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PAVILION AT BOAT LANDING

HOUSE OF CHARLES L. BRIGGS, MIAMI, FLA.

GORDON E. MAYER, *ARCHITECT*

MAIN DOORWAY—CHURCH OF THE BADIA, FLORENCE, ITALY

THE AMERICAN ARCHITECT

VOL. CXV WEDNESDAY, JUNE 25, 1919 NUMBER 2270

A BRIDGE SPANNING A RAVINE

Mill Creek Park, Youngstown, O.

By J. A. SCHWEINFURTH, *Architect*

"So far as natural beauty is concerned, there is no park in the country to compare with Mill Creek Park. It is as if a bit of choice scenery had been taken from the mountains of Switzerland and deposited in a level country." (The late Chas. Eliot, landscape architect of Boston, on viewing this park for the first time in 1891.)

"The existence of a tract comprising such a rare combination of attractive natural features in the immediate vicinity of a city is, so far as my experience goes, unparalleled elsewhere. The fact that for its whole extent it has been preserved from vandalism by those who have no conception of any other than a pecuniary standard of value, and finally the appreciation of its character and capacity for development, which has led to its being secured for all coming time as a resort for refreshment and enjoyment by all classes of citizens, are each and all subjects for congratulation * * * and cannot fail eventually to confer a distinctive character upon your city as the possessor of a park so unique in the variety and beauty of its natural scenery that it cannot elsewhere be rivaled." (Written after visiting the park in 1893, by the late H. W. S. Cleveland, landscape architect of Minneapolis.)

YOUNGSTOWN, Ohio, situated between Pittsburgh and Cleveland, is called the metropolis of the great iron and steel producing region of Eastern Ohio and Western Pennsylvania, better known as the Mahoning and the Shenango Valley. Where the iron tide from the ore ranges of the North sweeps through this valley, with its coal, its limestone, oil and gas, Nature, it may almost be said, has located this great industrial city of Youngstown, the home of some of the most prosperous steel manufacturing companies in America. When it is related that dividends paid by companies operating in the Mahoning Valley in the fourth quarter of 1918 aggregated $3,000,000—the largest disbursements on record—and Youngstown's payroll for 1918 reached over $84,000,000, compared with over $65,000,000 in 1917, one can gather some idea of the teeming life of this community, of its myriads of human workers, and their need of good living conditions and recreation. By day one sees a second Pittsburgh; at night the grandeur of the consuming gases from a hundred furnaces is a grand and moving spectacle never to be forgotten. Despite its dull and uninteresting aspect to the casual traveler, if he will visit the residential portion of the city upon both sides of the Mahoning River, he will find in its many attractive streets and homes a beautiful city, with marked evidences of a cultured and refined people. But its greatest attraction is not visible to

the casual visitor as it lies hidden along the valley of an ancient stream.

It was a professional visit which took me to Youngstown in early September. Stepping out of a comfortable car in the early morning into a thick and clammy fog, I groped my way across the flat, looking in vain for a station. Not finding it, I inquired the way to the city, and mounting a long flight of plank steps soon emerged on a busy clanging highway, above the vast empty railroad yard below. At this early hour the streets swarmed with workmen, each with anxious tense face and his faithful dinner pail, men or their descendants from all quarters of Europe, afoot and densely packed in huge trolley cars, hastening through the gloom to mill and shop, in that never ending pursuit.

Scanning the forbidding skies, it was concluded that a great storm was imminent, but this I later learned was no exception to the usual early morning atmosphere of the place. Indeed, before noon the conquering sun had devoured the clouds, the sky became clear, the sun shone with some constraint, the depression lifted from my soul, and I was enabled to attend more or less gaily to the affairs in hand. But over a part of the city still hung the gray pall which is characteristic of cities of this class.

Business concluded, my client proceeded to show me the town. I had seen no signs of a park, and after a drive of about one and one-quarter miles from the Central Square of the city entered a simple roadway marked by no grand gateway—or sign post—and immediately found myself in the midst of wild nature, with the addition of the roads and bridges. Consisting of nearly 500 acres the section is now all included in the city limits, and by the skilful management of those in control, it has cost up to date, including all its roads, bridges, etc., but $850,000. Its dominating feature is its natural beautiful and picturesque scenery. One recalls many of the cities of the Continent of Europe which have waters flowing through them—and whose banks are lined to the water's edge with uninteresting rear walls or back yards; thus losing the opportunity which has been so well improved in Youngstown.

VIEWS SHOWING DIVERSIFIED ASPECT IN PARK

Mill Creek, from which the park takes its name, had flowed, ever since it came into existence after the Great Glacier, through a partly level country, on its way to join the Mahoning River, within the

present city. During these years it has formed, in a picturesque valley, beautiful waterfalls, with meadows surrounded by cliffs and hills from sixty feet to one hundred feet in height. It is this ancient valley with its creek which has been preserved in its native wild state by Youngstown, as a place for the rest and recreation of its citizens, and it is these free, wild and untrammeled characteristics which make this park unique in America.

We reached at last a shady level with beautiful

LAKE GLACIER

green and gold vistas, blue hazy distances seen through mossy tree trunks, where picnic preparations were in progress for some of the workers we had met in the early dawn. It was a setting that a Sargent would have immortalized—or by which a Manet might have been inspired to paint "A Picnic." As we rested here, my friend told me the story of this park—and its creator, Volney Rogers, City Attorney of Youngstown for two terms, author of the Township, Park, and other Laws of Ohio; one of the earliest, most active and effective movers in the effort to preserve Niagara Falls from utilitarian encroachment, and who first suggested the proper legal steps to preserve the beauties of Niagara intact; lover of trees, birds and flowers, and, as his whole life testifies, filled with a consuming desire to preserve the beauties of nature for the people.

About forty years ago, a young man who had but lately been admitted to the bar located in Youngstown. A lover of nature in all its forms, in the wanderings which all nature lovers find necessary, he explored Mill Creek Valley, finding it wild, like a mountain gorge far from the haunts of men. There were a few meadows and level areas of grassland here and there, the hillsides and the banks of streams being covered with indigenous trees, shrubs, ferns and flowers. Thereafter, during the years of his law practice he came here to rest, to revel uninterrupted in the scenes he loved, and often to secure quiet for the study of his law cases. So much impressed with its charm was he, that he dreamed of the time when its influence should be brought into the lives of the thousands of busy

workers of his city, for every lover of nature wishes all others to share his love. From this time on through all the years, he has devoted his life to making this dream come true. To convince the citizens of its value as a park for the people so that they would appropriate money for its acquirement and maintenance, and often going into his own pocket for the money to acquire a valuable addition when circumstances rendered it imperative; to arrange all the details of its financing, of law, to defend it at the bar, to serve on the Board of Park Commissioners, and make this park what it is today, has been his devoted life work. As Park Commissioner he would build a dam across this valley to form a lake; throw a superb stone arch of noble span across this ravine, sweep a magnificently curving road across that meadow, remove a few dying trees here to make a charming vista; build a shelter there for refuge from storms, a bathing beach here, and a boat house there. He worked like a great landscape architect, using valleys, hills, waters, trees, sky and air for his medium. To do this, and to be able to convince a people that it was good, so good that they would be willing to be taxed for it—such was the Cyclopean task he undertook—and accomplished.

When threatened with the dangers of encroachment in various forms through all these years, he has used his legal ability to defend its very existence, appealing to courts and to legislatures in its defense. The City of Youngstown tried some years ago to take the park for water supply purposes, having a bill presented to the Legislature authorizing such use. Rogers opposed this before the House and won. Next a referendum was demanded, and Rogers again opposed such use for the park, and the people voted against the water proposition and have until now kept their park intact. Mr. Rogers' work is not yet done, however, for it is now threatened by a proposal to use the park water-course as an overflow for the new sewage system about to be initiated. This proposition Mr. Rogers opposed, and carried the case to the lower court and lost. He then took the case to the Supreme Court of Ohio, which court refused to affirm or reverse the lower court's decision, and rendered no opinion. Rogers is now engaged in trying to have the proposed sewage system changed, so that the waters of Mill Creek Park will not be contaminated. And so the matter rests—and time only will show the outcome. But the people of Youngstown are not ungrateful for their champion's devotion; they have signed a contract for a bronze statue of Mr. Rogers, to stand forever amid

A NATURAL FALL ON MILL CREEK

the scenery he created, where he loved to linger, while he was laboriously making the dream of his early manhood come true.

Before leaving the city, my friend showed me pages 298 and 299 in "Chas. Eliot, Landscape Architect," written by his father, Chas. W. Eliot, from which I quote:

"The park at Youngstown, Ohio, was thus described by Charles in a note to his wife: * * * 'A fine river glen with numerous side ravines and some cliffs, a really good reservation, and the work of a single energetic young lawyer, an enthusiast, and he has done a fine thing.' "

On page 301 the father quotes from a letter from his son to the Park Commissioners of Youngstown:

"Your gorge is one of the finest park scenes of America, and deserves most careful handling; and all who work in or for it have my very best wishes."

Mapping by Airplane

JUST how far the science of photography will be applicable to the production of topographic maps is a subject now engrossing considerable attention among aviators. When one considers the wide variety of purpose in map-making, the differences in aërial camera construction, and the many details involved in this work, it will be readily realized that many problems present themselves for solution.

J. B. Mertie, Jr., associate geologist of the United States Geological Survey, has gone thoroughly into the ramifications of this subject, and some of his conclusions are now printed.

To begin with, maps are of various kinds, are made in various scales and with different degrees of accuracy.

Thus there are recognized exploratory, reconnaissance, detail and ultradetail maps, ranging from scales of 1:1,000,000 or smaller up to an extremely large scale, and on, still farther, to natural-scene maps or even maps that are magnifications of the objects shown. Also, there are plan maps and relief maps, the former showing natural and cultural features and the latter indicating, by means of hachures, contour lines or other means, the regional relief. Likewise, there are timber maps, geologic maps, soil maps, and other special kinds. The most generally useful map is the modern topographic map as now produced by the Geological Survey, which shows all natural and cultural features, including also timber areas, and indicates also by means of contour lines the relief of the terrain. The production of such maps, at scales of from 1:250,000 up to 1:62,500 is the present aim of most workers from the air.

A photograph of a plane and horizontal surface taken from the air upon a photographic emulsion held parallel to the plane of the horizon is a true map. The lens has acted merely as a point of projection connecting one plane with another, and of course the scale is dependent both on the distance of the lens from the ground and on the distance of the photographic plate or film from the lens.

Any relief upon the surface of the object photographed, however, or any inclination between the plane of the ground and the plane of the plate, or film, vitiates at once the results and necessitates the making of compensating corrections. As a matter of fact, the surface of the earth shows everywhere more or less relief, and also in actual practice it has not yet been possible to hold an airplane camera in a truly vertical position, though some schemes reduce the deviation very materially. But both causes of error are present, and both must be recognized and corrected. It has been the practice of some workers to take a series of pictures from the air, fit them together into a photographic mosaic, ignoring the two sources of error just mentioned, and to call the resulting product a map, or a mosaic map. In truth, it is neither, but only a series of pictures showing distortion, differences of scale within the individual picture as well as between them, and lack of geodetic control, which are fitted and fudged together to present a pleasing appearance. While this has many uses, certainly it is far from being a map and should not be considered as such.

The modern topographic map presupposes an accurate plan map upon which the contour lines may be drawn. It is possible to derive both the plan and the contour lines from aërial pictures, provided the necessary data are given, but, states Mr. Mertie, it is impossible to make either of them from uncontrolled pictures fitted together in mosaic form.

Opinions appear to differ on this point, however. Lieut. M. C. Lawson, in a recent address before the second Pan-American Aeronautic Convention, maintains that the map of the future is the air mosaic. "Whether it be the military map, the automobile road map, or a map of air routes, the only

absolutely accurate information of the terrain, the roads, the elevation of towns, cities, and all topographic features, is the minute mosaic, the map produced by detail pictures snapped from the airplane, of any given territory. The Government already has begun using aviators in making a map that is to cover every inch of territory in the United States.

"This is a stupendous undertaking. It probably will require years of hard work and application, but its military and commercial value, once completed, will be unlimited."

"To realize the seriousness of the stability problem," says C. H. Calvin, a pioneer in the invention of safety devices for airplanes, "we have only to refer to a recent report of the United States Air Service. Out of 274 fatal accidents reported, in which the cause was known, 178, or 65 per cent, resulted from loss of control, due to the plane getting into unstable positions, side slips, skips, nose dives, stalls, and tail spins. I believe stabilizers, particularly of direction, will come into general use, and will be found highly advantageous on large commercial and mail-carrying planes.

"In flying a plane, fully 75 per cent of the pilot's energy is devoted to keeping the plane on its course."

The diversity in types of cameras also carries with it obstacles in consistent work. A large variety of aërial cameras has been designed and manufactured, both in this country and abroad, and it is safe to say that none is truly universal in scope. Nor should they be, says Mr. Mertie. They have been made to fulfill a variety of purposes, including scout photography along the battle line, more accurate and adequate photography from larger battle-planes, surveying cameras for peace times, cameras for pictorial aërial photography, and others. There have been automatic and nonautomatic types, equipped with various lenses and various types of shutters, and made to take plates or films or both. Multi-lens cameras have also been built.

Finally, with regard to photo-topographic surveying in general, certain facts should be more widely recognized, writes Mr. Mertie. In the first place, the making of topographic maps is a specialized science, and is a subject which is not mastered except by prolonged practice. Photo-topography is only a phase of the general science of cartography, and the cumulative results of long experience are just as valuable in photo-topographic mapping as in any other method. The laying out of projections, the subject of triangulation and control, with the consequent computations, the theory and practice of adjustments, and other matters familiar to the topographic engineer, are equally applicable and necessary in photographic surveying. In other words, the making of maps by photography or by any other method should be the work of experienced engineers.

Correlative with this idea is the other that photographic practice is rather of subordinate importance. By this, the writer does not mean that the photo-topographer should neglect the photographic side of his work, for good pictures are most desirable, though the quality of the map is not necessarily dependent on the securing of perfect negatives. The idea to be emphasized, however, is that the finest pictures may be entirely useless unless accompanied by the necessary engineering data; while, on the other hand, poor pictures if properly controlled may make a perfect map. The experienced photo-topographer attempts to get the best pictures possible, but judges his work by the quality of the finished map and not by the pictorial quality of the pictures from which the map is made.

Summarizing, it may be said that photographic surveying from the air is both possible and practicable. No new principles are involved, but methods and apparatus other than those used in photographic surveying on the ground are needed and are gradually being studied out and developed. It has been shown that the production of an accurate plan map in an area of any considerable relief is intimately connected with the production of the much desired contour map, and that the latter will be produced with little more labor than the former. In areas of low relief, of course, the plan map can be produced as soon as perfect horizontalization becomes an accomplished fact.

The crux of the whole problem lies in horizontalization, and the most pressing need of the present moment is either a completely stabilized airplane camera or a successful attachment which will record the direction and amount that the camera deviates from the true vertical. Also, it should be clearly understood that map-making is an engineer's job, and that pretty pictures do not necessarily make the perfect map. Finally, although maps made by air surveys remain a development of the future, yet we may confidently look forward to an early solution of the various problems involved.

While in the beginning, the cost may be so great as to offset the advantage in time saving that is claimed for the proposed methods, yet this, too, will resolve itself into simpler and more practicable processes. Mapping by airplane, when extensively adopted, will serve to introduce a spirit of adventure and a lively interest into what is now a tedious and ungrateful operation.

The Meaning of Architecture

ARCHITECTURE probably conveys as many meanings as there are individuals capable of receiving a message from it. These messages comprehend the entire gamut of those emotions which architecture can evoke and they may be segregated into groups. They range from the purely material messages which includes only the idea of shelter from the elements, to the message which exalts and gives the highest degree of pleasure to the observer through his ability to appreciate the meaning of the form, proportions, details and colors of the structure. Every person receives an impression from observing a structure, while probably but few have reduced these impressions into a concrete expression of the meaning of architecture. As truly as this applies to laymen, so truly does it apply to architects. To attempt to interpret and define the meaning of architecture is a task not to be undertaken without close study of the contemporaneous history of the peoples who developed architecture. In addition to this, mature deliberation and the attempt actually to evolve the architectural meaning of work already constructed, better fit one to attempt the interpretation. The bibliography relating to this subject is very limited, and the advent of such an expression by means of the written word and illustrations is an event of interest and importance. It is with an appreciation of this fact that one reads Mr. Pond's book.

The introductory chapter, treating of the animating spirit which is the basic motive of all human effort, is followed by eleven chapters in a logical development of the theme. The concluding chapter is devoted to the author's individual application of the theories advanced. The animating spirit he describes as the desire to attain the ideal. If this attempt to achieve beauty—to encompass the ideal—is art, then beauty is the individual's conception of perfection. This animating spirit leads to the development of architecture. Mr. Pond's definition of art and architecture reads: "Art is the expression, in terms of beauty, of a reconciliation to the struggle of life; just as a working definition of religion is that it is an expression, in terms of goodness, of an acceptance of the conditions which environ existence. The definition of art is frequently condensed into: Art is an expression of life. But art is all that and more; for to be art it must be the ordered and unified expression of an ideal which life holds. Architecture, as a phase of art, is an expression in building of that idealism which is capable of translation into structural terms; that idealism which may be realized in an interpretation of the laws governing structure; an idealism which may find in terms of structural force a deep symbolism of its own true essence."

Under this definition, a building is not architecture just because structural laws have been obeyed, but because underlying and directing its structural expression is an ideal. A building is not architecture merely because it symbolizes some great vital factor of life, such as a religion or a philosophy, or any great intellectual or spiritual concept, but because it symbolizes or expresses it in objectifying the inhering structural forces.

This definition is in accord with the modern idea that architecture and engineerng are inseparable and that the exact limits of each are incapable of of being definitely established. The idea that architecture is merely a matter of pure design, to which the engineer applies his ingenuity to the utmost in order to achieve stability, is directly contrary to the meaning of architecture as here defined. This definition will disturb those whose procedure is guided by habit and whose idea of architecture is the application of the details of the architecture of past ages to modern structures regardless of the function of the building. "Habit is life in the brute creation," states Mr. Pond, "but habit in man has been aptly denominated 'The soul's tomb.' To what depths then have fallen those whose architectural existence is a habit and this habit the mere application of "perfectly good precedents?"

The architecture which is the result of the animating spirit, is analyzed and its meaning explained and compared with the decadent architecture of the past and present times. The ideas expressed in this book have been severely criticized by some, apparently for the sole reason that they do not conform to certain accepted habits. But the arguments of some of the critics are valueless for the simple reason that they have not, by their own activity, engaged in the development of architecture through actual work performed. The personal application of the meaning of architecture by the author to his work is, of course, an individual expression. If the reading of this book will induce others, in large numbers, to make the effort to express a worthy meaning in their work, rather than the offspring of habit, there will be developed

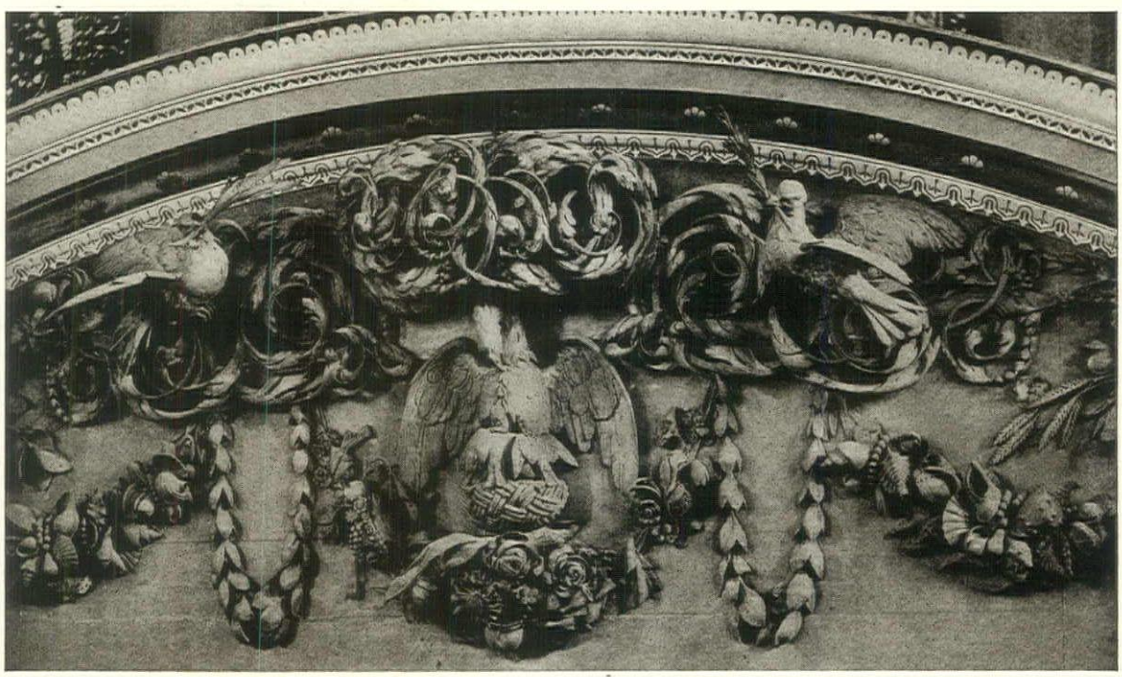
*The Meaning of Architecture, by Irving K. Pond, C. E., A. M. (Hon.), Architect. Member of the National Institute of Arts and Letters, Fellow and Past President of the American Institute of Architects. Cloth, 5½ x 8, 226 pages, illustrated with drawings by the author. Price $2.00 net. Marshall Jones Company, Boston.

an architecture which will be truly modern and American. This will be the amalgamation of the individual efforts which will have merit and virility sufficient to justify their future development.

"If the underlying principle be sound, and the forms in which it is given æsthetic expression be valid, then others may and will use these forms in their individual efforts to solve the problem of communal expression. Such use is perfectly legitimate and is in the nature of creative, constructive effort rather than after the nature of imitation. Certain strong individualists of our day have charged their own "disciples" with being imitators because, forsooth, these same disciples were employing the "master's forms"! If the master's forms are specious forms, based on personal idiosyncrasies, their use by another would, indeed, be in the nature of unjustifiable imitation; but if the forms are the æsthetic clothing of a living idea they belong to the race, and one who did not debase them but who employed them rightly was in so doing assisting in a legitimate act of creation. A "master" will realize that the vital spark within him did not come from himself, but from the race, and should therefore be freely given to the race."

To those Americans who have the ability to sense the communal spirit of the various regions of this country, this book will appeal as a *motif* in the overture which precedes the development of that American architecture which will be typical of this country. In this the influences of the Mississippi Valley region, that great valley of democracy, the heart of the nation, will dominate. It is so far removed from the close contact with other countries and is so lacking in precedents, that American logic, artistic instinct and common sense will prevail.

