Progressive Architecture

Factory Offices, Berkeley, Calif.: KETCHUM, GINA & SHARP

Man Takes Command: LEWIS MUMFORD

Department Store, Houston, Tex.: FRANZHEIM-LOEWY-ASHLEY

Display Pavilion, Broadmoor, Colo.: JAN RUHTENBERG

Sales Suite, Los Angeles, Calif.: HARWELL HAMILTON HARRIS

House, Palm Springs, Calif.: CLARK & FREY

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Streamlined Specifications: HENRY L. BLATNER

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Store: Shoe Display Unit

Selected Details

Bank: Check Counter

House: Dressing Counter

EDITORIAL: 1 VIEWS: 8 PROGRESS REPORT: 14

PRODUCTS: 76 MANUFACTURERS’ LITERATURE: 80

REVIEWS: 94 JOBS AND MEN: 114 P.S.: 136

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Mr. Edward D. Pierre
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Indianapolis, Indiana

Dear Mr. Pierre:

When we were in Indiana recently you asked us, "Why doesn't P/A do something about 'organizing' the building industry?" We replied that that was a pretty big task, and seemed beyond the scope of an architectural magazine. As this goes to press a resolution is being offered to the National Convention of the A.I.A. in Salt Lake City, and presumably will have been passed by now. The resolution calls on the Institute to set up a committee and arm it with the necessary funds to conduct, during the coming year, an inquiry into the constitution and functioning of that sprawling giant, the "building industry" in the United States.

The reason for the inquiry would be the realization that architects are in a unique position to determine objectively the factors, technological and social and economic, which cause buildings to cost as much as they do and which keep the building of necessary structures from being accomplished at the rate society seems to require. It would be spurred by the realization that the profession we are a part of has a duty because of its central, coordinating position, to search out the answers—a duty to each individual client, and in the larger sense a duty to society as a whole.

After a competent study has been made of the difficulties and the ways they might be resolved, then the resolution envisages the calling of a meeting by some over-all agency—perhaps the Board of Economic Advisors to the President. The meeting would bring together all elements of the building industry, but would differ from other "investigations" that have been held recently because it would start with information in hand, the findings of the architectural committee.

We like this resolution and all that it implies, and we hope the profession as a whole, in and out of the Institute, will give the committee which must be set up all the support possible. We certainly intend to.

Very truly yours,

The Editors

P/Akos

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(Architect: Harrison E. Baldwin, New Haven, Conn.)

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(Architect: Edward F. Sinnott, Richmond, Virginia)

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STREAMLINED SPECIFICATIONS

Dear Editor: I have had some very nice acknowledgments referring to the several exemplars published in P/A. The last one seems to have been helpful as an extended illustration of method in writing according to the "streamlined" system, about which numerous architects (including some of the best-known offices) have inquired of me.

A project under discussion by some of the members in our chapter contemplates the issuance of a quarterly bulletin the material for which will be largely supplied by the membership. Such material will include informal statements setting forth the thinking and/or experience of members on subjects of state-wide professional interest; exchange of cost data experienced by architects in various parts of the state (which should help to promote accuracy in preliminary estimates); experiences of architect-client relationship where disagreements or other unusual circumstances have arisen; etc. I expect to contribute some recommendations on methods for writing specifications.

JAMES D. BEACHAM
Greenville, S. C.

INTEREST AND VALUE

Dear Editor: In reviewing a few of my past editions of Progressive Architecture and Pencil Points magazines, I have run across several articles in your Materials and Methods sections which pertain to the streamlining of specifications and specification surgery by Horace W. Peaslee and James D. Beacham, architects.

These articles on the logical and sensible approach to writing of specifications are of extreme interest and value to me in the work I perform in my profession.

ROBERT E. MURRAY
New York, N. Y.

TO EXCHANGE IDEAS

Dear Editor: It occurs to me that you may be interested in knowing of the work of the International Federation for Housing and Town Planning, of which I am honorary treasurer. Possibly, indeed, membership in or contact with the Federation may be useful to you personally or to the organization with which you are connected.

The Federation now has members in 94 countries and can be extremely useful in the exchange of ideas and information.

The Federation also sponsors a biennial International Congress, attendance at which is always stimulating and enjoyable. I hope there will be a large delegation from both the U.S.A. and Canada at the meetings to be held in Zurich in June this year. As soon as conditions permit, it is intended to schedule a Congress in the American Continent.

F. J. OSBORN
London, England

P/A AWARD DINNER

Dear Editor: May we add our congratulations to those you must be receiving for the splendid Award Dinner held on June 1st at the Commercial Club of San Francisco.

We thoroughly enjoyed the program and feel you and your organization are to be highly commended for the architectural award program and its valuable contribution towards the advancement of the architectural profession.

EDWIN H. WILDER, Editor
The Architect and Engineer
San Francisco, Calif.

OPEN HOUSE EXHIBIT

Dear Editor: One house I am now building is on a very prominent street and has caused a lot of curiosity. From all I can gather is being very favorably received. As a matter of fact, I have an idea which I am going to try to carry through. My theory is that people need to be shown. How can we expect them to know when the only good example of organic architecture I know of in St. Clair County is well hidden in the woods and wasn't even discovered by me until last winter? And at the most the public's contact with architecture is the real estate section of the paper and perhaps popular house magazines. So upon completion of the house, before the folks move in, I propose to have an open house—an exhibit of contemporary architecture. Probably the folks will invite a good many friends and prominent people, and I am planning an exhibit of examples of modern architecture with some explanations, some models, maybe a little furniture which one of my talented young friends is designing and building. No highballs or cocktails—just a chance for the people to get acquainted with the better way of living.

Incidentally the house should be a good example for anyone, being built for my parents who have lived all their lives in (and are breaking away from the nostalgia of) a house which was built for them by my grandfather for them to start housekeeping. They have given me free reign for design, the only restrictions being reuse of present furniture—and, of course, cost. The house is designed for solar heating and materials with their natural and intrinsic character and value of the materials. The only change made was elimination of the radiant heating system (for which I am not sorry now) to get the price down to $14,000 complete.

This item of meeting a cost budget, incidentally, is an important criterion of a good contemporary architect which is usually overlooked. I am doing another house for a fellow who wouldn't even allow himself the luxury of flush doors, figuring he could get one-panel stock doors cheaper. I omitted doors wherever possible and using doors in the closets which would have worked swell—nothing added that wasn't absolutely necessary—and still we have a good piece of contemporary architecture. It won't get the publicity that a lot of these lush houses get—but certainly it is a better piece of architecture than a lot of them, and I feel that I have done the profession as well as the public a service.

CHARLES F. JOST
Webster Groves, Mo.

BETTER UNDISGUISED

Dear Editor: Can anything be done about our manufacturers destroying the character and value of the materials they manufacture? Can they be convinced that architects prefer to use materials which are already beautiful and useful? Can they be convinced that our manufacturers should be persuaded to use these materials? Can they be convinced that they should stop making their materials more beautiful and useful?

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FELLOWSHIPS

ERIC QUELL, Forest Hills, N. Y.; VINCENT MOSCARELLA, Brooklyn, N. Y.; and JOHN J. WALLACE, Middletown, N. Y., have been awarded Robert James Eidlitz fellowships of $1000 each for study and travel abroad in 1948-1949. The fellowships are awarded annually to graduates of Cornell University College of Architecture, in memory of Robert James Eidlitz, a Cornell graduate of 1885. Mr. Quell will study at the Eidgenössische Technische Hochschule, Zurich, Switzerland. Mr. Moscarella will register as a student in the Faculty of Architecture, University of Rome, Italy. Mr. Wallace will enroll at the Royal Academy of Art, Stockholm, Sweden.

RONALD A. DICK, Beckenham, Kent, England, has been awarded a $1500 special fellowship offered to a foreign student by the College of Architecture, Cornell University, for the year 1948-1949. Mr. Dick, a graduate of the Ecole Spéciale d'Architecture, Paris, is now completing his studies at the Bartlett School of Architecture, London. Alternates for the fellowship are FLORIAN VISCHER, Basle, Switzerland; MARCELO URRETS ZAVALLA, Cordoba, Argentina; and LLOYD E. A. ORTON, Melbourne, Australia.

SCHOLARSHIPS

The first postwar LE BRUN TRAVELING SCHOLARSHIP of $2800 of the New York Chapter of the A.I.A. has been awarded to Jouko Hakola, of New York, N. Y. The award was based on the best entry of drawings of a health center building for an industrial city of 100,000 population. The purpose was to house essential health services presently located in public buildings and rented quarters. Mr. Hakola, who studied architecture and design at Pratt Institute, New York University, and the Art Students League, will undertake a study of health centers in this country and abroad.

VICTOR A. LUNDY has been awarded the ROTCH TRAVELING SCHOLARSHIP IN ARCHITECTURE for 1948, sponsored by the Boston Society of Architects. Mr. Lundy plans to travel and study abroad for one year, visiting Scandinavian and eastern European countries.

EXHIBITION

Outstanding architects, designers, retailers, and manufacturers, all specialists in their fields, will speak at the conference of 10 clinics to be held in conjunction with the SECOND ANNUAL INTERNATIONAL STORE MODERNIZATION SHOW, Grand Central Palace, New York, N. Y., July 6th through July 10th. There will be five subjects discussed at the clinics, each clinic to be repeated during the week so that those attending either the first or the last two and one-half days may be present at all five clinics. Clinics are scheduled as follows: Store Layout and Traffic, July 6th and July 8th; Store Lighting and Color, July 6th and July 9th; Displays and Fixtures, July 7th and July 9th; Store Fronts, July 7th and July 10th; Planning and Budgeting for Modernization, July 8th and July 10th. Invitations to the Show and registration cards for the
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(Continued from page 10)

clinics can be obtained from the Store Modernization Show, 40 E. 49th St., New York 17, N. Y.

COMPETITIONS

Three sculptors from the New York area have won the top prizes for medal designs in a nation-wide competition conducted by the Mayor's Committee for the Commemoration of the Golden Anniversary of the City of New York. Each will receive $1500. Winners are John Amore, New York, designer of the Medal of Honor to be awarded to a New Yorker who has done the most for his city during the past 50 years; Michael Lantz, New Rochelle, N. Y., designer of the Medal of the Golden Anniversary to be awarded to the professional, commercial, or financial institution which has done the most for the city during the past 50 years; and Theodore C. Barbarossa, New Canaan, Conn., designer of the Departmental Medal of the Golden Anniversary to be awarded to the city department which makes the best showing at the Golden Anniversary Exposition, Grand Central Palace.

The National Association of Home Builders is sponsoring a competition for the best residential communities. Six classifications have been set up as follows: Class 1, best small group of single family homes under 50 units, with emphasis on the "economy" house; Class 2, best group of single family homes over 50 units; Class 3, best residential community; Class 4, best garden apartment or multiple group; Class 5, best suburban shopping center, where construction is 25 percent complete. The competition is open to members of the National Association of Home Builders, and prizes will be awarded and winners' plans displayed at the annual Home Builders Exposition in February 1949. Complete information may be obtained from the Urban Land Institute, 1737 K St., N. W., Washington 6, D. C., which is acting as consultant for the competition.

Patricia Casey and J. G. Replinger, both of the University of Illinois, have been awarded first and second prizes respectively in the recent competition sponsored by Progressive Architecture in conjunction with the Beaux-Art Institute of Design for the best solutions to the problem of the Design of a Rehabilitation Center for Underprivileged Children. Winners received prizes of $50, first place, and $25, second place, and first medals. One hundred and forty-six entries, representing eight schools, were considered in the competition, program for which was written by Lawrence B. Perkins, of Perkins & Will, Architects-Engineers, Chicago, Ill. In addition to the two prizes, the University of Illinois also won two first medals and three second medals. Oklahoma Agricultural and Mechanical College entries received two second medals. Other schools participating were Catholic University of America, Pennsylvania State College, Princeton University, Rice Institute, the University of Pennsylvania, and the University of Virginia. Chairman of the competition jury was Robert Allan Jacobs, of New York.

NEW ADDRESSES


SAMUEL ZOURI MOSKOWITZ, Deposit and Savings Bank Bldg., Wilkes-Barre, Pa.

OSWALD FISCHER, 35-10 Broadway, Long Island City 3, N. Y.

ROBERT I. GOLDBERG, 22 E. 17th St., New York 3, N. Y.

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JULY, 1948
NEW STRUCTURE: NEW DESIGN

More general appreciation of the work of Louis Sullivan, an acceptance that informs the earnest contemporary designer rather than adding to the professional stature of the great Chicago pioneer, is evidence of sound progress. Seven oversized photographs of selected "Architectural Masterpieces of Louis Sullivan" are spotlighted dramatically in a room set aside for their exhibition by the Department of Architecture of the Museum of Modern Art, New York. Together they attest the skill of the leader of the Chicago School, at the beginning of this century, in his efforts to define the new multistory architecture that structural advances had just made possible; as well as his disgust with the then-fashionable revivalism, expressed through invention of new ornament.

Intended to emphasize the importance of Sullivan as the man most directly responsible for the development of the American skyscraper in its formative years, in the nineties, this show follows a display last season of "Masterpieces of Henry Hobson Richardson" also presented by the Museum of Modern Art. Philip Johnson, consultant to the Department of Architecture, announced the exhibition with the note:

"The three great names in the history of American architecture are Henry Hobson Richardson, Louis Sullivan, and Frank Lloyd Wright. In today's concern with contemporary building the important work of Richardson and Sullivan is too often dismissed as old-fashioned, or is completely forgotten. These men are the pioneers of the modern movement and their contributions should be understood as an exciting and necessary part of the development of the architecture that we know and admire today.

"The name of Louis Sullivan has become synonymous with the American skyscraper. Throughout his entire life Sullivan attempted to define the new architecture that industrial growth and structural advances had made possible. His battle was won by the men who came after him, who recognized his genius and built upon his achievement."

