Window Panes of Translucent Stone

By Eugene Clute

National City Christian Church—John Russell Pope

Municipal Building

Garden Terminals

Wood Grilles of Santiago

Some Recent Small Houses by Herman Brookman

Portfolio: Roof Trusses

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BY BASIL IONIDES

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Lighting Rooms
Surfaces and Suitable Materials
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industry accounts for more than five million of the present unemployed. Lack of adequate financing is cited as one of the principal causes of this declining volume in construction work. The program sponsored by the Federal Housing Administration, when effectively under way, doubtless will prove an important factor in achieving recovery.

The building supply trades have been given their strongest impetus for expansion in some years by the benefits to be derived by the National Housing Act. The outlook for fall business in this group is the best for years.

Prices of most building materials are dragging along at the low levels of the last few years, the increases in a few divisions being counter-balanced by mark-down in others. While the general average in lumber prices increased less than ten dollars a thousand board feet during 1933, the average still is around 8 per cent under the 1929 level. Some prices were lowered in July to conform with code provisions, but no further changes are anticipated until after the turn of the year.

Wages remain stationary, being largely regulatory, although in many instances the union scales are not being observed with much care. As a whole, the cost of building a "small-sized house" is about the same as it was in 1930, and nearly 50 per cent lower than in 1920.

A. I. S. C. CONVENTION

THE Twelfth Annual Convention of the American Institute of Steel Construction, Inc., was held at the Edgewater Beach Hotel, Chicago, October 24 to 26, 1934. Details of the work accomplished and matters discussed are not yet available as we go to press.

RESULTS IN THE CHICAGO STOCK YARDS FIRE

J. E. KALINKA, chief structural engineer of Roberts & Schaefer Company, in a letter to the Editor objects to certain statements made in the report of the Chicago Stock Yards fire by the engineers representing the American Institute of Steel Construction. An excerpt of this report was printed in the September Bulletin Board. Mr. Kalinka feels that these engineers have possibly veered away from the steel construction in this fire rather too favorably, and the results to concrete and reinforced concrete buildings too unfavorably. A report on this extremely severe fire by the Chicago Board of Underwriters, in collaboration with the National Board of Fire Underwriters, might well be read in conjunction with the reports prepared by the various industrial associations. A. A. R. COMPETITIONS

THE Association of the Alumni of the American Academy in Rome will hold their ninth annual collaborative competition for architects, landscape architects, painters, and sculptors during the period of nine weeks from November 17, 1934, to January 18, 1935. Copies of the program will be distributed among the schools early in November.

Through the generosity of the American Pencil Company, makers of Venus drawing pencils, the Association is fortunately able to announce the "Venus Drawing Board" or prizes of $300, $150, and $75, respectively, to be awarded to the three teams whose designs are rated highest by the jury. The Association's offices are at 101 Park Avenue, New York City, from which the announcement is made by Roscoe Gurnsey for the committee.

SYRACUSE UNIVERSITY

SYRACUSE UNIVERSITY, College of Fine Arts, Department of Architecture, announces additions to its faculty beginning with the present school year. Professor L. C. Dillenback is appointed Professor of Architectural Design. He received his Master's degree in Architecture from Carnegie Institute of Technology in 1914. He taught first at Illinois University, where he became Professor of Design in 1926. It was in 1930 that he became Professor of Design at Columbia, resigning this position to come to Syracuse. He has had the benefit also of professional experience as an architect in association with Henry Hornbostel and Carlton Strong in Pittsburgh.

The second appointment is that of Erwin O. Christensen as Carnegie Lecturer on the History of Architecture and Art. Mr. Christensen received his Master of Fine Arts degree from Harvard in 1916. From 1919 to 1926 he headed the Art De-
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ARCHITECTS: Tragedy marked the Chicago World’s Fair and made the front pages of newspapers. Front page news it has continued as that outbreak of amebic dysentery spread to 206 other American cities affecting an estimated 8% to 10% of the population. There was a cause. There is a prevention. Write for your copy of “Civilization’s Greatest Menace” to get the plain facts treated tersely, comprehensively, interestingly. Just use the coupon—without obligation.

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THE BULLETIN - BOARD  Continued

(Continued from page 6)

partment at the University of North Dakota. In 1926 he was a Carnegie scholar and tutor in the fine arts at Harvard; from 1927 to 1931, Assistant Director of the Gardner Museum in Boston; and since then, Educational Director of the American Federation of Arts and Associate Editor of the American Magazine of Art. Mr. Christensen's engagement by the college was made possible by a grant of six thousand dollars a year for five years by the Carnegie Corporation of New York.

UNIVERSITY OF PENNSYLVANIA

THE School of Fine Arts, University of Pennsylvania, announces the appointment to its faculty in the Department of Architecture, of M. Georges Dengler as Professor of Design. M. Dengler has the distinction and honor of having won the Grand Prix de Rome in 1931.

MILWAUKEE AND MODERNIZATION

THE Milwaukee District of the State Association of Wisconsin Architects is playing a major part in a practical demonstration of home renovation now being conducted by The Milwaukee Journal. The demonstration is part of an educational campaign, aimed at home-owners, to illustrate how remodelling can be financed through the Federal Housing Act.

Three outmoded houses, one in each of the city's oldest sections, have been selected by these architects for complete modernization. Plans for renovation and remodelling are now being drawn up and submitted by certain members selected by the Architects' Association.

A feature of the demonstration are the frequent news stories explaining the details of consulting the proper authorities. The campaign as a whole covers the entire process of remodelling, beginning, of course, with consultation of the architect. Although no individuals are singled out in the publicity given the project, home-owners are impressed with the necessity of getting proper guidance in remodelling plans.

Other leading civic organizations co-operating with The Journal's demonstration are the Wisconsin Builders' Congress, which is supplying the labor for the remodelling, the Milwaukee Real Estate board handling the eventual sale of the three houses, and the Building and Loan Association which is financing the purchase and renovation cost.

The homes are open for inspection at all times while remodelling work is going on.

CHARLES L. HILLMAN, 1858-1934

CHARLES L. HILLMAN, architect, died September 9, at his home in Germantown, Pa., after a month's illness. Mr. Hillman, who practised under the name of Charles L. Hillman & Sons, after public school training, became connected with the firm of Addison Hutton, and in 1890 was made a member of the firm.

Mr. Hillman is said to have assisted in designing Philadelphia's first steel-frame office building. He also helped design the Girard Trust Building, the home of the Pennsylvania Company, the Fairview State Hospital, and several other hospital buildings. He was a member of the American Institute of Architects.

THOMAS R. KIMBALL, 1862-1934

THOMAS ROGERS KIMBALL, a past president of the American Institute of Architects, died at his home in Omaha on September 7, after a long illness. Mr. Kimball was born in Cincinnati, but his parents moved to Omaha while he was still a boy. His education was secured in the public schools, the University of Nebraska, Massachusetts Institute of Technology, and the Cowles Art School in Boston, after which he went abroad and studied in Paris under various tutors, among them the great painter, Harpignies.

Mr. Kimball returned and associated himself with the publishing firm of Bates & Guild, Boston, publishers of architectural and art works. In this work he prepared a special edition of Vignola. While in Boston his friendship with C. Howard Walker brought about the establishment of the architectural firm of Walker, Kimball & Best, with Mr. Kimball in charge of an Omaha office. As Walker & Kimball the firm continued until 1899. Among the important works that it developed were the Trans-Mississippi Exposition in 1898, of which Mr. Kimball was architect-in-chief.

After 1899 Mr. Kimball practised alone until 1928, when the firm of Kimball, Steele & Sandham was organized. It was in 1920 that Mr. Kimball joined The American Institute of Architects. He was elected a Fellow in 1901, and served as its president during the years 1918 to 1920. To the Institute he devoted many of the best years of his life, and gave to his fellow practitioners, as he gave to his intimate friends, most freely of his mature thought, keen judgment, and unselfish leadership.

HOWARD ROGERS, 1874-1934

HOWARD ROGERS, architect, died August 12, at his home in Albany. Mr. Rogers had been ill for more than two years. He designed the Municipal Building in Albany, and the Albany County Jail. Even during his last illness he continued to work on plans for a large addition to one of Albany's schools. During the war he served as a captain in aviation.

STEVENSON CONSTABLE, 1853-1934

STEVENSON CONSTABLE, retired architect, died October 10, at his home in New Milford, Conn. Mr. Constable was Superintendent of Buildings in New York City from 1895 to 1899. He was formerly associated with his brother, Howard Constable, in the architectural firm of Constable Brothers, practising in New York City.

Mr. Constable was a native of Philadelphia, and did some important engineering and construction work there before he moved to New York. In his earlier days he was assistant to Henry Pettit, chief architect and engineer of the main buildings of the Philadelphia Centennial Exhibition of 1876. Some years later he had charge of much of the construction of buildings and bridges for the Philadelphia & Atlantic Railway.

After moving to New York he supervised the erection of about eighty buildings in that city in 1886. With his brother he designed several hundred stores, office buildings, residences, tenements, stables, and factories. Mr. Constable was a member of the American Institute of Architects, and the Society of Civil Engineers of Philadelphia.
A substantial tonnage of Bethlehem Light Sections was used in the construction of the West Scranton Junior High School, Scranton, Pa. Tadee Williams, Architect and Engineer; Wm. Steele & Sons Company, General Contractors; Bethlehem Fabricators, Inc., Fabricators.