The book is written in a clear and pleasing style, approaching the epigrammatic at times. The influence of Mr. Pond's early engineering education and experience is in evidence in his clear and logical analysis of the subject, resulting in an impression of the reasonableness of his deductions. It has a place in the reading of the architect and those whose knowledge embraces an understanding and appreciation of the fine arts. Carefully studied by the broad gauge engineer it will bring to him an appreciation of certain responsibilities that he owes to himself and to the public.



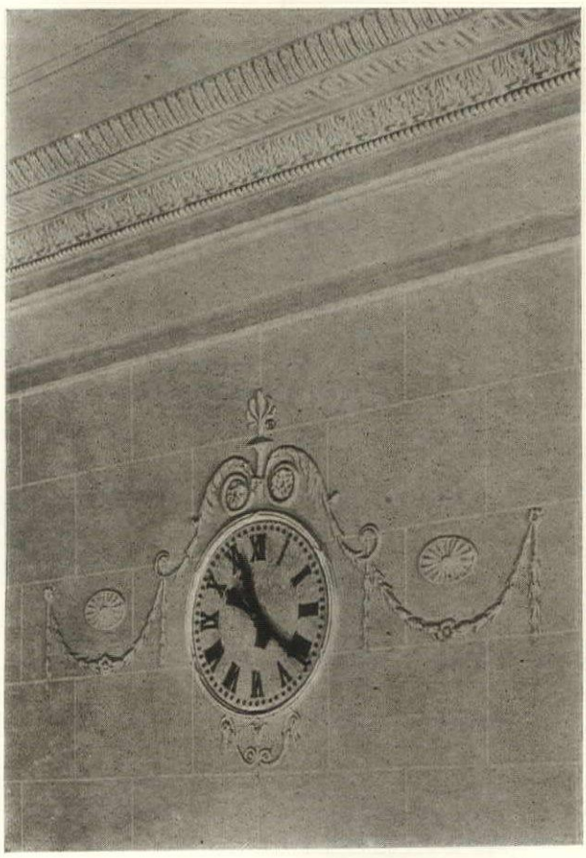
Building for the Colonial Trust Co., Philadelphia, Pa.

ALFRED E. BOSSOM, *Architect*

(For Exterior Views and Plans See Plate Section)

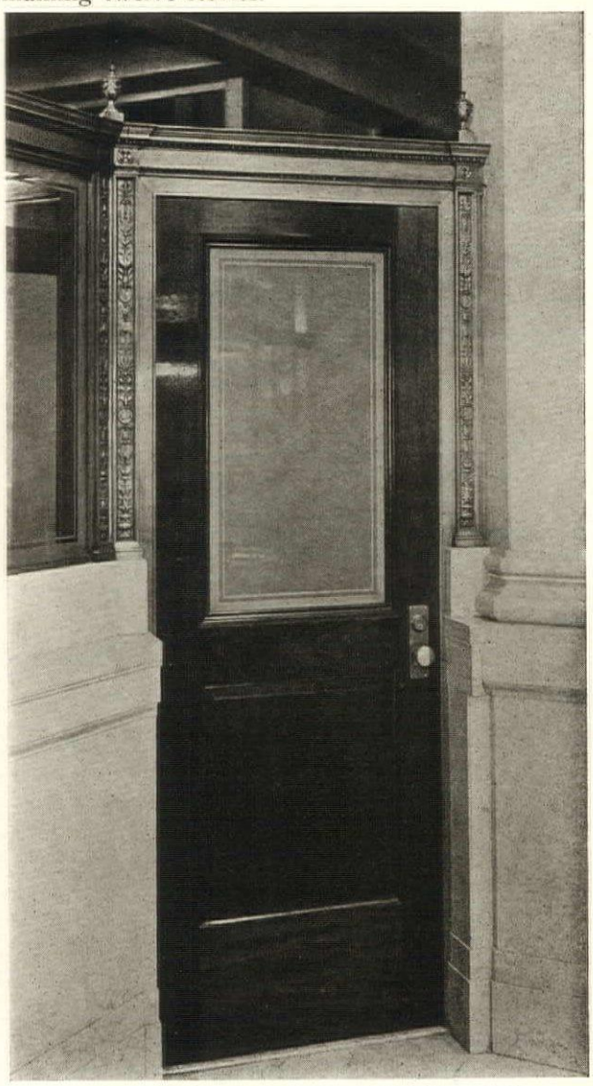
THE Colonial Trust Company, at the corner of Thirteenth and Market Streets, Philadelphia, Pa., occupies the corner in that city where more people pass in twenty-four hours than any other. The site, which is only approximately 45 by 118 ft. was valued, when this building was erected, at near to a million dollars, and the problem was as to how to develop this piece of real estate and get a revenue from it commensurate with its value.

The high cost of building made it essential that the utmost economy be exercised, for with the original value of the land so great, an exceedingly expensive building would have made it impossible to get a profit. Another problem was to provide enough rentable area so as to acquire sufficient square footage to produce a suitable return.



DETAIL OF WALL IN BANKING ROOM

Figures were obtained on this building in steel construction, upon an entirely reinforced concrete construction, and also upon a compromise between the two, using steel in certain portions of the ground floor and reinforced concrete for the remaining twelve stories.



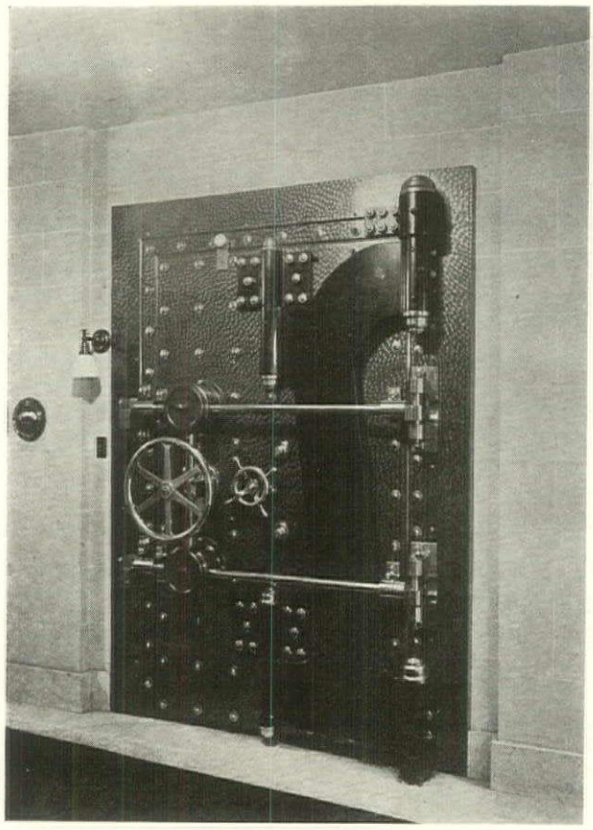
DETAIL OF BRONZE BANK RAILING

Here again reinforced concrete, although saving nearly fifty thousand dollars in the cost of this building, might have caused the piers to become altogether too large (had they been designed in

accordance with the most economic ideas for concrete pier construction) that they would have made the offices totally impractical.

Consequently it was decided to permit the wall piers to be an uneconomical section for the concrete column, that is, long and narrow, but by so doing the very maximum amount of floor area was obtained in the building, thus producing a very handsome return upon the investment.

This building, thirteen stories above the sidewalk, is, it is understood, the tallest reinforced concrete office building that has been built here in



VAULT DOOR

the East, and it has proved the statement that an office building of this height could be built on very valuable real estate and made a financial success.

The general architectural style of the building is a modified Colonial, the building having a limestone base for the lower story and a hydraulic pressed brick above, broken up at intervals with decorative terra cotta string courses and crowned with a hipped roof resting upon a very suppressed Colonial cornice and balustrade at the twelfth floor ceiling level.

In the design of this building it was essential that it be made so that it could hold its own against the very monumental building opposite, which is the John Wanamaker granite department store. This determined the selection of the color of the building. It was made light to contrast with the dark granite opposite. It was given a pointed roof to make it totally different from any building near it. A very large amount of window space was given so as to make the offices, which were rather big, as light with daylight as they possibly could be. In fact every attraction, both actual and artificial, which could be introduced into the building was incorporated, and the result has been that the former owners of the building, when the building was completed, were approached by a syndicate who purchased the complete undertaking from them at a very handsome profit, and who have in turn a most satisfactory investment.

Architectural Causerie

The Fire Place in All Ages

MY thoughts last evening centered upon the future of the fireplace, which, in all ages in this country, has been counted among the great joys of home life if not as the chief symbol of domesticity, as it is of hospitality, writes "Aero" in a recent issue of *The Architects' Journal,* of London. The round-arched fireplaces of Norman keeps, the hooded fireplace in the Guest Room at Netley Abbey, the flat-arched types at Tattershall and Eastbury, together with those of more recent date at Hampton Court, Portland Place, and Gower Street came to my recollection. I was perplexed with the variety. Knowing them all to be good, I could arrive at no satisfactory decision as to which was the best. Besides, I was tired and not a little perturbed by the remarks of an impudent fellow who earlier in the day had bluntly stated "that fireplaces were fast going out of fashion," and that he intended his new house to be free from such encumbrances.

* * * *

While ruminating on the subject it came to my mind that the future would, indeed, bring about some limitation in the number of fireplaces to each house, but nothing less than a complete transformation of an Englishman's soul could induce him to part with the most ancient feature of his home setting. For whatever convenience may accrue from the installation of central heating gas stoves and portable electric radiators, nothing could equal the charm of a wood or coal fire. This morning, far distant from the scene of my ruminations, I am at liberty to take my readers into my confidence, and state my feelings. Last evening, having reached my northerly retreat and supped, I closed the shutters in the living room, and piled fresh wood in the grate before settling down to read some designs by Blondel. The room was cheerful, the Empire can-

delabra ablaze with wax lights, the dark furniture catching and reflecting the darting flames, the pattern of the Aubusson carpet seemed formal and correct. Yet, notwithstanding the setting, such was my mood that I longed for surroundings the very antithesis of those arranged for my pleasure. The fact is, those who have the making of houses and the design of furniture in their charge can never hope to be satisfied, for the moment they indulge their fancy in pleasant imaginings, the joy of being at home in comfort vanishes, and they long to be elsewhere, perhaps on account of the added joy of returning to familiar luxury; for man is a perplexing creature, and over-prone to paradox.

* * * *

If there is one fireplace that delights me more than any other it is that in the kitchen of an inn or a farmhouse. The pages of my sketch books contain many representations of those chanced upon in distant parts of the country. With me the search for homely kitchens with firesides of goodly proportion has become a craze, and rarely is the privilege denied when I request to view the kitchen. Let it not be imagined for a moment that I am collecting data for the improvement of cooking, although conscience tells me that such research should be my office. A greater purpose is open to me, for during cross-country ramblings the discovery has been made that people removed from towns spend the greater part of their existence in the kitchen. The joy of the inn kitchen was well known to Fielding during his journeys between London and Somerset, which he induces Parson Adams to describe in the adventures of Joseph Andrews. Mr. Pickwick had a passion for conviviality and cheer in front of the kitchen fire, and although the kitchen of the Saracen's Head at Towcester now forms the bar I doubt not that its precincts are haunted by the shades of Pott and Slurk.

The kitchen in the country is the traditional common room. All meet there on an equal footing to witness the preparation of good cheer and the offerings smoking over the fire like incense fuming on the altars of Greece. In Cornish farmhouses a long table is arranged near the window, at which those employed on the land sit for meals. In Hertfordshire the kitchen is used as a species of hall, and I question not but what other special functions of country life, such as feasts, merrymakings, and reunions, common to every county, would be thought out of place if they were performed in any other room. The kitchen becomes again a hall. Formerly, let it be understood, the kitchen of the farmhouse reflected the squire's parlour, many such being fitted as living rooms. There were racks for guns over the fireplace, all sorts of cooking appliances forged by the local blacksmith, clockwork jacks for roasting, fire backs burnt and pocked with the heat of centuries of wood, high-backed settees to exclude the draught, and brick floors scrubbed and sanded. The fitted dresser, the table with columned supports, and the corner cupboard with its glazed door, complete the list. But the fireplace formed the chief attraction.

A Housing Policy for Wales

MR. CHARLES T. RUTHEN, F.R.I.B.A., read a valuable paper before the Society of Architects on "Housing and Planning; a National Policy; with Special Reference to Wales."

While housing in its generally accepted sense, he said, should be good housing, in its little understood sense it meant the "scheme of lay-out"; the placing of the home in its proper and rightful place; the public housing of the community as well as the private housing of the individual citizen, the commercial and industrial housing of the worker.

It had been said that Nature had been unkind to Wales in her treatment of the surface, but her great valleys and mountain sides should rather be regarded as a splendid opportunity of terracing the dwellings of the people upon a scheme impossible where land is flat. In a well-considered plan the undulations of the surface permit most of the homes of the workers being built upon the southern slopes, each home having its own place in the sunlight with an outlook over the valley to the hillsides or moors on the opposite slopes.

But the great mining populations had been crowded together in the narrow, once beautiful valleys, hemmed in on both sides by high mountains. The dwellings of the workers were huddled around the grimy surface works of the great collieries, in disordered masses, and the view obtained from the homes of the toilers was a jumble of dismal plant and barren spoil heaps, with their encircling railway lines.

In many of the important hilly districts of Wales future improvements and developments were rendered almost impossible by disconnected and disjointed planning. It was of the utmost importance that regional planning on a most extensive scale should be adopted for linking up upon national lines a chain of well-considered town planning schemes.

There would be required in Wales 75,000 houses in the towns and 25,000 in the country. If the blunders of the past were to be avoided, all these houses should be erected under town-planning schemes.

The control of the national regional planning

would necessarily have to be undertaken by some central body, say a Welsh Town-planning and Development Commission, which should take over much of the authority exercised by the Local Government Board, and should be a small body of experts of great experience in town-planning houses and industrial problems. By a very little extension of the principles already agreed to by the Government, a Welsh Town-planning Development Commission with fairly considerable powers would bring housing and planning in a national sense under control.

Masonry in Ancient Times

THE largest pyramid, writes M. T. Cantrell, in a west Canadian paper, was erected about 4,700 years B.C., and is said to have employed 100,000 slaves for 30 years in its construction. Its base was 764 feet square. It was originally 480 feet high and weighed about seven million tons. The immense amount of work its construction involved can be more readily realized when we consider that it contained sufficient material to build a city of about 20,000 houses the size of an ordinary apartment block, or to build a great wall from Cairo to Quebec, or if the stone was cut into one-foot cubes and placed together the line thus formed would extend about 17,000 miles, or about two-thirds round the earth's circumference at the equator. Many of the stones weigh between 40 and 60 tons. The granite blocks roofing over the central chamber are nearly 19 feet long by 3 to 4 feet deep and 2 feet wide. These were worked so true and were so close jointed that it is said to be at the present time almost impossible to insert the blade of a knife into a joint. The accuracy to which the stones were worked and bedded is further evidenced in the fact that there is an average error in length of only one in fifteen thousand, and even less in angle. The geometrical perfection is considered to be a marvel even in these times.

Another example of accuracy of this age of masonry is that of the granite sarcophagus of Senusert II, which was built with an average error in straightness and parallelism of less than seven thousandths of an inch. Even at the present time it is a mystery how such perfect work could have been accomplished. It is known that saws and rock drills, which were set with hard stones, also drills of stone fed with sand or emery, were in use prior to the building of the pyramids, but no tools or appliances such as we now have were invented in those days. The ancient builders had no lifting machinery which is now indispensable, and yet blocks of stone much larger than we now use were truly worked and often raised and carefully bedded at great heights. Among the ruins of the temple of the Sun at Baalbec, in Syria, are the largest squared stones yet used in a building. In one wall about 20 feet above the ground there are three blocks each over 63 feet long and 13 feet high still bedded in the wall. The width is unknown. In a near quarry, from which these stones are supposed to have been taken there still lies a stone hewn, but not entirely separated, from the bed rock, 14 feet by 17 feet and 69 feet long, its weight over 1,300 tons. How such immense stones were handled is still and unsolved puzzle.

The ancient Babylonians invariably used brick for their buildings, the staple industry of the country being brick-making. The country possessed neither stone nor suitable building timber, but sufficient of the latter was generally obtained for columns and piers, which were of cedar imported from Amanus or Lebanon. When cedar was not obtainable, brick was used. The Assyrians, after the Babylonians, continued to use brick, but they imported alabaster and limestone from the mountains north of Nineveh. Important buildings were faced with this material similar to our modern work, the limestone being used for plain facing and the alabaster for carving. From that time on to the height of Greek civilization the working of stone developed into the fine art of which so many splendid examples still exist in ancient Grecian architecture and sculpture. The same can be said of the Romans, since which period the art has improved only in the speed with which the work is executed, this being due to modern improvements in tools and the invention of power-driven machinery for the working and transportation of the stone.

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VOL. CXV JUNE 25, 1919 NO. 2270

The New York State Association

THE new association of architects recently formed in New York State, the announcement of which was made in our issue of June 18, is founded on principles more democratic than any other at present in existence in this country. This organization is really an attempt to develop an architectural guild, since it is to include, if possible, everyone within the State engaged in the vocation of architecture. Employer and employee are to be members, side by side, a democratization of membership leaving nothing to be desired.

From the west coast we hear of draftsmen organizing in unions affiliated with the unions of skilled trades. It is reported in our news columns in this issue that draftsmen in the Federal Departments in Washington are seeking affiliation with the American Federation of Labor.

If the scheme proposed for the New York State Association of Architects is successful, there would seem to be no need for separate organizations of architects and draftsmen. They would all find themselves in one organization co-operating for the establishment of right relations within the vocation and for progress and better service in the relations of the vocation to the public need for its service.

The principle involved is one that has been successfully in force in the guilds of Europe for centuries. It affords a common basis of interest for every man who shall seek to practice architecture and it eliminates all class or factional sentiments. The result will be watched with a great amount of interest.

For more than a year, THE AMERICAN ARCHITECT has stoutly maintained that in the formation of State Societies in all the States, and their ultimate federation, would be found the solution to the successful rehabilitation of the profession. These societies will in no way conflict with the well conducted activities of the Institute, and if formed after the admirable scheme of organization of the New York Society, will in the most successful and valuable way supplement the work of the Institute and its Chapters in a manner that will be truly representative of the profession of architecture all over the United States.

Building Conditions Are Improving

AN analysis of a questionnaire sent by the National Federations of Construction Industries, to the leading construction industries and related interests in the United States, confirms the fact that during the past few weeks general business conditions have greatly improved.

A preponderance of opinion supports the view that the present price level is here to stay for an indefinite period of time. Many replies received strongly express the opinion that prices will go even higher.

As an incentive to a quicker return to normal building conditions it is urged in a number of instances that the government should promptly act in extending loans for housing construction, and further, by proceeding with all public works thus far authorized.

Another suggestion is that urging on the part of the government a campaign to demonstrate to the public that present prices are practically permanent.

The building interests of the country are, it is believed, thoroughly competent to bring all matters affecting construction to a safe and speedy solution. In order to accomplish this, those interests will best function which are freed from all governmental interference or control. A very large group of replies to the questionnaire referred to, reflect this opinion by stoutly urging the return to their owners of all private property, now and for some time past under government control, and the complete discontinuance of war-time administration of private business.

The Guaranty Trust Co., in its weekly bulletin on business conditions, states that there have been

few periods since the signing of the armistice when the usual indicators of business conditions were more favorable than at present. The tremendous demand from Europe and other countries for American products, and the astonishing condition of wheat and other crops, is imparting an optimistic tone to our whole industrial life. With conditions presaging so great a period of prosperity, it is evident that we can only move forward to our great future when all the many restrictions, which were imposed during the war, and for which no good reasons now exist, are absolutely removed.

The Post Office Building in City Hall Park

NO one qualified to judge a work of architecture would attempt to justify the retention of the old post office building, which for more than half a century has reared its disfiguring mass on the southern end of City Hall Park, New York.

Architecturally ugly, inconvenient and ill-arranged, it has stood for all its years a reproach to its neighborhood. Periodically there has been demand for the removal of this structure, and recently the Board of Estimate has unanimously adopted a resolution looking toward the accomplishment of this desirable end.

The site of this old building is the property of the Federal Government, but under the terms of its contract with the municipality, if the Government should abandon the building for its present purpose, the city would merely be compelled to return the $500,000 it received for the site when the building was erected. If this great improvement can be effected at so small a cost, it will be a transaction to which undoubtedly every taxpayer will give quick approval.

With the Mullet Post Office removed and the site restored to the park, the beautiful Georgian City Hall would then have a fitting setting and there would be created a civic center that would become the most beautiful on Manhattan Island. There is no present need of the large post office facilities that this building affords. The new general post office opposite the Pennsylvania Terminal and the important substation in the Terminal Building have greatly reduced the necessity for space in the old building. Aside from the fact that the Federal Government uses the greater part of the space for its federal courts, the Mullet building may be said to have outgrown its usefulness.

As it has nothing architecturally to recommend it, and as it disfigures what could by its removal be made a dignified locality, it is desirable for the artistic growth of the city that the municipal authorities and those of the Federal Government come to an agreement that will early rid New York of an architectural monstrosity, and return City Hall Park to its erstwhile impressive aspect.

Solving Housing Problems in New York

THE New York State Legislature is to be commended for its recent enactment to conserve the rights of renters and curb the propensities of rent profiteers. Further, its action is commendable as very materially opening the way for a quicker resumption of building operations.

Under the new law four story and basement private houses may be altered into tenements for four families. The result of the removal of restrictions as to this form of remodelling is generally apparent, and in no location more than in the upper west side and Riverside Drive sections. Private houses that have long been vacant are now being turned into so-called studio apartments, and promptly rented, often before the completion of alterations.

Another feature of remodelling is the changing over of numbers of the earlier types of apartments with their many and large rooms, into smaller groups with smaller rooms.

The savings banks are now permitted to make more liberal loans, thus making possible the resumption of this class of remodelling and building. Such admirable legislation will certainly stimulate building and serve in a measure to relieve the present acute housing shortage on Manhattan Island.

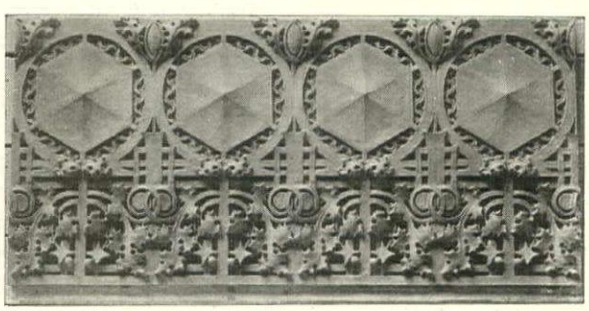


PLATE 207

BUILDING FOR THE COLONIAL TRUST CO., PHILADELPHIA, PA.