Sullivan was seeking to create a new architecture—giving character to the new multistoried building without resorting to the formulas of past styles. He raised the architectural level of the commercial building, but at the time lost favor in the Midwest by his refusal to join or applaud those who were happy in reviving, with modern improvements, the glories of Rome and Greece. Despite his able writings, the influence of his thoughtful design, even his exuberant ornament that has been discarded as later designers adopted other means of expressing structural lightness, he has been little understood or acknowledged. Henry-Russell Hitchcock, of M.I.T., and Vincent J. Scully, Jr., of Yale, who acted as special consultants for the exhibition, have paid tribute to the lasting importance of Sullivan. Captions for the pictures shown in the Museum of Modern Art's exhibition are as follows:

Tower, Auditorium Building, Chicago (1887-89) When the Auditorium Building was completed, its tower was the highest point in Chicago. Its unified, vertical design was the first step toward the skyscraper as we know it today. For the simplicity and power of the building's unadorned mass Sullivan owed much to Henry Hobson Richardson (1838-1886), the first of America's architectural pioneers. Abandoning, in the tower, the heaviness of Richardson, Sullivan rises to a new and more original range of expression. The smooth surfaced stone, the open arcade, and the tall, vertical arches enclosing grilled panels of windows suggest a thin sheathing of the interior rather than a solid masonry block. This new weightless monumentality was to become an important characteristic of twentieth century architecture.

Wainwright Building, St. Louis (1890-91) Here, for the first time, a skyscraper achieves unity and monumentality. The new skeleton construction needed only a thin sheathing to protect the metal frame against fire. Sullivan's soaring lines emphasize lightness and height. Broad corner piers frame the grid of tall brick verticals and short terra-cotta horizontalis. The feeling of monumentality is increased by the contrast between the plain stonework of the ground stories and the rich luxuriance of the terra-cotta frieze. This frieze and the slab cornice above it decisively terminate the verticality of the intervening stories. Offices are arranged around a partially enclosed court along which the elevators are banked. The plan shows...
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that alternate piers on the exterior sheathe major structural supports. To the intervening piers Sullivan gave equal visual importance in order to emphasize height through the repetition of verticals.

Guaranty Building, Buffalo (1894-95) Though taller and larger than the Wainwright, the Guaranty Building looks lighter and less massive to the eye. The broadly spaced round piers of the ground story express the structure with clarity. Above the horizontal line of the mezzanine double verticals rise like slender stalks. The entire structure is sheathed in modeled terra-cotta in lacy patterns that give no feeling of weight. Even the cornice, a heavy, flat slab on the Wainwright Building, is here hardly more than an outward curvature where the lines of the piers interlace at the top.

Gage Building, Chicago (1898-99) These facades of the nineties illustrate clearly the difference between competent building and distinguished architectural design. All three buildings were structurally the work of Holabird and Roche, but the facade of that on the right is by Sullivan. All three have the wide glass bays made possible by skyscraper construction. Yet the Holabird and Roche facades appear heavy and clumsy, without visual expression of the lightness implicit in their metal frames and thin sheathing. It is the cleaner articulation and the carefully studied proportions of the Gage Building which makes it seem lighter and more integrated than its neighbors. Sullivan divided the windows horizontally so that the entire front became an organized pattern of regular casement sash under panels of prism glass, between horizontal bands of decorated terra-cotta. He also thinned his molded vertical piers like plant stems, topping them with bursts of delicate organic tracery which relieve the heaviness of the broad band of terra-cotta at the top.

Carson Pirie Scott Department Store, Chicago (1889-1904) This department store made architectural history. It was the first distinguished example of the great skyscraper stores we know so well today. Its clean lines, large windows, and horizontal bands of masonry and glass, so radical when Sullivan introduced them, have become a twentieth century formula. The upper part of the building is strikingly simple. Huge rectangular windows fill the entire space between terra-cotta sheathed structural beams and stanchions. The naturally horizontal pattern of the metal cage construction is consciously and deliberately stressed by delicate continuous lines of decoration above and below the windows. The top story, set back to reveal the columns, emphasizes the structural lightness. A later addition at the right, by other architects, lacks this refinement, and seems, by comparison, solid and dull.

Martin Ryerson Tomb, Graceland Cemetery, Chicago (1889). The massive blocks of polished blue-black granite of which this tomb is built are treated plastically, like the forms of abstract sculpture. For its scale, its materials, and its organic simplicity, nothing could contrast more with Sullivan's characteristic works. No surface decoration diminishes the force of its compact mass and plain geometric shapes. In an age of correct stylistic revivals Sullivan designed a tomb so completely original that it can be traced to no specific his-

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5. Require no heavy lead-bearing supports except at the bottom
6. Are easy to install

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<table>
<thead>
<tr>
<th>STANDARD ROTO-WAITER DIMENSIONS</th>
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<td>Size No.</td>
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So if you are stymied by perplexing lifting and lowering problems involving the vertical movement of material and merchandise—tell us about them. And write for complete details and specifications of the new electric dumb waiter that cannot overtravel—the Sedgwick Roto-Waiter.

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(Continued on page 18)
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JULY, 1948 33
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The real cost of any equipment is the **total cost**, including maintenance, over the years. Here the overhead closer is far more economical than the floor type. (We know this, after twenty years of making both types and observing the experience of users.) The overhead closer needs less servicing and lasts longer. In its protected location above the door it avoids the abuses of floor dirt, scrub water, etc., which always foul floor closer and shorten its life. This is doubly true where closers are exposed to the weather.

LCN Catalog 11-b contains 33 pages of information on good door control; how to select the right closer; full data on each. Would you like a copy? Address LCN Closers, Inc., 466 W. Superior St., Chicago 10, Ill.
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Wilmette, Illinois
McCarthy, Smith and Eppig, Architects

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Notes on bending light

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Insulux Glass Block No. 351 actually bends light rays. Light is thus directed to ceiling for even distribution deep into the room.

Combined with Insulux Block No. 350 (pattern spreads light evenly through horizontal plane) brightness contrasts are sharply reduced, and light is more evenly distributed throughout the room.

American Structural Products Company, a wholly owned subsidiary of the Owens-Illinois Glass Company, has taken over the manufacture and sale of Insulux Glass Block and other Owens-Illinois structural products. For data on Insulux write Dept. E-26, American Structural Products Company, P. O. Box 1035, Toledo 1, Ohio.
Archts., Sidney H. Morris & Associates, Chicago
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COMPLETION of George Washington University Hospital, in the heart of the Nation’s Capital, marks another big forward step in applied medical science. Built by the Federal Government, and equipped through the practical generosity of public-spirited citizens, the Hospital is staffed by George Washington University, whose School of Medicine, one of the oldest in the country, has earned nationwide recognition for its professional standards. The new Hospital is the first unit in the projected George Washington University Medical Center.

Six stories in height, it is 400 x 185 ft. at wing projections, with 240,000 sq. ft. of floor space. The building frame is reinforced concrete, with wall construction of Indiana Limestone backed up with brick. In concreting frame and floor slabs, Chas. H. Tompkins Co., General Contractor, used ‘INCOR’ 24-HOUR CEMENT throughout. Dependable ‘Incor’ high early strength resulted in economical job speed with only one set of forms — saving an extra form-set worth $8000. At today’s form material and labor costs, ‘Incor’ savings are greater than ever. Figure your next job with ‘Incor’ — save time AND money!


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LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD’S LARGEST CEMENT PRODUCERS: 15 MODERN MILLS, 27,000,000 BARRELS ANNUAL CAPACITY
FACTORY OFFICES, BERKELEY, CALIFORNIA

KETCHUM, GINA & SHARP, Architects

Ingenious Design Dramatizes Kawneer's Own Products

PROGRAM: A new administration building, joined to an existing factory structure, thus gaining efficient new offices, at the same time releasing much-needed space within the factory where the offices were formerly located.

SITE: A prominent corner in Berkeley's industrial area.

SOLUTION: Excellent advantage taken of the open-corner site to provide maximum light and air conditions; extensive use of the client's own building products on both exterior and interior, making the building a "silent salesman" as well as a business headquarters. The new building contains a reception room, employees' entrance, staff offices and conference room, a drafting room for the chief draftsman and his associates, and general office space. In the factory proper, only the near end was remodeled and resurfaced to tie in with the new unit.
ADMINISTRATION BUILDING

FACTORY OFFICES, BERKELEY, CALIFORNIA

KETCHUM, GINA & SHARP, Architects

STRUCTURE
The new building and the remodeled end of the existing factory are schemes as a visual unit, the simple billboard-like, corrugated aluminum surfacing of the latter acting as a foil to the sprightly upsweep of the much-windowed, V-roofed new building. The new structure is surfaced with the company’s porcelain-enameded, corrugated aluminum sheets in tones of brown and celadon. The structural scheme consists of the up-sloping roof framed in wood and steel, supported on cement-filled pipe columns; there are no bearing walls. The floor is a concrete slab set on grade with a finish surface of linoleum tile. The roof framing gives lateral support to the steel frame. Ceiling joists are oversized in order to provide a flush interior ceiling surface; the roof deck encloses a continuous plenum chamber, used for mechanical exhaust of air from the interior. The ¼-in. plate glass enclosing walls have fixed aluminum store-front sash; spandrel sections beneath the glass areas are faced on the exterior with flat asbestos panels.
Extending in a simple rectangle to the left of and forward from the existing factory, the offices are joined to the factory by a small connecting wing that serves as the employees' entrance. Washroom facilities are located within the old building. The general drafting room opens in the remodeled north end of the factory block. Beneath the fixed glass of the east and west walls of the new building is an ingenious, continuous unit of heating and ventilating elements and storage space (detailed on page 46) which both simplifies the problem of office equipment and is a notable instance of integrated design. Interior partitions are variously surfaced with plywood, fabric-surfaced plywood, and the company's corrugated, porcelain-enameded, aluminum sheets.
FACTORY OFFICES.
BERKELEY, CALIFORNIA

KETCHUM, GINA & SHARP, Architects

MATERIALS, EQUIPMENT, ETC.
Throughout the building, the architects have incorporated their clients' products—glazing moldings, awnings, hardware, wall finishes, and other equipment. This not only reflects an obvious wish on the client's part but demonstrates that these products, at present chiefly marketed for storefront use, are equally applicable to other architectural problems. If more architects were thus to explore the versatility of established, though "typed," materials, there is little question but that it would similarly turn up fresh and salutary design potentials. Artificial lighting of the building in general comes from fluorescent lamps mounted in louvered troffers and installed flush with the perforated asbestos ceiling panels. Heating is from convectors in the front portion of the enclosed space beneath the window ledge; fresh air from the outside (see detail, page 46) is circulated to interior rooms through window-ledge registers and so up through special sections of the perforated ceiling to a plenum chamber (one in each roof slope) within the joist space and thus out through a roof exhaust.
BELOW SPANDREL SECTIONS is a continuous vent to admit a controlled, dust-filtered current of air through registers in the window ledge.
DRAFTING ROOM—in north end of the factory structure. This wall is frankly a resurfacing job, with a continuous, projecting window band introduced. The much-used deep window sill and soffit are plywood surfaced; the 3½-in. pipe columns are embedded in the masonry of the existing wall.

Natural north light is supplemented by fluorescent troffers above drafting tables.
Almost a generation separates Le Corbusier’s *Vers une Architecture* and Siegfried Giedion’s latest book, *Mechanization Takes Command*. But whereas Le Corbusier’s early works were hymns to the machine and its products, and took for granted that man himself was the gainer by every effort at mechanization, Mr. Giedion’s book reflects a more mature attitude of discrimination and appraisal. At the origin of his inquiry, Mr. Giedion explains, he sought “to understand the effects of mechanization upon the human being; to discern how far mechanization corresponds with and to what extent it contradicts, the unalterable laws of human nature... The coming period has to reinstate basic human values.”

Le Corbusier’s attitude toward the machine was at the time a salutary one. We had taken our mechanical inventions for granted and had detached our feelings from the new forms our civilization had created. The lyricism of the great engineers, Brunel, Paxton, Eiffel, the Roeblings, with all their imaginative daring, had faded into the pedestrian prose of the efficiency engineer. Except for an occasional Frank Lloyd Wright, architects had come to treat the machine with disdain. Following Marcel Duchamp, who had demonstrated that cheap, ready-made, mass-produced articles might be works of esthetic interest, Le Corbusier showed that the machine itself was the source of form. But in the course of acclimatizing modern man to his mechanical environment, Le Corbusier somewhat innocently overlooked the machine’s limitations. He forgot that the machine, by nature, represents only a fragment of the human personality; and he falsely identified mechanization with human development. (Reacting against such essentially nineteenth century views, Mr. A. J. Toynbee, in *A Study of History*, has gone so far as to indicate that there is an inverse relationship between mechanization and culture: an equally erroneous description.)

The great merit of Siegfried Giedion’s study is that he has set out to explain the split between thought and feeling that still persists in our generation. He treats mechanization, not as an end in itself, but as a means of releasing and developing the human personality; and, unlike Le Corbusier, he understands that this end has sometimes miscarried. While his work proceeds on the basis Le Corbusier laid down for his generation in the most general terms, Giedion’s last two books—for the new work is in effect a companion volume to *Space, Time, and Architecture*—both correct and complete it.

The rich veins that Giedion has opened up in *Mechanization Takes Command*, have, strange to say, hardly even been prospected. Even in the realm of technics itself, far more attention has been paid to machines, particularly to those that converted energy into motion, than to the utensils, the apparatus, and the utilities that have modified the character of building. There are many exhaustive histories of the steam engine and the loom; but not a single book, so far as I am aware, that covers the whole story of plumbing. When was prefabrication first introduced into building, and in what historic order were windows, doors, stoves, mantels, mouldings, ice chests, kitchen cabinets prefabricated?

Up to now, apparently, no one has bothered to ask those questions, much less tried to find the answers. The result is that we often attribute to our own age many advances that began generations ago. Who would guess from current references to wallboard that plasterboard was advertised in American architectural magazines in the Nineties? Sometimes our ignorance works the other way round, too: a very recent innovation like the domestic electric refrigerator (1916) seems to have been with us almost as long as the electric light (circa 1895).