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The Port of Calvi, Corsica
From the dry-point etching by
Philip H. Giddens
Window Panes of Translucent Stone  
By Eugene Clute

In the Monastery of St. Luke of Stiris, in the province of Phocis on the Gulf of Corinth, which is one of the finest monuments in Byzantine architecture of the eleventh century, there are many window openings filled with slabs of a material that the Greeks call phengites, "the gleaming stone." This is probably the oldest remaining example of the early use of translucent stone windows. The slabs are carved with designs composed of symbols, geometric motives, and grillage of foliage. Some are carved on both sides and some on only one side. The material is not over 1/4 in. thick and it is reduced to 1/2 in. in the deepest portions of the carving. The light comes through in a soft effulgence.

Of the many very beautiful windows of translucent onyx, marble, or alabaster in Italy, those in the Church of San Miniato, Florence; those in the Cathedral of Orvieto; and those in the Church of St. Paul Without-the-walls in Rome are especially noteworthy. In San Miniato there are five large rectangular embrasures in the upper part of the apse which are filled with a mottled translucent stone. The windows present a marvellous play of changing tints of gray and rose that ties in perfectly with the white, gray, and black of the marble walls, and provides a foil for the colorful marble, frescoes, and the Cosmati mosaic ornamentation with which the apse is enriched. The many windows of translucent stone in the Cathedral of Orvieto are rich in ever-changing color, ranging through various soft yellows and orange browns. Though the stone windows in the Church of St. Paul Without-the-walls are of recent origin, they are very beautiful and admit a soft glow of golden light that contributes much to the beauty and charm of the interior. These slabs were installed to replace glass shattered by an explosion during the World War.

But we do not need to go so far afield, for there are windows of gleaming stone right in our own country, though they are few. In St. Bartholomew's Church in New York City, of which Bertram Grosvenor Goodhue was the architect and to which Mayers, Murray & Phillip have made additions, there are some of the finest examples to be found anywhere.

At the ends of the narthex of St. Bartholomew's there are semicircular pierced grilles of amber onyx of geometric design. The one at the south end is particularly interesting. The afternoon sunlight causes it to glow with an inner fire like a ruddy sunset. It is as though the stone itself were a source of light. Passing under this grille, one enters the chapel, where the clerestory windows are filled with onyx slabs with superimposed geometric grille work of the same material. But most marvellous of all are the tall round-arched windows in the upper part of the apse of the church itself. There are five of them, about twenty-one feet in height and nearly four feet in width, filled with amber onyx. They are given design character by geometric grilles of onyx backed by thin slabs of this material. The light is diffused in a mysterious radiance of varied tones. In the late afternoon the grilles are silhouetted in black against the golden amber light in the semi-darkness of the apse.

These windows have dignity, beauty, and richness, in keeping with the colored marbles of the columns in the sides of the embrasures and with the magnificent coloring of the gold-and-polychrome enamel mosaic ceiling of the half dome above and of the sanctuary arch. But they do not compete with these features as stained glass, itself rich in color, might.

Probably this special suitability of windows of translucent stone for close association with rich marbles and mosaics was a strong reason for their frequent use in the old Byzantine
churches; another reason was the relatively undeveloped state of the art of stained glass at the time. The former is an excellent reason for employing windows of gleaming stone today in such a relationship to marbles and mosaics as in St. Bartholomew's. The grilles are built as shown in a detail herewhith. Recesses in the stone jambs and a pocket at the top permit the installation of the upper sections of onyx by raising them above their final position and then letting them down into place. There are five saddle bars of bronze extending across each window to support the weight of the stone and to give rigidity. These bars are concealed in recesses cut in the edges of the sections of onyx and are invisible because the material diffuses the light around them. Their ends are built three or four inches into the masonry at the sides of the windows. Each panel of the design, containing a complete circular motif, is composed of four sections of onyx. There are five of these in each window and a bottom panel made up of two sections. The slabs were cut across the grain of the stone, at right angles to its natural bed. This cutting brings out veins instead of the clouds that appear when such a stone is cut with the grain. The thin slabs between the grilles were sawn about \( \frac{3}{8} \) in. thick, then rubbed down to \( \frac{3}{8} \) in. and polished. The parts are firmly joined together with a transparent cement.

Seen from the outside, the outer grilles are highly effective features of the exterior, contributing to its architectural dignity and beauty; their creamy color tones in well with the warm yellows of the brick walls and the buff of the stone.

Among the most unusual and beautiful features of the Nebraska State Capitol, the crowning work of Bertram Grosvenor Goodhue's life, are the windows of translucent onyx set in tracery of creamy white marble.

Henry Bacon has made use of a translucent marble ceiling light of great size in the main hall of the Waldorf-Astoria, artificially lighted from above.
In the upper part of the apse of St. Bartholomew's there are five windows, twenty-one feet in height, filled with amber onyx from Norie, Mexico. Details of the construction are shown on page 244. Mayers, Murray & Phillip, architects. Craftsmanship by George Brown & Company of the Lincoln Memorial, Washington, D.C. The soft radiance that comes down upon Daniel Chester French's great bronze figure of Lincoln, and upon Jules Guerin's allegorical murals around the walls, is produced by light filtered through slabs of Alabama cream marble set in the heavy bronze framework of the panelled ceiling. There is a glass skylight above. These slabs of marble are 4 ft. 6 in. square and 3/4 in. thick. It is said that they were immersed for twenty-four hours in a tank of oil, kept hot by means of steam pipes, to produce the requisite translucency.

In the grand foyer of the Waldorf-Astoria Hotel, New York City, there is a large ceiling light composed of translucent stone slabs set in the panelled ceiling. This ceiling panel is of an Alabama marble that is of a cool white, owing perhaps to minute veins of blue; it is very even in color and highly translucent. Here Schultze & Weaver have employed several rectangles, one within the other, stepped up to an oblong central panel. Frames of ornamented nickel-silver, suspended by hangers, support the marble slabs. Electric lamps—blue, amber, red, and white—are installed above so that varied color effects may be produced if desired.

Windows of translucent stone are spoken of in many descriptions of buildings as windows of alabaster, even when they are of marble or onyx. Though marble is a form of calcium carbonate, onyx is siliceous stone and alabaster is a hydrite of calcium sulphate. While this indiscriminate use of the term alabaster is contrary to the present narrow meaning of the word, there seems to be some justification for it, for this word seems to have been derived from a Greek word, alabastron, meaning "without a handle," a term applied to the little handleless amphora-shaped vases that were used to hold perfumes and the like. These vases were commonly fashioned from some translucent stone, perhaps not always alabaster in the present-day sense. Then the name of the object is thought to have been transferred to the material.

ARCHITECTURE

NOVEMBER, 1934

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It seems strange that windows of translucent stone are not more often used in fine buildings, for the alabaster from Volterra in Italy is well suited to this purpose, is readily obtainable at a cost within reason, and is very easily worked. It is this material from which are made the beautiful windows in the Chapel of the Sacred Heart, Convent of St. Joseph, at Brentwood, Long Island. There is a detail photograph herewith, and other photographs of these windows were published in the issue of this magazine for October.

Below, typical details of the construction for the alabaster window in the Convent of St. Joseph.
Examples of the possibilities in colored inserts in white alabaster, the inserts bearing designs in incised lines. Designed by E. J. Schmitt. At left, amber alabaster in white; centre, rose-colored alabaster in white; right, green alabaster in white tober, 1931. There are twelve windows, each 3 ft. 8 in. by 8 ft. 8½ in. These windows and other alabasters on and under the balconies of the apse are carved with ornamental and symbolic motives of great richness. As the interior of the chapel was inspired by the Early Christian and Byzantine monuments of Italy, principally those of Ravenna and Florence, rich marbles, murals, and mosaics play an important part in it, and it was felt that filling the window opening with translucent slabs of alabaster would produce the soft light needed and avoid the introduction of conflicting colors in the windows. To prevent any possibility of monotony these were
carved. They are rich in color, being of varied ivory and amber tints with a suggestion of rose; the alabaster, naturally white, has been impregnated with the desired coloring.

The chief beauty of this material is the soft glow of light by day or night. When viewed from within at night it appears akin to the mysterious will-o’-the-wisp or the St. Anthony’s lights that appeared upon the rigging of old sailing-ships at sea. In the daytime these windows present a never-ending succession of changes in tone and tint.

These windows are composed of slabs 5/8 in. thick, and as the carving, which is on the inside only, is about ¼ in. deep, the thickness is reduced to about 3/8 in. in the background. The design is in three planes; the face of the slab, which is the face of the raised ornament; the background; and the minor detail, which is incised less than 1/8 in. As the detail section shows, these windows are divided into panels by the bronze muntins of the frames, and some are hinged to swing open for ventilation. Windows of moderate size can be formed of a single slab each. Larger windows can be formed without muntins, if these are not desired, by joining the sections, either by means of bronze dowels or of a tongue-and-groove joint. This tongue and groove are easy to carve and, cemented together, make a joint that is not obtrusive.

Volterra alabaster of the natural translucent milky white color is very beautiful, but the possibilities of the material are greatly increased by the fact that it can be colored through and through, not only in tones of amber or ivory but like rose quartz or jade or in almost any desired color. This makes it possible to enrich windows of the white or tinted alabaster with inserts of different colors. Furthermore the inserts may be engraved with designs in incised lines.

Though windows of translucent stone have been used almost exclusively in churches, there is no need to limit them to ecclesiastical architecture. Windows of Volterra alabaster, particularly, are within the range of possibility for very many buildings other than the most monumental; for banks, theatres, hotels, and fine residences.
A structure of reinforced concrete in which particular care has been taken in the delicacy and precision of the exterior molds

DEPARTMENT OF PUBLIC WORKS, CITY OF LOS ANGELES;
P. K. SCHABARUM, ARCHITECT

Valley Municipal Building, Van Nuys, Calif.
A multitude of widely varying civic needs has brought about a plan that is striking chiefly in its lack of the monumental, grand-manner flavor we usually associate with our public buildings.