ALFRED C. BOSSOM, *ARCHITECT*

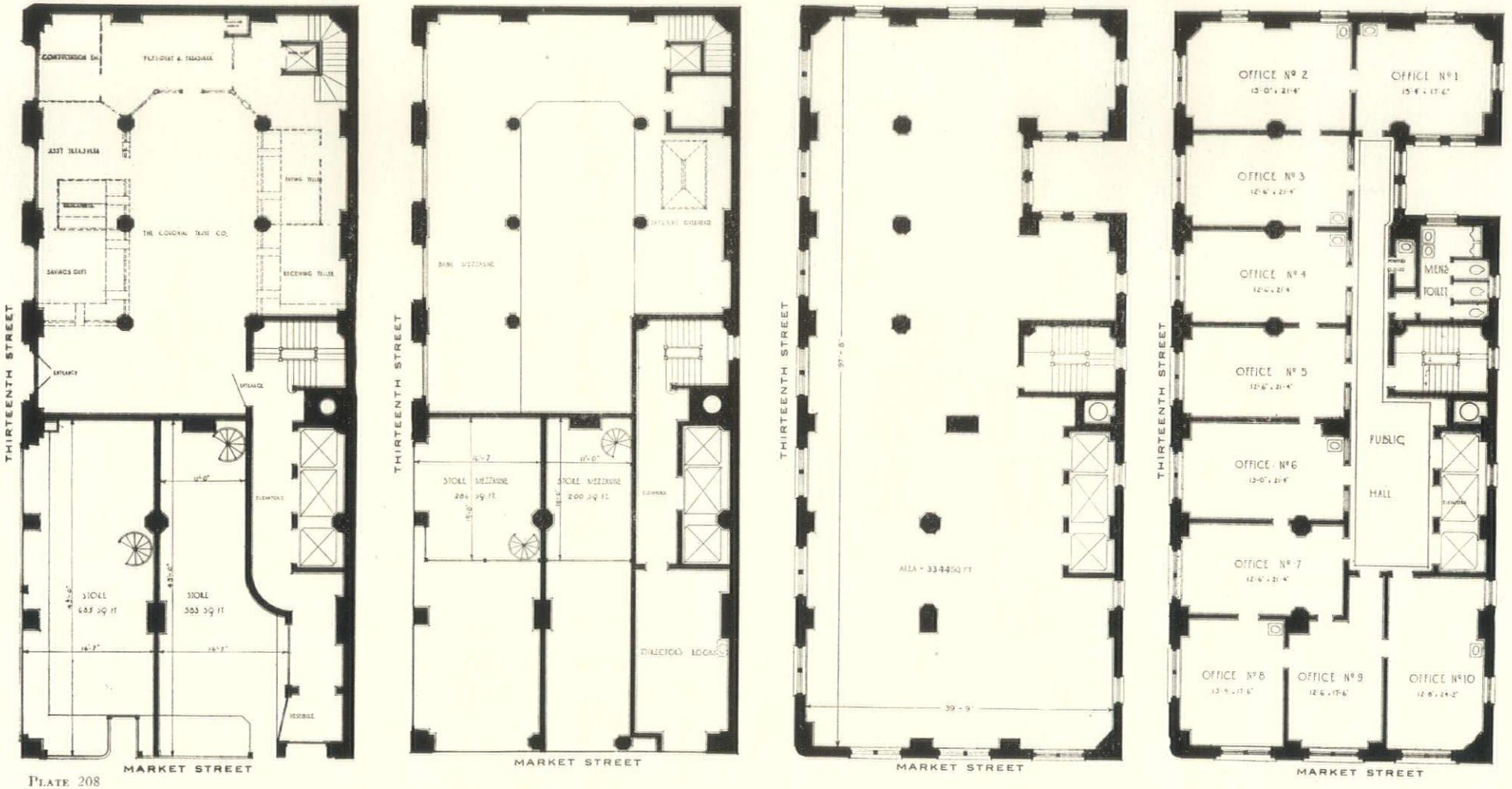


PLATE 208

BUILDING FOR THE COLONIAL TRUST CO., PHILADELPHIA, PA.

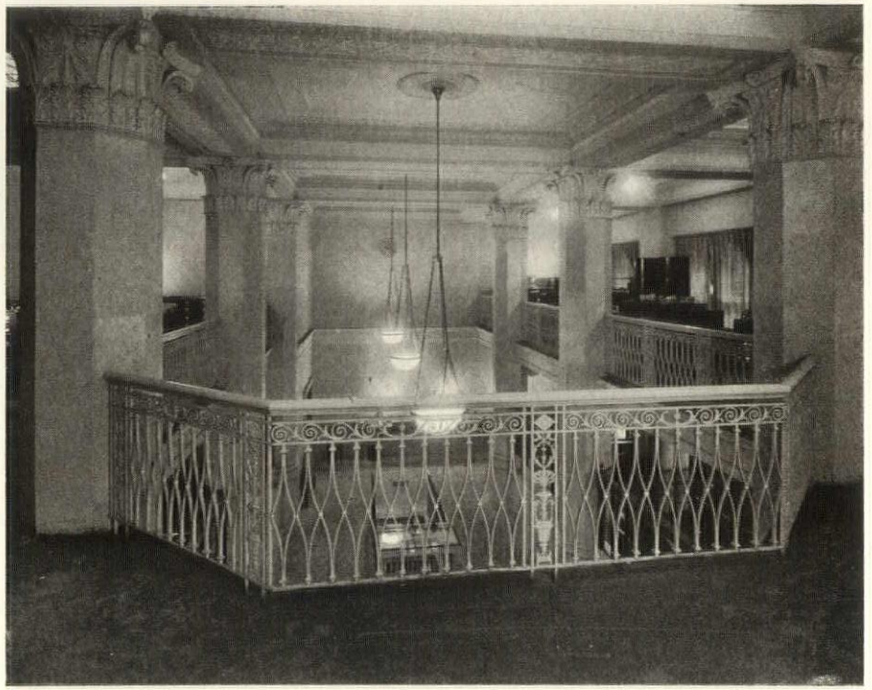
ALFRED C. BOSSOM, *ARCHITECT*

PLATE 209 DETAIL MAIN ENTRANCE DETAIL UPPER STORIES

BUILDING FOR THE COLONIAL TRUST CO., PHILADELPHIA, PA.

ALFRED C. BOSSOM, *ARCHITECT*

PLATE 210 VIEW IN BANKING ROOM



VIEW ON BANKING ROOM FROM MEZZANINE FLOOR

BUILDING FOR THE COLONIAL TRUST CO., PHILADELPHIA, PA.

ALFRED C. BOSSOM, *ARCHITECT*

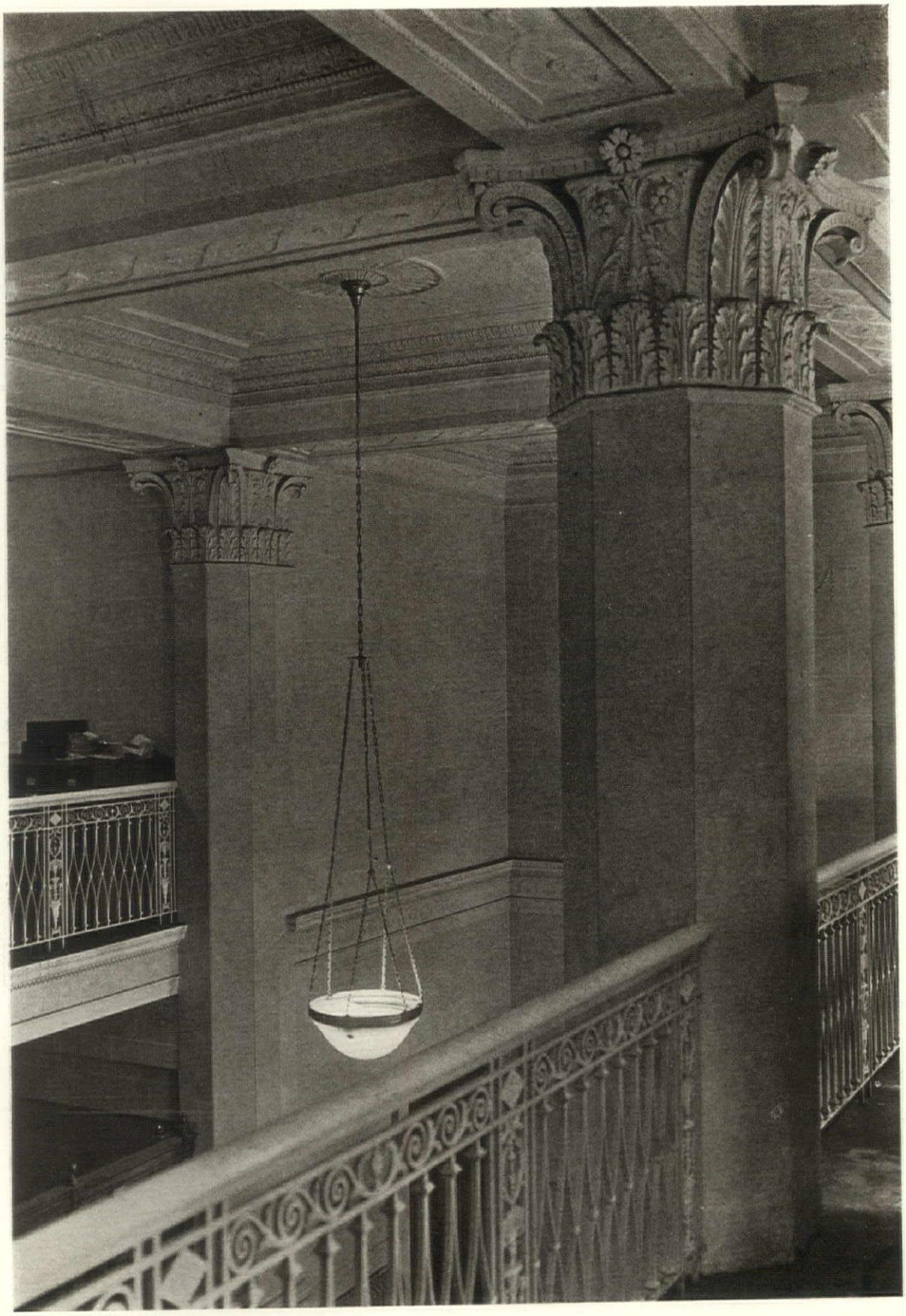


PLATE 211 DETAIL, BANKING ROOM CEILING

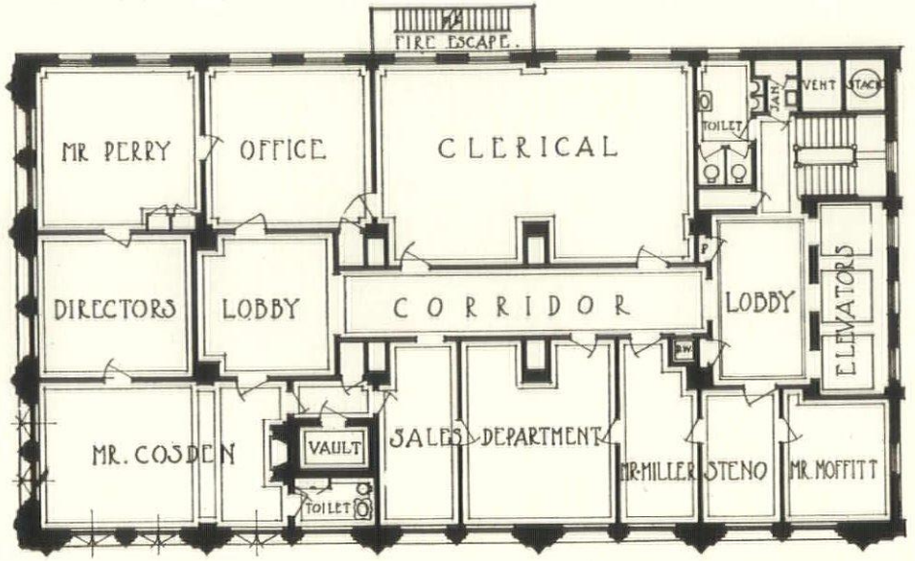
BUILDING FOR THE COLONIAL TRUST CO., PHILADELPHIA, PA.

ALFRED C. BOSSOM, *ARCHITECT*

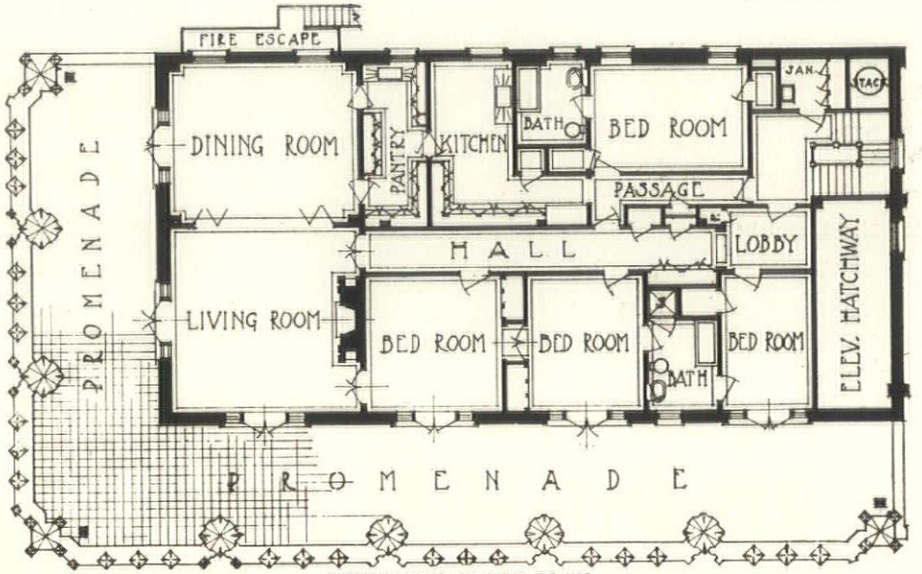
PLATE 212

OFFICE BUILDING FOR COSDEN & CO., TULSA, OKLA.

HENRY F. HOIT, *ARCHITECT*



FOURTEENTH FLOOR PLAN



SIXTEENTH FLOOR PLAN

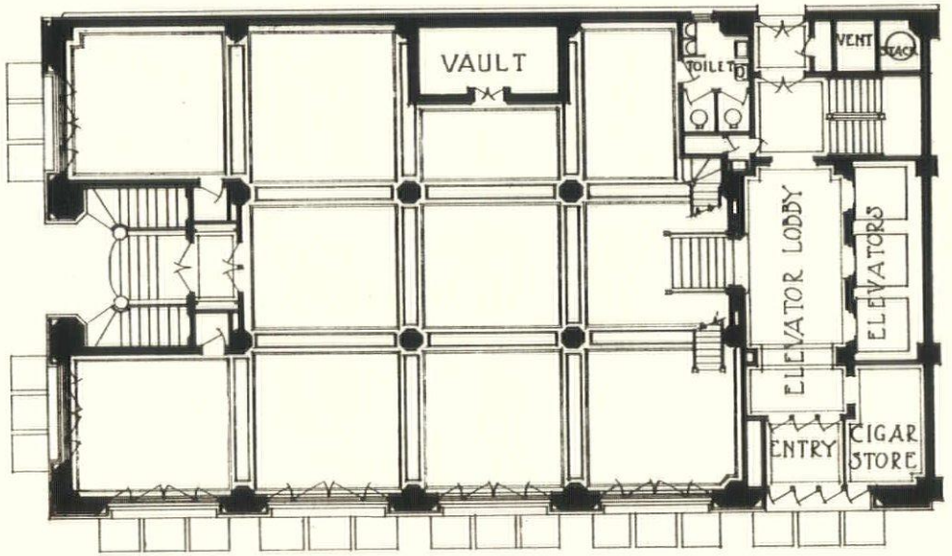


PLATE 213 FIRST FLOOR PLAN

OFFICE BUILDING FOR COSDEN & CO., TULSA, OKLA.

HENRY F. HOIT, *ARCHITECT*

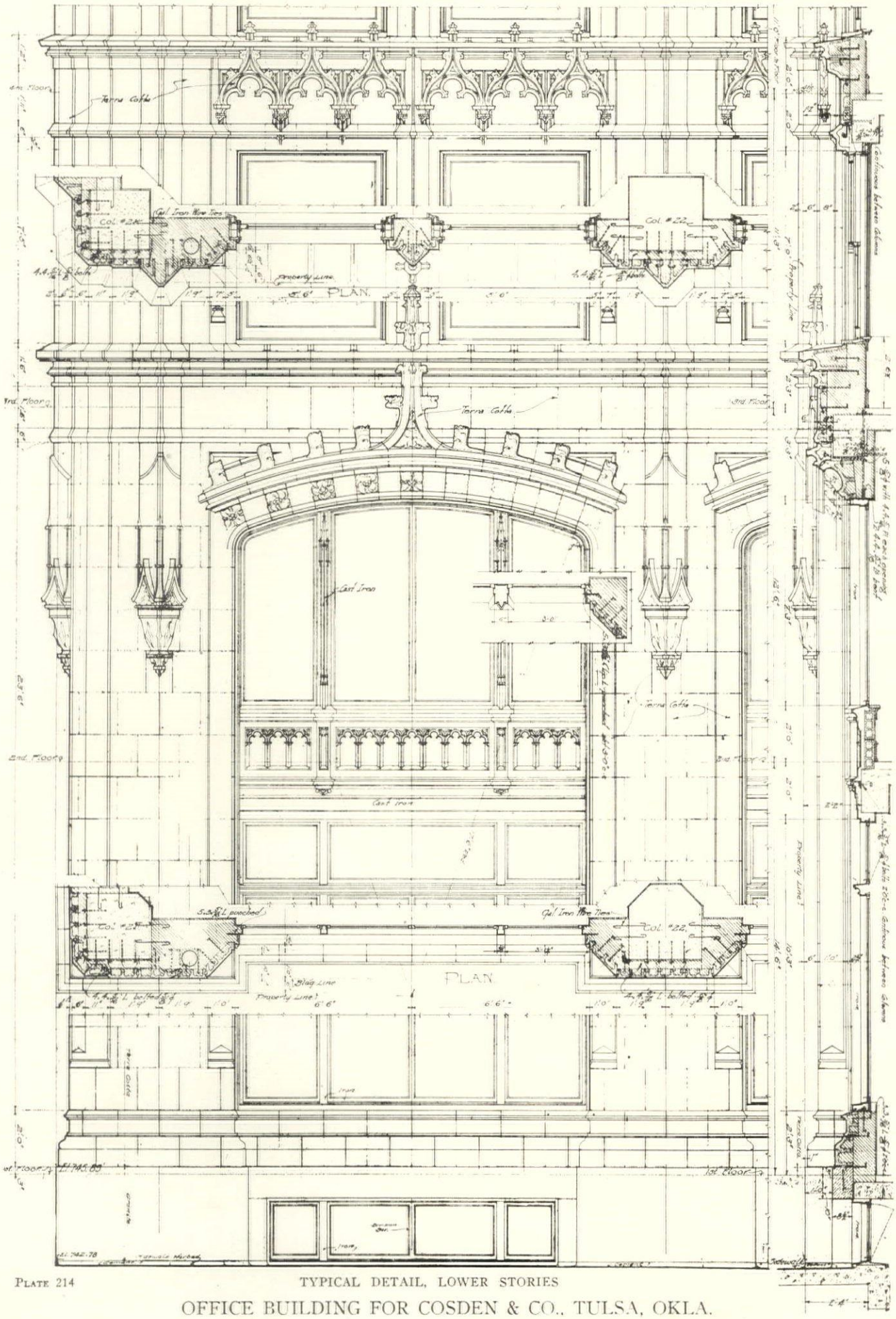


PLATE 214

TYPICAL DETAIL, LOWER STORIES

OFFICE BUILDING FOR COSDEN & CO., TULSA, OKLA.

HENRY F. HOIT, *ARCHITECT*

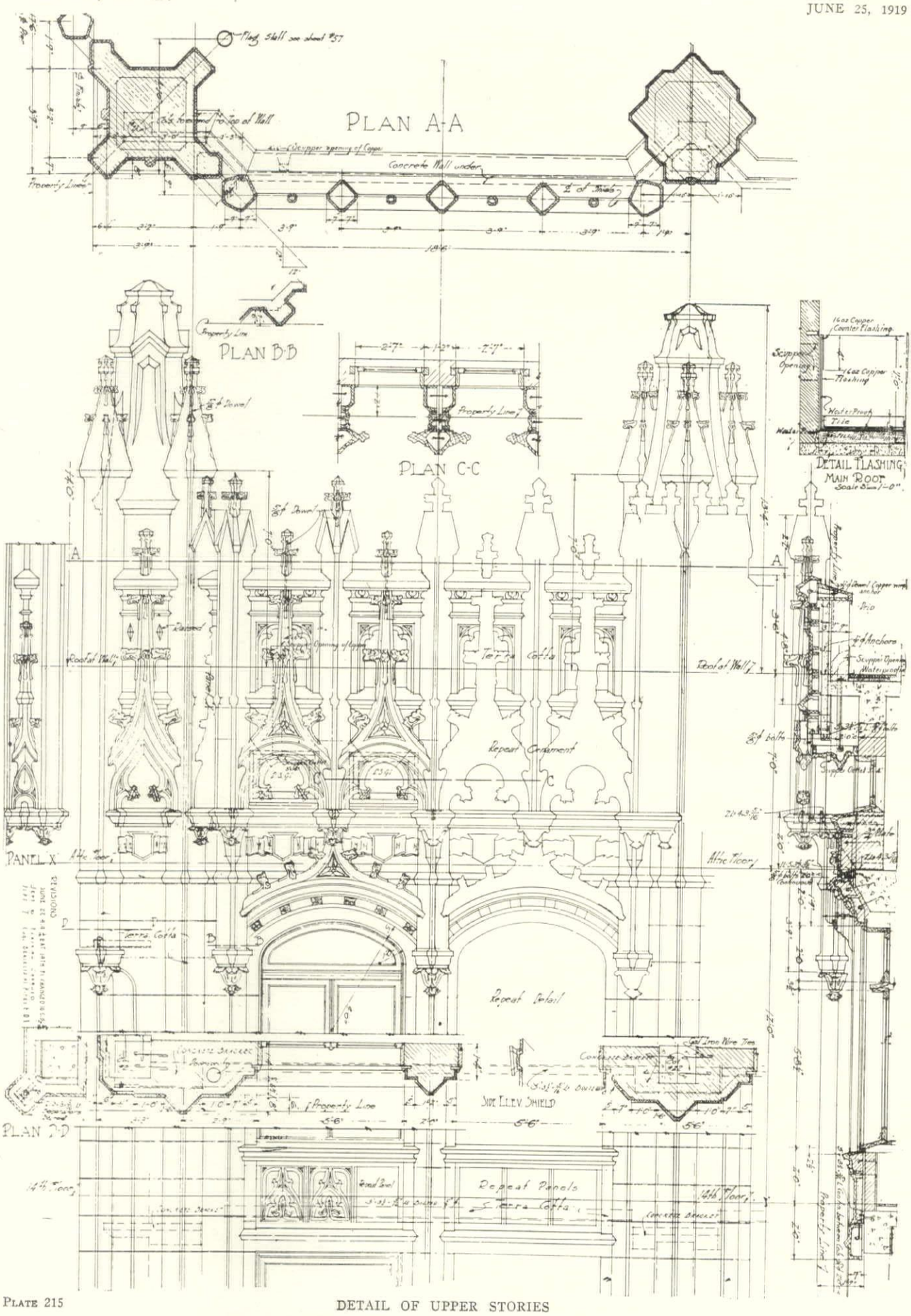


PLATE 215

DETAIL OF UPPER STORIES

OFFICE BUILDING FOR COSDEN & CO., TULSA, OKLA.