There are, of course, reasons for this ironic silence about the things that have most occupied our minds and hands for the last century and a half. One of the reasons Giedion himself has pointed out: the fact that the development of the machine belongs to the realm of what he calls “anonymous history,” history without names, dates, collected records. In their concern for profits and practical success, our manufacturers forgot that the machine was a formative element in our culture: one of the masters of mass production even said that “history is bunk.” This contempt for the meaning of industry’s achievements has led to the wholesale destruction of archives and records. Most of the exceptions to this rule occur in Europe: the Caldburys have kept a fascinating record of the development of their cocoa business, from the foundation of the firm onwards; and in Germany, F. E. Krauss, the head of a small family...
A new downtown department store in which thoroughgoing restudy of the problem of handling goods and customers has resulted in a new high in mechanized efficiency.

PROGRAM: The store proper; an adjoining parking garage; a warehouse on the perimeter of the city—all to be interrelated in such a way as to assist the customer's arrival, shopping, and departure; delivery of merchandise to the store, and shipment of sales therefrom.

SITE: A full downtown block for the store; the better part of an adjoining block for the garage.

SOLUTION: A six-story store building (provision for addition of six more floors at a later date); a five-level parking garage, on the neighboring site.
A SIDEWALK CANOPY surrounds the entire building.

DEPARTMENT STORE, HOUSTON, TEXAS

KENNETH FRANZHEIM, Architect
RAYMOND LOEWY ASSOCIATES, Retail Planners and Designers
EDWARD E. ASHLEY, Consulting Engineer

GENERAL
The store, at present a six-story and basement block, is of reinforced concrete frame construction; foundations and columns and placement of mechanical services are so arranged that six more floors may be added at a later date without upsetting present installations. A windowless scheme above the ground floor (which has show windows on all four sides), the exterior walls are of buff stone and matching brick. The sawtooth front facade is equipped with numerous conduit outlets (see detail across page), so that the entire wall may be used for "hanging" dramatic, seasonal displays.
THE GARAGE BUILDING is on the adjoining block (note corner of store at left of photo). As plans on the next pages show, the basement of this building is an integral part of the mechanized merchandising service. Tunnels under the intervening street connect the two structures. Reinforced concrete construction.

Kenneth Franzheim, architect, is a graduate of M.I.T. and practices in Houston and Mexico City. Vice-president of the Houston A.I.A. Chapter, Mr. Franzheim is in charge of the Institute's 1949 convention, to be held in Houston and Mexico City.

William T. Snaith, architect head of the Retail Development and Planning Division of Raymond Loewy Associates, was in charge of over-all design, including interior planning of the store. A partner in the design firm, Snaith directs all building and architectural programs in the five Loewy offices—New York, Chicago, Los Angeles, Sao Paulo, and London.

Edward E. Ashley of New York, N. Y., was consulting engineer for the project.
DEPARTMENT STORE, HOUSTON, TEXAS

KENNETH FRANZHEIM, Architect
RAYMOND LOEWY ASSOCIATES, Retail Planners and Designers
EDWARD E. ASHLEY, Consulting Engineer

HANDLING OF MERCHANDISE

The three units of Foley's—the store, the garage, and the warehouse (on edge of city)—all play their part in the mechanized system for expediting merchandise. Heavy goods such as furniture and appliances are stocked in the warehouse; only floor samples are at the store. The customer makes purchases from the samples; merchandise is shipped from the warehouse.

INCOMING MERCHANDISE

Goods stocked at the store arrive at an unloading dock at one side of the garage building, travel via a chute to a basement-conveyor and so under the street to the store receiving and marking room. When ready for delivery to sales floors, the goods travel up on wheeler lifts to stock-receiving rooms on each floor. To reach a particular department, the merchandise is then wheeled around the perimeter corridor (see typical floor plan, page 56) to a point immediately adjacent to the destination department.
OUTGOING MERCHANDISE

Purchases (on all floors above the main floor) that are to be mailed out, delivered by truck, or taken by a customer whose car is parked in the parking garage follow this route: the merchandise is wrapped and placed on one of two spiral chutes (located in opposite corners of each sales floor). These take it down to just below the ground floor where it is automatically deposited on a ceiling-mounted conveyor which trundles it through the under-street tunnel and delivers it onto a "sorting ring" (see photo at top of facing page). At this point, sorters channel the packages onto one of three types of outgoing conveyors—(1) to the mailing department; (2) to the delivery-truck platform; or (3) in the case of the customer whose car is parked upstairs, to a branch conveyor that feeds up to a parcel-checking room on the street level of the garage. Main-floor purchases follow this same general route; only on this floor, all of the central sales islands have parcel drops that feed directly down to the sub-floor conveyor system.

At time of purchase, the car-parking customer is given a claim check for each purchase and finds all his packages waiting for him at the checking room. For either incoming or outgoing merchandise that is too bulky to travel via the conveyor system, a receiving and shipping dock occurs in one corner of the main sales floor of the store, adjacent to freight elevators.
DEPARTMENT STORE, HOUSTON, TEXAS

MAIN FLOOR

The plan shows the basic organization—electric stairways on center, reached by straight aisles (the school of thought that opposes the "baffle" technique of store layout that confronts customers with a miscellany of merchandise, willy-nilly). A side entrance for the carriage trade adjoins passenger elevators. Notable departmental organization is the grouping of all fashion-accessory goods for women on one floor—shoes, millinery, lingerie, hosiery, gloves, handbags, jewelry, and cosmetics. The entire store is year-round air conditioned by means of electronic precipitators to remove dust and smoke and air-conditioning cabinets to control cool air that may be increased or lessened in any zone as required. The heating system is a combination of numerous types—steam, hot water, radiant panel.
GENERAL VIEW. Pink marble floor; lighting is combination fluorescent and incandescent, furnishing 32 foot-candles at display-case level.
THIRD FLOOR

Women's specialty shops make up the third-floor plan. All merchandise is organized according to sizes; 135 fitting rooms are located in close relation to each department. Note the perimeter corridor which allows off-floor handling of all new merchandise coming from the corner receiving area. Throughout the store, safety has been built in to the design. A complete sprinkler system, each outlet acting as a fire alarm, is supplemented by stand-by fire pressure pumps in the basement. The sprinkler system is backed by pressure storage tanks of water on the roof. Enclosed stair wells are separated from the store by steel doors. All stock shelving is of steel. In addition, of course, the building itself is of fireproof construction.
DEPARTMENT STORE, HOUSTON, TEXAS

OTHER FLOORS

**Basement**: men's and boys' furnishings, clothes for infants and young children, women's ready-to-wear, luncheonette.

**Second floor**: boys' and men's wear, grill, children's furnishings, bedding, dress goods, etc.

**Fourth floor**: furniture, draperies, rugs, lamps, etc.

**Fifth floor**: housewares, china, glass, silver, gifts, appliances, radios, paints, luggage, toys, auditorium.

**Sixth floor**: business offices, beauty salon, main public lounge, etc.
TO HARMONIZE with neighboring buildings, both the roof and the exposed structural columns are surfaced with copper.

DISPLAY PAVILION, BROADMOOR, COLORADO

JAN RUHTENBERG, Designer

PROGRAM: A display shelter for a collection of carriages used in the early days of the West; supplementary display space for a collection of Indian artifacts.

SITE: A parklike flat piece of land facing the fashionable Broadmoor Hotel.

SOLUTION: An oval plan, literally developed around an
Independent steel frame allows a free pattern of curtain walls.  

Ideal arrangement of the old carriages previously worked out in model form. Curved concrete-block wall sections within the space act as backgrounds for carriage displays and (on the reverse sides) as screens against which the cases for the Indian collection are arranged. Structurally, the building is of free-standing steel frame, with curtain walls of cinder block and glass.

are made up of screen walls of structural glass.
Frosted mirror-backed plant bay at left; ceiling portion is a light source, amplified by the mirror surround.

SALES SUITE,
LOS ANGELES, CALIFORNIA

HARWELL HAMILTON HARRIS, Designer

Manufacturer's display rooms designed to approximate normal background for products.

PROGRAM: A suite of “casually elegant” rooms for display of women’s clothing and for business entertainment.

SITE: A 30-foot square space within an existing building.

SOLUTION: Almost residential atmosphere worked out in natural materials: redwood walls; flooring of end-grain sections of redwood trunks; planting; leather and webbing upholstery; copper, rich fabrics.

The suite of rooms is ventilated by a blower which also delivers heat in winter. An air purifier removes odors of tobacco, food, etc. The dressing-room sofa accommodates an occasional overnight guest.

Looking toward dining “L” of lounge.
Integrated design in which space takes on new dimensions. The home an architect planned for himself.

Mr. Frey comments: "I am thrilled every day by the varying spectacle of the natural views that are part of it, changing with light and color, wind, rain, stillness, and sunshine... I believe, however, that a full understanding of this type of house will come only gradually because most people's reflexes are conditioned by the conventional, closed-in houses in which they have grown up."
1 SOUTHWEST FRONT. Wing walls (direct continuations of interior walls) define separate areas and provide wind protection.

HOUSE, PALM SPRINGS, CALIFORNIA  CLARK & FREY, Architects

SOLUTION

Mr. Frey arranged his home within a rectangle only 16' x 20' in area; but both horizontally and vertically, wall, floor, and ceiling planes have been variously extended; floor-to-ceiling and wall-to-wall windowed portions of walls slide; the pool, the view, and the closed-in terraces are important factors in the design, and the end result is a compact, efficient little plan with exceptional indoor-outdoor relationships that provide literally horizon-wide dimensions. Depending on the adjustment of the sliding walls, circulation of air is controlled over a wide range; on hot days, the house can be wholly shut up, and a cooler-humidifier-fan-air-washer unit takes over; in cool weather, electric space heaters keep things warm, assisted by the solar benefits inherent in the glass walls on south, east, and west. Curtaining, on the other hand, can cut direct sun out entirely.
THREE-QUARTERS of the pool-front wall is a sliding, glass partition (sliding screen panel outside); both panels slide wholly out of the way along frame at right.

Laid out both in plan and section on a modular basis, using multiples of 4 feet as the dimensional control, the house is of wood-frame construction; exterior and interior surfaces are simply panels of either rigid asbestos cement board or corrugated metal, screwed to the frame. Mr. Frey actually applied these panels himself—a cost-saving system which some mass producer might study—a pre-made frame, with prefinished but unattached surfaces which the owner can install himself.

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Albert Frey received his training in Zurich, Brussels, and Paris (with Le Corbusier). Following prefabrication experiments with A. Lawrence Kocher and the U. S. Dept. of Agriculture, he worked with Howe & Leseaze and with Philip Goodwin. He is the author of "In Search of A Living Architecture."

John Porter Clark had his formal training at Cornell, subsequently worked in Southern California offices, entered private practice, and joined Mr. Frey in partnership in 1939. For four years he was Captain with the Corps of Engineers and has served as chairman of the Palm Springs Planning Commission.

The cooler unit that washes, dehumidifies, and fans the air as well, is suspended from the roof, just outside the corrugated metal kitchen wall.

Kitchen drawers and shelves are dimensioned to hold the things to be stored therein.
LIVING-ROOM CORNER. Note continuous planes of both asbestos-cement-suraced walls and corrugated metal (painted blue) ceiling.

THE ROOF OVERHANG at the southwest is extra deep, forming a car shelter. A hinged bookcase panel lets down to form a desk.
Materials and Methods

"HIGH-EARLY" PORTLAND
Changes Concrete Construction

HIGH-EARLY STRENGTH PORTLAND CEMENT has shared in popularizing reinforced concrete for buildings; occasionally it has even helped concrete displace other structural materials. Yet only 20 years ago was it first used in construction, and then only for heavy engineering work. In this article PROGRESSIVE ARCHITECTURE analyzes the characteristics which have made it an accepted building material.

Top photo shows first job in which high-early strength Portland cement, then barely out of several years of laboratory research, was employed: the Denver and Rio Grande's Moffat Tunnel. Chart shows strength attained in three days with high-early cement almost equals 28-day strength of ordinary Portland.

Early attainment of high strength results in shorter curing time; and this in turn makes possible the placing of concrete even in subfreezing weather—an important factor during the recent war and even now, when high costs and great need make construction at all seasons essential.
Another early use of the material is highway paving, where quick hardening reduces traffic interruption. Parallel uses have come up in the building field; for instance, industrial floors, loading docks and ramps. Chart compares strength of samples, both high-early and ordinary, taken from highway (photo) after 18 years in use. Curves indicate strength would probably increase with more age.

**CEMENT**

Watertight concrete can be more quickly attained with high-early strength than with ordinary Portland, which has caused it to be specified for such uses as the irrigation flume illustrated. Extremely low permeability is needed in concrete used in buildings to house wet industrial or food manufacturing processes, in roofs, etc.

Charts show effect of curing on strength of ordinary and "high-early" cements. Another great advantage in using the latter is the fact that forms can be removed quickly and reused, which substantially reduces an inevitable cost item in concreting and increases speed of work. In general, the larger the job, the larger the saving on forms.

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Thin-shell concrete hangars for American Airlines, Chicago, have the tremendous clear span of 257 ft between vertical walls. In construction

"HIGH-EARLY" PORTLAND CEMENT Changes Concrete Construction

In 1927 a new kind of Portland cement, which had the property of attaining almost as great a strength in one day as ordinary Portland had in seven, had just about proved itself in the laboratory. Engineers for the Moffat Tunnel, the Denver and Rio Grande's cutoff through the Rocky Mountains, were searching for a cement that would rapidly become strong enough to carry the tunnel's tremendous loads. Learning that there was enough of the new cement available for their purposes, the railroad people prevailed upon the cement manufacturers, who were somewhat reluctant to release their new product for such a use because it had not been quite as thoroughly tested in actual practice as they would have liked, to make it available. When examined in 1947 the tunnel's concrete, made with what has since become widely known as high-early strength Portland cement, showed no evidence of structural failure or disintegration, and in the intervening time there had been practically no necessity for maintenance.