In the plan of the first floor, below, the left wing is given over to a Department of Health, the right wing to the Police Department. A ramp leads down from the rear yard to automobile parking space in the basement.
Detail of the tower top, where the cast ornament reaches its greatest florescence

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Detail of the main entrance. The sculpture panel here and others over the wing entrances are by Harold F. Wilson, sculptor. An inscription on the back ground of the panel above reads: The public officers are the servants and agents of the people to execute the laws that the people have made.
The church is located on Thomas Circle at the intersection of Massachusetts Avenue and Fourteenth Street, N.W. It is built throughout of limestone, the roof of the little dome being of bronze, the weather-vane gilded.

OFFICE OF JOHN RUSSELL POPE, ARCHITECT
National City Christian Church, Washington, D. C.
The general color scheme of the interior is a combination of the stone gray with light tones of blue and gold in the coffers. The lighting fixtures were designed especially to give the effect of a visible light through low-power candle bulbs with an added stronger light cast directly down. Pews are of walnut with blue cushions. There are several memorial windows in place, one of them to the wife of R. A. Long, who took an active part on the building committee. Nicola d'Ascenzo executed these windows, which have a large proportion of clear glass, with border and medallions in color.

Plan of the main floor as built. There is an unusual feature here in the baptistry and the adjoining baptistry chapel. The photograph on page 254 shows that the height of the marble enclosure of the baptistry is such that very little more than the heads of those descending for immersion is visible from the auditorium.
Axial view of the auditorium, looking toward the apse, the columns in which are of St. Genevieve marble—a warm gray with yellow veining. Between these the hangings are of blue

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A view across the front of the chancel, showing at the far side the marble enclosure of the baptistry. The floor of the auditorium is carpeted in blue.

For the pulpit a creamy white marble with gray veining has been used, with panels of St. Genevieve marble.
The main entrance as seen from inside the vestibule. Doors are of walnut, floor of terrazzo with a marble border.

The console as seen from the front. It is of walnut, framing the panel of "The Last Supper" carved by Alois Lang in lime wood.
Plan of the church and its supplementary buildings as originally projected. The parish house has not yet been built, nor the chapel, and the church itself was changed in accordance with the plan on page 252.

Mr. Eggers's pencil drawing of the proposed chapel

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The Architect in the Body Social

By B. Charney Vladeck

MEMBER NEW YORK CITY HOUSING AUTHORITY

Mr. Vladeck spoke at a recent meeting of the architects selected by competition to design New York City's projected low-rental housing. His opinion of the architect seemed to us to be a sharp spur—it hurt, but it may induce action. We asked Mr. Vladeck to write it for a wider audience in the profession, and here it is.—EDITOR.

BEHIND each building monstrosity, behind each tenement, behind each get-rich-quick building project, there are the brains of an architect. As I walk along the lower East Side or Harlem, or, for that matter, any slum in the city, I see in my imagination some member of the architectural profession burning midnight oil in an effort to make a maximum of people uncomfortable and unhealthy, at a minimum infringement of the law.

No modern profession has become as completely a tool of greed, selfishness, and speculation as the profession of architecture. The landlord, the builder, and the usurer tell the architect:

"Here is a small parcel of land whose inherent worth is zero; if you manage to erect on it a building that would yield a healthy income, the land will become more valuable than gold and all of us will be rich."

So the architect proceeds to cover as much of the plot as possible. He burrows into the earth and into the sky, to make a building that will earn money, no matter how crowded and inconvenient it may be, so that the landowner, the builder, and the money man may become rich. And when they do become rich, they "influence" local, state, and federal legislation for the protection of their interests and for the perpetuation of all their crimes and follies.

Today the only solution for the terrific unemployment in architectural ranks is an extensive public-housing program on a national scale—"a program for the reconstruction of our cancerous cities along modern lines. They have been doing it on the Continent since the War, and it can be done more easily and with less sacrifice on the part of the public treasury here than on the other side. Nevertheless the same interests whom the architectural profession served so blindly and so loyally are piously opposed to all such utopias because it would show the American people the extent to which it has been robbed of the comforts and amenities of life by the organized greed of real-estate and money interests. Public low-cost housing, of course, needs public assistance. Also cheap money and cheap land. But public assistance, when not given to the rich and powerful, is "Socialism"; cheap land and cheap money, "Bolshevism." It is this organized opposition that very efficiently keeps housing in a state of confusion. It is this opposition that keeps housing in the United States, after so many years of study and education, in a state of helplessness and disorganization. A thousand nostrums and panaceas are being offered as housing which do not contain the simplest essence of housing—and that is extensive low-cost projects and radical slum clearance.

There is still another drawback, which may seem purely technical but is important just the same. The American architect, like the average American layman, still thinks of housing in terms of houses and not in terms of homes. In the recent competition for the qualification of architects, held by the New York City Housing Authority, 278 designs were submitted by registered architects. All designs were based on a plot of twelve city blocks and were to deal with 100, 150, and 250 densities. But the overwhelming majority of the architects saw nothing but that many lots to be covered by structures. They didn't stop to say to themselves: Here I am supposed to house so many thousands of human beings. How can it be done with the
least crowding, with a maximum of privacy, with an abundance of air and sunshine, with ample provision for community recreation and park space? In one particular case the architect was puzzled over the requirement of a two-block park, and since he couldn’t understand what a park is needed for in a low-cost housing project, he stuck it in a corner.

And yet a small number of competitors did display some housing intelligence, and twenty-two designs were qualified. Not that they were all entirely perfect. Some of them are somewhat hazy and illogical, but at least these men display an attitude to housing that is new: an attitude that proclaims that building for a community is something not entirely identical with building for an individual as for profit.

With our architectural background, this is very encouraging. There was a time when architecture was the highest expression of a nation’s culture. The brains of the architect were the focal centre of everything the nation had achieved in thought, in beauty, and in its standard of living. It was understood and accepted that the most important building is for the national collective, and that the spirit of architecture can be best expressed in public enterprises. It is time the profession reverts to its original function and natural destiny. By encouraging public enterprise in housing and construction, by studying the problems of community planning and community building, by giving thought to the necessity of giving all the people the benefits of modern science and achievements in construction, architecture will again become a living profession and a great force in the cultural development of our city and our nation.
Garden Terminals

FROM A COLLECTION OF PHOTOGRAPHS IN THE OFFICES OF WILLIAM PITKIN, JR. AND SEWARD H. MOTT LANDSCAPE ARCHITECTS

Sculpture at the end of narrow garden path in Italy

Balustrade stopping a vista at a transverse axis.

A more elaborate terminal for a larger garden walk at Ilford, England

Lady Astor's Italian memorial garden, Cliveden, England

An elaboration of the niche motif, Dropmore, England

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11. Cimbrone, Ravello. The terminal is not necessarily en axe.

Isola Bella, Italy—another instance of the terminal off axis.

The added value of steps for an elaborate architectural terminal, Wilton House, England.

Villa Falconieri, Frascati, Italy.

A minor terminal on the Farnese Palace, Caprarola, Italy.
Measured drawing of this window will be found overleaf

MEASURED AND DRAWN BY R. NEWTON MAYALL

Wood Grilles of Santiago de Cuba
ARCHITECTS and students travel far afield and dig into the past with a passion akin to that of the archaeologist, in their search for source material. All too often they follow the beaten paths made famous by illustrious predecessors. Malorca, Madrid, Florence, Paris, Munich, and many other places have been kept under close observation for years.

The New World holds much that is as yet uncharted; much that is of great age, when compared with our own young portion; much to rival the charm of the Old World. It is a fertile field for those who wish to partake of its riches.

Perhaps we have forgotten that more than one hundred years before the founding of the Jamestown and Plymouth colonies, the first permanent settlement in the New World was made at Santo Domingo, in 1493.

Next door to us lies the Island of Cuba, at the western end of which is situated Habana, "The Paris of the West," and the tourist's paradise; at the eastern end is located the city of Santiago—a little bit of Spain transplanted in the New World.

Santiago might almost be termed the "Forgotten City." Founded by Velasquez in 1514, it was the capital of Cuba from that time until 1551, when the government was moved to Habana. During this brief period it was the
centre of social, commercial, and political life in the New World, which was responsible for its extremely rapid growth. Its subsequent decline was a natural result, and today we find it sprawled over the side of a hill, about seven miles inland from the south coast, at the head of a landlocked bay.

The bay and city are surrounded by high hills and mountains, the whole resembling a gigantic bowl. The scenic beauty of this portion of the island far exceeds that of the comparative lowlands to the west, with which we are all so familiar.

The quaint narrow streets, lined with low one-story houses, typically Spanish in character, whose irregularities add charm and interest to the city, in part attest to its antiquity. When looked up to from the harbor or down upon from the surrounding heights, the polychromatic walls and roofs glistening in the sunlight resemble a mammoth kaleidoscope. Balconied casement windows above one's head take one quickly back into the romantic past and remind one of the not too unromantic present. The city abounds in fine examples of early iron work, and wood grilles are found protecting many street-level casement windows.