HENRY F. HOIT, *ARCHITECT*

Recent Legal Decisions

Where Lien for Material Not Used in Building May Be Claimed

In an action to foreclose a mechanic's lien for material furnished to the owner of a building, the defense was that the material did not actually go into the construction of the building for which it was furnished. The Indiana Mechanic's Lien Statute of 1914 rests on the principle that one who furnishes labor or material for the improvement of the property is entitled to look to that property for his compensation. And the Indiana Supreme Court has held that "a material man claiming a lien must *ordinarily* show that his materals were furnished for and were actually used in the erection, alteration or repair of the building against which the lien is asserted." *Potter Mfg. Co. v. A. B. Meyer*, 171 *Ind.* 513, 519; 86 *N. E.* 837. But it is not *always* necessary to show that the material furnished actually went into the building, since the circumstances in a particular instance, especially where the material was furnished to the owner of the building to be used therein, may be such as to estop the owner in a foreclosure suit from working the general rule. So, where the trial court has found specially that the material man furnished the material directly to the owner on his promise to use it in the construction of his dwelling-house, and on the security of that building and the real estate on which it was being erected, and that the owner diverted it to other use without the material man's knowledge or consent, these circumstances were held sufficient to estop the owner from relying on the general rule.—*Moore & Richter Lumber Co. v. Scheid (Ind.)*, 121 *N. E.* 91.

Government Contractors' Bonds

Where the penalty of a government contractor's bond is sufficient to pay all the claims against the contractor, the Circuit Court of Appeals holds that a sub-contractor, or other claimant, may recover interest from the time his demand became due. Under the act of Congress of 1894, as amended 1905, permitting any person furnishing material to a government contractor to bring suit on his bond within one year after performance and final settlement of the contract, and permitting any other similar creditor to intervene "within one year from the completion of the work under said contract and not later," the time limit is the same in the case of the original plaintiff and an intervener.—*Pederson v. United States*, 253 *Fed.* 622.

Expense Incurred After Abandonment

Whether a provision in a building contract is a condition precedent or a condition subsequent depends upon the intention of the parties disclosed by all the provisions of the contract as applied to its subject-matter. If precedent, its performance is essential to the creation of the right, and must precede a suit for its enforcement; if subsequent, it is important only as affecting the maintenance of the right, and may be proved at the trial, although happening after suit brought. A provision in a contract, limiting the right of action to six months after the term fixed for completion, where the subject-matter was a building requiring six months to complete, was considered rather persuasive that the audit by the architect of the "expense incurred" in finishing after abandonment by the builder as provided in clause 5 of the uniform building contract was not intended as a condition precedent to suit within the term limited, for obviously it was more than likely that if so construed it would, in the ordinary course of events, defeat any recovery whatever under the bond. The point was not decided because, even if it was, it was held that, a completion contract having been entered into and the suit being for the expense so incurred and the answer not specifying any condition precedent, the performance of which was to be contested, the general allegation of the complaint, that all conditions precedent had been performed was conclusive, and the completion contract should have been admitted in evidence to establish the "expense incurred" in finishing.—*Board of Education v. Richmond Const. Co., New Jersey Court of Errors & Appeals*, 105 *Atl.* 220.

Current News

Architectural Bureau Claims Big Savings

That the State Architectural Bureau is saving the taxpayers of California a considerable sum of money yearly, and otherwise is performing very valuable service, is the statement made by James S. Dean, Assistant Architect, in a booklet just issued from the State Printing Office.

Dean backs up his claims with figures showing that during the twelve years in which the Bureau has been operative the state architects have taken care of all new work in addition to the general overhauling of over twenty-eight major jobs.

Forty per cent of the construction and engineering work has been done by contract, 13 per cent by sub-contract and 47 per cent by day labor. The report also shows that a majority of the jobs come under $5,000. It is estimated that a saving of more than 4 per cent has been affected through the Bureau during the last two years.

During this time the contracts totaled $741,536; subcontracts, $218,932; day labor, $837,151.

Italians to Recover Stolen Art

Professor Paolo d' Ancona, of Milan, who is at the head of the Italian art mission, tells a correspondent of the *Associated Press* that the whole matter of recovering her lost art treasures has been laid before the peace conference for decision and that the Italians so far are only placing the works of art under sequestration, so that they may be protected in case of bolshevik attempts to destroy, steal or resell them as happened with the Hermitage gallery at Petrograd. The Italians feared this might be the fate of the Budapest gallery containing such priceless works as Raphael's Madonna.

Professor d' Ancona stated that the Italian claims fall under three heads: First, indemnities for art works, valued at $10,000,000, destroyed by the Austrians in Italy during the war, including the air raids at Venice, Ancona, Padua, Ravenna and other points; second, works which have been stolen from Italy in the past; third, works which logically belong to territory now occupied by Italy or about to become her property, including Pola, Lissa Island and Fiume.

There are also provisional claims for Italy's share which belong to her historically in case the museums of Vienna and Budapest should be divided among the nations of the former empire, the Czechs having already submitted a similar claim.

Professor d' Ancona said that among the works of art, restitution of which is demanded by Italy, are eighteen paintings, of which only one is not Italian, the exception being the larger of two portraits of Rembrandt. These eighteen works have been valued at about $5,000,000. Other notable works claimed are Raphael's "Madonna del Prato," "Jupiter and Io," by Correggio; five other Correggios of the twenty that are in the Austrian Imperial museum; Titian's "Madonna Delle Cileege," Moretti's "San Gustina," and two Tintorettis, one being "Susanna and the Elders."

Among second-class works alleged to have been stolen from Italy and included in the Hof museum collection, is the famous Florentine diamond which Italians claim as part of the treasures of Tuscany carried off by Princess Anna Maria of Medici, contrary to agreement when nearly two centuries ago she renounced the Tuscan throne in order to become empress of Austria. There is also a collection of Venetian arms and manuscripts and Italian war trophies which the Italians claim have been stolen at various times, but which Austria has always refused to restore.

Regarding the 150 paintings which the Italians took in February, it is stated that the Austrians have admitted the justice of Italy's claims to them, as these works were alleged to have been stolen by Austria after the downfall of Napoleon.

New Place for Art and Letters

A new appreciation of her artists and men of letters has come to Great Britain as the result of the war, says the English artist, Nevinson, who is now in this country.

At the beginning of the war Britain sent her artists and her writers to the trenches. It was not until they were invalided home, and such of them as could began to write and paint, that she realized that here were forces which should be preserved as carefully for their own line of work as the specialists in industrial production.

As soon as England did awake to this she sent her artists to the front, to be sure, but this time to make the studies for the great war paintings which should serve as nothing else could to arouse patriotism in the present, and be an invaluable legacy for posterity as well. Equally her writers were encouraged to turn their clever pens to war service, and everybody who reads knows what the contributions of English authors have been as propaganda and as literature.

So, from those who lived to paint and write, and from those who died, but left sketch or immortal lines to rouse their countrymen, England came to a better understanding of art and letters as real factors in human life.

America too has learned something of the same lesson, and what has hitherto been regarded as only means for man's amusement has attained a new importance as a great and moving force.

Mississippi Valley Highway

A proposal is afoot to organize a scenic highway along the Mississippi River. The first steps have been taken by the formation in St. Paul, of a group to have in charge the development of the northern division.

The highway begins at Lake Itasca, source of the Mississippi, in Itasca Park, and parallels the river to the Gulf of Mexico.

The northern division runs from Lake Itasca to Dubuque; the central from Dubuque to St. Paul, and the southern, to the gulf. Each section will co-operate with various highway officials for road improvement and maintenance.

Stirling Calder, Sculptor, Discusses War Memorials

Stirling Calder has contributed a valuable letter to the *New York Times* on this much discussed topic, which is conspicuous for its clarity of thought and expression. In this letter he justifies the opinion that memorials should refer to the future and break away from past traditions.

At this time, he writes, when so much attention is centered on the subject of war memorials and our art journals are bristling with warnings and advice to prospective committees, it is natural to remember the most recent design for such purpose—the Arch of Victory at Madison Square. This, we understand, is a strictly temporary monument, but it nevertheless tacitly advocates a type in design. It would be well now to consider if this type is the best that is possible, for even a temporary purpose.

The ranks of artists engaged in matters of design, architects, sculptors, and painters, are broadly separated into two distinct camps defined by conviction and practice. There are those, a very large body, who are almost wholly swayed by the dictates of precedent, denying any place to expression and the present. And there is the other perhaps smaller camp of those who, while acquainted with precedent, only believe in using it to an extent, as one of many elements that are ours wherewith to design and express for ourselves the present, living ideals. Briefly, in other words, there are the creators and the plagiarists, those who have something to say and those who have nothing to say, but insist on graceful antics. They proceed upon a theory that everything worth while has already been done, that nothing remains for us but to copy, to adapt the superficial aspects of works of approved age, leaving their spiritual significance either quite out of consideration, or violating it by the adaptation. It is the practice of this theory that has studded our cities with Greek and Roman temples, Italian and French palaces, performing various and sundry domestic duties ad infinitum. And now we have a mutilated Roman arch of imperial triumph doing duty as our monument celebrating the victory of a free democracy over an imperial power.

The design of this temporary arch is based on the assumption that this age knows nothing, cannot learn, must remain stationary in striken adoration of the phantoms of past achievement in art, instead of being stirred to new expression by them as we should be, and as some of us are. But how, may we ask, were these admirable works which now react with such deterrent influence in certain quarters achieved? They were certainly not achieved by brains paralyzed by precedent. Free artists have always exulted in calls on their invention, have grown mighty in striving for ideals. That is their food. It has knit them into giants at times. The stimulus to art growth today is as potent as it ever was, only those who could assimilate the strong diet cannot always come at it. Too often the husks of archaeology are preferred to the kernel of living thought.

Genuine work is not designed by visualizing as nearly as possible an old work designed for another purpose and then revamping it to serve a present need. This real war cannot be memorialized by imitation art. It was a deadly, serious thing. Good art is serious. Good artists are serious, devoting lives on bare subsistance for the privilege of exercising their function. "Art is the expression of the essential character of a subject." The subject in this case is the monumental celebration of the triumph of democracy over autocracy—in plain language the proof of the proposition that organized force is not to be endured—that no man or number of men shall enforce their will on the rest of the world without challenge and combat, either in arms or art.

Thought, truth, justice, beauty must always ultimately defeat force, error, cruelty, perjury, because men will it so. It is the sense of the world that this is the better way.

This noble creed that America has upheld, and that we have all in some measure suffered for, is not in any way expressed, nor attempted, nor considered, in the temporary structure of three arches hung with disorganized ornaments, the totality of which amounts only to dreary decoration.

Art of the first class, and our permanent war memorial should be of this kind or not at all, is never primarily decorative. It is always primarily expressive. It stamps a fresh impression of character, meaning, beauty. It is an invention, only possible under conditions that demand it, distilled from the sweat of imagination and will, and as such has distinct spiritual value. It is a record, an achievement. A copy, on the other hand, no matter how good, is merely decoration, because its making is no longer guided by the mind demanding expression, but only by the mind seeking resemblance. A decoration is not an expression. It is a second-class work. Its use in the present case is a step backward in art.

The world today is looking to America for help to construct a generously practical theory of life. We can be most helpful by being genuine in our art. This is a really great opportunity. It should enlist in ordered fashion the art energy of the community. Whether we are intelligent, free, and honest enough to succeed remains to be proved. The school of precedent has had its chance with the design of the present Arch of Victory—an imitated gesture; it is not genuine.

Let it now be seen to that the present is expressed, that a national war memorial is created.

Other Aspects of A. E F. Study in Architecture

Not all the men making up the American Expeditionary Force in France were sent across as soldiers. There is much work of a civil nature to be done, such as construction work, educational work and other similar duties. To teach architecture to the soldiers of the American army might seem to be going somewhat astray from the main object of sending such a force to France, were it not for the fact that the continuance of education in the ranks has become a settled policy in most of the Allied armies.

Among the Americans who enlisted for construction work in France was Ernest Coxhead, a practicing architect of San Francisco. Before he reached France the armistice had been signed, so he was transferred to the educational commission and sent to Le Mans to conduct classes in architecture. Of the 200,000 young men in the Le Mans area quite a number were students of architecture whose studies had been suddenly broken off and their civil careers brought to a standstill. These young men found themselves in a land of wonderful buildings. Close at hand were cathedrals, chateaux, public halls, whose beauty and grandeur could be appreciated but not assimilated for lack of time and proper instructive guidance.

When Mr. Coxhead's plans were laid before the general commanding in the Le Mans area his enthusiastic consent was immediately obtained and a class was started. It contained 22 "boys" who had had some architectural training, who were detailed for a three-weeks' course of in-

tensive study. They reported to Mr. Coxhead for work at 8 A. M. and continued, with intervals for mess, until 9 at night.

The mornings were given over to out-of-door work, visits to the great Gothic cathedral of Le Mans, or to some neighboring church or chateau chosen by the instructor. In the afternoon they developed the notes they had taken in the morning into careful drawings under his supervision. In the evening they discussed the rules of form and construction as exemplified by what they had seen. In this way, what had seemed to be an interruption and a loss of time in their career became to them an architectural tour of great interest and value. The work was hard, but then the course was short, and they entered into it with enthusiasm, determining to profit to the full by the advantages thus unexpectedly placed in their way. During the third and last week of the course a five-day tour was arranged to Orleans, Tours and the great chateaux and churches of Chartres, Blois, Chambord and others.

The course ended with a highly successful exhibition of the work done, held in the hall of the Municipal School of Design at Le Mans. Here more than 200 drawings were displayed, varying from rough sketches to water colors and oils, attesting to the value of the work done. So delighted were the American officers with these results, and with the the reception given by the public to the exhibition, that they gladly consented to a second and, later, a third course being formed. The second course was completed with a six-day study of the architecture of Paris, and a second exhibition of drawings—more than 300—in the Army Educational Commission Building.

Nor is this all. Mr. Coxhead has prepared a plan by which the work may be extended. He is seeking to establish a number of centers for architectural teaching, each under a competent instructor, which shall move in rotation from point to point, the entire course covering a period of three months. Of course, only architects, or men who have had some practical training under an architect would be eligible.

Local Housing Problem Solutions

More and more is the housing problem coming up to vex and perplex in the big cities, where houses and apartments are difficult to obtain, and are commanding such high prices in the way of rents.

Mayor Hylan of New York city recently approved a plan which it is considered will help out the situation there, temporarily at least, and that is for the city to take over the Pelham Bay Park encampment built by the government to house 25,000 sailors, and to convert it into dwellings. Inspectors declare that with a few alterations the barracks could be made into perfect apartments which could be maintained on a co-operative housekeeping plan.

It seems that this big naval training base was built at an expense of $10,000,000. The barracks consist of 537 buildings, occupying an area of about 135 acres, set in a park space of 1700 acres, where there are facilities for swimming, fishing and truck gardening for the prospective tenants, while baseball diamonds, tennis courts and other playgrounds can be built at small cost.

The project is considered feasible, and the committee in charge of the proposition feel that there will be no hitch in the negotiations now going on with the Navy Department for turning over the buildings for the purpose for which they have been requested.

Architects Design Pittsburgh's Bridges

Mr. John W. Beatty, president of the art commission of Pittsburgh, informs us that two architects residing in Pittsburgh, A. B. Harlow and Benno Janssen, have been selected, together with a New York firm, to provide the plans for three of the new bridges to be built across the Allegheny River. The art commission of Pittsburgh has been deeply interested in this matter, and the county commissioners have loyally co-operated and supported the movement inaugurated about a year ago, when Ralph Adams Cram visited Pittsburgh and delivered an address on the subject. The first practical result of the movement was announced the other day. An extraordinary opportunity is now afforded the city of Pittsburgh, and the intelligent action of the county commissioners may be destined to affect architecture in this country to an important degree. "It is," says Mr. Beatty, "a distinct recognition of the importance of art in connection with works of public utility, and I doubt not that the other three bridges which are to be built will be designed upon the same high standard of artistic merit."

An Ideal City

Beginning with Plato's "Republic," there have been from time to time, efforts to describe the ideal city. Everybody tries it, more or less persistently. The item printed below is the version of Mayo Fesler, of Trenton, N. J., and appears in the current issue of *Americanization*, a publication circulated by the Department of the Interior, Bureau of Education, Washington.

A city, sanitary, convenient, substantial;

Where the houses of the rich and poor are alike—comfortable and beautiful;

Where the streets are clean and the sky line is clear as country air;

Where the architectural excellence of its buildings adds beauty and dignity to its streets;

Where parks and play-grounds are within reach of every child;

Where living is pleasant, toil honorable, and recreation plentiful;

Where capital is respected, but not worshiped;

Where commerce in goods is great, but no greater than the interchange of ideas;

Where industry thrives and brings prosperity alike to employer and employed;

Where education and art have a place in every home;

Where worth and not wealth give standing to men;

Where the power of character lifts men to leadership;

Where interest in public affairs is a test of citizenship and devotion to the public weal is a badge of honor;

Where government is always honest and efficient and the principles of democracy find their fullest and truest expression;

Where the people of all the earth can come and be blended into one community life, and where each generation will vie with the past to transmit to the next a city greater, better, and more beautiful than the last.

The Day of the Builder

The word on every tongue is the word of the builder. Writing in the daily press of Bluefield, W. Va., an editorial appears as follows:

The most important man in the new world we are living in is the builder. Be a builder—a builder of better conditions are well as of material things. Builders are needed in the distracted countries of the old world to build free governments on the ruins of despotism.

Builders of houses, roads, bridges and mills are needed in France and Belgium. Business builders are needed in America where industries and public utilities are in a bad way. We must build American nationalism in the place of the idealistic internationalism which impractical theorists have tried to set up in this country. We must restore opportunity for individual initiative which has been torn down. We must build a merchant marine and rebuild the transportation and communication organizations. We must re-establish American industry on a permanent peace basis, and build a foreign trade founded upon business principles, not upon paternalism. We must construct loyal American citizens out of several millions of men and women who are still aliens and not in full sympathy with our government and its institutions. We must build the character of our electorate so that it will not stand for crooked statesmen nor countenance any influence in politics except the public good. This is a reconstruction period in every sense of the word, and there is endless opportunity for builders.

Reward for the Just Employer

The following statement is issued by Grosvenor B. Clarkson, director of the United States Council of National Defense:

The War and Navy Departments having issued a citation to employers who give assurance that they will gladly take back their old employees who have served in the armed forces of the United States, it seems fitting that some symbol representing this attitude on their part should be placed upon the service flag.

The United States Council of National Defense, therefore, endorses the placing of the United States shield upon the red border, but no names of individuals or business firms shall appear anywhere upon the flag. Any employer who sends the required assurance to the War and Navy Departments through Colonel Arthur Woods, Chairman of the Council's Emergency Employment Committee for Soldiers and Sailors, Washington, D. C., can receive the citation, and as soon as the citation is received such employer is entitled to put the shield upon his flag.

The shield should appear upon the service flag in the following manner: If the service flag hangs downward, as in a window, the shield should be at the top; if the flag flies from a mast, the shield should be placed on the border nearest the mast. In both cases, the shield shall be right side up.

Needs 10,000,000,000 Bricks

Nearly 10,000,000,000 brick are needed for Government housing schemes and private building in Britain in the next two years.

The average annual output before the war was less than 3,000,000,000.

Personals

Herbert A. Foster, architect, has moved from Arlington, Mass., to 72 Fox Street, Fitchburg, Mass.

E. N. Butler, architect, Flint, Mich., moved offices from Dryden Building, to 611½ South Saginaw Street.

William H. Thompson, architect, has opened offices at 235 S. 11th Street, Philadelphia, and desires catalogues.

Joseph A. Jollette, architect, has moved from 325 Grafton Street, to 419 Grafton Street, Worcester, Mass.

Frederick Muhlenberg, architect, has opened offices at 101 Flanders Building, Philadelphia, and desires catalogues.

Geo. M. Lindsay, architect, announces the removal of his office to 2201 Dime Bank Building, Detroit, Mich.

Waggaman & Ray have moved their office from 1211 Connecticut Avenue, to 1742 M Street, N. W., Washington, D. C.

Howard S. Chandler, architect, of 73 Newbury Street, Boston, Mass., has moved to 75 Boylston Street, Boston, Mass.

Urgel Jacques, architect, after two years absence has resumed his practice at 22 McKinley Road, Worcester, Mass.

Leonard H. Bailey, architect, Oklahoma City, has moved his office from 616 Colcord Building, to 1207 Colcord Building.

H. George Fink, architect, has opened offices in the Bliss Building, Miami, Fla., for the practice of his profession. He desires manufacturers' samples and catalogs.

Eric Kebbon, recently major of Engineers, U. S. A., announces his association with Welles Bosworth in the practice of architecture at 527 Fifth Avenue, New York.

Architect E. J. Hancock of Milwaukee has become associated in the practice of architecture with J. F. Everett, architect. The firm will maintain offices in Boston Block, Seattle.

Edward L. Gahl, for many years associated with Wheelock and Shank, architects, Chicago, announces that he will open an office at Guthrie, Oklahoma, for the practice of architecture and requests catalogs and samples.

Architect Alexander H. Spitz announces his return from military services and the resumption of his practice at 1303 Standard Trust Building, 105 West Monroe Street, Chicago. Samples, catalogues and literature on building materials are desired.

Richard Schermerhorn, Jr., Captain, Engineering Section, Sanitary Corps, U. S. A., has returned from service with the A. E. F. in France and has resumed his practice as landscape architect and civil engineer with offices at 363 Lexington Avenue, New York City.