At first the new material's uses were limited to heavy engineering construction: tunnels, dams, highways; and by 1929 and '30 it had been employed in several bridges. At about the same time it began to appear in buildings, in freight loading docks, railroad terminals, and the like. In all of these installations the principal factor leading to selection of "high-early," as the product is familiarly called, was the possibility of putting the structure into use, often under heavy traffic, one day after pouring. Since then, other secondary characteristics, most of them rooted in this "quick-use," have been recognized and have had a share in widening the material's utilization to include many types of building construction. At the same time, there are now many manufacturers; and the price differential, not very great at any period, has consistently lowered.

CHARACTERISTICS: THEIR EFFECT ON CONSTRUCTION

Primarily, high-early gains strength and durability sufficient to withstand quite severe usage in a fifth the time required by ordinary Portland. The tests cited on the preceding page indicate that well proportioned, expertly placed high-early concrete continues to maintain this advantage over 20 years; it continues to increase in strength as time passes, just as ordinary Portland cement concrete does. Perhaps ordinary cement concrete will catch up to it eventually; we cannot tell about this because the product hasn't been in use long enough.

Assuming you have good concrete, early attainment of high strength means that formwork can be removed quickly, that relatively little curing time is required, and that the concrete achieves minimum water absorption (and maximum density) in about the same time it takes to reach usable strength.

The net result of these characteristics is to speed up construction, of whatever kind; which makes possible quick occupancy or use of the structure. Since time is very patently money in American building construction, this speed-up has been found to save appreciably in building cost. Nor has the saving been noted only in terms of time; we must also consider the material's effect on curing, on formwork, and on the possibility of concreting in subfreezing weather.

Curing can contribute almost as much to good concrete as proper proportioning, mixing, and placement. It requires nothing like the engineering attention of these three processes, and it's not as impressive—there's nothing exciting about watching a piece of green concrete grow old. To speak plainly, the curing process is apt to be slighted. Therefore, concrete which can be cured satisfactorily in one day (see charts, "Effect of Curing on Concrete Strength") not only saves time in labor, supervision, and inspection, but also is that much more likely to be good concrete.

Formwork is admittedly an expensive part of concrete construction. The principal means of reducing form costs, even on relatively small jobs, is to reuse forms as often as possible. Use of high-early strength Portland cement makes it possible to shift forms quickly, and thus on even a large job one comparatively modest set of forms may suffice for the entire project. In some wartime plants, barrel-roof forms were mounted on tracks and hauled forward daily.

Cold-weather construction, once so costly as to be almost prohibitive with concrete, has become entirely feasible when high-early is employed. Concrete must be protected against freezing while it is hardening. High-early concrete requires stoves, fuel, and tarpaulins for one day only, however low the temperature.

Savings in terms of dollars due to use of high-early cement have been tabulated for many types of buildings, in localities from Texas to Massachusetts. On a small Texas hotel, for instance, with concrete frame and brick curtain walls, the saving (in today's dollars) on form costs was just under a thousand dollars; in addition, brickwork started 10 days earlier than it could have with ordinary Portland cement.
forms were moved rapidly forward and reused; high-early strength Portland was used.

On a New York factory, savings were over $14,000 and four weeks. In 1947 the New York Housing Authority went to the length of having prepared two full sets of working drawings for at least two different housing projects, one set in steel framing, the other in reinforced concrete. Figuring on use of high-early, bids on the concrete designs came in substantially lower, and both projects went ahead in concrete.

**EFFECTS ON DESIGN**

Use of high-early strength Portland cement has widened until now we build institutions, multifamily housing, industrial buildings, hangars, etc., with this material; in fact, it has proved its worth for any concrete structure in which speed of erection, complex or extensive formwork (which can only be employed economically if quick re-use is possible), early attainment of strength and water-resistance, and reduction of cost for labor, curing, and overhead, are important. In addition, high-early is advantageously used in producing concrete masonry, precast units (slabs, beams, etc.), and cast specialties ranging from ornamental lighting standards to concrete pile points.

In all these manifestations there are design opportunities. When concrete as a material is to be exploited to the greatest possible degree, as in some of the thin-shell constructions, architect and engineer combine talents to produce one of the most breathtaking of contemporary esthetic results. If, by reducing form costs, high-early aids this design—and it does—it has earned its place. Perhaps the design must be “streamlined” (although we hesitate to use the word) to permit forms to be shifted economically; that is a technical consideration to be taken as a matter of course.

In laying out a structure for use of precast units, the designer is merely employing a building block larger than is customary. Often he also has the opportunity to design the units themselves—slabs, columns, beams, purlins, etc. And in such expanding developments as use of high-early in “shotcrete,” or concrete applied forcibly through a hose nozzle, there are chances to form walls and columns integrally, to build in lighting recesses, ductwork—to make the structural frame, the enclosing “curtain,” and at least part of the equipment, an integral whole (see the Long Beach, Calif., theater, Hugh Gibbs, Architect; January, 1948 P/A.). The laboratory product of 20 years ago has effectively changed construction practice and broadened the designer’s horizon.
Prefabrication in concrete has also benefited from use of high-early strength Portland cement. Photos show (upper left) foreground, roof panels poured in forms on the ground at the site, and, background, being loaded on a truck. Upper right, placing prefabricated framing; forms were clamped around joints and joints poured. Lower left, frame nearly assembled, roof panels stacked ready for installation. Note that the season is winter. Lower right, placing roof slabs. (Naval Supply Depot, Mechanicsburg, Pa.)

Hayden Planetarium, New York, has a spherical dome of gun-applied concrete over wood frame; construction occurred in early winter season.
**MISCELLANEOUS AND ORNAMENTAL STEEL AND IRON**

**1. GENERAL CONDITIONS.**

**A.** Hereby made a part of this specification.
- Contractor cautioned to read same carefully.
- Particular attention called to Article 48.

**2. SCOPE.**

**A.** Any or all miscellaneous and ornamental steel, iron, aluminum or other metal work required by or inferred from drawings and/or specifications.
- Flashings specified under roofing work.

**3. SHOP DRAWINGS.**

**A.** Prepare detailed shop drawings of all items except stock items.
- Include size, weight, shape, location and all pertinent information for all members and items.
- Submit in triplicate to Architect for approval.
- Correct and return if required.
- Check measurements and elevations at building site wherever possible.

**4. CUTTING, PATCHING, DRILLING, etc.**

**A.** Of all work supplied by miscellaneous iron and steel contractor.
- For any or all trades whether or not part of this contract.

**5. STEEL LINTELS, FRAMES, etc.**

**A.** Generally indicated and specified under structural steelwork.
- Supply lintels, frames, etc., required by special job conditions only.

**6. ANCHORS, BOLTS, RODS, CLIPS, etc.**

**A.** As indicated, detailed and/or as necessary for a complete and workmanlike job.
- Necessary nuts, washers, straps or other devices.
- Furnish to mason for building-in where necessary.

**7. LADDER RUNGS.**

**A.** Bent pieces of 3/8” diameter wrought iron or steel with 18” wide face.
- 6” projection into wall with hooked ends.
- 6” projection from wall.
- Spaced vertically 16” o.c.
- Furnish to mason for setting.

**8. GUARD RAIL ASSEMBLY.**

**A.** 1 1/2” diameter standard steel pipe rail assembly.
- Neat, welded joints less fittings.
- Extra length for anchorage into concrete with pin or bent plate anchor at each vertical support.
- Wall flanges as required.
- Shop coat of approved metal protection.

**B. Installation.**
- Securely install guard rail assembly to insure rigid job.
- Vertical members true and firm.
- Horizontal members level.

**C. Schedule.**
- Storage Area #3 as shown.
## MISCELLANEOUS AND ORNAMENTAL STEEL AND IRON (Continued)

### 9. ACCESS PLATES.

**A.** 1/4" thick, checkered steel plate.
- drop lift.

**B. Schedule.**
- two 16" x 24" access plates to Kitchen trench at points directed.
- four 12" x 16" access plates at points noted on drawings.

### 10. MANHOLE COVER AND FRAME.

**A.** Flockhart Foundry Co. #33650 or approved equal.
- 24" x 24" watertight frame and 5/16" thick, hinged steel plate doors.
- complete with hardware including cast bronze hinges, handles and padlock eye.
- complete waterproof assembly.
- shop coat of paint.

### 11. ALUMINUM WORK.

**A.** Ornamental Metal Letters.
- 1 set of exterior anodized aluminum letters made from 1/4" x 3" bars fabricated to simple ribbon style letters per full size details later submitted by Architect.
- anchor exterior letters to masonry by concealed aluminum rod anchors.

**B. Aluminum angles.**
- 4" x 1/4" x 3" continuous extruded anodized aluminum angle base completely around Assembly-Cafeteria area and anchored to masonry only.
- angles as noted at sliding door recess adjacent to All-Purpose Room Entrance door.

**C. Guard Rails.**
- 3/8" diameter, round extruded tubing or solid rod.
- rails, vertical supports, flanges, etc.
- neat, brazed joints without fittings.
- solid, secure anchorage to masonry or other construction.

**D. Aluminum Floor Strip.**
- stock tee strip 3/4" wide at intersection of wood and concrete finished flooring.

### ALTERNATE WORK

See Alternate Specification Sheet for addition of Metal Wire Door and Frame in Pantry.

## STRUCTURAL STEELWORK

### 1. GENERAL CONDITIONS.

**A.** Hereby made a part of this specification.
- Contractor cautioned to read same carefully.
- particular attention called to Article 48.

### 2. SCOPE.

**A.** All Class "A" structural steelwork as required by or inferred from drawings and/or specifications per latest AISC Code of Standard Practice.
- complete material, fabrication, transportation and erection.
- as shown on structural layout Drawing S-1, and as detailed and explained on other general drawings.

### 3. CODES AND REGULATIONS.

**A.** In strict accordance with latest edition of:
- AISC Specifications for The Design, Fabrication and Erection Of Structural Steel For Buildings (Riveted, Bolted and Arc-Welded Construction).
- Standard Specifications ASTM.
- Pertinent Specifications of American Welding Society.
- any pertinent federal, state, or local codes.

### 4. SHOP DRAWINGS.

**A.** Prepare detailed shop drawings in triplicate for Architect's approval.
- Include framing plans indicating size, weight, and location of all members and detailed drawings of all members and connections.
STRUCTURAL STEELWORK (Continued)

—Correct and return if required by Architect.
—Await Architect's approval before fabricating.
—Make provision for any work abutting steel as noted on drawings or as directed by Architect.

5. MATERIALS.

A. Structural Steel.
—Standard stock sections conforming to requirements of AISC and ASTM for steel for buildings.
—Free from injurious seams, flaws or cracks.
—Minimum sections and weights noted. Substitution must possess equal or greater section moduli and not otherwise violate AISC specifications.

B. Rivet Steel.
—Conforming to standard specifications ASTM for structural rivet steel.

6. FABRICATION.

A. Conforming to best practice in modern structural shops.
—Beams.
  —cut, fit and cope as necessary.
  —project no closer than 4" to the outside face of exterior walls except where detailed otherwise.
  —bearing plates as shown.
—Columns.
  —mill bearing ends.
  —splice only where necessary due to change in size of section.
  —base and billet plates complete with anchor bolts.
—Rigid Bents.
  —completely fabricated as shop units and delivered to job ready for erection.
  —all connections shop welded except loose connecting members which will be field bolted.
  —complete with connections, etc., to receive other members as shown.
—Connections.
  —AISC Standard Series throughout except where absolutely necessary to deviate or otherwise shown.
  —Designed to withstand stresses due to wind and eccentric loading both during and after erection.
—Shop Connections.
  —riveted or welded.
—Field Connections.
  —to columns or within 3'-0" of the face of any column—Dardalet Rivet Bolts.
  —other field connections—machine bolts, washers and nuts.
—All necessary rivets, bolts, rivet bolts, nuts, washers, etc., for complete fabrication and erection of all structural steelwork.

7. SHOP PAINTING.

A. Complete in every respect and conforming to best practice in modern structural shops.
—clean all scale, rust and foreign matter.
—one coat of approved metal protection to all surfaces except contact surfaces.
—well and evenly applied.
—to dry surfaces only.
—one additional coat of different color to surfaces inaccessible after assembly.
—identify all sections or pieces by suitable mark to conform with erection drawings.

8. ERECTION.

A. Erect complete steel frame.
—plumb and true in all particulars.
—bolt up during erection to provide for dead load, wind and erection stresses.
—temporary bracing and shoring as required.

B. Field corrections.
—as necessary to correct shop or detailing errors.
—cut, burn or drill members only with Architect's approval.

9. FIELD PAINTING.

A. All unpainted field bolts, etc., and any serious abrasions to shop coat.
—touch up with same material used for shop coat.

B. General Field Painting.
—Included in Painting Specifications.
KITCHEN CABINETS REDESIGNED

Designed by Sherwood, Mills & Smith, Connecticut architects, and being readied for production by a New England mill is a new line of kitchen cabinets which incorporates some unique features as well as some which are similar to other new lines. While the base unit as designed is not yet in production, it is an important component of the complete line and ought to be produced.

Wall cabinets have sloping fronts, which not only provides shelves sized to take the variety of items usually stored in kitchens, but also increases available storage space by 1/3. The roll-up doors eliminate the possibility of bumping one's head on an open side-hinged door. The suggested bins beneath the wall cabinets, while not yet in production either, are to provide storage space, convenient to the point of use, for staples such as flour and coffee. Base cabinet counter width has been increased from the normal 25" to 29". The projecting drawer space will afford knee-room for the housewife who would like to sit at her kitchen work—an advantage obtainable in no other cabinets to our knowledge. Below this are to be storage cabinets with pivoted (rather than hinged) fronts on the back of which the shelves are mounted. Thus, instead of having to bend over and peer into the cabinet to find something stacked at the rear, a touch on the pivoted door brings the cabinet's entire contents into view; the desired object can be lifted out easily. This same "lazy Susan" principle is adapted to corner units for both base and wall cabinets. The architects have recommended that the finish be natural to show the grain of the wood.