The wood grilles are fascinating; no two are alike. Many of them are over 300 years old, and in an excellent state of preservation. They are met with in Turkey, Spain, and Mexico, to some extent; but in and about Santiago they are common. The architect and landscape architect will doubtless find them of great interest.
Measured drawing of this window will be found overleaf
Measured drawing of this window will be found overleaf
ELEVATION

PLAN

SECTION A-A

WOOD GRILL ~ SANTIAGO DE CUBA

Photograph of this window will be found overleaf

ARCHITECTURE

NOVEMBER, 1934
Measured drawing of this window will be found overleaf
W O O D  G R I L L — S A N T I A G O  D E  C U B A


P H O T O G R A P H  o f  t h i s  w i n d o w  w i l l  b e  f o u n d  o v e r l e a f

© A R C H I T E C T U R E ©
N O V E M B E R ,  1 9 3 4
2 6 8
Better Practice

By W. F. Bartels

HEATING

1—LOCATION OF BOILER

It is usually advisable to place the heating plant as centrally as possible, to aid in even distribution of heat. However, in conjunction with location some thought must be given to the supply of fuel that is to be used. With gas it means only some additional piping from outer wall to center of basement; with oil the run of the pipe should not be too long, while with coal there is the question of where it can be delivered on the outside and how much additional labor is necessary to get it to centrally located bins. It is well to locate the boiler a sufficient distance away from all walls, so that all parts of it, including the smoke breeching, may be easily cleaned. This is particularly important where there are tubes to be cleaned, so that there is room to draw the cleaning brush through them. Then, too, it is better to locate the boiler in a part of the cellar where there will be no necessity to make a pit for it in order to obtain sufficient headroom for the proper piping. Of course if it is necessary to do this the pit must be large enough so that there will be sufficient room for firing and drawing the ashes. If the ground is not dry there must be proper provisions for water-proofing and draining it. A pit under the boiler, however, has its merits, as it allows more air under the grates with less likelihood of their burning due to ashes piled up under them (Fig. 1A). One thing often overlooked is the air supply for the boiler. To enclose a boiler in a closed room is poor practice. A window or an air duct should be provided so that the fuel may be completely burned. Lack of fresh air will result in a waste of fuel.

2—CHIMNEY

From the standpoint of the tenant the chimney must be located so that it does not run through any part of the building where its heat may be a disadvantage; this is a sound reason for its complete insulation. If not properly erected a faulty chimney becomes a great fuel waster; it may be a source of danger if the flue linings (these should never be omitted) are not tight. There should be no cracks in the lining. The area of the flue should be the same all the way up the chimney, with no shelves or offsets to catch any soot (Fig. 2A). The size of the chimney should be governed by the boiler's requirements, and the boiler manufacturer's directions as to size should be implicitly followed. Do not economize—or rather, it might be said, do not be wasteful—by making the flue size too small. It is better to have a chimney so located that there are no long ducts in the cellar, and it is better to have long sweeping turns than to have sharp bends which will slow down the flow of the escaping gases. If more than one boiler is used, it is advisable when possible to have a separate flue for each boiler. All smoke breeching must be tight, and it is economy in the long run to have it made of a sufficiently heavy gauge so that renewal is not necessary each season. All cleanouts must be tight. Where the breeching enters the chimney, it is better to have it slightly behind the edge of the flue lining rather than projecting into the chimney. Nor should the breeching be so near the outside face of the chimney that there may be danger of gas leakage due to the movement of the breeching (Fig. 2B). The height of the chimney is very important. It must be of sufficient height so that neither adjoining buildings nor peculiar air currents due to them can cause a down draft (Fig. 2C). A dependable draft will usually be the natural result of a properly designed chimney.

3—BOILER TYPES

In general, boilers are cast iron or steel. Some steel boilers come in narrow sizes, but in general it is necessary to have a considerable wall opening through which they can be delivered to the cellar. Cast-iron boilers made in sections have the advantage that they may be carried through the average hallway into the cellar. This is an advantage in a building already erected. The claim, however, concerning the ease by which damaged sections may be renewed is slightly overestimated. The time necessary to install a new section will be worth almost as much as it would cost to install an entirely new boiler, and then one has the satisfaction of an entirely new product. The cast-iron type of boiler resists corrosion but cracks easily upon lack of water. The steel boiler resists cracking and has for its further protection a fusible plug in case of absence of water. Some cast-iron boilers now are supplied with fusible plugs. There are now on the market two steel boilers which can be installed wherever a cast-iron boiler can be located. The one is a steel boiler which is bolted together, while the other one is welded together on the job. Thus, if a steel
loss, as well as that of the boiler. Esca
from the boiler itself. Proper
ilratt regulators, or, in some cases, to
grade coal, inefficient damper and
is generally ilue to poor firing, low-
ready erectetl, it can now be ob-
boiler is desireil for a hnililiiig al­
is as little loss as possible by piping
architect should see to it that there
poor boiler design. The only legiti­
ated is not uncommon. This loss
will be reflected in the coal bill and
all the expected surface that is possi­
ble on the inside, so that every unit
of heat generated may come in con­
outside of the boiler as possible and
from a building is not generally real­
put out by the Heating, Piping and
The grate of a boiler and its care
rating. It must be remembered that
boilers are rated in many different
ways, and not always on the same
basis. Then, too, they are rated
under ideal conditions. Nothing is
deduced for the soot that is bound
to accumulate. The surfaces are
rated as if they were clean and not
full of scale and dirt. It is presumed
that there is an ideal draft and that
the boiler is efficiently fired. Dirty
or rusty water may make steaming
difficult. All these may be
factors that will upset the archi­
tect's calculations, but nevertheless
the client will blame only him if the
heater does not deliver enough heat.
Therefore the architect should al­
ways get a boiler that will do the
duty to which it is assigned. As
was previously mentioned, not all
boilers are rated in the same way.
To make sure that he is getting the
proper amount of heating the archi­
tect is advised to consult a booklet
boilers are rated in the same way.
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real rating of the boiler, upon
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heating systems too
often suffer from being too small.
Fuel costs are excessive because a
small boiler is driven too hard in an
effort to get enough steam from it
the radiation. The result is that
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small boiler. Heating systems too
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Fuel costs are excessive because a
small boiler is driven too hard in an
effort to get enough steam from it
the radiation. The result is that
canol be burned faster than it is pos­
to the water. Too often the archi­
tect selects one too small in size to do
the work properly.

The measure of the value of the
performance of a boiler is the amount
of the useful heat which is obtained
from the coal used. The fuel used
over a period of one year may cost as
much as the boiler, in some cases
even more. Therefore it is evident
that the real cost of the heating of a
building is not the comparatively
small amount spent for a boiler, but
the price of the fuel. Hence to per
cent more spent for a boiler of ade-
quate size to economically convert
the coal into heat is not an extrava­
gance but eventually a saving. Ob­
jections to a heating system are gen­
 \rantly traceable to one of the follow­
causes: incorrect piping, not
ough radiation, poor chimney, and
small boiler. Heating systems too
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5—PROPER SIZE FOR BOILER

The great amount of heat lost
from a building is not generally real­
ized. The building itself gives off a
great deal of heat. All one has to do
to see this is to look down the side
of a large building on a cold day.
The heat waves can be seen shoot­
ing out from it for a distance of one
to two feet. When the architect
realizes this he will be more careful
in selecting a boiler and give the
proper amount of thought to its

MAGAZINE TYPE BOILER

MAGAZINE TYPE BOILER

CHIMNEYS SHOULD BE HIGHER THAN ALL NEARBY ROOFS

ARCHITECTUR

NOVEMBER, 1931

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make sure that he specifies a large enough grate area. An oversized grate allows slower burning of gases and a consequently longer time for the heat units to be transferred to the water. 

6—BOILER INTERIOR—TUBES AND SECTIONS

One of the first things the architect should look for in the boiler he would specify is whether or not it is easy to keep clean. If not, he can rest assured that the person who attends the boiler will not make an effort to keep the boiler clean from soot, and consequently it will lose much of its efficacy. Then it is important to see to what tests the boiler is subjected, so that he will be sure that it is going to stand up under severe demands. It is well to specify a boiler having a large combustion space so that the gases will have a place in which to burn and will not dissipate their heat in the chimney (Fig. 6A). A flat surface over the combustion chamber would not offer as much area for heat transferance as a corrugated one, hence many manufacturers have taken advantage of this principle and have corrugations in the crown sheets of their boilers. These help in still another way. If the air were allowed to flow along without any interference it would stratify, but because of these corrugations it is stirred up and more heat units are removed from it (Fig. 6B). The next thing for the architect to require is a long fire travel. The longer this is the more chance there is for the boilers to absorb the heat units from the gases (Fig. 6C). Also, the more tube and other interior surface area there is exposed, the less heat will go up the chimney. There must be space inside the boiler for the water to circulate. The more this is possible the more heat can be absorbed from the hot gases. In large plants it is often advantageous to put mechanical circulators on the boilers to increase their efficiency. The better boilers have a large steaming space, so that only dry steam is sent up through the pipes. To send wet steam through the lines only overloads them.

Steel boilers often have small tubes. This is permissible within limits, and is good practice if the architect makes sure that they are not so small that they will easily clog up and be difficult to keep clean (Fig. 6D). Also, the tubes will very often be long so that in the long travel more of the heat may be transferred to the tubes and thence to the water. However, it is important that the tubes be easily cleaned of soot or their efficiency will be radically reduced by its insulation. Some boilers come with especially low water lines so that they may be installed in shallow cellars without the necessity of building pits for them.

Water-tube boilers are generally not used where there is hard water, because of the difficulty of cleaning them.