Through an act of the North Carolina Legislature creating an office of State Architect, the State Building Commission being so authorized has appointed a State Architect, Mr. James A. Slater, and Engineer, Mr. L. R. Woodhull, and offices have been opened at 707-708 Commercial Bank Bldg. Raleigh, North Carolina.

The office will require and will be glad to receive catalogs, samples of information of all kinds of material and equipments for asylums, prisons, schools, etc.

Foreign Handicraft Exhibition and Sale

An exhibition of handicrafts of many nations is now being held in the galleries of the Art Alliance of America, 10 East 47th Street, New York. This colorful and varied display, brought together by the Art Alliance in co-operation with the Settlement Houses, comprises the work of foreigners exclusively, although most of it was done in this country. Nineteen nationalities are represented.

Workers in native costumes are in the galleries, giving actual demonstrations of their crafts. A French artist-weaver is making on his loom a reproduction of a fine old Gothic tapestry. Nearby is a Ukranian girl making bead bands and necklaces. Her needle darts at the tiny bead and spears it with the accuracy of a warbler catching midges on a leaf. There is an English lace maker with her bobbins, fashioning a butterfly, and the bobbins move like one. Two Italian boys are modeling bowls and vases in clay, while a jeweler, with his burins, is shaping silver and gold. Beyond, a Russian girl is painting wooden beads and queer-shaped vases and boxes.

Everywhere is color; cloth of gold is woven before your eyes by a Swedish woman; and there are gay-colored milk jugs hung on still gayer painted brackets done by Bohemians. There is rich gold and blue embroidery from China, a barbarically beautiful Corean costume, together with modern textiles, books of design and kakemono from Japan. Syrian wood carvings, two old chest fronts, lend a quieter note that harmonizes well with fine old Italian and Spanish draperies and vestments. But the dominant note is one of exuberance, nowhere better shown than in the rich display of Hungarian embroideries, where pillows, counterpanes and costumes vie with one another.

The great fact which this exhibition makes plain is that we do not need to send abroad, as we have done in the past, for beautiful things made by hand. They can all be made here—embroideries, laces, tapestries, jewelry—and by men and women of the highest skill in these crafts. There are hundreds of workers like those now at the Art Alliance who can be reached, and who only need the encouragement which must come from active interest and support of the public. The Art Alliance of America, with its organization, stands ready to facilitate this co-operation in every way.

The exhibition is further planned to draw attention to things of really good design, not necessarily made in this country, nor even of the present age, but which can be reproduced here by workers who had the necessary training before they came to this country. These well designed pieces will also serve as inspiration to raise our national standards of taste.

Some day—before long, we hope—America will have her great industrial art schools, as every other important nation has had for years; meanwhile it is of vast importance that we save and encourage the wonderful resources of ability that have already come to us from other lands.

First Motion-Picture Forum Is Established

The first motion-picture forum in the United States was recently established at a school in Boston by the Information and Education Service of the Department of Labor. It proved so successful that a number of others will be established soon. The plan is to use films imparting some definite social, economic or patriotic lesson, with discussion by the audience in the open-forum style to bring out the strong and show up the weak points in the teaching. The first picture shown was a dramatization of Edward Everett Hale's classic, "The Man Without a Country."

Why Not An Architect, Too?

The Rural Welfare League of Texas will hold its second annual conference at the Agricultural and Mechanical College of Texas, in College Station, June 25-28. It is learned from the program that matters of vital importance are to be discussed and acted upon. While these are of particular interest to architects, it may be observed that no architects appear to contribute anything to the proceedings.

Better housing and sanitation, improved schools and churches, and more effective community organization are some of the social problems to be considered.

The subject of rural housing and sanitation is to be discussed, not by an architect, but by Dr. P. W. Corrington, of the State Board of Health, Austin, and by Rev. J. A. Hornbreak of Fort Worth, a Presbyterian minister who has given his life to the service of rural churches.

Prominent representatives of the schools, churches and other professions will read papers. There is also a Farmers' Clubs Section, through which an interest in better farm buildings might be created. Several men of national reputation in the field of rural sociology will address the general sessions of the conference. The question is, why should not architects be also represented. The conference promises to be well attended and all persons interested in the promotion of better rural living and social conditions, particularly in Texas, are invited to attend. Will architects in that section do their part?

East Is West

Illustrative of the expanding interests in eastern countries along the lines of occidental developments is the fact that Frank Lloyd Wright of Chicago has been selected as architect for the Imperial Hotel at Tokio, Japan, and the contract for the construction has been awarded to the Mueller Construction Co., also of Chicago.

Mr. Wright is at present in Tokio, and states that the building contains many unique features peculiar to a hotel that will serve, also, in a measure, as a government building. The structure is designed to cost $2,500,000. A representative of the contractor's company is now organizing his forces in Tokio for active work. He states that he will purchase about $500,000 worth of mechanical equipment from American producers for the heating, ventilating, plumbing, electric, elevator and kitchen installations.

New York State Association

The Chairman of the Committee on Membership of the New York State Association of Architects, Frank H. Quinby, 99 Nassau Street, New York City, will send, on request, blank applications for membership.

These applications have printed on the back the By-Laws of the Association.

Every registered man in the profession is urged to secure one of these blanks and become affiliated with this organization.

Permanent Exposition Proposed

In connection with his study of the lumber needs of Europe, John D. Walker, Trade Commissioner at the American Embassy in Paris, suggests the desirability of a permanent lumber exposition. Architects, government officials and lumber dealers in England, France and Belgium seem, whenever questioned, to be in favor of the idea.

Plans for its development are now practically matured. They have been made for the purpose of illustrating the value of using standard grades and sizes of American woods abroad, and should greatly increase our lumber exports to Europe.

Soldiers' Memorial Open to Competition

Competition for the selection of an architect for the proposed temporary memorial in honor of Marion County's (Indiana) war heroes will be open to all practicing architects of Indianapolis. The memorial is to be in the form of a triumphal arch. The appropriation for the memorial is $3,500, and the competitor is urged to exercise every possible care in submitting a scheme which may be actually constructed for that amount of money.

No Freight Reduction on Material

In answer to various inquiries as to whether the Railroad Administration contemplates a reduction in freight rates on materials used in construction of buildings, Walker D. Hines, Director General of Railroads, makes it clear that no such reductions are in contemplation.

Before the matter can or will be definitely determined it is intended to ascertain what, if any, reduction necessary to establish a stable price will be made in the price by those producing and supplying the materials.

Shows Housing Need

While the United States Department of Labor has estimated that there exists in the country a shortage of 500,000 houses as a result of the stoppage of building by war conditions, it is probable that half a million does not cover the actual deficiency. In New York city living quarters are now at a high premium. Rents have gone up approximately one-third, modern priced apartments being subject to the largest increase. Thousands of war workers have been crowded into the city and the regular growth has been advanced in many other ways. Although it has not yet reached one-third of the normal volume of construction, a survey of 152 cities shows an encouraging increase of building.

University of Virginia Receives Library and Works of Art

In addition to the gift of $155,000 to the University of Virginia to endow a school of fine arts, embracing art, architecture and music, Paul Goodloe McIntire, a native of Charlottesville, has given to the city a park in which he will place an equestrian statue of Lee; a library fully equipped—site, buildings, furnishings and books; a plot of ground near the courthouse upon which it is his purpose to erect an equestrian statue of Jackson; an exquisite group of statuary at Midway school, commemorating the Meriwether Lewis and William Clark expedition, and a monument to George Rogers Clark, who from the annals of our earlier times perhaps won more fame than his brother, William. Nestling in the foothills of the Blue Ridge, blessed with wonderful natural advantages, in sight of Monticello, the home of Jefferson, at the doors of the University of Virginia, enriched and adorned by the gifts of this man, Charlottesville is to become truly a beautiful city.

Washington Draftsmen Organizing

Draftsmen in the employ of the government are rapidly organizing in an effort to secure a higher wage scale. A new schedule for draftsmen employed by architects of the Treasury Department became effective this week. Members of the craft in the Ordnance Department are now seeking an affiliation with the American Federation of Labor. Many of these men were employed by large building firms and engineering concerns before entering the government service during the war.

To Complete Frieze in Capitol Rotunda

Senator Lodge of Massachusetts has introduced a joint resolution authorizing a joint committee on the library to select an appropriate design for the completion of the frieze in the rotunda of the United States Capitol. An appropriation of $20,000 is asked to complete the unfinished work of two noted Italian artists, Constantino Brumidi and Filippo Costaggini.

Costaggini will be remembered by the older generation of architects and artists for his work in the large cathedrals of this country. He died before the frieze could be completed. Brumidi painted the scenes on the walls of the President's private room at the Capitol, the canopy of the dome, the picture of Cornwallis suing for cessation of war in the House side and other noted paintings in the legislative building. Pope Pius IX commissioned him to restore the Loggia of Raphael in the Vatican before the artists came to America. While working on the frieze in the early '60's, Brumidi fell from the scaffold and died from injuries.

Build Now for Reconstruction

The War Department, through Colonel Arthur Woods, is urging State, City and County officials to push work on public buildings in order to provide jobs for returning soldiers and sailors. There has been a gratifying response to this advice, because it is universally felt that the immediate return of ex-service men to suitable employment is of the utmost importance. In commenting on the possibilities of this means of reconstruction, Colonel Woods says:

"Every contract which is let makes more work in the forests, at the mines, in the quarries and at the railroads, in addition to the labor requirements of the operation itself, and this means more jobs for returning soldiers and sailors."

Late News from Architectural Fields

Special Correspondence to THE AMERICAN ARCHITECT

Approve Plan for a National Memorial Forest

WASHINGTON, D. C., June 23.—The National Arts Commission of the city of Washington has approved the proposed National Memorial Forest. The project was discussed at a special meeting called Friday at the request of its proponents. While the Commission heartily endorsed the proposed memorial, it declined to take the initiative in securing the necessary legislation.

When the proposal was made in October, 1910, that the Government acquire a wooded area bordering on the District of Columbia, for scientific reforestation and rehabilitation as a National Forest and Park, it was endorsed by many organizations. The bodies expressing approval included the American Institute of Architects, Landscape Architects' Association, American Federation of Art and the American Forestry Association. It is now proposed that the forest be made a National War Memorial to commemorate the services rendered by soldiers, sailors and marines.

In addition to the forest, the suggestion was made at the meeting last week that the Government should secure the co-operation of the architects, landscape architects, foresters and engineers in planning an "Insurance City" to care for the thousands of War Risk cases which the Government has to provide for. The plan is to build a model city for the wounded heroes as a suburban extension to Washington. This would replace the soldier's homes of other wars. The Commission did not consider the proposal at this time.

Bill Makes Homes for Workers Possible

HARRISBURG, June 21.—Modern homes for workmen could be built on considerable property Pittsburgh has seized for the non-payment of taxes, or the city could acquire other real estate and provide suitable homes and apartment houses for its workmen under the provisions of a bill offered in the Senate by W. W. Mearkle.

The bill is State-wide in its effect, affecting every municipality. It would be optional with each of them as to whether or not to launch upon such an enterprise. It was designed particularly for Pittsburgh to meet a situation there that probably exists nowhere else in the Commonwealth. Recently the Council sought authority to proceed along the lines indicated in the bill and was advised by the legal department that it lacked the authority the Mearkle bill contains.

Section one of the measure authorized any municipality "whenever the Council thereof shall, by ordinance, determine thereon" to "acquire private property and to apply, use, improve and develop property thus acquired and property now or hereafter owned by said municipality for the building, constructing and erecting of dwelling houses, apartments and homes."

The second section confers the right upon municipalities to enter into contract agreements for the purchase of property and the construction of buildings "with such restrictions in the leases and deeds of sale as will duly insure the protection and preservation of the appearance, light, air, health and usefulness thereof."

Councils are authorized to make such rules and regulations for the acquisition of property, the letting of contracts and the renting and sale of the properties they may deem proper.

Report of United States Employment Service

WASHINGTON, D. C., June 23.—Nearly 6,000,000 persons were directed to employment by the United States Employment Service from its organization January, 1918, to May 24 last. Of this total, over 4,500,000 themselves or through their employers reported back to the Service that they had been placed.

Figures made public today by the Department of Labor show that in this period, and with the returns for April and the first three weeks of May not yet complete, 6,578,086 persons applied at the offices of the Federal Employment Service for employment of all kinds from unskilled labor to positions calling for men and women of professional and technical training. Of this number, 5,979,233 were directed to positions and 4,574,287 reported placed.

With returns for six States missing, during the week ending May 24, the United States Employment Service placed 52,000 persons, of whom 42,826 were men and 9,174 were women. Of the male placements, 12,654 were soldiers and sailors. The States which have not yet reported are Alabama, Connecticut, Illinois, New Jersey, Texas and Wisconsin, whose placements will considerably swell the reported total.

Canada Provides Money for Homes

MONTREAL, CAN., June 23.—The housing shortage of Montreal is to be overcome by government aid. A fund of between $4,000,000 and $5,000,000 will be available soon, and the administrative commission of the city of Montreal has been working on a plan by which it may be used most effectively. This plan contemplates the appointing of five public spirited citizens who shall have charge of all housing projects. A manager will be appointed, under whom plans and specifications will be prepared.

When a workman makes a request for money with which to build a home, he will have a choice of plans, provided he has not already chosen a required style of structure. After the required amount of money has been lent, the building will be inspected from time to time, so that assurance may be obtained that the specifications on which the loan was made are being carried out. The worker has the privilege of building the house himself, or he may contract for the construction.

The commission intends to give preference to labor in making the loans, but a certain amount will be at the disposal of contractors willing to undertake the building of houses for workers. Loans will be made for a period of 20 years at 5¼ per cent. The borrower, however, may provide for a sinking fund at a charge of 7 per cent.

In this connection it is of interest that the workers classified as eligible to preference in the loans are defined by the commission as "all low-salaried men, and not necessarily men who work with pick and shovel."

Poor Housing Means Big Labor Turnover

NIAGARA FALLS, N. Y., June 21.—The labor turnover in Niagara Falls in 1917, in plants employing 5,249, was placed at approximately 13,600 employees or an average of 260 per cent. This percentage, applied to the total number of employees which, it is estimated, are engaged in industrial work in the city, would mean that the total labor turnover in the community in 1917 was about 38,000 persons.

It is the belief of a Housing Committee whose members have carefully studied conditions, that a labor turnover reduction of up to 25 per cent might be effected if the housing conditions were first class. This committee found that it had been difficult to attract the right kind of labor, that many men have refused to stay in the city because of inability to secure proper house or adequate boarding facilities and that a reasonable proportion of the high and costly labor turnover has been due to insufficient housing.

If 25 per cent of the present turnover, as was estimated, could be reduced by excellent housing conditions, it would mean a saving of about 10,000 employees. If the cost of turnover per employee averages the conservative figure of $50, the saving to employers in Niagara Falls, resulting from good housing, would amount to something like $500,000 a year.

As a result of these investigations, the Niagara Falls Chamber of Commerce has taken steps to establish a housing corporation which would help finance the erection of dwellings in the city. According to estimates, 10,000 will be needed within the next ten years.

Wilmington House Shortage at End

WILMINGTON, DEL., June 23.—Real estate men, who have been predicting that 300 families will be homeless in Wilmington on June 25, the official moving day, have changed their opinions. More than 300 dwellings in the government housing project at Union Park Gardens will be ready for occupancy by that time, and it is not believed that any families will have to go homeless.

Artists' Work Shows Canadians in the War

The Canadian War Memorials, an exhibition already shown in London and planned to continue in New York until July 31, is in progress at the Anderson Galleries, Fifty-ninth Street and Park Avenue. The great collection of Canadian war paintings present vividly that country's share in the war, and incidentally the part played by American volunteers in the forces of the neighboring Dominion.

The exhibition is under the joint management of Cap. Percy F. Godenrath, representing the Canadian War Records Office, and Paul G. Konody, Secretary and Art Director of the Canadian War Memorials.

Memorial in Washington to Negro Soldiers and Sailors

WASHINGTON, D. C., June 21.—Congressman Sherwood has introduced a bill providing for the appointment of a commission to secure plans and designs for a monument or memorial to the memory of the negro soldiers and sailors who fought in the wars. The bill authorizes the erection of the memorial in the city of Washington, to cost not more than $100,000.

Another provision directs the immediate use of a $10,000 appropriation to commence the project. This commission will be empowered under the terms of the bill to employ the services of architects and sculptors.

Late Building Material Market Reports and Quotations

The sum of $15,000,000 has been made available for loans by New York City banks on bond and mortgages within the next two months to help along the program for the building of homes. Officials of eight large New York savings banks, testifying at the Legislative Committee's investigation of why construction has been retarded, declared that they were prepared to invest this amount, and although they are heavily loaded with Liberty Bonds, they are willing to lend every effort to relieve the situation. Many of them declared that they would be able to advance larger amounts at a later date.

In a letter to Senator Charles C. Lockwood, chairman of the committee on housing, Samuel Untermeyer characterized the committee's investigation of life insurance officials and building material men as "superficial, unintelligent and useless, to the point of being farcical."

"It is a pity to squander the money of the State in that way," he wrote. "You went on with your so-called 'inquiry' without another word to me," he said, "while circulating the statement that I had declined to assist, all of which has created a most unpleasant impression as to the earnestness and sincerity of your committee.

"You call the heads of the insurance companies and calmly permit them to 'get away' with the transparent camouflage that the investments of their companies in Government bonds are accountable for their having paralyzed the building industry for years past by suspending loans on real estate.

"You do not inquire (1) how much money they have received year by year for investment during that period; or (2) what part of it has gone into Wall Street securities; or (3) how much they invested in foreign securities before we entered the war; or (4) what real estate loans they have called, collected or reduced; or (5) why they have not sold securities that it has been for thirteen years last past the announced policy of the law to require them to sell, or any other of the hundreds of questions that might be asked that would tend to prove that there is no legitimate reason why they do not invest largely in real estate loans."

* * *

The steel market has not increased materially in activity, but the improvement scored early in the month is well held. Some mills are showing slightly increased operating rates.

There is approximately as much price shading in finished steel products as formerly, few lines being entirely free from price irregularities, but the cutting does not spread, and March 21 prices are still regarded as representing the

(*Continued on page 900-A*)

Building Material Costs Cannot Revert to Pre-War Levels, Say Business Leaders

THE U. S. Department of Labor has just prepared a circular containing a symposium of interviews with leading business and financial authorities on the topic of "How Much Will Prices Fall." Each statement clearly shows that there can be no appreciable recession from present price levels, confirming THE AMERICAN ARCHITECT'S analysis printed some time ago that it is the high cost of loan money and labor wages that have retarded post-war construction and not the cost of building materials. Some of the interviews follow:

J. Ogden Armour:—The greatest danger to our economic structure to-day arises from the failure of many to recognize a *new and higher level of prices, based on permanently increased cost of labor, and high taxation.*

Those who postpone building or buying in the hope of materially lower prices, are speculating in the future misfortune of the Nation. For falling prices, when reaching the point where profit is eliminated, mean panic, depression, unemployment, and other troubles.

In the final analysis 75 per cent or more of the cost of most commodities consists of labor, and reductions in the market price of commodities are, therefore, inevitably reflected in the compensation of labor.

Nothing in the labor situation warrants anyone in expecting materially lower cost of commodities in general, and building in particular. Wages will not be less for several fundamental reasons, viz:

1. The practical stoppage of immigration since 1914, depriving America of the several million workers who would normally have come to our shores.
2. The retention by the Nation's military and naval establishments of nearly 2,000,000 workers, which may continue for an indefinite period.
3. The creation of new industries, such as shipbuilding, and manufacture of chemicals and dyes, requiring hundreds of thousands of workers.
4. The urgent demand for building and construction of every class, due to their having been forcibly held back for several years.
5. The shortage of the world's food supply.
6. The proportionately higher levels of commodity prices existing practically all over Europe.

On the one hand, then, we are facing a serious shortage of labor as soon as we approach normal industrial activity, and on the other hand there is confronting us a tremendous, unsatisfied demand for many necessities which it was difficult or impossible to obtain during the war.

Normally, under such conditions, we could have expected a flood of low-priced goods from the Old World, while now we find that prices in Europe have risen proportionately much higher than in America, and the demand for commodities and labor, to make up for the wastage of war, is even more keenly felt there than here.

The manufacturer who now quotes the lowest possible price consistent with the high cost of labor, and guarantees this to be so, doing his buying freely on the same basis, ranks as our highest type of patriotic citizen. A new level of prices has been established, from which there can be no material recession until inventive genius succeeds in correspondingly increasing labor's productive capacity by mechanical means.

* * *

Theodore N. Vail, of American Telegraph & Telephone Co.:—During the Civil War prices rose relatively more than during the recent war. The prices unquestionably were inflated, being based on the greenback currency. Even so, however, the drop in the prices of 92 commodities in the decade from 1864 to 1874, *was at the rate of less than 6 per cent per year;* in building materials it averaged less than 4 per cent per year over the same period.

The principal cause of the gradual return to pre-war price levels has been ascribed to the rapid transformation of manufacturing, agriculture, mining, transportation, and business in general, from hand methods to machine methods, from small-scale to large-scale production. Opportunities do not exist at the present day in any measure comparable with those of the period following the Civil War. Price declines so far, since the cessation of hostilities, bear this out, having been trifling—only 5 or 6 per cent up to April 1, 1919, as compared with over 25 per cent for the corresponding period after the Civil War.

Abstract consideration of these facts does not support any expectation of sudden and radical declines in present prices. As applied to big building, it would appear that any structure should prove commendable which is calculated to show a sufficient profit to offset an expected decline averaging, say, from 2 to 4 per cent per year for the next one or two decades.

Another factor which should be considered as favorable to big construction is the present tremendous latent demand for buildings, commodities, labor, and raw material, which is expected to bring on a period of intense activity and national prosperity. It is also well to consider that, excepting steel, the rise in the cost of building materials has been relatively small as compared with other commodities. The price of lumber, in particular, may easily go higher, and in view of the decreasing lumber supply may never get back to the low levels of 1913-14.

* * *

Darwin P. Kingsley, President New York Life Insurance Co., New York:—We have undoubtedly reached a new price level.

For some years food will be higher. Europe has been so stripped of every sort of food that it will take more than the harvests of 1919 to restore an equilibrium.

Food will remain high because wages will not go back to pre-war level. Wages will fall at some points—where production was overforced during the war; but unless our whole industrial and financial fabric falls into chaos—and nothing like that seems possible now—the post-bellum readjustments mean continued high wages and, of course, a higher cost for everything into which wages enter.

How far discoveries in science, inventions, improved methods, etc., may go toward overcoming this increased cost through increased efficiency and increased production is a question. These will be a factor, possibly a surprising factor, because the rewards will be large, and few things so quicken invention and efficiency as the incentive of large returns.

Carry the message to the Bolsheviks.