Of the complete assembly, only the upper wall cabinets of the Rolaway line are now getting into production. These are to be distributed eventually through normal retail outlets. Pivot-front base cabinets are available in other lines, but this is the only current proposal to combine design for comfortable sitting, drawer space, and the pivot front. Note that counter top is brought out into the open, for easy lighting and accessibility, by the sloping-front wall cabinet.
REMOTE CONTROL ELECTRIC WIRING

We can't resist telling you that the General Electric Co. has as much trouble with housebuilding as Mr. Blandings. G-E wanted to show us the new Remote Control Wiring System being installed in a house in Bridgeport, Conn., so we'd see how simple it is (and it has excellent points). However, frantic phone calls just before train time informed us that the showing was transferred to New York, so we had a hotel lunch and saw the system in G-E's basement auditorium. Supposedly the transfer was due to an imminent railroad strike; but a G-E fellow let slip the fact that the electricians just didn't get things ready on time.

In spite of the basement showing we came away enthusiastic. The system is almost foolproof, and of established electrical practices it upsets only one, and that not everywhere: a few local codes insist on conduit for low-voltage wiring, which makes no sense. In principle, the Remote Control switch operates a low-voltage relay which turns off (or on) the 115v current at a light or convenience outlet. Several switches can be hooked up to a single outlet without complex interconnections, and with each switch turning current on or off regardless of other switches; or one switch (or a number of them) can control a group of outlets. The permutations and combinations of the four items shown at the top of the page are almost endless. There are limits, of course; too long a run of wire causes excessive voltage drop which impairs operation, and more than three relays per switch overloads the transformer.

When installation is made during construction, all that shows is the switch (actual size above); no switchplates are used. For rewiring, the low-voltage wire may be fished through walls, channeled into plaster, or tacked to the surface. The system substantially reduces hazards of fire and electric shock (most people can't feel 25 volts) and makes it possible to install multi-switching in even low-cost houses (which seldom have it) as well as in expensive houses, on the farm, for outbuildings, in office buildings, factories, hospitals, tourist cabins, etc. With it, the farmer (or watchman or foreman or floor nurse) can control distant lights from a central point; Mr. Householder, reading himself to sleep, can put out the downstairs light without getting out of bed. Yes, we were fascinated with G-E's newest development; we examined it, poked it, asked questions, and fiddled with the beautifully designed switches for nearly two hours.

COMPONENTS: switch, operated by feather touch; relay with two coils, one for closing, one for opening circuit, relay mounted on standard outlet box in knockout; 25v transformer, only one required for average house; wire, no. 22 Flamencol-covered, two- or three-conductor, solid, with ribbed covering for identifying conductors. INSTALLATION: wire may be stapled to studding, is easily concealed; components and recommended installation conform to National Electrical code and union practices. SAFETY: the low voltage cannot cause fire, is imperceptible to touch. COST: in general, Remote Control system is cheaper than conventional wiring when 2 or more lights are to be controlled from 3 or more points. Costs of the two systems are roughly equal for 1 light controlled from 3 points, or for 1 or 2 sets of 2 or more lights controlled from 2 points; conventional wiring is at present cheaper for 1-point switching. AVAILABILITY: ample stocks should be in dealers' hands by the time this is published.

Installing: left, mounting 25v transformer; center, installing switchplate in lightweight wall box; right, installing low-voltage wiring. Note: no armor or conduit.

Top, BX runs (expensive 3- or 4-wire cable), large box for 16 wires, 9 connections, required for customary 4-way switch wiring; lower, simple low-voltage runs, one high-voltage supply, small outlet box, for Remote Control system.

Variation: one transformer, two Remote Control switches for two lights.
M. N. Schaeffer Co. building, Reading, Pa., has Corrosite, white and gray, on walls and ceilings to withstand steam and alkali cleaning, high humidity.

In this new building for F. W. Berk & Co. in Wood Ridge, N. J., manufacturers of chemicals, the owners expect a more accelerated corrosion problem than is normally encountered. Corrosite is being applied to all structural steel and window sash in two coats. All machinery, piping, etc., will also be Corrosited.
Twin-Ring Chimney Crown: utilizes force of air currents from every angle to improve chimney draft and increase efficiency of heating systems. All parts (tube, two outer bands, chimney proper, top disk) continuously extruded, quickly assembled by cementing, Coleman Co., Inc., 2nd & St. Francis Sts., Wichita 1, Kansas.

Thermo-Matic Register: individual room temperature control device for forced warm air heated residences. Warmed air from register is regulated automatically in relation to thermostat, Wichita 1, Kansas.

DOORS AND WINDOWS
Rite-Lock Series 500: new unit-type lock for sliding door, adjustable to various thicknesses and installed without mortising. Exposed parts of solid brass, four standard finishes. Adams-Rite Mfg. Co., 540 W. Chevy Chase Dr., Los Angeles, Calif.

Metal Window Well: made of heavy galvanized copper steel with flanges for attachment to masonry walls. Conserves yard space, silvery surface brightens up basement room. Types, sizes for every window, United Steel Fabricators, Inc., Wooster, Ohio.

ELECTRICAL EQUIPMENT AND LIGHTING
Timer: small, compact, for battery chargers, ovens, laundry equipment. Transparent polystyrene housing permits inspection of electrical contacts. Eagle Signal Corp., Moline 3, Ill.

Minuteman: portable self-contained emergency lighting system. Two adjustable lamp heads supply light, instantly and automatically, for approximate area of 10,000 sq ft for about five hours. When normal current is resumed, lights go out; battery restores itself for next emergency. No special wiring required—only convenient plug, Electric Cord Co., 30 Church St., New York 7, N. Y.

Reflector Flood and Spot Lamps: two new 75w flood and spot lamps with internal reflectors, to supplement standard 150 and 300w, R-30 bulb lamp claimed to be smallest ever offered in standard voltage ratings of 115, 120, and 125. Westinghouse Electric Corp., Box 1017, 306 4th Ave., Pittsburgh, Pa.

FINISHERS AND PROTECTORS
Corkoustic: resilient acoustical material, entirely composed of cork particles, again available. Glassless white paint finish reflects 80% of all light that strikes it. Thermal conductivity is 0.18 Btu per sq ft per hour, per degree of temperature difference. Building Materials Div., Armstrong Cork Co., Lancaster, Pa.

SPECIALIZED EQUIPMENT
Loudenrall: coin-operated automatic washing machine, with tamperproof meter. Machine can be stopped during washing cycle to add extra articles of clothing. F. L. Jacobs Co., 1043 Spruce St., Detroit 1, Mich.


SURFACING MATERIALS
PROGRESSIVE ARCHITECTURE, 330 West 42nd Street, New York 18, N. Y.
I should like a copy of each piece of Manufacturers' Literature listed.

We request students to send their inquiries directly to the manufacturers.

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PROGRESSIVE ARCHITECTURE

MANUFACTURERS' LITERATURE

 Editors' Note: Items starred are particularly noteworthy, due to immediate and widespread interest in their content, to the conscious and clarity with which information is presented, to announcement of a new, important product, or to some other factor which makes them especially valuable.

AIR AND TEMPERATURE CONTROL

1-183. Capture the Sun with B & G Hydro-Flo Heating (AX-1247), 17-p. illus. catalog on the application of forced hot water to all forms of radiant heating. Advantages, typical installations. Bell & Gossett Co.


1-185. Airjet, 4-p. illus. folder, including 15 loose sheets, on roof ventilators and vent flue caps for commercial and industrial buildings. Modern design with low silhouette (cannot be seen from street). Advantages, selection data. C. R. Gelert Co.

1-186. The New International Warm Air Oil Furnace (Form 121-8-472-25M), 6-p. folder on two types of automatic oil furnaces for basementless houses. Specifications, installation data. International Oil Burner Co.

CONSTRUCTION

3-1 Fabricated Structural Steel, 8-p. booklet containing advantages of steel construction, a brief description of the A.I.S.C. and its aims, research findings, and services. List of publications on steel construction. American Institute of Steel Construction.

3-5 Daylight in Industrial Buildings (1B-78), 36-p. illus. catalog on structural glass block used to bring daylight into building interiors. Made in a variety of face designs, each with its own light-transmitting characteristics. Advantages, typical installations, tables and charts, details, dimensions, specifications. American Structural Products Co.

3-6 Aluminum Sheet and Plate, 48-p. illus. booklet containing data on various sheet and plate alloys, gauges and sizes. Analysis of cost comparisons with other metals, tolerances, specifications, mechanical properties, tables of weight, ordering data. Reynolds Metals Co.


DOORS AND WINDOWS

4-134. Tinted Screening, folder on weatherproof tinted plastic screening; is worked like cloth, can be cut with scissors. Advantages. Firestone Industrial Products Co.

4-135. The Window of the Future—Today! 4-p. folder on awning windows, made up of separate panes, each of which operates independently, controlled by worm and gear shift. Specifications, price lists, general data. Gate City Sash and Door Co.


4-137. Apartment Casements (A-623), 4-p. illus. pamphlet on casements with tilt-in sill ventilators, steel screens, and casings. Types and sizes, installation details, specifications, general information. Truscon Steel Co.

ELECTRICAL EQUIPMENT AND LIGHTING

Two booklets dealing with causes of trouble in electrical equipment, and their remedies. Tables. Frank Adam Electric Co.:  


5-126. Surgical Lighting Technique (7L-949-1), 32-p. illus. catalog on direct Luminaire lighting for all surgical postures. 360w lamp features dual control and head end. Fixture combines track and offset mounting to provide for height adjustment over the operative site. Contents table, general data, photographs. American Sterilizer Co.

5-127. Prescolite, 4-p. illus. folder on recessed lighting fixtures for residential and commercial purposes; manufactured in 42 styles and finishes. Light distribution charts, specifications for standard package quantities, features. Pressteel Co.


FINISHERS AND PROTECTORS

Old St. Louis Courthouse Dome

GETS NEW ROOF OF REVERE COPPER

ANOTHER EXAMPLE OF COPPER AND COMMON SENSE

A new roof of Revere Copper was recently installed on the Italianate dome atop the old St. Louis Courthouse, now the museum of the Jefferson National Expansion Memorial. The new roof is part of a large restoration program that will preserve this handsome, historically-rich building for future generations.

Sheet copper for roofs, flashings and gutter linings is the common sense choice whenever you want extra years of service. Not only is copper the most enduring of all the commonly used sheet metals when exposed to the elements, but the Revere Research Laboratories have developed design and installation data that help you provide the very finest sheet copper construction.

Whenever you are faced with a problem concerning the design or installation of copper, look first to the Revere manual*; and if you do not find the complete answer there, the Revere Technical Advisory Service, Architectural, will be glad to help you. The chances are that they have already had experience with a similar problem. In any case, they'll do their best to help solve yours.

There is no charge or other obligation for this service. Simply call your Revere Distributor or the Revere Office nearest to you.

* "Research Solves Problems of Stress Failures in Sheet Copper Construction"

Sheet Metal Contractor: Mound Rose Cornice & Sheet Metal Works.
Distributor: Brass & Copper Sales Co. Both of St. Louis, Mo.

COPPER AND BRASS INCORPORATED

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New Bedford, Mass.; Rome, N. Y.

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MATERIALS OF INSTALLATION

SANITARY EQUIPMENT. WATER SUPPLY, DRAINAGE
19-236. Ornamental Metalwork (Booklet 148), 16-p. of illustrations on decorative metalwork such as balconies, treillage, window grilles, fences, etc. Julius Blum & Co., Inc.

SPECIALIZED EQUIPMENT


19-238. Hydropump (Bul. 47-8020), 8-p. bulletin on a split case multi-stage centrifugal pump for low capacity and high pressure pumping. Construction, sub-assembly, parts and dimensional drawings; installation photographs. Pump Div., Byron Jackson Corp.

SURFACING MATERIALS
19-239. Mafico Asphalt Tile Flooring, folder containing three pieces of literature on asphalt tile: manual for guidance in installation and maintenance; descriptive information on greaseproof tile, with color and pattern charts; leaflet recommending methods of cleaning and waxing tile flooring. Mastic Tile Corp. of America

19-240. Castle Square, 4-p. pamphlet on hardwood squares composed of wood strips insulated on all edges with latex filled, fibrous material. Installed without nails; mastic glue secures each square to sub-floor, cement slab, or old flooring. Advantages, laboratory test. Newcastle Industries, Inc.

REVIEWED JUNE '48
AIR AND TEMPERATURE CONTROL
1-176. Air Recovery (Bul. 105-A Form B-24), W. B. Connor Engineering Corp.
1-177. Cyclotherm to Meet Every Steam Need, Cyclotherm Corp.
1-178. Heat, Cyclotherm Corp.
1-180. Thatcher Oil Master, Thatcher Furnace Co.
1-181. Thatcher Thermaster Gravity Furnace, Thatcher Furnace Co.
1-182. The V & E Water Tube, V & E Products Co.

CONSTRUCTION
3-1. Temprex Duo-Pane, Appelman Art Glass Works.
3-2. Fenestra Panels for Up-to-Date Houses (BP-2), Detroit Steel Products Co.
3-3. Laminated Arches and Beams, Unit Structures, Inc.

DOORS AND WINDOWS
4-130. Hope's Lok'd Bar Steel Sash (Pub. No. 76B), Hope's Windows, Inc.
4-132. Durall Aluminum Tension Screen, New York Wire Cloth Co.
4-133. Modern Ways for Modern Days (G71179), Pittsburgh Plate Glass Co.