7—DOMESTIC HOT WATER

All the general requirements that hold good for steam and hot-water heating boilers will also be true with several additions for boilers supplying domestic hot water. While steam boilers are generally tested for a hydrostatic pressure of 60 to 100 lbs., hot-water tank heaters must stand much higher pressures, due to the fact that the water is under pressure before it is heated. Therefore some tank heaters are tested for as high as 300 lbs. hydrostatic pressure, which of course adds to the ease of mind of the owner of such a heater. The architect should investigate the heater’s rating. Most catalogues give the number of gallons the heater will heat. They often fail to mention the number of hours it takes to do this. In other words, a heater which is labelled 600 gallons because of the difficulty of cleaning them.

Some boilers come with especially low water lines so that they may be installed in shallow cellars without the necessity of building pits for them.

Water-tube boilers are generally not used where there is hard water, because of the difficulty of cleaning them.
degrees in six hours. Sometimes the tests are based on a different number of hours, and it is important to know this.

It is best practice to put the bottom of the tank above the top of the heater and in a horizontal position rather than in an upright one as is too often done (Fig. 7A). If it is a small tank for a one or two family house the tank may be hung to the beams in order to achieve this position (Fig. 7B). It is advisable to have the circulating lines between the heater and the tank as short as possible, as well as to have them the same size as the outlets on the heater or the tank (Fig. 7C). This makes for a freer flow of the water through these lines, and is the most efficient way to do the job, because it transfers the heat to the water most quickly. There should be a washout plug at the bottom of the heater so that it may be flushed out when necessary. It is well to have a relief valve on the system in order that the heater as well as the tank and the lines may be protected. This valve will discharge water when the pressure exceeds the amount for which the valve is set. The amount for which the valve is set depends upon the water pressure and the pressure that the tank will stand. A line should lead from the relief valve back to a wall or other place where a discharge of hot water will not injure any one.

The tank question is an important one. In the smaller building it is desirable to have one that will not rust. These are now produced in several metals and are very satisfactory. In the larger buildings, however, the costs of such tanks would be too great at the present time, so either black iron ones or galvanized ones are used. Here the architect must be very careful in his selection. The tanks are divided into two classes, standard and extra heavy. The standard tank is tested for 75 lbs., while the extra heavy is tested for 100 lbs. But the difference does not stop at that point. It must be realized that more rusting will take place in a black iron tank than in a galvanized one. Therefore the better tanks are made of thicker sheets either at the ends or throughout. However, unless there is a specific demand for these better tanks an inferior one may be foisted upon the architect. The heating contractor or the plumber can evade the demand for the better tank by proving that his tank will stand a pressure of 100 lbs., and although the better tanks are made of heavier plates, there is no definite standard that the architect can refer to as regards thickness.

A check valve on the hot-water return line is an important adjunct to prevent any interference in the circulation of the hot water. A thermometer on the hot-water tank gives the person operating the system something to go by other than a guess. A damper regulator that is operated by means of an apparatus put on the hot-water circulating line not only will result in coal saved but in a more uniform temperature being maintained (Fig. 7D).
Some Recent Houses by Herman Brookman

The front of the house is of twelve-inch salmon-colored brick. Above the windows the decorated panels are of brick set with the corners projecting. On the shutters the herringbone strips are of a light apple green on the same silver gray as the roof. Sash is green.

Below, a detail of a front corner, from which it will be seen that the side walls are of shakes with a window course of cedar and horizontal battens.

The floor plan is of the compact one-story type so widely used on the West Coast.

In the living-room the architect has emphasized the fireplace with brick of two colors, the horizontal lines contrasting with the vertical battens of the woodwork around the room.

House for Tom Greene, Jr.
Portland, Oregon

Architecture
November, 1928
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Portland's unusual topography explains the hillside house with its view to the east over the city, the river, and the snow-capped peaks of the Cascades. Every important room in the house has this eastern exposure. Brick is salmon-color, roof of hand-split cedar shakes stained silver gray. The bay and woodwork trim is cedar siding stained like the roof. The entrance motive is trimmed with cast stone.

At left, first-floor plan. It will be noticed that one enters upon a landing midway between first and second floors.

At right, plan of second floor. There is in the basement a large playroom with fireplace, two maids' rooms and a bath, laundry and boiler room.

House for Lee S. Elliot
Portland, Oregon
Herman Brookman, Architect

ARCHITECTURE
NOVEMBER, 1934
The west front, to which the entrance drive dips. The garage is at left, and there is an adequate court space for turn-around.

In the hall near the main entrance door

A corner of the hexagonal breakfast room. Half of its wall surface consists of windows commanding the view.

The stair rail is of wrought iron.

A glimpse of the dining-room from the hall. Here the woodwork is of La Jina mahogany finished in its natural color.
Mr. Brookman's own house is built largely of wood, but has a base course of brick. Siding and brick are painted white, excepting the window course, which has a gray-pink cast. The doors are of this same color. Silver gray cedar shingles are used for the roof.

The plan shows an ingenious combination of living quarters and office, the latter at a level three steps below the living-room and opening upon what is in effect a garden of its own.

House of Herman Brookman Architect Portland, Oregon
A corner of the living-room, showing the stairway leading down to the bedrooms

The dining-room is an extension of the living-room, as may be seen from the plan, with a continuous band of windows on two sides

Below, entrance to the office. The decorative pediment is of carved wood painted white. The door has the same gray-pink color as the window course

The fireplace side of the living-room, with an unusual combination of brick and woodwork keyed together. Portieres cover the doors leading out upon the terrace

Below, a glimpse of the house from the upper slope to the southeast
A common red brick has been used for the walls of the Palmer house. The roof is of cedar shingles stained silver gray. All of the trim is white, and the shutters a light blue-green.

Main entrance. The delicacy of scale in the trellis and supports is due to the fact that the material is wrought iron, painted white.

House for
Dr. Dorwin L. Palmer
Portland, Oregon
Herman Brookman, Architect

There is a workable combination of house and doctor's office here, with the possibility of entering the doctor's office either through the porch, or, if that is occupied, through the main entrance.
Another hillside house with the entrance front on the upper side. The combination of stucco, carved wood lintel, and wrought iron lighting fixture is an interesting one.

The McHolland house is of stucco on masonry. Trim and stucco are a cream color, with shutters of blue-green, and silver-gray cedar shingle roof.

**House of V. H. Jorgenson, Portland, Oregon**

**Herman Brookman, Architect**

**House of J. McHolland, Portland, Oregon**
There is a similarity of plan in the house shown on this page and the Green house on page 273. Each of these cost $4,500 a little over two years ago. Here again the architect has emphasized in color and material a horizontal course for the windows. Considering the size of the house with its two bedrooms, the supply of bathrooms is unusual.

House of
MRS. EMMA STEIN
PORTLAND, OREGON
HERMAN BROOKMAN,
ARCHITECT
Saturday, September 1.—Talbot F. Hamlin, who is librarian of the Avery Library of Columbia University, has some interesting ideas as to what an architectural library of today should be. In the first place, since the Avery Library is an American library, it should be particularly strong in material devoted to the architecture of this region. But the library must also be a place where the architectural student can find a record of the great achievements of architecture and the allied arts of both past and present. Additions to the shelves cannot be made on the basis of any dogmatic theory of style desirability or any personal prejudices. By far the greatest number of new books are books concerning directly or indirectly the so-called modern movement in architecture and the allied arts.

Monday, September 3.—The Portland Cement Association deserves the commendation of the profession as a whole. Unlike some of the other trade associations which it has been none too careful in activities that trespass upon the architect’s field of action, the Portland Cement Association has adopted the policy of answering the technical questions that are put to them in touch with architects. It has steadfastly refused to enter upon any program of stock plan selling. Our hats are off to you, Sirs!

Wednesday, September 5.—The problem of extending architectural services to include the small house—the great bulk of building in this country—continues to receive an increasing amount of thought and study. Wilbur R. Hanawa, of Cleveland, has a program which is worthy of notice. “Any effort at the solution of the small-house problem must be two-fold: It must reach the public in terms that the public can understand; and it must place the public’s needs before the profession. . . . The needs are mainly two: Making possible the handling of the smaller contract by architects and decorators on a profitable basis; and getting authoritative and unbiased information into the hands of the small home builder when he needs it. . . .
The A. I. A. should invite the co-operation of organized interior decorators and landscape architects in forming a national home information council. This council would carry on a continuous program to integrate the work of present and added sources in information for the public. . . . It would direct the appropriate agencies where unbiased information could be secured. . . . The prospective home builder’s needs and desires would be summarized and codified, then referred to a committee of the professional group. This committee would determine whether members of the professions would care to handle the case, and if so, refer it to a member on some rotating basis. . . . If, on the other hand, the job was too small for professional handling, it would be returned to the information centre for execution through the use of student architects, decorators, and landscape men, being finally approved by the professional board before execution. . . .

Thursday, September 6.—After months of jockeying for position the New York Housing Authority and the Public Works Administration in Washington seem at the moment to have reached an understanding. At least Mr. Ickes has announced that he is ready to go ahead on a basis which he outlines in detail. The PWA is to buy the land, to give the Housing Authority a 30 per cent grant and a loan, the city’s equity being mainly in the form of public services and in land gained by the closing of certain streets that would no longer be necessary. The project is to be amortized in a longer period than usual, forty-five years, and is to be supervised jointly by the Housing Authority and the Federal PWA. It should seem that some such logical arrangement as this might have been arrived at months ago.