* * *

John Hays Hammond:—The immediate problem that confronts us is the resumption of business, including, particularly building construction, manufacturing, and mining. Business is being retarded because we are hoping for—or fearing—lower prices. Whether these fears, or hopes are to be realized no one can, perhaps, adduce convincing argument, but above the maze of conflicting arguments that are being applied to the situation one fact stands out pre-eminently; we can return neither to pre-war conditions nor to pre-war prices.

Department of Architectural Engineering

Public School Buildings—Methods, Economies and Standardization in the Preparation of Plans*

By CLARENCE E. DOBBIN†, M.A.I.A. AND M.E., N. Y.

THE work of the Bureau of Design, Construction and Maintenance does not possess the importance, from an engineering standpoint, of the Catskill aqueduct, subways, East River bridges, or other large public undertakings. Certain features of plan production as developed and practiced by our office may, however, be of interest to engineers as they pertain to one of the important branches of engineering—that of efficient management.

The term "plan production" may be objected to by some as resembling too closely the term "shop production" used almost exclusively by manufacturers; but the fact remains that there is a distinct problem of this kind in any architectural office with a volume of work such as we have in hand. It is a problem of sufficient importance to merit thoughtful, scientific treatment and if it is handled without sacrifice either in architectural design, planning or construction, there can be no valid objection to any appropriate term used to designate it.

The development of the type buildings, or rather perhaps the standardization of the public schools of this city, as illustrated by C. B. J. Snyder, our Architect in Chief, in his talk before this Society on September 25, 1918, made it quite clear that we have become specialists in this particular architectural line and therefore cannot hope to always obtain men sufficiently familiar with what we are doing to be of immediate use upon important work. The breaking in of new men, even when they are of high grade, involves trouble and expense. The situation is still further complicated by the limitations imposed by civil service rules.

In order to meet these difficulties, and also to obtain uniform practice for all jobs in course of preparation at any one time, we have reduced to writing all instructions and decisions that go to make up our office practice. These, together with tabulations, small drawings showing typical arrangements of the various standard rooms, and other details that may be of assistance to draftsmen, are bound in loose-leaf form with subjects alphabetically arranged and make up what is termed our Office Manual. A copy of this is placed in the hands of each squad leader for ready reference.

Each new question that arises is investigated and considered with great care and when a satisfactory solution is reached the necessary instructions are placed in the manual. If later on a better solution is evolved, new instructions are issued to replace the earlier ones. The manual keeps everyone informed as to the latest decisions so that all effort may be directed toward the same objectives. The squad leaders are expected to see that their assistants follow these standards, or, if a variation seems advisable, to refer the matter to the Chief for decision.

In this way only can the practice of the office be kept standard. In the absence of such a manual the office practice must be transmitted from one draftsman to another by word of mouth. This is the usual method and it is responsible for great loss of efficiency, because the same questions are asked and answered repeatedly, and the same problems solved again and again, with attendant discussions, delays and variations in practice. New men have no definite, accurate way of acquiring the office practice and often proceed along incorrect lines.

The planning of our new school buildings is accomplished through the co-operation of the four divisions into which the office is divided—General Drafting and Plumbing, Heating and Ventilation, Electrical and Furniture. Each of these divisions has its own head and are all under the immediate

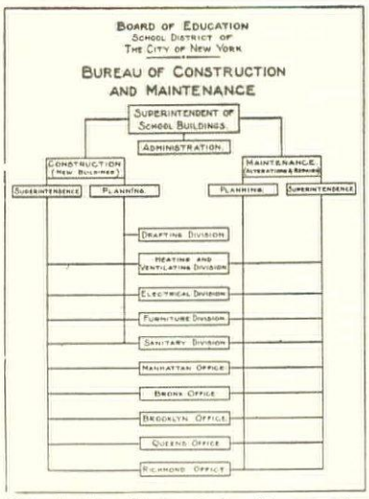
*Paper read before the Municipal Engineers of the City of New York.

†Deputy Superintendent of School Buildings, in charge of General Drafting Room, Bureau of Design, Construction and Maintenance, Board of Education, New York City.

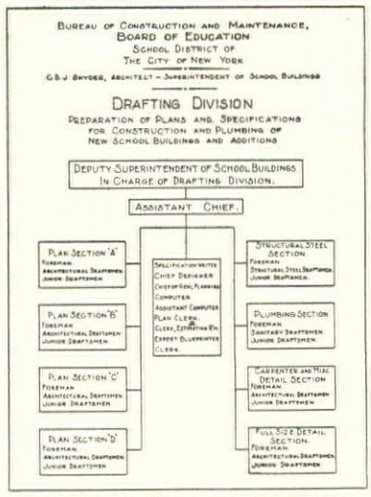
direction of Mr. Snyder, who also has jurisdiction over the inspection force connected with the construction and equipment of the buildings. The general plan of this organization is indicated by the first of the two organization diagrams.

We do not claim that this form of organization or the work performed offers any new or startling features, but believe there may be something of interest in connection with our methods of systematizing and standardizing not only the types of buildings, but the working plans, details, specifications and office practice.

In our steel designing many of the factors are constant. The dead weight of our typical floor construction is always the same and the live loads for certain groups of rooms are alike. We have therefore developed tabulations of various kinds that enable the engineers to select the steel shapes much more quickly than by computation or by reference to a hand book. One such table gives the safe I-beams for different lengths and spans, assuming our typical dead load and a live load of 75 pounds. There are other tables for live loads of 100 pounds, 120 pounds, etc. Having worked out a beam plan and fixed the lengths and spans of the beams, their sizes can be obtained from these tables with the least expenditure of time. Similar tables have been provided for many other structural members for which we have constant use: channel columns for our standard story height of 15 feet 0 inches, safe loads for struts made up of one, two and four angles in various positions, etc.



Organization Chart of the Bureau of Construction and Maintenance.



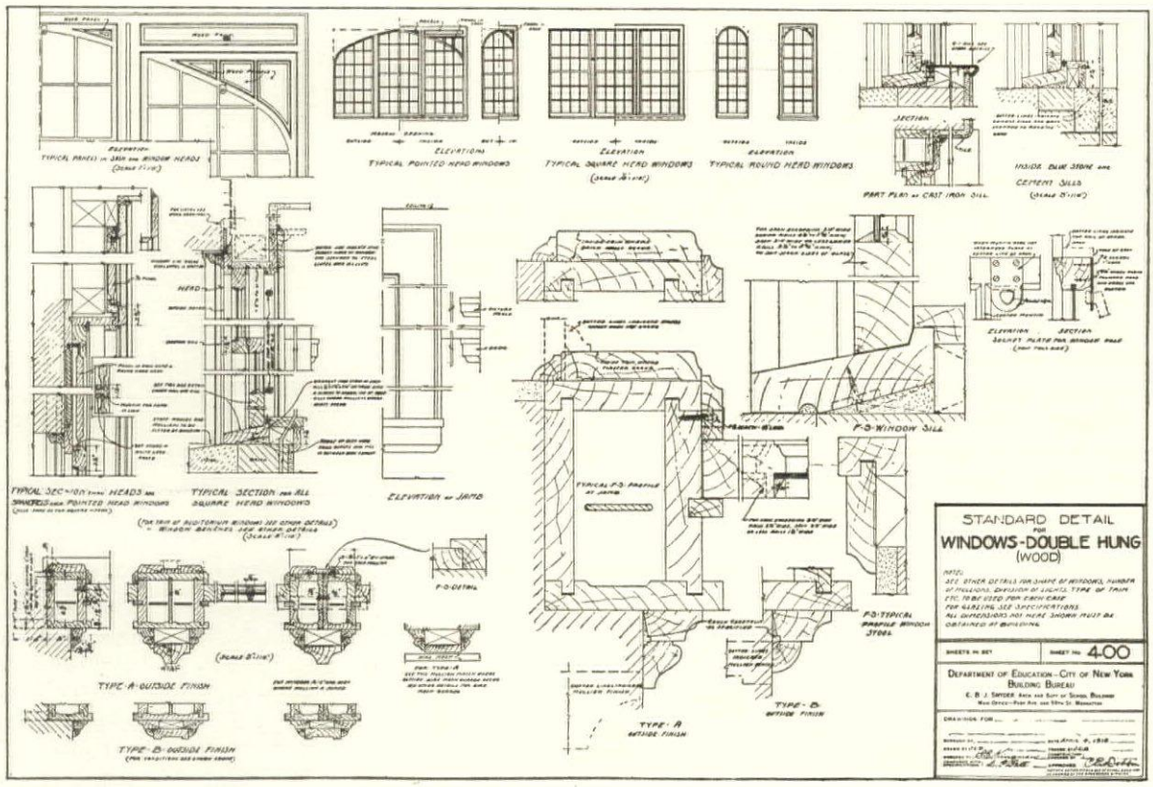
Organization Chart of the Drafting Division, which Prepares the Plans and Specifications for the Construction and Plumbing Work of New School Buildings and Additions.

The volume of work is such that a number of jobs must be put forward at the same time. The work naturally segregates itself into subdivisions, such as general planning, designing, scale detailing, full-size detailing, structural-steel and other engineering, plumbing, specification writing and computing.

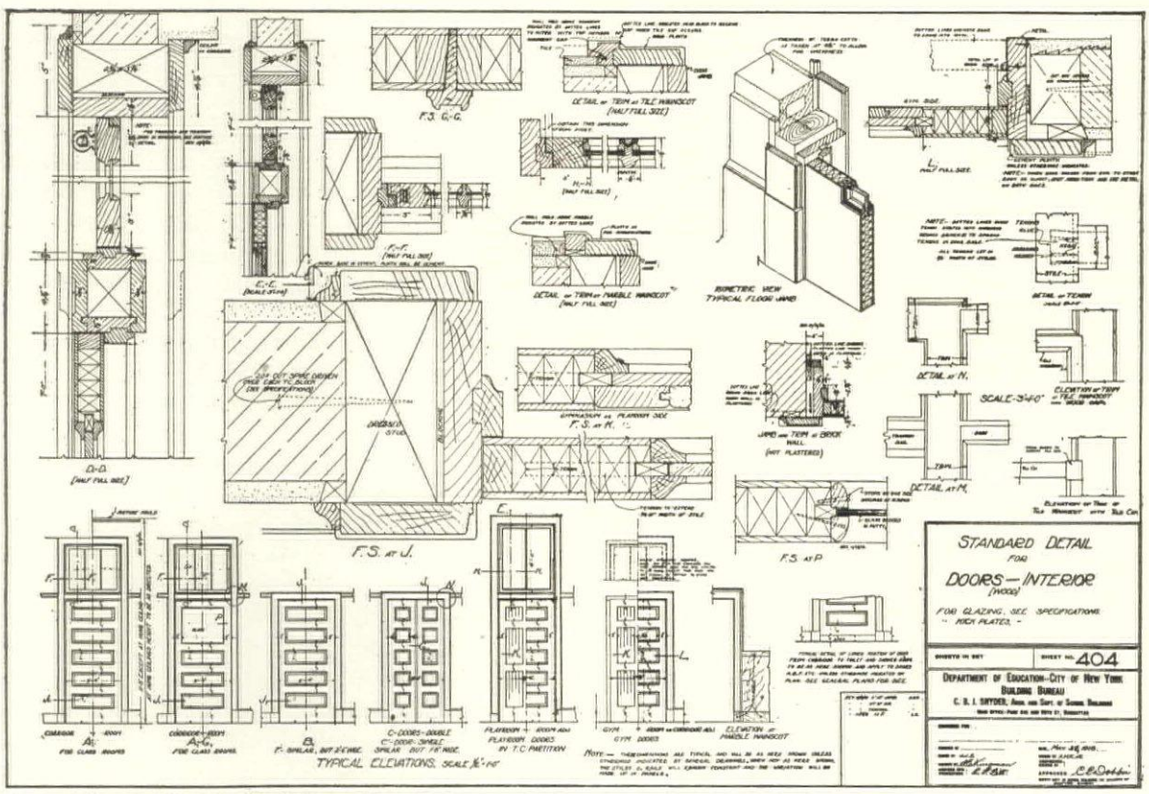
The first essential is a properly organized and balanced drafting force. Reference to the second of the two organization diagrams shows that the employees of this division are divided into appropriate squads, each of which is continuously engaged in one kind of work. While the personnel of the squads may change from time to time the leaders at least are comparatively permanent and become thoroughly familiar with the established methods in their particular branches of the work. The qualifications, inclinations and aptitude of each man are studied so that he may be placed where he will count for the most. This is a matter of great importance and careful attention to it has led to the discovery of special ability in some men, which when developed has produced surprisingly good results.

The next step is to standardize the details for features which occur repeatedly in different buildings; for example, a standard detail is made covering the entire construction of the ordinary double-hung window. This drawing is made on tracing cloth and once prepared can be used for any number of buildings without further drafting, by striking off the necessary number of blue prints. Similar standard details are made for pivoted windows, hollow metal windows, steel windows, steel doors, wood doors, kalamein doors, skylight construction, vault-light construction, interior trim, cabinets, wardrobes, lockers—in fact for every possible feature of the building from column bases to the flagpole on the roof. These standard details do not entirely obviate the necessity for special details, but their number is thereby reduced to the minimum.

The advantages of these standards are threefold: First, the entire subject is very thoroughly studied when the standard is prepared and the detail is made to cover every phase of the construction, so as to furnish all the information required on that subject. Second, the draftsmen become familiar with the standards and are able to proceed with the plans much more expeditiously. Third, the con-



Standard Detail of Double-Hung Window and Frame, Covering all the Usual Conditions. There are Similar Standards for Pivoted, Hollow-Metal and Steel Windows.



Standard Detail of Interior Wood Doors, Covering All Types Ordinarily Used, Together with Complete Details of Construction. The Appropriate Letter to Designate the Type of Door to Be Used, Is Placed at Each Opening on the Floor Plans. The Standard Detail Does the Rest. There Are Similar Standard Details for Kalamein, Steel, Alignum and Metal-Clad Doors.

tractors after becoming familiar with them, are able to systematize their methods of production and to reduce their estimates accordingly.

This Division has at the present time about one hundred standard details of this kind. A complete file of these is furnished to each squad leader and each is required to plan his work in conformity with them as far as practicable. This does not discourage suggestions on the part of assistants. These are always welcomed and the standards are revised whenever better methods are found. It does prevent waste of time in study of unauthorized variations of no practical value, undertaken often for no better reason than the desire to do the thing differently.

When conditions are such that a type building cannot be used, the general plans, framing plans and plumbing plans must all be specially made; but the standard details are applicable to these as well as to the type buildings, which minimizes the labor of detailing.

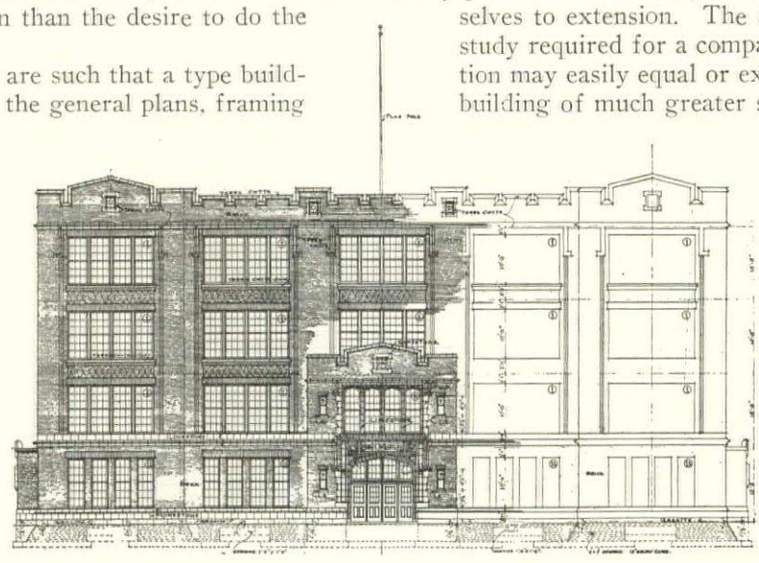
Where the drawings for one building are to be substantially like those for another building we take advantage of methods of process reproduction in order to reduce the amount of tracing. It is necessary to have a full set of tracings for each building because additional prints may be needed at any time, either during the progress of building or after completion.

An earlier attempt to curtail drafting by making prints for all similar buildings from one set of tracings and then applying pasters covering the variations, had to be abandoned owing to the difficulty of keeping the great number of paster tracings, and of assembling sets of prints made up of the original sheets with innumerable pasters. There was also too great a liability to error.

Where the ornamental features of buildings of the same type are alike, the details for these are made in standard form, so that having once prepared tracings of these details for the first building they apply without change to any extent desired.

If all buildings could be made to conform to one or another of the standard types, plans could be produced with great rapidity, but unfortunately this is impossible. The present building schedule comprises five new buildings of Type A, one of Type B, two of Type C, three of Type E, six of no standard type, and seven additions. This schedule of twenty-four items, made up prior to the adoption of the type buildings, offers only seven opportunities for duplication. In future building schedules it is expected that greater use will be made of the standard types.

Buildings requiring additions are usually old, badly planned and in many cases do not lend themselves to extension. The amount of time and study required for a comparatively small addition may easily equal or exceed that for a new building of much greater size. In the present building schedule, therefore, the advantage gained by the opportunity to duplicate seven buildings is largely counterbalanced by the seven additions.

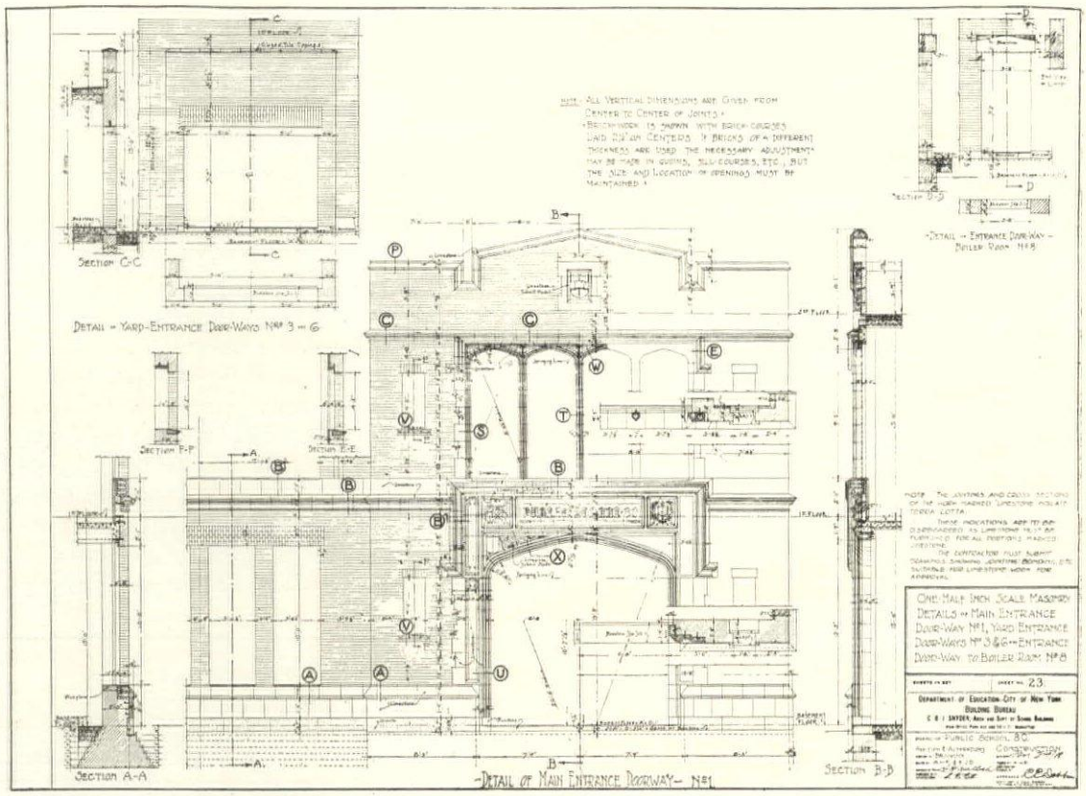


FACADE OF TYPE C BUILDING
Note the simple straightforward character of the design. It is devoid of excessive ornament, but expressive of a school building.

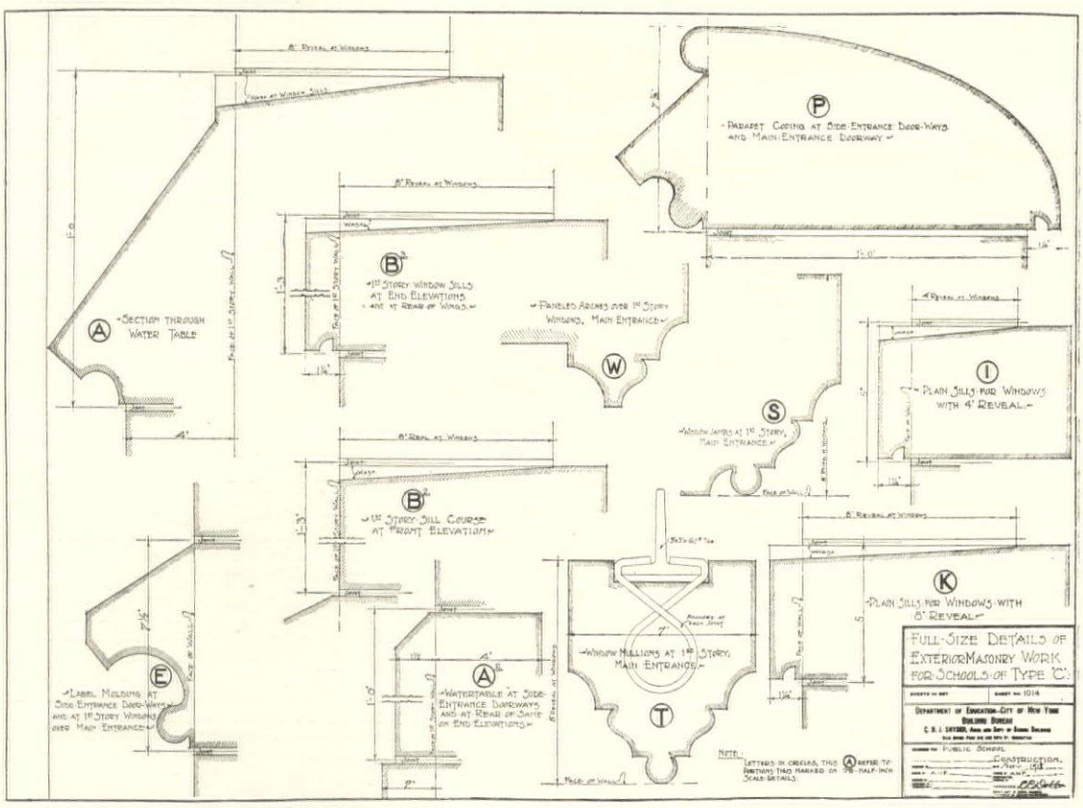
It seems to be a matter of surprise to many that our plans are submitted for the approval of the city departments and that they are scrutinized as closely as the output of other offices. The facts are that we must not only obtain the approval of all departments that have jurisdiction of the plans for private work, but must also submit our plans to the Municipal Art Commission and the Board of Estimate and Apportionment, as well as to our own board, its committees and Superintendent of Schools.