ELECTRICAL EQUIPMENT AND LIGHTING
5-121. The Executive Luminaires, All-Bright Electric Products Co.
5-123. Port-O-Reel, Industrial Electrical Works

FINISHERS AND PROTECTORS
6-123. Smooth-On No. 7 Iron Cement, Smooth-on Mfg. Co.
FOLEY'S DEPARTMENT STORE
Houston, Texas

RAYMOND LOEWY ASSOCIATES
Retail Planners and Designers

JULY, 1948 83
He himself has chosen Crane time after time in nationwide surveys. He knows Crane for fine quality . . . for modern styling . . . for beauty that endures. And you know the broad Crane line will suit his needs exactly—with a style for every taste, and a price for every budget. These things are true of Crane kitchen sinks, bathroom and laundry fixtures alike—and all feature the new finger-tip Dial-ese faucets. Again in heating, Crane offers a full choice of equipment . . . for any system, any fuel. When making selections, refer to your copy of "Crane Service for Architects," or ask your Crane branch for one. Of course, not all fixtures are immediately available everywhere . . . check your requirements with your Crane branch or wholesaler.

The outdoors comes in . . . to this conservatory kitchen. A gay blend of efficiency and charm, the room focuses on the new Crane Sunnycrest sink.
Lucky couple! The honeymoon need never be over for them. A bright horizon, aglow with opportunities for better, happier living, lies invitingly ahead.

She will not come back home to a lifetime of household drudgery like her grandmother did. He will never know the petty irritations caused by lack of modern conveniences.

They'll just press a button, turn a tap, depress a lever... and presto!... they'll have health-guarding pure water when needed, heat that radiates like sun-warmth from walls or floors, fuel that is clean and safe, comforts and conveniences almost without limitation.

All this, steel pipe makes possible!

Durable, reliable, adaptable... and within pocketbook's reach of everyone... steel pipe goes on serving and extending its usefulness for the health, convenience, comfort and happiness of us all.

The interesting story of "Pipe in American Life" will be sent upon request.

COMMITTEE ON STEEL PIPE RESEARCH of American Iron and Steel Institute, 350 Fifth Avenue, New York 1, N.Y.

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1. Adjustable closing power.
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4. Adaptable through standard attachments to any type of door.
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7. Essential parts precision ground.
8. Most efficient packing prevents leakage around spindle.
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10. Special units for hospital doors, coupon booth doors, telephone booth doors and fire tower doors, etc.

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Automatically Trips Off

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Occur!

There's no worry about short circuits or overloads in the plants, stores and offices that are equipped with Thermag Panelboards made up with Thermag Circuit Breakers.

These efficient circuit breakers interrupt any dangerous current by operating automatically and tripping the handle to the "off" position to indicate the circuit in trouble. There's no intermediate handle position... nothing to replace... no danger of shock.

This modern safety and convenience is the result of a thermal-magnetic action that automatically opens the troubled circuit... and as long as the trouble remains, the circuit breaker will continue to trip to the "off" position when any attempt is made to restore service.

Once the cause of trouble has been eliminated, the circuit breaker handle can easily be flipped to the "on" position, restoring the circuit to normal operation.

See your nearest Thermag Representative for more details (he’s listed in Sweet’s), or write direct for Bulletin No. 301.

For Automatic CIRCUIT PROTECTION install
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Shockproof and simple to operate, Thermag Panelboards can be installed in any size plant, store or office. Capacities: 15 to 50 amps, for 120 volts AC service only; single or double pole; 4 to 42 branch circuits with 3 wire and 4 wire solid neutral mains.
HERE’S THE IDEAL All-Year air

"We have been most pleased with our Servel unit. I can unhesitatingly recommend it as an efficient, economical method of year-round air conditioning," writes Dr. A. C. Traverse, of the Stephenson-Traverse Clinic, 515 College, Alva, Oklahoma.

From his attractive new office at 924 Noble Avenue, Bridgeport, Connecticut, Dr. Leonard C. Scalzi writes: "It gives me a great deal of pleasure to tell you how completely satisfied I am with the performance of the Servel All-Year Air Conditioner which was installed in my offices last September.

"As you know, I had originally planned on using electrical air conditioning equipment, and I am glad now that I changed my mind. The Servel unit is so simple to operate, so efficient, so quiet, and so economical, that I am quite sure I made the wiser choice.

"When you told me about the Servel All-Year Air Conditioning, you mentioned the hundreds of owners who were completely satisfied with its performance. You may now add me to that list!"

Cordially,

Leonard C. Scalzi, M.D.

"We selected Servel All-Year Air Conditioning for our Clinic because of its low cost and economy of operation. The heating and cooling efficiency of this unit is excellent," writes E. A. Weinheimer, M.D., 201 E. Jackson, El Campo, Texas.

Interior view of Cottage Hospital, Pomona, Cal. Dr. W. D. Stahl says: "The Servel unit has exceeded my expectations, especially since it was possible to utilize the existing duct system previously used for forced air furnace. It has proved most satisfactory."

"We selected Servel All-Year Air Conditioning for our Clinic because of its low cost and economy of operation. The heating and cooling efficiency of this unit is excellent," writes E. A. Weinheimer, M.D., 201 E. Jackson, El Campo, Texas.
conditioning FOR DOCTORS' OFFICES

Servel All-Year Air Conditioning wins praise from M.D.'s the country over

You've got many points in your favor when you talk Servel Air Conditioning to doctors planning to build or modernize offices, clinics, or small hospitals. Hundreds of Servel units are already successfully providing an ideal indoor climate—the year round—in doctors' establishments, in homes, offices, and stores the country over. All the owners are delighted with the efficiency, simplicity, and economy of Servel operation, as the representative testimonials on these pages indicate.

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With one simple unit, Servel supplies complete, year-round air conditioning. In summer, at the flip of a switch, Servel circulates refreshingly cooled air, from which sticky, wilting humidity has been removed. Servel also filters out irritating dust, dirt, and pollen.

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Planning your clients' buildings around Servel All-Year Gas Air Conditioning gives you an opportunity for many innovations in design. You can effect construction economies, too, which will materially reduce the net cost of the conditioner.

Doctors are air conditioning-conscious. Make the most of your opportunities by talking Servel All-Year Air Conditioning to them and to other interested clients. Send today for complete information on Servel's long list of successful installations in doctors' offices and clinics, in homes, in retail stores, and in offices the country over. Get the facts from your local Gas Company, or write Servel, Inc., 4807 Morton Avenue, Evansville 20, Indiana.

"Ideal for efficient work in medical offices," says Dr. Fred L. Scott, of Huntington Park, California, about the temperature and humidity conditions maintained in his offices throughout every season by the economical Servel All-Year Air Conditioner.
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FIRST ELECTRONIC signal control elevators

Otis engineers, who were working on electronics before World War II, have applied the magic of this new science to improve Signal Control operation. As a result, you can now summon an elevator by simply touching a plastic arrow in the landing fixture.

The instant your finger contacts a 'touch button' a directional arrow lights up. The light shows that your call has been registered. As the elevator approaches your floor the overhead lantern also lights up. Both lights remain aglow until the car has stopped, you have entered, and the doors have closed. It's all controlled electronically.

Otis Electronic Signal Control gives you continuous and visible evidence that it has received and remembered your call — evidence that is pleasantly and attractively reassuring.

Otis Elevator Company. Offices in all principal cities.
The first installation of Otis Electronic Signal Control can be seen in the Universal Pictures Building, 445 Park Avenue, New York City. It operates the four local and four express elevators that serve 21 floors and a penthouse. Otis Electronic Signal Control is applicable to all elevators. But for the immediate present, it will be confined to large buildings where elevators travel at speeds of 500 feet per minute or more.
FROM THE TECHNICAL PRESS

FROM OTHER PUBLICATIONS


A very pointed evaluation of standards in the field of illuminating engineering. Might well be used as an approach to the problem of standards generally (standards being stepping stones on the path of progress).

The author's classification of foot-candle levels comprises: threshold; ideal; optimum; recommended. The gist of his argument is in favor of flexibility, aiming for ideal conditions. Establishing "just enough" as standard tends to degrade general practice, which would otherwise tend naturally toward at least tolerable conditions. Without ideal conditions as a goal standards become static, out of date; a drag on progress.

The paper is concerned with close visual work and considers three kinds of visual tasks, of very different requirements, impossible to illuminate in terms of a single standard: (a) black details to be seen against a "white" background (b) black details seen against a dull background (c) very low brightness contrast, as sewing with black thread on dark cloth. For any one task three foot-candle levels can be determined: threshold; optimum; ideal. The recommended level for any one task is not so easy. It is necessarily a compromise involving (for instance) economy, practicability, and conservation. There is danger in letting such a compromise become fixed as a standard.

Threshold levels for Task A above are of the order of 10 foot-candles and up, varying with size of type, brightness contrast, etc.; Task B, 100 foot-candles and up; much more for Task C. Of course we are able to adapt to such threshold levels, but we do so at the expense of eyesight or reserve energy.

If we are to continue working we must work at optimum levels of illumination—the most favorable level considering one certain factor such as production, rate of reading, or the like. Such a standard, however, does not take in enough territory. There are more factors in achieving speed of reading, for example, than foot-candles alone. Ideal illumination would enable us to get the most out of the effort with the least drain on our reserves.

Recommended levels, usually compromises between threshold and ideal, are of course different for the various tasks. For the examples given in the paper they vary from 50 to 1875 foot-candles. This great range has to be available if we are to handle such divergent tasks as those outlined (and such tasks are common in industry today). We are used even to higher levels of illumination under outdoor conditions. In fact, Man evolved his seeing mechanism under very high levels of illumination so they are fairly "natural." Under artificial light, however, high levels of illumination result in high brightness.

A Candidate for the Cabinet

A candidate for the Cabinet... Bergen Cabinet, we hasten to add... always has the following qualifications:

1. Vision, to integrate modern design with modern merchandising.
2. Desire, to see his plans translated into tangible form without compromise or deviation.
3. Acumen, to recognize the absolute necessity of engaging the right craftsmen to implement the first two qualifications.

Among the distinguished members of our "Cabinet" is Kellogg Fine Papers, a division of U. S. Envelope Co., with Showrooms at Radio City, New York. Mr. Harold Guy is the designer.

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(Continued on page 98)
History will be made under a roof of ANACONDA COPPER

Party delegates assembled in the huge Philadelphia Municipal Auditorium will select their candidates for the nation's highest office. Hon. Bernard A. Samuel, Mayor of Philadelphia, will welcome the delegates to the first of the national conventions which opens here on June 21st.

This spring more than 100,000 pounds of Anaconda Copper were used in reroofing the barrel vault type roof which covers this vast amphitheatre. The proven durability of copper, its fabricating qualities, corrosion resistance, appearance and low maintenance costs, combined to give this time-tested metal preference over all other materials considered.

Design and supervision of this tremendous roofing job were in the hands of Joseph A. Roleter, Director of City Architecture, and Thomas Buckley, Director of Public Works. The J. Edward Linck Sheet Metal Works of Philadelphia and Washington were the contractors.

The Philadelphia Municipal Auditorium, erected in 1930, has a seating capacity of more than 13,000 in the main hall.
contrasts and all the tricks of “brightness engineering” must be brought into use if we are to save our eyes. We have seen “usual” foot-candle levels raised greatly in the past 10 years. There seems to be no limit short of ideal seeing conditions.

“Adequate light, proper lighting, easy seeing, and good seeing conditions are universally important and are challenges worthy of all the knowledge and ingenuity that we possess.”


A “ceiling of light” gives an initial reading at desk level of 60 foot-candles. GO-inch Slimline lamps on 24-inch centers, are set close to the white-painted ceiling, with “egg crate” louvers flush with the bottom of the beams. The “egg crate” is more like a subway grating, very simple and attractive.


Startling “before and after” photographs illustrate these articles describing the rehabilitation of the card-punch section in the Bureau of Internal Revenue and the entire GPO (Government Printing Office, biggest printing plant in the world). Improved production in the card-punch room paid for the renovation five times over in the first year. The revamping included repainting and refinishing, not only walls and ceilings but machines, desks, and floors, as well as fluorescent lighting.

The renovation in the GPO included furred ceilings to avert a replastering job which incidentally provides a flush reflecting surface for the new fluorescent lights. Repainting helped enormously, too.

HOSPITAL PLANNING


Who Should Take Part in Planning Our Hospitals?

A round-table discussion participated in by architect, administrator, consultant, and trustee, called together by Modern Hospital. Emphasizes the necessity of having a survey made by a competent consultant before any plans are drawn, and determining realistically what the project may cost before going to the community for funds.

Basic Considerations in the Hospital Design. Nathaniel A. Owings.

Controlling factors in the design of a contemporary hospital are (1) environmental requirements including site consideration, orientation of patients' bedrooms and sound control (2) efficiency of operation, and (3) economy of construction.

Enough space must be used to establish a “suburban character—a place where grass and trees can live.” This means either moving to the country or clearing enough space in the city. (The author proposes 10 percent coverage or less.) The patients' rooms must face south, necessarily in a straight line, and this establishes the form of the structure.

The article is illustrated by typical plans and views of the VA Hospital at Fort Hamilton, Brooklyn.


Division of Hospital Facilities. U. S. Public Health Service.

Two more excellent articles on hospital planning. The first outlines the various
WITH the new Honeywell air diffusion Register, unsightly wall and ceiling streaks are eliminated.

Built into the back of this forced air register is a seal of sponge rubber. This rubber gasket, together with its wide diffusion, assures streakproof operation. Stress this feature to clients and prospects. Point out how the Honeywell Register puts an end to a frequent cause of costly redecorating. And, in addition, explain how the streamlined contour of the extended grille affords unbelievable smooth, even air diffusion into every nook and cranny of the room. On both high and low wall installations, temperatures are the same across the room as they are near the register. The air is diffused in every direction instead of being concentrated in a narrow stream.