Saturday, September 8.—While the contributors to the Guest Editor’s section in the last issue took a stand almost unanimously against competitions, nevertheless, I hear more and more enthusiasm for certain kinds of competitions as being well adapted to present needs. For instance, the design of state and city works if handed over to an architect or a group on the basis of someone’s judgment alone is almost sure to provoke criticism. A properly conducted competition for such work gives the small man a chance to prove their worth and, in these days, is no great hardship in requiring the duplication of effort—since if the competitors are not doing that they are probably reading the newspapers. Lorimer Rich makes the assertion that every one of the satisfactory public buildings in New York was designed as a result of a competition; moreover, that those which were not the result of competitions are less notable architecturally. Herbert G. Wenzell, in The Weekly Bulletin, of the Michigan Society of Architects, makes the point that Raymond Hood’s career illustrates the value of competitions. Without such means of attaining recognition Hood might still have been unknown at his death. That, of course, is a very debatable question, for Hood’s power grew apace in the last twelve years, and might very easily have done so even without his spectacular leap into fame with the Tribune Tower competition.

Monday, September 10.—It is a matter of serious concern to us that we have no really adequate means of gathering the news of architects throughout the United States. We did not know until long after his death, on August 23, that Charles Kotting, of the old well-known firm of Chittenden & Kotting, had passed on. We do read a number of newspapers from all over the country, but by no means all of the important ones. I wish there were some way in which organizations of the profession or individual members of the profession could be induced to keep us informed about important events in their respective communities.

Tuesday, September 11.—Tonight Sigmund Spaeth is giving a dinner to nearly two hundred men and women interested in the possibilities of a new form of art expression adapted to the radio. On my left as I take my seat at the table is Miss Elstner, one of the cast of “The Gibson Family”; on my right, Mrs. Courtney Ryley Cooper, whose husband has written the book for this new musical comedy, designed particularly for broadcasting. The prospect of a pleasant evening between two such interesting neighbors has suddenly lost its significance, for on my left-hand neighbor’s left is Lawrence Tibbett—so I shall see no more of her. Turning to my right, on the far side of Mrs. Cooper, Rudy Vallee has just taken his seat. The prospect, therefore, would indicate that I had better busy myself with writing diary.

Thursday, September 13.—James H. Blauvelt tells me that Mrs. Edward Palmer York, widow of the late partner in the firm of York & Sawyer, has joined him in the practice of interior decoration.

Friday, September 14.—Commissioner Robert Moses, John H. Finley, and I. N. Phelps Stokes rededicated Bryant Park in the rear of the New York Public Li-
brary today. This two-thirds of a city block has passed through a picturesque life in which it finally came to be one of the most disreputable parks in the city of New York. Robert Moses, with the aid of the unemployed, has ended this, and has produced a magnificent open space as a setting for the William Cullen Bryant bronze. The scheme is one developed by the Park Department from Lushby Simpson's winning design in a competition held in the fall of 1933 by the Architects' Emergency Committee. Here is a great central plot of lawn surrounded by a double border of trees, with a memorial fountain to Mrs. Josephine Shaw Lowell near the west end. A memorial to Robert Shaw, Mrs. Lowell's brother, stands at the head of the Boston Common. The thing I liked most about the new park is that it has a central open greensward which, incidentally, is likely to be kept so in spite of city dust and midsummer droughts, for it has an underground sprinkling system.

Saturday, September 15.—Mrs. Simkhovitch, who is president of the National Public Housing Conference and vice-chairman of the New York City Housing Authority, has come back from England deeply impressed by the progress that is being made in housing throughout England. England's present attitude toward housing as a public duty is reflected in a letter by the Earl of Listowel before the House of Lords: "The basis for the uneconomic housing of the poorest paid section of the working class...is founded on the belief that individuals have the same right to decent homes and decent housing accommodations as they have to a minimum of education or to the protection of the law...Private enterprise has been unable to furnish these houses at a low rent for the working class [and now] the State and local authorities have stepped in and done what the business man has been unable to perform."

Monday, September 17.—The Engineering Foundation believes there is considerable more activity of late in the study of building foundations than in all history before our time. Foundation planning is still primarily a matter of judgment. Nevertheless, we are rapidly learning something about soil mechanics and the widely differing conditions that may be found even in local foundations. In designing a column footing ten feet square, the engineer used to assume that the pressure on the soil under each square foot of the footing will be, say, two tons. Actually this is not the case, the pressure on the soil being greatest at the centre and least at the edges. Many engineers and research bodies are adding to our knowledge concerning the mysteries of underground supports.

Tuesday, September 18.—Lunched with Philip Goldens, recently back from Spain with a portfolio full of beautiful drawings. Some of these we are to have the pleasure of reproducing in an early issue. Like most of his fellow etchers, Mr. Goldens reports to his dealers a selling comparatively few etchings these days.

Wednesday, September 19.—There is a significant straw in the wind, perhaps, in the fact that this morning's Times tells of two more Manhattan loft buildings, one of four stories and one of five, which are being cut down. The lots are for sale to those farms. There is a superabundance of loft space in New York, but ground floor space, being limited by the size of the island, is in better demand.

Thursday, September 20.—R. A. Fisher, Assistant Professor of Architecture at Carnegie Tech., showed me the work that unemployed architects and craftsmen of Pittsburgh have been doing this summer in low-cost housing research. About nineteen of these men were employed for a period of about sixteen weeks studying the possibilities both in city housing and in subsistence housing, working out details of engineering, heating, and the like. The results of this work, under Professor Fisher's direction, consisted of a large number of uniformly rendered drawings together with working drawings of the structural and mechanical details—a particularly interesting showing, embodying many fresh ideas in the technician's work. With the main emphasis having been placed upon the social and economical phases in our general study of housing by various bodies and individuals during the past two years, this examination of some possibilities from the technician's viewpoint is particularly constructive.

Friday, September 21.—Motored up across Connecticut and Massachusetts to New Hampshire, then New Hampshire, and New Hampshire, following the Connecticut Valley toward the river's source. There ought to be established providing for an annual visit into this northern country when the foliage is assuming its autumnal dress. It is just as important for the eyes to be rested and benefited by the tapestry of these northeastern hillsides as it is to benefit the body by annual visits to the baths of Baden Baden, or to Vichy or Saratoga Springs for the waters.

Sunday, September 22.—Motored through the tight little valley sheltering Plymouth and the Coolidge homestead, and in contrast to this primitive simplicity, there is a look at the Orozco murals in the Baker Library of Dartmouth at Hanover. The murals here are even worse than I had judged them from the photographic reproductions. Once again it was impressed upon me that the place for Mexican painters, if any, is in Mexico.

Monday, September 24.—Visited the memorial to Augustus Saint-Gaudens at Cornish. His home, which was an old inn remodeled, together with a lovely garden and the studios he maintained by trustees as a memorial to the man and his work. In the larger studio are to be found the full-size plaster model of the Chicago "Lincoln," and smaller models of the Adams memorial in Washington, Robert Shaw at the head of the Boston Common, the Diana that once perched on top of the Madison Square Tower, the Stevenson has-reliefs, and many other reminders of the wealth of beauty in form that Saint-Gaudens left us.

Wednesday, September 26.—Having motored down the Connecticut Valley yesterday, I spent the night with Lewis Welsh in his two-hundred-year-old farm-house at Fairfield, then to see and photograph the new house which Louis Rosen­berg, architect and etcher, has built for himself in Greens Farms. Rosenberg, like most of those who have freed themselves from the fetters of literal style copying, is frequently amused by the bewildement of visitors who refuse to believe that no style label can be attached to his house. It is reminiscent of work in England, France, and in the country of his own forefathers, Sweden, the whole welded into an unusually charming environment for life today.

Friday, September 28.—Frederick Woodbridge, Jr., was telling me at luncheon today of the reconstruction of Columbia University's School of Architecture. While the problem method as developed by the Ecole is being retained as the basic principle of instruction, group competitions are eliminated. Dean Hudnut feels that the competitive system has developed so many conventions and so many arbitrary standards of judgment as to have become widely separated from reality. There are to be three studios in the School of Architecture for the work of design. Each of these will be under a master and an assistant. The three masters are Jan Huibergen, the Swedish architect, Hanover, the State and local authorities have stepped in and done what the business man has been unable to perform.
In a typical slum section of Atlanta, Ga., demolition has been started in preparation for the erection of a housing project under the Federal Emergency Administration of Public Works. The allocation of public funds is $2,100,000. The plot of seventeen and one-half acres, that cost the government 50 cents per square foot, is near three institutions for the higher education of Negroes, and the housing is exclusively for that race.

Building coverage, 26 per cent. There are to be forty-two groups of two- and three-story family housing units, containing approximately 2,450 rooms. The apartments are of four types, ranging from two to five rooms. There is to be a building for stores and offices. The plan calls for no back yards, and no common halls, entrances being on both sides of the buildings. Construction provides fire-proof, reinforced concrete floors. Walls are faced with cinder blocks (painted) and brick, backed up with load-bearing tile. Roofs are of tar and gravel, insulated. Heating and cooking by gas. A plot plan appears overleaf, and the character of the work is shown by the accompanying photographs of models.