Before plans are given out for bidding they are made complete in every detail, so that there is no room for misunderstanding as to the extent or character of the work to be performed. The drawings for a Type A building comprise the following:

General plans	17 drawings
Steel plans	9 drawings
Plumbing plans	10 drawings
Special details	29 drawings
Standard details	78 drawings
Total	143 drawings



Detail of the Main Entrance Feature of the Type C Building. Scale ½ Inch to the Foot on the Original. The Large Letters, A, B, C, Etc., Refer to Full-Size Profiles of the Various Moulded Members as Shown in the Following Illustration.



Details of Terra Cotta Work for the Type C Building Shown Full Size on the Original Drawing. The Large Letters, A, B, C, Etc., Refer to the Locations of the Various Details as Shown on the ½-Inch Scale Details in the Preceding Illustration. Details of This Kind and Similar Ones for Interior Ornament Are Standard for All Buildings of the Type to Which They Apply.

All of these are completed and available to the contractors for estimating and all are issued to the successful bidder as soon as his contract has been

RECOMMENDATIONS FOR FOUR TYPE A BUILDINGS

29 BROOKLYN	57 BRONX	20 BROOKLYN	182 BROOKLYN
BOYS & GIRLS KINDERGARTEN TO 8B	BOYS & GIRLS KINDERGARTEN TO 8B	BOYS ONLY KINDERGARTEN TO 8B	BOYS & GIRLS KINDERGARTEN TO 6B
AUDITORIUM	AUDITORIUM	AUDITORIUM	AUDITORIUM
1 LIBRARY	1 LIBRARY	1 LIBRARY	1 LIBRARY
1 GYMNASIUM	1 GYMNASIUM	1 GYMNASIUM	1 GYMNASIUM
1 KINDERGARTEN	1 KINDERGARTEN	1 KINDERGARTEN	1 KINDERGARTEN
1 DOMESTIC SCIENCE	1 DOMESTIC SCIENCE		
1 SEWING	1 SEWING		
1 DRAWING	1 DRAWING		
1 SCIENCE	1 SCIENCE		
1 WOODWORKING SHOP	1 WOODWORKING SHOP		
36 CLASSROOMS	36 CLASSROOMS	43 CLASSROOMS	43 CLASSROOMS
		2 RECITATION ROOMS	
		1 NATURE STUDY	
			1 UNGRADED ROOM
1 MEDICAL INSP. OFFICE	1 MEDICAL INSP. OFFICE	1 MEDICAL INSP. OFFICE	1 MEDICAL SUITE:
1 DENTAL OFFICE	1 DENTAL OFFICE	1 DENTAL OFFICE	CONSISTING OF GENERAL, DENTAL, EYE, NOSE, AND THROAT CLINICS

Recommendations for Four Type A Buildings, Showing the Variations that are Required in Buildings of the Same Type.

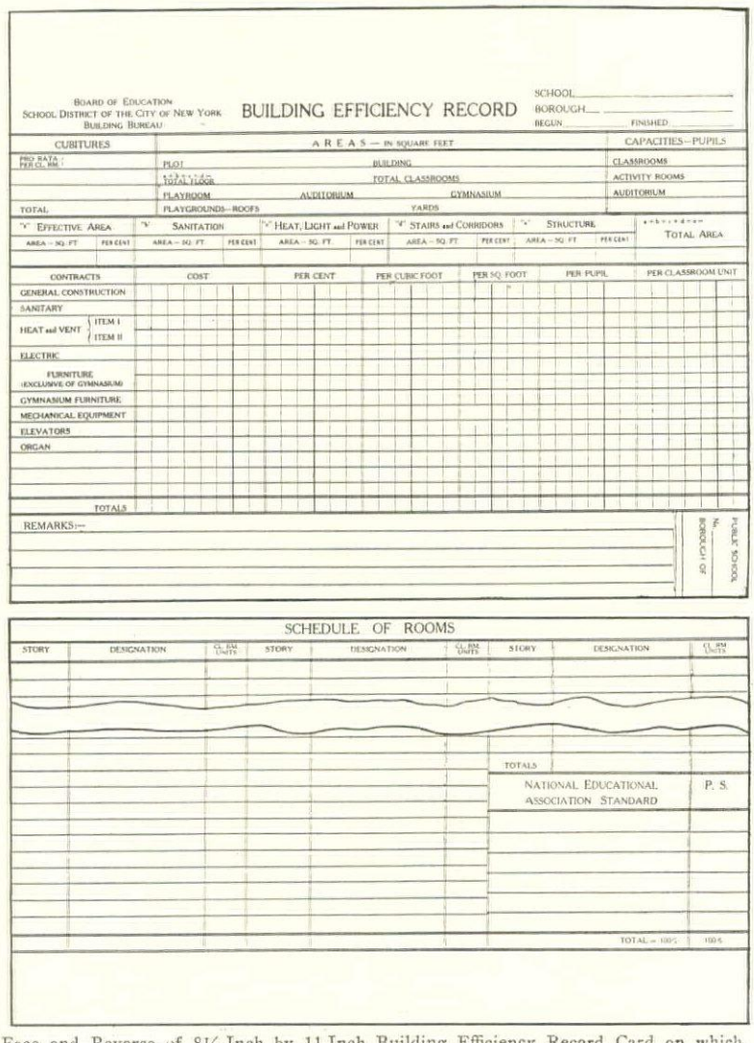
approved, which enables him to proceed with his work without delay.

This practice insures complete checking, cross-checking and correction of drawings before any of them are given out. It also tends to lessen the number of extras on the contracts, due to omissions or errors. In proof of this it may be stated that in eight years' work, the contracts for which amounted to $28,000,000, extras of this kind amounted to only $24,000, or less than one-tenth of one per cent. When it is realized that the extras on one building frequently equal that amount, the advantage of complete, accurate drawings and specifications becomes apparent.

The adoption of the standard specifications with amendments, as described in Mr. Snyder's article, has resulted in a great saving in the labor and expense of writing, editing and printing the specifications. No time or thought has to be devoted to the standard specifications, which comprise about 80 per cent of the whole. It is only necessary to take care of the variations from the standards, or about 20 per cent.

By the exercise of determination and against the judgment of some of the men, it has been found not only possible, but advantageous, to limit the size of drawings to dimensions that are practical for drafting as well as for use on the building. It is no longer necessary for our draftsmen to recline full length on their work nor to wear carpet slippers so that they may walk on it. Neither is it necessary for the contractor to cut his drawings into sections before attempting to use them. Tracing cloth is purchased in sheets of standard size with a margin line and the department and signature stamp printed on each sheet. The printing is less expensive than lining, lettering and stamping by hand.

Payments on the contracts are made on the basis of 90 per cent of the amount earned at various fixed stages of the operation. The work included in these various payments, together with the percentage of the contract price to be paid, is printed in the specification. This method as distinguished from the usual monthly payments, has been found highly satisfactory, because it eliminates all controversy as to the amounts earned and all opportunity for contractors to obtain excessive payments as a preliminary to abandonment of the contract.


BOARD OF EDUCATION
SCHOOL DISTRICT OF THE CITY OF NEW YORK
BUILDING BUREAU

BUILDING EFFICIENCY RECORD

SCHOOL
BOROUGH
BEGUN FINISHED

CUBITURES | AREAS — IN SQUARE FEET | CAPACITIES—PUPILS

PRO RATA PER CU. FT.:
PLOT | BUILDING | CLASSROOMS
TOTAL FLOOR | TOTAL CLASSROOMS | ACTIVITY ROOMS
PLAYROOM | AUDITORIUM | GYMNASIUM | AUDITORIUM
TOTAL | PLAYGROUNDS—ROOFS | YARDS

% EFFECTIVE AREA		% SANITATION		% HEAT, LIGHT and POWER		% STAIRS and CORRIDORS		% STRUCTURE		TOTAL AREA
AREA—SQ. FT.	PER CENT	AREA—SQ. FT.	PER CENT	AREA—SQ. FT.	PER CENT	AREA—SQ. FT.	PER CENT	AREA—SQ. FT.	PER CENT	

CONTRACTS	COST	PER CENT	PER CUBIC FOOT	PER SQ. FOOT	PER PUPIL	PER CLASSROOM UNIT
GENERAL CONSTRUCTION						
SANITARY						
HEAT and VENT (ITEM I / ITEM II)						
ELECTRIC						
FURNITURE (EXCLUSIVE OF GYMNASIUM)						
GYMNASIUM FURNITURE						
MECHANICAL EQUIPMENT						
ELEVATORS						
ORGAN						
TOTALS						

REMARKS:—

BOROUGH OF — No. — PUBLIC SCHOOL

SCHEDULE OF ROOMS

STORY	DESIGNATION	CL. RM. UNITS	STORY	DESIGNATION	CL. RM. UNITS	STORY	DESIGNATION	CL. RM. UNITS

TOTALS

NATIONAL EDUCATIONAL ASSOCIATION STANDARD | P. S.

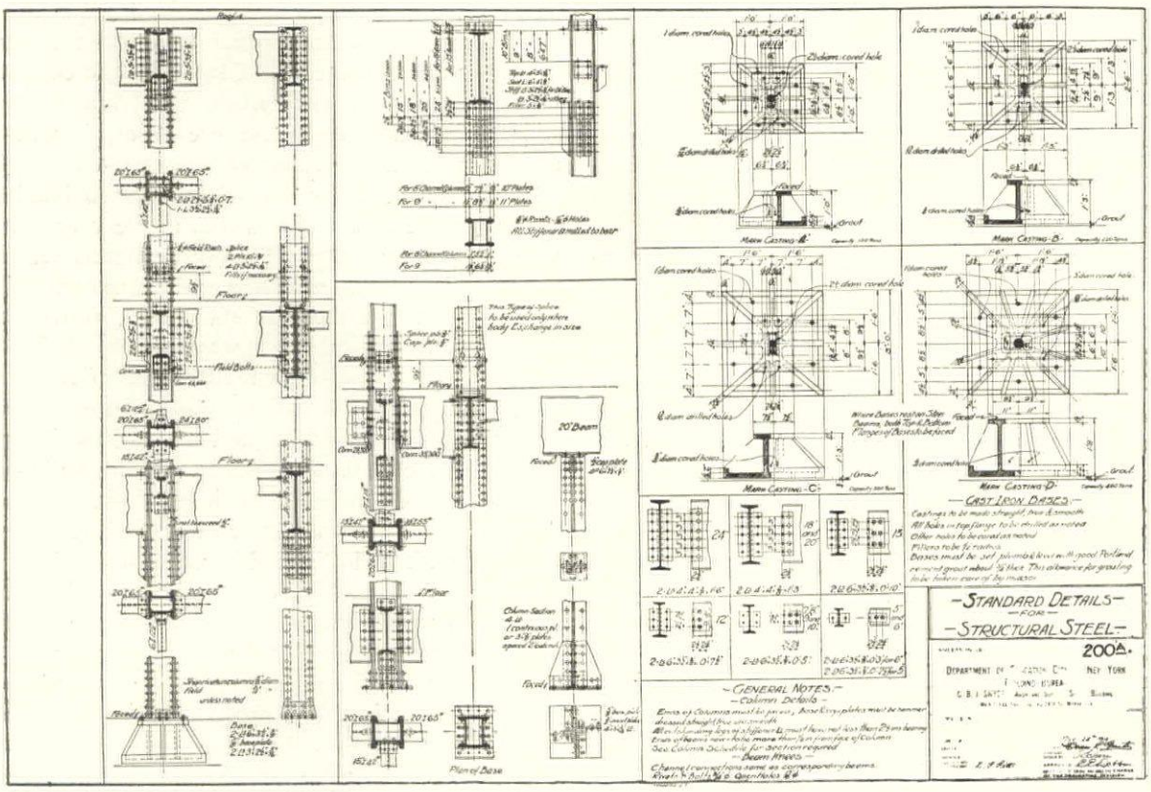
TOTAL = 100% | 100%

Face and Reverse of 8½-Inch by 11-Inch Building Efficiency Record Card on which a Complete Record of Each Building Is Kept.

In order to fix the percentages for the various payments an accurate quantity estimate is made and this is segregated into the payments determined upon. Many other methods and short cuts have been adopted in the effort to conduct this branch of the people's business in the most careful and efficient manner. Those enumerated are sufficient to indicate that this Bureau is not hampered by old or traditional methods, but, on the contrary, follows the best practice of the profession and when that does not fully meet its requirements, develops new methods of its own. An excellent example of the latter has just occurred.

In a recent fire all our records and drawings, including the recently completed tracings for a building not yet under contract, were destroyed. Fortunately a set of blue prints from the tracings was preserved. The cost of retracing these drawings would have been $1,000 or more. There was no known process of reproducing tracings or negatives from blue prints, but by careful study of various methods of photographic reproduction and after some experimenting by our blue printer a way has been found to replace the lost tracings, at a cost of $170. By this new application of existing processes we have solved a problem for which no less an authority than the *Scientific American* has been unable to find an answer.

Confronted as we are with a work of great magnitude and many complications it is our endeavor to apply factory methods to the less vital phases of our work, such as plan production and reproduction and to reserve our best thought and effort for the real problems that are always before us.



Standard Detail for Structural-Steel Work, Covering All Ordinary Conditions for Columns, Column Bases and Connections for Beams and Girders. Special Details Are Required Only for Plate Girders, Trusses, Etc.

Reinforced Concrete in Office Building Construction

IN another section of this issue the Colonial Trust Company Building of Philadelphia is illustrated. While this building presents an interesting study from the aesthetic standpoint, it also has combined with a pleasing exterior and usable interior several structural features, not evident upon inspection, which can be studied with profit.

In the structural planning of a building three things must constantly be kept in mind: the cost of the type of construction selected, the contemplated use of the building and the adaptability to such use of each type, and the limitations of the several types of construction available.

In the building under consideration we note that the plot of ground is comparatively small, being but 4,200 sq. ft. in area, although located on what is probably the busiest corner in the entire city of Philadelphia. As a matter of fact this piece of property is valued at some $800,000, or almost $20,000 a front foot on Market St. In getting at the net rentable area per floor we must deduct from the gross lot area all walls, stairs, elevators, toilets, light courts, chimneys and columns. In so far as this space can be reduced to a minimum, the income of the building will be increased proportionately.

The Colonial Trust building is occupied by two stores and as a banking room by the owners in the first story, and for office purposes above with a rentable area of about 3,300 sq. ft. per floor. It is 13 stories high and roughly 42 ft. by 100 ft. in area, over-all dimensions. The type of construction which would be considered as most adaptable to these conditions would be skeleton steel construction with brick walls and stone trimmings, supported at each story, and concrete or hollow tile floor arches. This would of course permit columns of minimum size, and thin walls.

It is interesting to note that the design was first laid out in steel, but at that time the steel market was high, and estimates led the architect to believe that a considerable saving could be accomplished by the use of reinforced concrete. While this type of construction is common for industrial buildings, it has never been used to any great extent in the East for office buildings. However, the building was re-designed in concrete, and an estimated saving of $70,000 was apparent, due to the change. Unfortunately though the columns in the first story (according to this design) assumed such massive proportions as practically to ruin both show window, store and banking room space, if constructed as designed. The corner store was expected to (and does) bring an exceptionally high rental, and it was imperative that the columns occupy as little space as possible in the ground story.

After carefully studying all the factors involved a compromise design was adopted which has proved entirely satisfactory, and enabled a saving of over $50,000 below the estimates for the original design in steel. This compromise design provided for steel columns below the second floor level, steel girders supporting the wall above the store front, and reinforced concrete construction above. At the rear, the building was divided transversely into three approximately equal bays, and the banking room rail arranged on a line with the columns, so that they in no way caused interference or obstruction in this area. At the front, it will be noticed that the columns are not on a line with those at the rear, for had they been so lined up it would have meant obstruction in the very valuable corner store space. The wall columns are rectangular in section, which while an uneconomical design from a structural standpoint, proves the best from a practical one, these columns taking up the least space possible with this type of construction. Several of the corner wall columns are almost triangular in section, and some of the interior columns are of irregular section so as to be largely hidden or lined up with the interior walls or partitions. The floor construction is of reinforced concrete with hollow tile fillers, the top slab being about 2½ in. total thickness with troweled floor finish (no wooden flooring was used), the tile fillers giving a good key for the flat plastered ceilings.

The walls are faced with hydraulic pressed brick and limestone trim. The roof is of slate. The total cost of the building was $300,000, or about 50 cents per cu. ft. Had steel been used throughout the cost would have been nearly 60 cents per cu. ft.

From the foregoing the feasibility of the use of reinforced concrete in office building construction, when carefully designed to meet practical considerations is manifest, and the economy of such design is clearly proved.

Building Material Market Reports

(*Continued from page* 891)

regular market. In this respect the market is stronger than was to have been expected, for earlier in the year producers felt that the only way to prevent the bottom dropping out of the market was for every producer to adhere rigidly to the recognized price schedule. Now the steel market is showing decided signs of being able to stand on its own merits.

On this point the *Iron Age* says:

"It is interesting to watch the spread of the belief that substantially the present level of prices, with possible slight concessions here and there, also possible advances, is to be reckoned with for a longer time than seemed likely three months ago. Jobbers appear to be buying with less fear of having stocks decline in value before they can be sold."

* * *

(*From our Special Correspondent*)

CHICAGO, ILL., June 23.—The demand for building material of every description is now greater than at any time during the past three years (according to an official of a company operating twenty-five yards in this city and neighboring suburbs). It is a general demand resulting from increased activity in building, and the call is for quick delivery in wagon-load lots. Prices are holding firm on all items, although competition is keen and dealers say there is but small margin of profit in consequence of high costs entering into the manufacture and a tendency to undersell in order to get what business is offered.

A total of ninety permits for new buildings was issued during the week for structures to cost $1,218,685 in the aggregate. The same week one year ago the records show a total of forty-seven permits for buildings to cost $712,000. These figures give a fair idea of conditions in this city at the present time. There is a better tone generally in all markets; few idle men, and no labor difficulties of consequence.

New business of various steel companies in the Calumet district has been running in excess of production since the first of the month and orders continue to expand. A representative of one of the independent steel companies says the increased buying of steel products encountered by his company made greater strides in the past week than in any similar period in the history of the company. Steel manufacturers report a good demand for steel for export to South American countries.

Lumber is moving from the yards to the building contractors in exceptionally good volume. There also is better demand from the consuming industrials, especially the sash and door factories. Unusual conditions prevail in the wholesale markets. The demand is greater than the supply at the mills. It is now a question of placing orders for stocks to meet the demand and not a question of price. Values are changing almost over night, and during the past fortnight there have been some sharp changes upward in wholesale prices of cypress, hemlock, northern pine, and some of the more staple hardwoods. In consequence of the scarcity of oak, gum and poplar the building and furniture industries are substituting such northern woods as birch, basswood and maple to some extent. Low grades in both the hard and soft woods, for which the demand has been slow, are now moving into regular trade channels at high prices.

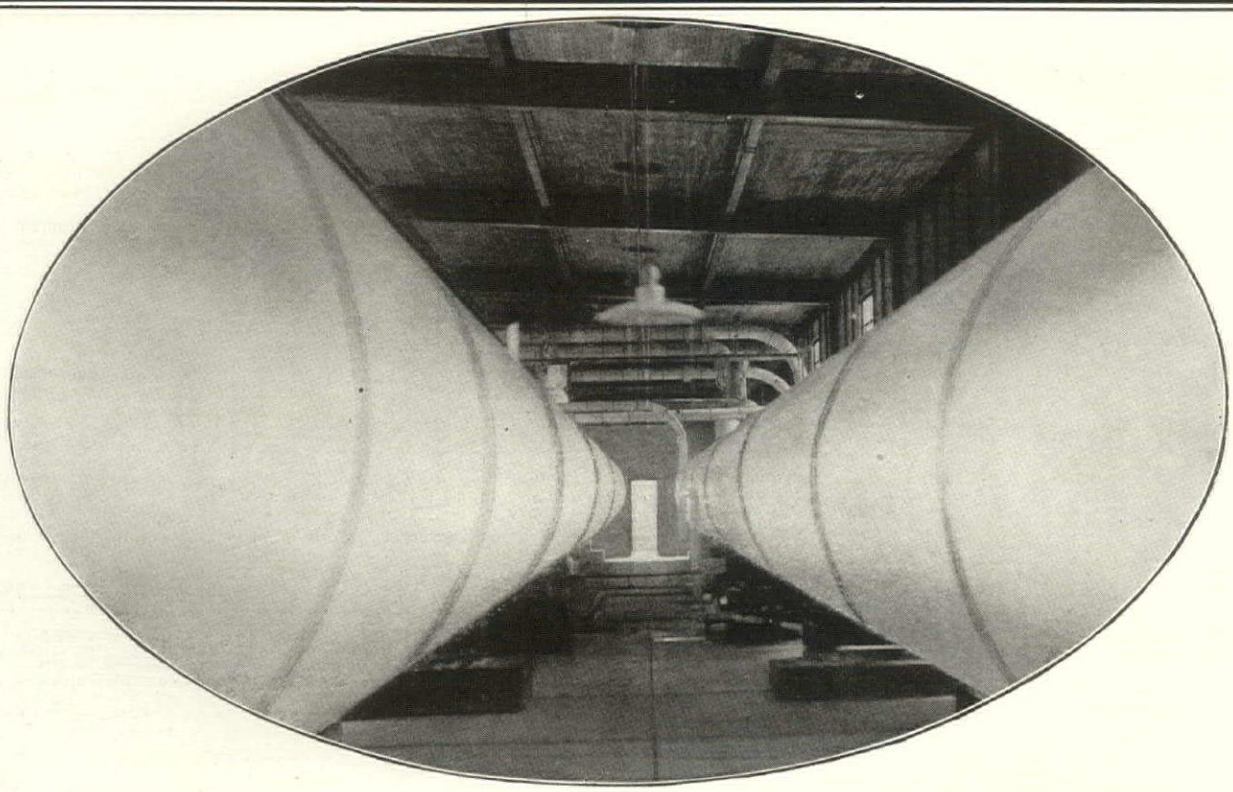
Fully ninety per cent of the war claims of this district against the Government have been adjusted. The aggregate of contracts involved in those not yet adjusted is between $25,000,000 and $30,000,000, as compared with an original amount of about $400,000,000.