It's advantages like these that explain why the new Honeywell Register represents such a spectacular improvement in performance—plus striking beauty. Minneapolis-Honeywell, Minneapolis 8, Minn. In Canada: Leaside, Toronto 17, Ontario.
stages of a complete project: program, schematic stage, preliminary drawings, working drawings, award of contract, construction, equipment. The importance of the program and schematic stages has been too often overlooked in the architect's fondness for making impressive sketches (and the fondness of all Boards for "pictures"). The second article stresses the variety of factors that must be considered in addition to construction costs (equipment, site survey and soil investigation, architects' and consultants' fees, acquisition of site, landscaping, fund drives, etc.). The fallacy of using "per bed" costs is exposed and a realistic evaluation in terms of the actual structures is advocated.

Repatriation General Hospital, Concord, New South Wales.

A. G. Stephenson, architect.

A very handsome, up-to-date military hospital for 600 beds, featuring balconies at all wards. Triple-hung windows giving access to the balconies seems an excellent solution to the problem of summer and winter exposure. The project was completed in January 1942, a considerable contrast with our own Veterans Hospital program.

St. Luke's Builds a Quonset Ward.

Earl Finberg.

Urgent need for additional bed space at St. Luke's Hospital, Duluth, Minn., was filled in short order by Quonset construction at a cost of $1685 per bed. With radiant heating and plenty of insulation the temporary structure provides satisfactory accommodations for 30 patients, pending the carrying out of the hospital's expansion program.

MANUALS, PAMPHLETS


In the former of these two publications, Dr. Sabine gives a clear exposition of the meaning and use of acoustical terms and the phenomena of reflection and absorption of sound. In describing the problems most frequently encountered (acoustical defects in auditoriums, sound conditioning work rooms, etc.), he gives simple explanations, illustrated by the solution of typical problems, and makes recommendations for the use of suitable corrective material. Design of interiors for good acoustics with a minimum of "padding" is hardly touched upon. This is, after all, the province of the acoustical consultant—rather beyond the architect.

The second publication covers sound absorption data for the various commercial materials, presented concisely and attractively in tabular form. Tables are included for absorption of seats and audience and for general building materials (including openings).


Not only is this a comprehensive manual "for prefabricated houses," it is a complete text on wood as a housing material. There is full discussion of properties of the various woods, grading, preservatives, finishes, insulation and ventilation, gluing, etc. Presented very clearly and completely, with numerous tables, diagrams, and photographs.

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FLUSH DOORS are:

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1. Made of "Spellerized" steel for easy bending and clean-cut threads.
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PROVED BY THE TEST OF TIME

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Pittsburgh 30, Pa.
Collegiate textbooks seem to be a necessary evil. They probably will remain such until the typical college is transformed from a "Place of Teaching" to a "Place of Learning." This must be taken into consideration whenever such books are critically examined, because of the relatively little freedom left to authors to determine the scope and extent of material covered. The book which is accepted by the average college for undergraduate engineering students necessarily reflects present methods of educating which, in the opinion of those most concerned with it, are far from being what they should be. The first question that arises therefore is whether the authors succeeded in turning out an engineering compromise. The answer to this question is in the affirmative, in the case of *Elementary Structural Analysis*. The book covers the requirements of the usual curriculum of structural theory, but also incorporates important topics which are, unfortunately, often not considered part of undergraduate courses. For example, the book covers such topics as experimental structural and stress analysis by means of models, various methods of deformation measurements, measurement of surface strains, and the applications of photo elasticity. These subjects, today, should become standard knowledge of the engineer as soon as he departs from the uninteresting routine work. The chapters dealing with this subject are entirely justified and it is hoped that the subjects will find their way into more college courses for civil engineers.

An attempt is also made to call the readers' attention to related structures which ordinarily are not considered within the civil engineering field, such as airframes, ship structures, chemical engineering structures, etc. Familiarity with related structures can be extremely useful. They offer stimulation and inspiration to the structural designer when seeking solutions in his own field. It would have been a welcome addition if more space had been allotted to these topics.

The introductory chapter of the book acquaints the student with some basic considerations underlying the design and construction of civil engineering structures: live and dead loads, make-up of girders and trusses, etc. Familiarity with related structures can be extremely useful. They offer stimulation and inspiration to the structural designer when seeking solutions in his own field. It would have been a welcome addition if more space had been allotted to these topics.

Eight chapters of the book cover general topics of analytical and graphic statics; determination of reactions, shear, axial forces and bending moments, influence lines and deformations of determinate and indeterminate structures. Six separate chapters deal with types of structures: roof and bridge trusses of various kinds, three-dimensional framework, gravity structures, and (somewhat arbitrarily separated) long-span structures. In the last mentioned chapter, only a few pages are devoted to
Costa's use of Enduro-Ashlar Terra Cotta is indicative of modern architectural trends in wall surfacing... interior or exterior.

The interior treatment of Costa's processing rooms is a soft cream glaze with a base course and decorative bands of azure blue.

The ceramic-glazed surface of Enduro-Ashlar Terra Cotta is permanent... does not absorb odors and is easily cleaned by simple soap-and-water washing.

In food processing plants, the larger size ashlar units are an advantage... ranging from 8" x 16\(\frac{1}{4}\)" up to 2' x 2', numerous, unsightly joints are minimized and application simplified.

Enduro-Ashlar Terra Cotta is a precision product, ground on sides and ends after firing to specified dimensions.

Enduro-Ashlar Terra Cotta is delivered to the scaffold in substantial corrugated containers, it is not easily chipped, broken or scratched. These important features facilitate speed, economy and accuracy in erection.

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PERTH AMBOY, N. J.  SOUTH AMBOY, N. J.
The general approach of the book is based on a strict separation of analysis and design, being concerned only with the latter. This is done quite intentionally, as the authors point out, since it is in accordance with current (and past) college practice. A slight departure from this artificial and rigid separation might have been of great benefit, contributing to the better understanding of the subject.

At this point also the rigorosity of the proofs should be mentioned. The desirability of the presentation of such proofs seems to be beyond question, however the feasibility of carrying out these intentions in engineering college textbooks is something of a problem. It appears that the authors have compromised at a level which, in their judgment (based on their positions and experience at M.I.T.), corresponds to the knowledge of the average undergraduate student in the elements of higher mathematics. This knowledge, as most practicing engineers have probably observed, is rather low...

The most important requirement of the textbook however is clarity of expression. Elementary Structural Analysis fulfills this to a high degree. The contents within each chapter are easy to understand, are systematic and very thoroughly presented. The efforts of the authors on this score are especially praiseworthy. The illustrations, which are of primary importance in technical literature, are also done with great care: special notations have been introduced in the figures to permit the student to differentiate at a glance between applied forces and reactions. The numerous and detailed illustrative examples contribute to further understanding of the subject. This type of clarity of exposition is the real measure which will ultimately determine the usefulness of the book not only to the student but also to the practicing engineer and the interested architect.

PAUL WEIDLINGER

AN INTRODUCTION TO STANDARDS IN BUILDING

D. Day Harrison, E. & F. N. Spon Ltd., 57 Haymarket, London, S.W.1, England. 1947. 84 pp., illus. 8s. 6d.

This little book is packed full of the liveliest discussion of building standards that has yet appeared. It takes modular construction in stride and gives a good historic background to dimensional coordination generally. (The old 40-inch ell is a better planning module than the foot or yard and is very close to the meter. Another old standard, 42 inches, is to be seen in American Colonial work, also French and Russian.) A 3-inch module, conforming to their brick coursing, is as much in favor in England now as the 4-inch. If they should go in for universal coordination it is likely that they would settle on a 3 inch-42 inch system, and wouldn't that be a mess, alongside the 4 inch-40 inch American standard?

The continual establishment and revision of standards is a natural process that legal enactments merely help (or hinder). Establishment of minimum standards (in housing, for example) generally results in beating down all standards. Unless we regularly bring

(Continued from page 100)}
FOR SKILLED HANDS
... a powerful tool!

The technical and artistic achievements of our modern world have this in common—they are born of the pencil point. Engineer, artist, architect, draftsman, designer and student—all rely upon the drawing pencil to transfer their ideas onto paper, their visions into reality.

VENUS Drawing Pencils are engineered to give you drawing and drafting perfection. They are accurately graded to assure uniformity in all 17 degrees... strong in performance... smooth and clean in action.
NU-WALL PERMANENT BONDING PLASTER is the product of years of research—research devoted to the development of a plaster that would adhere to any conventional surface without the usual costly and time consuming preparation.

Architects and specifiers everywhere have been quick to take advantage of this revolutionary new bonding plaster. They've discovered that NU-WALL not only reduces costs but covers easier and quicker as well. In addition, NU-WALL takes any desired finish—even serves as a textured finish in itself.

There's no sacrifice of quality either. NU-WALL is tested and proved on the job—guaranteed to form a firm, enduring bond with glazed tile, smoothest concrete, brick, fibre board, wall board, insulation board or any construction material of gypsum, cinder or cement base.

NU-WALL cuts remodeling costs, too—eliminates the expense and inconvenience of knocking down old plaster and ripping out woodwork.

Give NU-WALL a fair trial. We know you'll agree with the contractors, dealers and architects who have found NU-WALL the most outstanding plaster available today.

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HILLYARD SPECIFICATION CARDS


RICHARD J. NEUTRA has been appointed guest lecturer on theory of design, city and regional planning, and architectural design for a three-day session to be conducted by the Summer Quarter, Montana State College, July 26th through July 28th. Complete information may be obtained from the Director, Summer Quarter, Montana State College, Bozeman, Mont.
Modern architecture is building a whole new world up under the sky—roofs that meet the varied needs of modern life. Garden roofs for apartments and hotels. Promenade roofs for schools, hospitals and office buildings. Heavy traffic roofs for factories and warehouses.

Ruberoid has the specifications to make these new, imagination-stirring developments fully workable and practical. Soundly engineered, fully proved in actual construction. They’re available and practicable now.

What building are you planning—commercial, institutional, religious, industrial or public? No matter what type of roof you have in mind for the job, Ruberoid specifications will help you make fullest use of that valuable roof area.

Our nearest sales office will be glad to furnish these specifications to you, or consult your Ruberoid Approved roofer.

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Representative of this trend in modern design, here’s a landscaped roof that brings apartment dwellers a pleasant spot for relaxation and play. Flowers, shrubbery, trees and grass high above busy streets—up in the sunshine and fresh air!

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Ruberoid makes every type of built-up roof—Smooth Surfaced Asbestos, Coal Tar Pitch with gravel or slag surfacing, or smooth or gravel-and-slag surfaced asphalt... in specifications to meet any need. Ruberoid Approved Roofers are not prejudiced in favor of any one type. You are assured of one source for all materials, centralized responsibility, smoother operation, uniform quality!

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A complete line of quality Industrials... open, louvered or glass.

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Notices
(Continued from page 104)

The appointment of JOHN E. BURCHARD as dean of humanities at the Massachusetts Institute of Technology has been announced. Mr. Burchard is director of the Albert Farwell Bemis Foundation and director of libraries at the Institute.

MICHAEL CZAJA, associate professor of architecture, State College of Washington, has been appointed visiting professor of design at Stanford University for the summer session June 22nd to August 22nd.

HENRY J. BETTMAN, member of the architectural firm of Garriott, Becker & Bettman, has been appointed chairman of the Cincinnati City Planning Commission.

ELECTED

CHARLES G. RUMMEL, architect, who has been associated for many years with Naess & Murphy, Chicago, Ill., was elected recently to the Board of Directors of the Economic Club of Chicago.

FELLOWSHIP

John Henry Bickel III, of Louisville, Ky., has been named winner of the GEORGE G. BOOTH TRAVELING FELLOWSHIP COMPETITION for 1948. Announcement was made recently by the College of Architecture and Design, University of Michigan, which sponsored the competition. Mr. Bickel plans to travel in Europe.

COMPETITION

A Manufacturers' Advisory Committee to the Museum Design Project, Inc., which is co-sponsor with the Museum of Modern Art, New York, of the current LOW-COST FURNITURE COMPETITION, was created recently. The new Advisory Committee will make available to the Project expert opinion on current problems of manufacture and distribution. The Committee's detailed information will be published in a bulletin and distributed to the competitors and research teams. This is the first time an entire industry has banded together on a nationwide scale in a single project to produce well-made furniture within the average man's income. Prizes and grants totaling $55,000 are offered in this competition, which closes on October 31, 1948. Nearly a thousand entries, from the United States and 30 foreign countries, have been received to date.
One of the essentials of modern retailing is “the right merchandise properly displayed.” In modern air conditioning, an important essential to success is adequate automatic temperature control—“the proper equipment, correctly applied.” Modern merchandising and modern temperature conditions go hand in hand, for comfort means better satisfied customers and more efficient, better-natured employees.

In the up-to-the-minute Foley Department Store in Houston, a Johnson automatic temperature and humidity control system is at work, especially engineered to fit the requirements of the comprehensive air conditioning and radiant heating installations. All of the air conditioning units, as well as the four radiant heating zones, are commanded by Johnson T-900 master thermostats which measure the outdoor temperature on the various exposures. In accordance with the demand for heating or cooling, those thermostats automatically reset the Johnson T-901 sub-master thermostats which are in command of the heating and air conditioning apparatus throughout both the store and the service building. Many Johnson coil valves and 140 Johnson dampers are at the command of these modern, efficient controllers... Ask a Johnson engineer from a nearby branch to tell you just how a specially-planned Johnson system can solve the automatic temperature and humidity control problems with which you are confronted. He brings to you the result of more than sixty years of experience in just this one line of business. JOHNSON SERVICE COMPANY, MILWAUKEE 2, WIS., DIRECT BRANCH OFFICES IN PRINCIPAL CITIES.

JOHNSON Automatic Temperature and Air Conditioning CONTROL
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...ATLAS WHITE CEMENT

A sparkling finish of factory-prepared portland cement paint made with Atlas White Cement imparts clean, refreshing beauty. And with beauty, there is utility. For, when applied to concrete, concrete masonry, stone, brick or hollow tile, this dependable finish penetrates the pores to form a protective coating that resists moisture, dirt and dust.