EDWARDS & SAYWARD, ARCHITECTS

University Housing Project, Atlanta, Ga.
STUDY FOR
UNIVERSITY HOUSING PROJECT
ATLANTA, GEORGIA
EDWARDS & JONES
ARCHITECTS
O. F. COOK
ENGINEER
1934

ARCHITECTURE
NOVEMBER, 1934
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THE NINETY-SEVENTH IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

ARCHITECTURE'S PORTFOLIO OF ROOF TRUSSES

Subjects of previous portfolios are listed below at left and right of page

1926
- DORMER WINDOWS
- SHUTTERS AND BLINDS
1927
- ENGLISH PANELLING
- GARDEN STEAIRWAYS
- STONE MASONRY TEXTURES
- ENGLISH CHIMNEYS
- FANLIGHTS AND OVERDOORS
- TEXTURES OF BRICKWORK
- IRON RAILINGS
- DOOR HARDWARE
- PALLADIAN MOTIVES
- GABLE ENDS
- COLONIAL TOP-RAILINGS
- CIRCULAR AND OVAL WINDOWS
1928
- BUILT-IN BOOKCASES
- CHIMNEY TOPS
- DOOR HOODS
- BAY WINDOWS
- CUPOLAS
- GARDEN GATES
- STAIR ENDS
- BALCONIES
- GARDEN WALLS
- ARCADES
- PLASTER CEILINGS
- CORNICES OF WOOD
1929
- BOOKWAY LIGHTING
- ENGLISH FIREPLACES
- GATE-POST TOPS
- GARDEN STEPS
- RAiN LEADER HEADS
- GARDEN POOLS
- QUOINS
- INTERIOR PAYING
- BELT COURSES
- KEYS TONES
- AIDS TO FENESTRATION
- BALUSTRADES
1930
- SPANDRELS
- CHANCEL FURNITURE
- BUSINESS BUILDING ENTRANCES
- ELEVATOR DOORS
- ENTRANCE PORCHES
- PATIOS
- TREILLAGE
- FLAGPOLE HOLDERS
1931
- CASEMENT WINDOWS
- FENCES OF WOOD
- GOTHIC DOORWAYS
1932
- BANKING-ROOM CHECK DESKS
- SECOND-STORY PORCHES
- TOWER CLOCKS
- ALTARS
- GARAGE DOORS
- MAIL-CLOSET BOXES
- WEATHER-VANES
- BANK ENTRANCES
- HEALS
- WINDOW GRILLES
- CHINA CUPBOARDS
- PARAPETS
1933
- RADIATOR ENCLOSURES
- INTERIOR CLOCKS
- OUTSIDE STAIRWAYS
- LEADED GLASS MEDALLIONS
- EXTERIOR DOORS OF WOOD
- METAL FENCES
- HANGING SIGNS
- WOOD CEILINGS
- MARQUISSES
- WALL SHEATHING
- FRENCH STONEWORK
- OVER-MANTLE TREATMENTS
1934
- BANK SCREENS
- INTERIOR DOORS
- METAL STAIR RAILINGS
- VERANDAS
- THE EAGLE IN SCULPTURE
- EAVES RETURNS ON MASONRY
- GABLES
- EXTERIOR LETTERING
- ENTRANCE DRIVEWAYS
- CORBELS
- PIER ENDS
- GOTHIC NICHES
- CURTAIN TREATMENT AT WINDOWS

Below are the subjects of forthcoming Portfolios

Modern Lighting Fixtures
- DECEMBER

Circular Gothic Windows
- JANUARY

Tile Roofs
- FEBRUARY

Molded Brick
- MARCH

Dormer Windows
- APRIL

Entrance Seats
- MAY

Photographs showing interesting examples under any of these headings will be welcomed by the Editor, though it should be noted that these respective issues are made up about six weeks in advance of publication date.

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Church of SS. Simon and Jude, Bethlehem, Pa.
Henry D. Dagit & Sons

University of Chicago Dining-hall,
Chicago, Ill.
Zantzinger, Borie & Medary

Graduate College Extension,
Princeton University, Princeton, N. J.
Cram & Ferguson

Larchmont Avenue Presbyterian Church,
Larchmont, N. Y.
Office of John Russell Pope
Jefferson Avenue Presbyterian Church, Detroit, Mich.  
Smith, Hinchman & Gryllis

Fourth Presbyterian Church,  
Chicago, Ill.  
Cram, Goodhue & Ferguson;  
Howard Shaw

Christ Church, Bronxville, N. Y.  
Mayers, Murray & Phillip

Holy Cross Church,  
Germantown, Pa.  
Henry D. Dagit & Sons
Chapel, St. Thomas's Boys High School, Rockford, Ill.  
W. J. Van der Meer

Public Library, Riverside, Ill.  
Conner & O'Connor

St. Luke's Evangelican Lutheran Church,  
Chicago, Ill.  
Edward A. Nitsche

St. Paul's Church, Malden, Mass.  
Cram & Ferguson
House of Schofield Andrews, North East Harbor, Me.
Tilden, Register & Pepper

Grace Lutheran Church, La Grange, Ill.
Culver & Eden

House of Hampton Anderson, Bedford Hills, N. Y.
Harold Pindar Zoller

First Presbyterian Church, Wilmington, N. C.
Hobart Upjohn
Church of St. William the Abbot, Seaford, Long Island
James W. O'Connor

Kent School Chapel, Kent, Conn.
Roger H. Bullard; Arthur Loomis Harmon

Camp Aladdin, Andover, N. J.
Clarence S. Stein

Swimming-pool,
Lido Beach Hotel,
Long Beach, N. Y.
W. A. Sawsey
Epworth Euclid Church, Cleveland, Ohio
Bertram G. Goodhue; B. G. Goodhue Associates; Walker & Weeks

Kent School Chapel, Kent, Conn.
Roger H. Bullard; Arthur Loomis Harmon

House of J. H. Perkins,
Greenwich, Conn.
William F. Dominick

Hudson Guild Farm,
Andover, N. J.
Clarence S. Stein
Church of New Jerusalem, Pittsburgh, Pa.
Harold T. Carswell

Albany Park Lutheran Church, Chicago, Ill.
Robert C. Ostergren

Trinity Protestant Episcopal Church,
Moorestown, N. J.
Walter T. Karcher & Livingston Smith

Christ Church Parish House, Fitchburg, Mass.
Hobart Unjohn
Mission Covenant Church of Austin, Chicago, Ill.
J. E. O. Pridmore

Julia Morgan

St. Peter's Church, Antioch, Ill.
Leo Strelka

Church of the Epiphany, Brooklyn, N. Y.
Latenser, Bastow & Way
Trinity Lutheran Church, Detroit, Mich.
W. E. N. Hunter Company

St. Clement’s Church, Lakewood, Ohio
William Koehl

Chapel of the Intercession,
New York City
Bertram G. Goodhue;
Cram, Goodhue & Ferguson

Hotel Rolyat,
St. Petersburg, Fla.
Kiehnel & Elliott
Church of St. John the Evangelist, Buffalo, N. Y.
Karl G. Schmill

Chapel, St. Lawrence University, Canton, N. Y.
Mayers, Murray & Philip

House of Jefferson Penn, Reidsville, N. C.
Harry Creighton Ingalls

St. Brigid's Church, Westbury, Long Island
F. Burrall Hoffman
Refectory, Princeton Graduate College, Princeton, N. J.
Cram & Ferguson

Bethany Evangelical Lutheran Church, Chicago, Ill.
Benjamin Franklin Olson

Irving Presbyterian Church, Indianapolis, Ind.
Harrison & Turnock

Collegiate Chapel of St. Andrew's, Philadelphia, Pa.
Zantzinger, Borie & Medary
First M. E. Church, Hanover, Pa.
Sundt & Wenner

South Madison Dining-hall,
Princeton University, Princeton, N. J.
Day & Klauder

St. John's Episcopal Church, Buffalo, N. Y.
Mayers, Murray & Phillip

St. Paul's Episcopal Church, Yonkers, N. Y.
Cram & Ferguson
Scripps College, Claremont, Calif.
Gordon B. Kaufmann

First Presbyterian Church
Greensboro, N.C.
Hobart Upjohn; Harry Bortin

House of Henry de Roulet,
Los Angeles, Calif.
Morgan, Walls & Clements

Living-room in a California House
John Byers
NOVEMBER, 1934
ARCHITECTURE

St. James Evangelical Parish Hall, Chicago, Ill.
Benjamin Franklin Olson

Church of Latter Day Saints,
Chicago, Ill.
H. B. Bernard

Hudson Guild Farm, Andover, N. J.
Clarence S. Stein

House of
H. H. Rogers,
Southampton,
Long Island,
Office of
John Russell Pope
House of George E. Hardy, Fishers Island, N. Y.
Van Pelt, Hardy & Goubert

First Congregational Church, Columbus, Ohio
Office of John Russell Pope

Kitchi-Gammi Club, Duluth, Minn.
Bertram G. Goodhue

Christ Church, Crambrook, Mich.
Mayers, Murray & Phillip
Members of the architectural profession may secure without cost any or all of the literature reviewed on this and the preceding page.

Fill in the file numbers of items desired on the prepaid mailing card below and mail. ARCHITECTURE will see to it that you have full information.

WHY SEAMLOC?
F. 348. The L. C. Chase Company has a most interesting booklet, fully illustrated, showing how problems of installation have been overcome by Seamlco. They will be glad to send this on request.

PRESSURE REGULATORS AND REGULATION PROBLEMS
F. 349. A booklet has been prepared by the Air Reduction Sales Company of New York which will prove of great interest to all industries requiring accurate, uniform pressure control and the close regulation of oxygen, acetylene and other gas pressures. It is profusely illustrated with pertinent diagrams and charts which are so arranged as to permit the reader to quickly grasp the salient facts about pressure regulators and methods of solving regulation problems. You will certainly want one of these.

CIVILIZATION'S GREATEST MENACE
F. 350. A booklet, under the above title, published by The John Douglas Company of Cincinnati, thoroughly discusses the dangers of water pollution, amoebic dysentery and other water-borne diseases as caused by cross connections and back-siphonage in plumbing fixtures. Excellently printed in two colors, it thoroughly explains, through numerous graphic illustrations, conditions under which cross-connections and water pollution can and do occur. It presents a simple, non-mechanical fool-proof solution of the problem. Your copy may be had, without obligation, on request.