Just as Atlas White Cement is used by outstanding point manufacturers in making portland cement paint, so, too, is it used as a matrix to bring out clearly and permanently the true color values of the pigments and aggregates used in Terrazzo, Stucco and Architectural Concrete Slabs.

Atlas White complies with Federal and ASTM specifications for portland cement. It has the same advantages for concrete and is used in the same way. Atlas White concrete looks clean, fresh and colorful...and it cleans easily. Maintenance costs are low.

For further information on the uses of Atlas White Cement, see SWEET'S Catalog, Section 4B/2 and 13B/8, or write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, N. Y.

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"THEATRE GUILD ON THE AIR"—Sponsored by U. S. Steel Subsidiaries
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Fireproof Construction ... in a hurry!

Speed may not be the first requirement—but it's an important factor in many construction jobs these days.

It follows right on the heels of those prime requirements—good fireproof construction and low cost.

To get all three benefits, Fenestra* Metal Building Panels were specified for this building. 7,200 square feet of 1½"-deep Type D Panels were used as base for its built-up roof. 14,200 square feet of 3"-deep Type D Panels were used for the second and third floors, a concrete slab being poured over the panels and a suspended ceiling installed underneath for fireproof construction.

Fenestra Panels are quickly laid and interlocked without special skills or special tools. Other work can proceed without delay ... the panels provide a flat surface that is ideal for wheeling in other materials.

Fenestra Building Panels are suitable for all types of buildings. They save construction time and money, not only in floors and ceilings, but also in walls, partitions and roofs. See Sweet's Architectural File for 1948 (Section 3c-1) or mail the coupon for full information.

THESE NONCOMBUSTIBLE FENESTRA PANELS SPEED ALL TYPES OF CONSTRUCTION

TYPE C FOR WALLS. Two metal members pressed together, with felt at each side to prevent metal-to-metal contact. Filled with insulation and closed at the ends, at the factory. Standardized in 3" depth and 16" width, in 18 gage painted steel or 16 B & S gage aluminum.

TYPE D FOR FLOORS. Box beam formed by welding together two steel sections. Side laps interlock to form continuous flat surface. Standardized in 16" width. Depth 1½" to 9". Gages 18 to 12. Type AD available with two flat surfaces.

HOLORIB ROOF DECK. Steel sheets reinforced by three integral triangular ribs on 6" centers. Flat surface for mopped application of insulation and roofing. 18" wide. Lengths to 24' to ft. Gages 18 and 20 are standard.

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Dept. PA-7, 2253 E. Grand Boulevard
Detroit 11, Michigan

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JULY, 1948 109
“Answer this question, Homer. Sneeze, And you’ll be living on Easy Street!”

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MAN TAKES COMMAND

(Continued from page 108)

the spread of “good taste” in forms which sacrificed fresh invention to the refined mimicry of antiquarian objects. But his treatment of mechanization in the kitchen and the bathroom is equally penetrating; for he relates the improvement of kitchen utilities to feminism and the servant problem, quotes Catherine Beecher and Harriet Beecher Stowe in their forgotten book, The American Woman’s Home, and goes on to show the direct influence of the efficiency engineers in the redesigning of the kitchen, not least through the studies done by Lilian Gilbreth, wife and collaborator of one of the early efficiency engineers, Frank B. Gilbreth.

This book is a history of mechanization, replete with indispensable dates, figures, names, illustrations, and at the same time an interpretation of the nature of modern man in relation to the machines and utilities he has created. As an interpreter, Giedion raises questions of the widest importance. Should, for example, the bath be merely a means of superficially removing dirt, or should it become once more, as it has been in so many other cultures, an instrument of regeneration, a transformation of soul as well as body, accompanied by a collective ritual of conversation, art, physical exercise? This question is not settled automatically by the mass production of cheap plumbing: for it is quite conceivable that in many parts of the world there will be a return to the communal bath and a diminishment of the private bath: a matter which would profoundly alter the internal plan and the general design of housing projects.

There is so much to praise in this work that one hesitates to mention its few shortcomings. There are occasional oversights, for example, like the failure to describe or illustrate the original Morris chair, one of the soundest contributions to adjustable furniture, and to analyze its progressive vulgarizations and debasements in the United States. As might happen with a foreign observer, relying mainly on documentary evidence, he underestimates a little the influence of the Craftsman movement. Much harder to account for than these oversights is the very abrupt account of the introduction of mechanization itself: overwhelmed by his concern with source material Giedion has, apparently, paid little attention to other interpreters of mechanization; hence he overlooks the decisive contribution of the mechanical clock, the very pattern of repetition and standardization, of timed movement and spaced timing; and he passes by the self-imposed regimentation of the human personality, in the ideal types of the monk, the business man, the soldier. These are matters that have been treated at some length elsewhere

(Continued on page 112)
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MAN TAKES COMMAND

(Continued from page 110)

and the neglect of them leads to an inadequate account of even motion itself, while it keeps Giedion from doing full justice to the antiorganic nature of the original processes of mechanization.

In the last chapter, “Man in Equipoise,” the author endeavors to point the moral that is implicit in the series of brilliant monographs that make up this book. He shows that mechanization, being in a sense as impersonal as nature, equally needs control if man is to protect himself against its inherent perils: indeed, because “mechanization sprang entirely from the mind of man it is the more dangerous to him” if only because “mechanization reacts on the senses and on the mind of its creators.” He calls attention to the need for a more organic kind of equilibrium; indeed, he says that “our period demands a type of man who can restore the equilibrium between inner and outer reality.” “We have refrained,” Giedion continues, “from taking a positive stand for or against mechanization. We cannot simply approve or disapprove. One must discriminate between those spheres that are fit for mechanization and those that are not; similar problems today arise in whatever sphere we touch.”

From my standpoint, these concluding observations are pure gold; and the great virtue of Giedion’s book, among its many extraordinary virtues, is the fact that it provides the data on which such judgments may be made. Mechanization Takes Command is, after all, the preface to a far more important book, still unwritten, to which each of us must contribute a chapter. The title of that new work is: Man Takes Command.

NOTICES

NEW ADDRESSES

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TURNER CONSTRUCTION CO., opening Chicago office, Bankers Bldg., 105 W. Adams St., Chicago, Ill.

EDGWOODB FURNITURE CO., INC. (sells directly to architects), 208 E. 27th St., New York 16, N. Y.

ABRAHAM WARNOFF, 1110 13th St., N. W., Washington 5, D. C.

JULIUS SIGMAN, NICHOLAS FARKAS (SIGMAN & FARKAS, CONSULTING ENGINEERS), 14 Church St., New York 6, N. Y.

McMAHON & HILLS, partnership dissolved. New addresses: RUSSELL F. HILLS, 173 Barker St., Hartford 6, Conn.; JOHN J. McMahan, 189 Barker St., Hartford 6, Conn.

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This new book is worthy of being put alongside Space, Time and Architecture, and one would have to look long for one written in the past decade that belongs on the same shelf. It is a series of related monographs on the way in which mechanization has transformed the human environment, and, naturally, the human soul in the last century and a half. Much of the data for this 'anonymous history' as Giedion calls it, has already been obliterared, but with great pertinacity Giedion has salvaged and appraised some extraordinarily interesting material. By no means all of this book deals with building and furnishing—one of the most exciting (and disturbing) chapters is on the mechanization of the meat-packing industry—but to such matters of concern to architects as the designing of the Yale lock, the transformation of the kitchen by the efficiency engineer, and the invention of adjustable furniture Giedion has made a rich and original contribution. A most important fact about his book is that, for all his patient research and audacious conclusions, he does not, like LeCorbusier, assume an attitude of pious adoration before the machine; as Henry Adams would put it, he is on the side of the Virgin as well as of the Dynamo. Refusing to swallow mechanization whole, yet certainly not rejecting it whole, he tries to relate it to the human need for equilibrium and growth. No one has done this particular job before, and no one should have to do it again in our generation. Giedion, who has recently demanded a new monumentality in modern architecture, has himself created a monument.
The editors of PROGRESSIVE ARCHITECTURE got to thinking about the need for a book on houses for architects to show to their clients. They write and edit each month for a professional audience; perhaps, for once, they should do a job which would appeal to—and, if possible, influence—the great consuming, home-building public. Maybe, they thought, they should do a book.

Here's the book. Working through many a spring and summer evening and top of the morning, they've come up with a collection of HOMES selected for their livability, their friendliness, and intimacy, their invitation to informal attractive living. They've done this for only one reason—to give you a useful book that will help you interest your clients in good residential architecture; to promote design progress yet further; to show in page after page what all of us know anyway—that today's architecture can be charming and beautiful and livable.

The book is cloth-bound with a cover designed by Stamo Papadaki. There are 287 handsome architectural photographs and 116 plan drawings by Elmer Bennett. All regions are represented, and many, many architects. There is just enough text to explain—in easily understood terms—what the trends are in home design, and why these houses are good, in planning, use of materials, and in many details of design and construction.

Price $5.00
DURING THE LAST YEAR I'VE TANGLED, IN PRINT, WITH A NUMBER OF PLANNERS. This worries me, because I hate to disagree with people whom I admire tremendously—Frederick J. Adams, for instance. Mr. Adams, head of the Department of City and Regional Planning at M.I.T., President of the American Institute of Planners, "wonders sometimes if we are speaking the same language." The principal difference of opinion has had to do with the architect's role in planning, and, basically, whether the planning process in which geography, geology, and the other disciplines play the most important role is an end in itself, or whether it must culminate in a creative act and result in three-dimensional expression, to which the other studies are preliminary and on which they are dependent. Some architect-planners—Bob Weinberg and Henry Churchill among them—have supported our point of view. Others, as I said, disagree.

WE'VE REJECTED A NUMBER OF MANUSCRIPTS BY PLANNERS DURING THE LAST YEAR, because they were examples of what Churchill calls "hocus-pocus such as the substitution of six-syllable words for the shorter ones used by common folk to say the same things." If planning is a democratic process, which it must be, then why can't planners express themselves simply and clearly? I'd like to be fair and present both sides of this matter, but I've just sent back a manuscript which argued that architects are "small peanuts in the planning process, because planning is so important and different that they can't be expected to understand it. The author said: "The uniqueness of comprehensive planning is established: a) in the philosophical and theoretical base on which it rests, b) the composite and distinctive knowledge comprising its intellectual corpus, c) the particular methodology of planning, d) the features of operation which it exhibits, and e) the existence of a substantial and rapidly expanding literature dealing specifically with the subject."

That's what's the matter with planning. What does the man mean? As far as I can figure out, when the fancy words are removed it stands as a rather unimpressive statement: Planning is different from architecture because a) it is a theory, b) it requires study, c) it is logical, d) (I give up on this one) and e) people write about it.

I'M SORRY TO SEE CONTROVERSY ABOUT THE "PLANNER" AS A PROFESSIONAL DISTINCT FROM THE ARCHITECT. and about "planning" as a process separate from the design of man's physical environment in any other sense, because many excellent studies, valuable to the practicing designer, are coming from the work of those engaged in the statistical and theoretical aspects of planning. They are valuable as adjuncts of planning; the mistake would be to consider them complete in themselves. They come to life only when and if communities and buildings result from them. The best study I've seen in a while is called Planning the Neighborhood, a booklet prepared by a subcommittee of the American Public Health Association Committee on the Hygiene of Housing (headed by Frederick J. Adams), which has been published by the Public Administration Service, 1313 East Sixtieth Street, Chicago 37, Illinois. It costs $2.50, and it's well worth it. A tremendous amount of study and analysis has gone into it, and it is packed with useful data indispensable to anyone planning a community or planning a structure which he would like to see part of a community.

However, this is a study for ideal living. The Committee, for instance, "supports the view that one- and two-family houses, including their row or group forms, are the generally preferable type for families with growing children." That's wonderful, and few would disagree. But the cold hard fact is that thousands of families with growing children are living, and will continue to live for many years, in multiple-family dwellings, new if they are fortunate but old and decrepit in most cases. Even if the most progressive housing legislation was passed and implemented tomorrow, many of these buildings would not be torn down and replaced in our lifetime.

THERE ARE OTHER APPROACHES TO THIS PROBLEM. I belong to the Municipal Art Society in New York—an organization which considers civic problems from the point of view of esthetics. It is now discussing seriously a proposal by its president, Architect Charles Platt, for the "beautifying" of slum areas in the city, which may have important planning implications. The proposal is that the City Housing Authority, in addition to concerning itself with new housing projects, should attempt the integrated improvement of several nine-block "slum" areas. Dangerously obsolescent buildings would be condemned and removed (the hope would be to clear one full block in the center of the group); blocks within the area would be cleaned, but not physically altered in any important sense.

The suggestion is that a pilot study be made of several such districts, to see whether, by cooperation of tenants and landlords and the help of the Authority, an improvement in community living could be made for families who have no real hope of moving elsewhere.

It is a dangerous proposal. The objections are obvious—this is, in a sense, putting sugar candy on what remains a bitter pill. Palliative measures can never take the place of replanning. The buildings should be torn down and the land should be redeveloped. And yet—will these things be done—would they, for many generations, even under the most favorable conditions?

PATRICK GEDDES SUGGESTED SOMETHING SIMILAR TO MR. PRATT'S PROPOSAL. FOR SEVERAL TOWNS IN INDIA. YEARS AGO. He called it "conservative surgery," and said about it: "Even if, as rarely happens, the new site offered is both suitable and acceptable to the people expelled, they are practically excluded by the present cost of building in favor of the more prosperous classes. . . . The method of Conservative Surgery, on the other hand, brings out different and encouraging results; first it shows that the new streets prove not to be really required, and that the removal of a few of the more dilapidated and insanitary houses, these lanes can be greatly improved and every house brought within reach of fresh air as well as of material sanitation."

The point is that the proposal opens interesting possibilities and should result in serious debate and perhaps some attempts to prove whether or not it would work and, if it did, whether or not it's socially desirable. And the proposal comes not from planning statistics, but from a consideration of the visual aspects of the run-down portions of the city. Who's the planner now?
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