LEVELITE
F. 351. You know that an uneven base on which a floor is laid is sure to result in shortened life if not more serious damage to the finished floor. Therefore after several years of experimentation a compound known as Levelite was invented and perfected by Selby Batterby & Company, of Philadelphia. The properties, methods of application and advantages of this unique floor compound, which is used to receive either rubber, linoleum, asphalt, tile, cork, celluloid wood block or carpet, and which adheres to steel, wood, glazed tile, etc., will be gone into in detail if you will check this item on the enclosed card.

BAKELITE LAMINATED
F. 352. In the last quarter century the Bakelite Corporation has contributed much to the production of fireproofing materials especially suited for use as flooring, trim, walls, furniture, etc., in public buildings, stores, and factories. They will send you detailed information on the uses of Bakelite Laminated for sturdy, decorative fireproofing.

TAKAPART PRECAST FIREPROOF WALL
F. 353. Architects, building owners and managers have been demanding a fireproof wall that eliminates all wet trades, can be painted immediately, shows no joints or cracks, provides runways for wiring, lends itself to putty-less glazing, has almost complete salvage value, is insulated against sound transmission, at a cost no higher than an ordinary wall. The Takapart Products Company, 114 East 35th Street, New York City, have the answer in their Precast Fireproof Wall, and pictures of the wall being installed are shown in a most instructive leaflet containing specifications.

WEATHER-RESISTING COLD WATER PAINT
F. 354. The story of Aquacote is a simple one ... a cold water paint, scientifically and especially compounded for exterior use. When mixed with cold water and applied in accordance with the directions of the Blue Diamond Service Corporation, it resists all kinds of weather for a reasonable and satisfactory length of time. Aquacote should prove of great use in carrying out the work planned by the Federal Housing Administration as it is particularly suitable for use in the renovation of small houses, track and stable equipment, and farm buildings, and is remarkably long-lasting on light shafts, areas, air-shafts, and courtyards of apartments, where frequent painting is now required to maintain attractive, light-giving surfaces. Further information about this unusual paint will be furnished gladly.

SPECIAL SHAPES
F. 355. The Tuttle Brick Company of Middletown, Conn., have a folder showing sizes, weights and colors of their Common Brick, Ancient Size Puritans, Arawa, Raintashed, and Whitewash Brick, Lammies, Old Style Common, and Waterstruck Type. It also shows diagrams of some of the shapes they keep in stock, with their Angles and intersections.

ONE OF MAN'S CHOICEST POSSSESSIONS
F. 356. Has always been a panelled room. Now this may be had in a few days, at small cost, by the use of Timbertone, a prefabricated material possessing all the rich mellowness of century old wood. Ideal for installation in executive offices, private libraries, recreation rooms, hotels, churches, taverns, and any place where the loneliness and durability of wood paneling is desired. The Timbertone-Stone Products Corporation of New York manufacture Timbertone, and we will be glad to send you their illustrated booklet fully outlining the uses of this material.

BALANCED DOORS
F. 357. In a black and silver booklet the Ellison Bronze Company of Jamestown, N. Y., tell you why these balanced doors, built of bronze, aluminum, or steel, overcome wind pressure and wind suction. Their door sections are at your service and will send you full particulars.

ALUMINUM SKYLIGHTS
F. 358. The Milcor Steel Company of Milwaukee, Wis., have sent us diagrams, cross sections and specifications of their new Super Extruded Aluminum Skylights. These are a far cry from the antiquated and dangerous "roof windows" with their rusting bars and bolts, and are a signal advance in the building industry. You may have these diagrams and cross sections by checking your order.
sustained action, will not mar nor disintegrate under the wearing action of rolling cans, steel truck wheels, or constant steaming and scrubbing. A Duronite Floor will outlast an ordinary concrete floor five to one, say the makers, the Washington Concrete Corporation, New York, developing a compressive strength of 15,000 to 20,000 pounds per square inch and a tensile strength of 1,000 to 1,500 pounds per square inch. List of installations and complete architectural and engineering data on request.

THUMBS DOWN ON RUST

F. 361. This is the title of a new folder, referred to as Bulletin No. ADV 133, by the makers of Toncan Iron, the Republic Steel Corporation. The bulletin goes into the problem of rusting and corrosion and how it has been met by this modern alloy of refined, heat-resistant iron, copper and molybdenum. It has been used with great success for interior sheet metal work, as indirect heating ducts, for ventilators, culverts, bridge work, water mains, carbon black furnaces, and roofing on elevated trains. You will want further information about the durability of Toncan Iron. Write us for the bulletin.

HEAT-PROOF YOUR HOUSE

F. 362. A new principle in house insulation is described in a folder entitled "Alfol Insulation for Modern Homes," published by the Alfol Insulation Company. This new process of heat reflection involves a very low initial investment with a high return in the way of reduced fuel costs, elimination of waste space, and healthful indoor conditions. You will want the heat-saving table contained in the booklet as well as the samples of Alfol which the manufacturer will send on request.

BUILDING MATERIALS


GATE VALVES WITH RISING STEM

F. 364. The Kennedy Valve Manufacturing Company of Elmira, N. Y., announces a new line of rising stem heavy standard bronze gate valves for 150 pounds working steam pressure, and 250 pounds working water, oil or gas. This valve, known as Fig. 45, is a companion type to the new Fig. 23 which was introduced earlier in the year, and is provided with a flexible connection between the disc and the stem so that the stem will not bind nor spring when the valve is closed.

HEATING EQUIPMENT

F. 365. The National Radiator Corporation of Johnstown, Pa., have a new booklet describing several of their modern heating units including the National Bonded Contention, National Bonded Jacketed Square Boiler, National-Premier Steel Boiler, Aeron Iron Convector, and Aero Tube-Type Radiators.

COMPENSATED HUMIDITY CONTROL

F. 366. The Minneapolis-Honeywell Regulator Company is now prepared to supply a compensated instrument control system which will accurately govern relative humidity at any desired differential between inside relative humidity and outside temperature. This is accomplished by the use of a potentiometer humidity controller in conjunction with an outside temperature controller of remote bulb type.

SERVICE FOR DOORS

F. 367. The Robert Mitchell Manufacturing Company, of Cincinnati, have just taken over the products formerly made by the Compound & Pyron Door Co. and will continue to manufacture the Compound Key Veneered Wood Doors, Pyro Process Fire Proof Doors and Trim, and the Tri-Mount Sound Proof Doors. They will gladly send information on these products and on their service to architects.

FLOAT AND THERMOSTATIC DRIP VALVE

F. 368. Designed for removal of air and condensation from short steam mains, branches or risers, the operating characteristics of this new No. 17 Drip Trap make it especially desirable for installation on unit ventilators, small unit heaters, or other equipment which may be subjected to freezing temperatures during periods when the heating system is not in operation. This is a product of the J. P. Marko Co., which will send full descriptive details on request.

FOR VENTILATION AND DRYING JOBS

F. 369. ILG Electric Ventilating Co. are offering a new series of what they call Type "B" Volume Blowers in five sizes. These are available in different speeds, weights, air capacities, and pressure ranges, and because they are quiet, smooth running, and cover a wide capacity range in small steps with low power consumption and higher efficiency, the blowers are suitable for ventilation and drying jobs of many kinds.

MOST ECONOMICAL IRON ALLOY

F. 370. The use of Molybdenum was little known up until about five years ago but now "Moly" irons are being used wherever exceedingly high temperatures are required. Wear and heat failures as well as susceptibility to cracking and oxidation while the physical properties and uniformity are improving. Yet, strange as it may seem, the comparative alloy cost is reduced and the machinability remains constant. The Climax Molybdenum Company, New York, have a publication, The Moly-Matrix, which is most interesting and informative.

CHROMALOID

F. 371. If you will check your card, we will have the latest brochure of the American Nickeloid Company, of Peru, Ill., sent you. This is entitled "Chromium," and is filled with photographs for very attractive, utilitarian as well as beautiful, to which chromaloid is being put by prominent architects throughout the country.

ADVERTISERS' LITERATURE

A. 162. American Telephone and Telegraph Co. Building Telephone Conductors...

A. 170. Austral Sales Corp. Standard School Equipment...

A. 171. Bethlehem Steel Co., Inc. Economical, Balanced Designs...

A. 172. Bigelow-Sanford Carpet Co. Carpet Counsel for Architects...

A. 173. Brunswick-Balke-Collender Co. Maximum Speed with Minimum Waste...

A. 174. Byers Company, A. M. Difference Between Genuine Wrought Iron and Other Ferrous Metals...

A. 175. Carnegie Steel Co. The Good Reasons for Light-Weight Sections...

A. 176. Cutler Mail Chute Company Modernizing with Mail Chutes...

A. 177. D'Ascanio Studios, The Memorial Stained Glass Windows...

A. 178. Douglas Company, The John Syphon-Proof Bowls...

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Of ARCHITECTURE, published monthly at New York, N. Y., for October 1, 1934.
State of NEW YORK, County of NEW YORK.

Before me, a NOTARY PUBLIC in and for the State and county aforesaid, personally appeared CARROLL B. MERRITT, who, having been duly sworn according to law, deposes and says that he is the BUSINESS MANAGER of ARCHITECTURE, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, to wit:

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CARROLL B. MERRITT, Business Manager.

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Notary Public, Warren, Ohio

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