Late Quotations in Building Material Markets

(Price quotations now current on building materials and supplies as quoted by dealers and jobbers for delivery in New York and Chicago follow. The quotations set forth are placed before readers of THE AMERICAN ARCHITECT to afford an accurate review of market conditions rather than for use as a basis for actual purchase. They will not only provide knowledge of the exact state of the market as to items quoted, but will also present a basis to judge conditions as affecting correlating materials. Items marked (*) indicate an advance over last week, while those marked (†) record a decline. Other prices did not fluctuate during the week.)

BRICK	New York	Chicago
Face brick (delivered on job):		
Common (Delivered at job in Borough of Manhattan only), per thousand	$17.85	$12.00
Rough red	29.00	40.00
Smooth red	26.00	40.00
Rough buff	32.00	40.00
Smooth buff	32.00	40.00
Rough gray	38.00	42.00
Smooth gray	40.00	42.00
Colonials	24.00	30.00
BROKEN STONE		
(Delivered on job):		
1½ in. per cu. yd.	$2.75†	$2.35
¾ in. per cu. yd.	2.75†	2.35
BURNED CLAY		
(Delivered on job)		
Block partition:		
3 in., per sq. ft.	.13	.10
4 in., per sq. ft.	.15	.11
Chimney tops:		
12 x 12 for 8 x 8 flues	$3.50	$2.25
Flue lining:		
4½ ft. x 13 ft., per lin. ft.	.24	.12
4½ x 8½, per lin. ft.	.18	.16
8½ x 8½, per ft.	.24	.16
8½ x 13, per ft.	.54	.20
13 x 13, per ft.	.46	.28
8½ x 18, per ft.	.54	.32
13½ x 18, per ft.	.70	.42
18 x 18, per ft.	.90	.55
Wall coping (double slant):		
8 in., per lin. ft.	.16	.14
12 in., per ft.	.26	.18
18 in., per ft.	.54	.30
Wall coping (single slant):		
8 in., per lin. ft.	.16	.14
12 in., per ft.	.26½	.30
18 in., per ft.	.54	.30
(Corners and angles four times the price of one foot of coping the same size.)		
Hollow Tile		
(Delivered at job, in New York below 72nd St.)		
2 x 8 x 12 partitions, per 1,000 sq. ft.	$70.15	....
3 x 12 x 12 partitions, per 1,000 sq. ft.	102.00	$67.90
4 x 12 x 12 partitions, per 1,000 sq. ft.	114.75	72.50
6 x 12 x 12 partitions, per 1,000 sq. ft.	153.00	99.60
8 x 12 x 12 partitions, per 1,000 sq. ft.	....	135.80
10 x 12 x 12 partitions, per 1,000 sq. ft.	....	167.50
12 x 12 x 12 partitions, per 1,000 sq. ft.	....	194.60
2 x 12 x 12 split furring, per 1,000 sq. ft.	63.75	....
CEMENT		
Per bbl. in 15 cent bags (Rebate 60c. per bbl. for bags)	$3.25	$2.80
COPPER SHEETS		
At the mill, hot rolled, 16 oz. base-price, per lb. (From jobber's warehouse add 2 to 3 cents. Cold rolled add 1c. per lb. to hot rolled.)	25½c.*	25½c.*
CORNER BEAD		
Per foot	.05	.05
FIBRE		
Per bushel	.30	.30

(*Continued on page* 900-*B*)



This Big Creosoting Plant is Covered with "85% Magnesia"

THE admitted supremacy of "85% Magnesia" for the covering of steam pipes and boilers has led to its adoption for many other fuel-saving purposes. The illustration shows the large pole *creosoting* plant of the L. & N. R. R. Co., at Gautier, Miss.

The tanks are 135 feet long by 7 feet diameter, and the poles are pushed on trucks right into the tanks which are then hermetically closed. Steam is forced in to season the wood. This is followed by hot creosote oil.

The treatment lasts for several hours, during which time the necessary temperature is maintained by the "85% Magnesia" coverings, resulting in a large saving of coal over the old way, whereby it was necessary to heat the Creosote continuously during the entire operation.

In addition to the tanks themselves, the steam boilers, pipes, valves, flanges and fittings are all covered with "85% Magnesia."

This is only one of the many fields wherein "85% Magnesia" is daily demonstrating its efficiency as a heat-saver, not only in chemical but in manufacturing plants of all kinds. For covering pipes, stills, receivers and all carriers or containers of heat, "85% *Magnesia" stands alone for maximum heat-saving efficiency, durability, and in actual cash-per-year return on the investment.*

Ask For The Proofs

For two years the Mellon Institute of Industrial Research has conducted experiments to prove the definite degree of its efficiency under varying conditions of temperature and pressure. A Table of the Monthly Coal Savings in Dollars and Cents by use of "85% Magnesia" has been prepared by this Institute, and the Magnesia Association will mail it to you for the asking. Also the illuminating booklet, "Let '85% Magnesia' Defend Your Steam." If you are an engineer or architect, ask us for the Specification for the scientific application of "85% Magnesia," compiled and endorsed by the above Institute.

MAGNESIA ASSOCIATION *of* AMERICA
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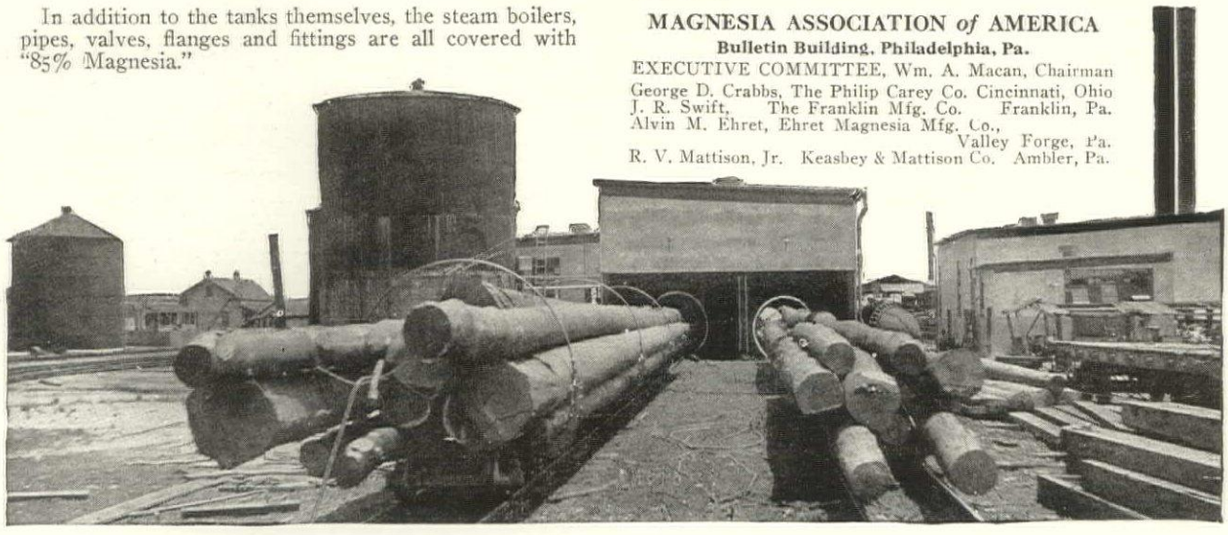


Late Building Material Prices

(Continued from page 900-A)

GALVANIZED SHEETS

	New York	Chicago
Nos. 18 and 20 gauge, per lb	$6.12	$6.12
No. 26	6.42	6.42
No. 27	6.57	6.57

GLASS

(Discounts from manufacturer's price lists)

Single strength, A quality, first three brackets	77%	77%
Single strength, B quality	77%	77%
Double strength, A quality	79%	79%
Double strength, B quality	81%	81%
Plate—up to 5 sq. ft.	82%	....
Plate—over 5 sq. ft.	84%	....
Plate—up to 10 sq. ft.	....	83%
Plate—over 10 sq. ft.	....	82%

GRAVEL

1¼ in. (Borough of Manhattan only), per cu. yd.	$2.75	$2.35
¾ in. (Borough of Manhattan only), per cu. yd.	2.75	2.35

GYPSUM

Plaster Board:

Delivered at job, Boroughs of Manhattan and Bronx.

27 x 28 x 1	35c.	....
27 x 48 x ½	30c.	....
32 x 36 x ¼	21c.	25c.
32 x 36 x ⅜	21c.	26c.
32 x 36 x ½	23½c.	....

Plaster Blocks:

Delivered at job, Boroughs of Manhattan and Bronx.

2 in. solid, per sq. ft.	7½c.	....
3 in. solid, 12 x 30, per sq. ft.	10½c.	....
3 in. hollow	10½c.	10c.
4 in. hollow	12½c.	11c.
6 in. hollow	17½c.	....

LATH

Eastern spruce, per thousand	$6.50*	....
No. 1 white pine, per thousand	....	$6.50
No. 1 hemlock, per thousand	....	6.00
No. 1 yellow pine, per thousand	6.50*	5.35*

LEAD

America pig, per lb	6 to 6½*	6¼ to 6¾*
Bar, per lb	7½ to 8	5½ to 6¼

LIME

Common, 300 lb. bbls., per bbl	$2.50	$1.40
Finishing, 300 lb. bbls., per bbl	3.70	....
Hydrated, in paper bags, per ton	18.50*	18.25*

LUMBER

(Retail prices per M, delivered.)

Yellow pine, 2 x 4	$56.50*	$47.00
Yellow pine, 2 x 6	54.00*	45.00
Yellow pine, 4 x 4	63.00*	52.00
Yellow pine, 8 x 8	73.00*	52.00
Yellow pine, 12 x 12	59.00	57.00
Yellow pine, No. 1 boards, 1 x 6	60.25	53.00
Yellow pine, No. 1 boards, 1 x 12	62.50	56.00
Yellow pine, B and better flooring (plain)	64.00*	57.00
Yellow pine, B and better flooring (quartered)	77.50*	71.00*
Douglas fir, 6 x 6 to 12 x 12	65.50*	65.00*
Douglas fir, 12 x 14 to 14 x 14	....	64.00
Norway pine, 2 x 4	60.00	50.00
Norway pine, 2 x 12	65.00	57.00
Hemlock, 2 x 4	49.50*	46.00
Hemlock, 2 x 12	53.00*	48.00
Oak flooring, 13/16 quartered white	167.00*	130.00
Oak flooring, 13/16 quartered red	140.00*	125.00*
Oak flooring 13/16 plain white	98.00*	91.00*
Oak flooring, 13/16 plain red	98.50*	91.00*
Maple flooring, 13/16 clear	89.50*	89.00
Maple flooring, 13/16 select	85.00*	75.00
Maple flooring, 13/16 No. 1 factory	74.50	62.00
Mahogany, 1" F. A. S.	300.00	300.00
Quartered oak, 1" F. A. S.	180.00	150.00
Plain oak, 1" F. A. S.	120.00	100.00
Red gum, 1" F. A. S.	89.00*	75.00
Sap gum, 1" F. A. S.	58.00*	61.00*
Chestnut, 1" F. A. S.	88.00*	81.00*
Poplar, 1" F. A. S.	135.00*	125.00*
Birch, 1" F. A. S.	71.00*	69.00*
Spruce, random 2"	52.00	50.00
Spruce, wide	62.50	60.00

METAL LATH

Under 100 sq. yd., per sq. yd.	35c.†	35c.†

MORTAR COLORS

Red, per lb.	.05	.05
Brown, per lb.	.05	.05
Chocolate, per lb.	.05	.05
Black, per lb.	.05	.05

OILS

Linseed, city, raw	$1.73†	$1.73†
Linseed, boiled, advance, per gal.	.01	.01
Out of town, American seed at	1.73†	1.73†

PAINTS

Leads:		
American white, in oil, kegs; lots over 100 lbs.	15c.*	16c.*
White, in oil, 25-lb. tin pails; add to keg price	¼c.	¼c.
Red, bbl., ½ bbl. and kegs; lots over 100 lbs.	13c.†	14½c.
Dry Colors:		
Red Venetian, American, per 100 lbs.	$2.75	$4.10

Metallic Paints:	New York	Chicago
Brown, per ton	$32.00 to $36.00*	$24.00 to $32.00
Red, per ton	35.00 to 40.00*	24.00 to 32.00

PIPE

Cast Iron:

6 in. and heavier	$52.70*	$51.80
4 in.	55.70	54.80
3 in.	62.70	61.80

(and $1 additional for Class A and gas pipe.)

(Discounts to jobbers for carload lots on the Pittsburgh basing card; freight rates from Pittsburgh to New York, and also from Pittsburgh to Chicago, in carloads, per 100 lbs., are 27c.)

Wrought:

Steel: Butt Weld		
Black, ⅛ to 3 in.	50½%	57½%
Galv., ⅛ to 3 in.	24 to 44%	41 %
Iron:		
Black, ⅛ to 1½ in.	29½ to 39 %	39½%
Galv., ⅛ to 1½ in.	22½ to 23½%	23½%
Steel: Lap Weld		
Black, 2½ to 6 in.	53½%	53½%
Galv., 2½ to 6 in.	41 %	41 %
Iron:		
Black, 2½ to 6 in.	34½%	34½%
Galv., 2½ to 6 in.	21½%	21 %

PLASTER

Neat wall cement in 15 cent bags, per ton	$20.30	$18.50
Finishing plaster	24.00	21.00

PUTTY

In bladders, per 100 lb.	$6.25	$6.25
In 1-lb. to 5-lb. tins, per 100 lb.	6.75	6.75

RADIATION

(A further discount, effective April 4, of 15% on direct radiators, 12½% on wall radiators, and 10% on steam and hot water boilers is announced. This approximates a drop of 36% on radiators and 33% on boilers from prices in effect before the 1st of January, 1919.)

Chicago reports a 57% discount on standard heights.

REGISTERS

Cast iron semi-steel or steel, in black or white japan or electro plate and small faces and borders	40%	40%
Wall frames	40%	40%
Large faced, 14 x 14 in. and larger	60%	60%
Base board registers	40%	40%
Base board intakes	40%	40%
White enameled goods	15%	15%
Solid brass or bronze goods, except grilles	net	net
Grilles in black and white japan or electroplate in cast iron, plain lattice design—smaller than 14 x 14 in.	40%	40%
—Less than 14 x 14 in.	60%	60%

REINFORCING BARS

High carbon steel from mill	$48.50	$49.50
Medium steel from mill	48.50	49.50

ROOFING MATERIAL

Tarred Paper:		
1-Ply, per ton, per roll, 108 sq. ft.	$56.00 to $58.00†	$65.00
2-Ply	98c.*	95c.
3-Ply	1.33*	1.30
Rosin sized sheathing	per ton 60.00	60 00

Corrugated roofing, galvanized, 2½ in. corrugation, over flat sheets, 30c. per 100 lbs.

SAND

Mason, per cu. yd.	$1.80	$2.25
Torpedo, per cu. yd.	1.80	2.35

SHINGLES

Red cedar, 5 to 2, clear, per thousand	$9.00*	$8.50*
White cedar, extra star, A star, per thousand	8.00*	7.25*

SLATE ROOFING

Pennsylvania:	F.O.B. cars, Quarry Station	F.O.B. Chicago
Best Bangor	$7.75 to $9.00	$10.20 to $11.45
No. 1 Bangor Ribbon	6.75 to 7.25	9.20 to 9.70
Pen Argyl	7.25 to 8.00	9.70 to 10.45
Peach Bottom	10.00 to 12.50	12.45 to 14.45
No. 1 Chapman	7.25 to 8.25	8.70 to 9.95
Vermont:		
No. 1 Sea Green	3.50 to 6.75	5.95 to 9.20
Unfading Green	5.50 to 9.00†	8.30 to 11.05
Red	12.00 to 16.00†	14.80 to 22.80
Maine:		
Brownsville, U'f'g Black, No. 1	11.00 to 12.00	14.10 to 15.10
Slaters felt, 30 lb. roll	1.75	.....
Slaters felt, 40 lb. roll	2.25	.....

SPIRITS TURPENTINE

Per bbl.	.66½	.66½

STONE SCREENINGS

Lime, per cu. yd.	$2.35	$2.35

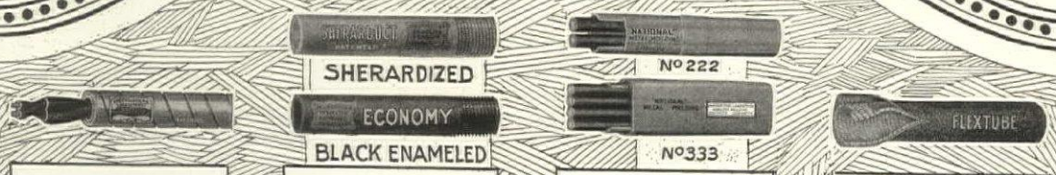
STRUCTURAL STEEL

Beams and channel, 3 to 15 in., per lb.	2.45c.	3.47c.
Beams and channel, over 15 in., per lb.	2.45c.	3.57c.
Angles, 3 to 6 in.	2.45c.	3.47c.
Zees and tees	2.45c.	3.47c.
Steel bars, half extras, from mill	2.35c.	3.47c.

STUCCO

In cloth, per ton (white, mixed)	....	$21.50

NATIONAL PRODUCTS



FLEXSTEEL
Distinctive flat surface. Easy to fish, cut and strip. Ideal for wiring either old or new buildings. A complete line of improved fittings
Write for Bulletin 201

SHERARDUCT
The Rigid Steel Conduit with both surfaces Sherardized *and* Enameled. ECONOMY Black Enameled Conduit. There's none better
Write for Bulletin 50

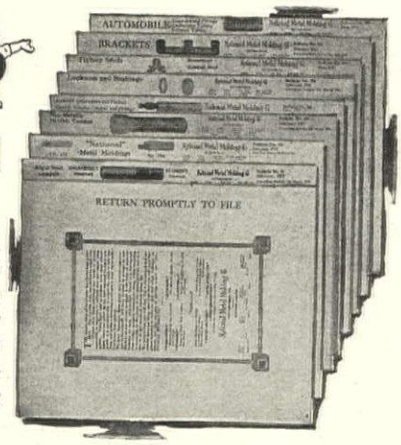
"National" METAL MOLDINGS
For two, three and four wire surface wiring. Lowest installation cost of any metal wiring system.
Write for Bulletin 101

FLEXTUBE
Interwoven — Seamless — Non-Collapsible. Inseparable and Double Compounded. Easy to fish and every foot of every coil can be used
Write for Bulletin 151

For Your Files

Complete data on Electrical Conduits and Fittings

A separate bulletin on each of our various lines, each bound in a standard correspondence folder, suitably indexed for convenient filing, either according to the name of the manufacturer or the materials listed. A system which permits the filing of correspondence, quotations, etc., in the folder listing the materials to which such may refer.



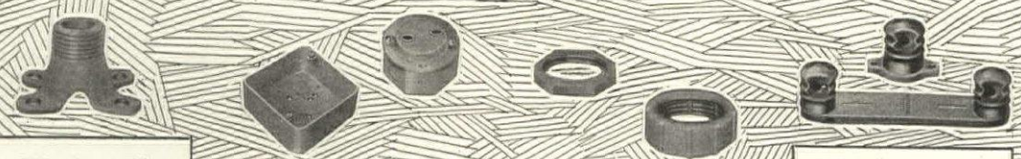
Any or all of the bulletins listed will be sent promptly on request

National Metal Molding Co.

1111 Fulton Building, Pittsburgh, Pa.

Atlanta, Boston, Buffalo, Buenos Aires, Chicago, Dallas, Denver, Detroit, Havana, Los Angeles, Manila, New York, Paris, Philadelphia, Portland, Salt Lake City, San Francisco, Seattle, St. Louis

CANADIAN DISTRIBUTORS: CANADIAN GENERAL ELECTRIC CO., LIMITED 419



"National" FIXTURE STUDS
Sherardized Stamped Steel. Hollow Stems. Stronger, and yet lighter, than any other stud on the market.
Write for Bulletin 400

"National" Outlet Boxes and Covers
A box for every purpose and a purpose for every box. Furnished in Sherardized or Black Enameled Finish.
Write for Bulletin 250

"National" Locknuts and Bushings
Threads sharp, clean and true. "National" quality products. Exclusive self-cleaning-feature in the bushings.
Write for Bulletin 350

"National" BRACKETS
Complete with insulators. Sherardized Bases. Wires run straight through. No Tie-Wires necessary.
Write for Bulletin 602

BUILDING NEWS

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it. Our sources of information are believed to be reliable, but we cannot guarantee the correctness of all items. Persons in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

ALABAMA

BIRMINGHAM, ALA.—A new Masonic Temple will be constructed here. $1,000,000.

MONTGOMERY, ALA.—Plans are being prepared for the construction of a four story addition to the St. Margaret's Hospital. $100,000.

ARKANSAS

ABILENE, ARK.—Electric light plant units, costing $350,000, will be constructed by American Public Service Corporation, Abilene, Ark.

BLYTHEVILLE, ARK.—Central power plant will be established by Missouri Southeastern Utilities Co., Blytheville, Ark., to furnish electricity for towns in southeast Missouri and northeast Arkansas; $450,000 available.

CALIFORNIA

BAKERSFIELD, CAL.—City voted on $150,000 bonds to build Lincoln School. Architect not selected.

EMERYVILLE, CAL.—Oakland Terminal Co., Oakland, is having plans prepared by C. N. Burrell, Architect, 217 First Trust Building, Oakland. for one story, 22 x 450 ft., brick terminal warehouse.

FRESNO, CAL.—J. A. Madden, San Francisco, is having sketches made by G. A. Applegarth, Architect, Spreckles Building, San Francisco, for twelve story hotel here.

LOS ANGELES, CAL.—Board of Public Service, 645 South Olive Street, plans to vote on $2,500,000 bonds to build power plant No. 2 in San Francisquito Canyon and power development in Owens River gorge and $11,000,000 bonds for purchasing distributing system owned by Southern California Edison Co. E. F. Scattergood, 645 South Olive Street, Engineer.

RIVERSIDE, CAL.—California Date Association plans to build packing plant. Architect not selected. $50,000.

SAN FRANCISCO, CAL.—Grosjean Rice Mill Co., 3210 Twentieth Street, purchased 362 x 800 ft. site, in Islais Creek District, and plans to build mill and warehouse. Architect not selected.

TULARE, CAL.—Tulare Hotel Association is having plans prepared by E. J. Kump, Architect, 227 Rowell Building, Fresno, for hotel, on Kern and L Streets. $125,000.

WHITTIER, CAL.—H. L. Siler, care Gale Theater, plans to build theater. $65,000.

WOODLAND, CAL.—Commissioners of Yolo County are having plans prepared by W. Weeks, Architect, 75 Post Street, San Francisco, for reinforced-concrete group of hospital buildings, to include administration, ward and nurses' buildings, and superintendents' houses, etc. $150,000.

CONNECTICUT

BRIDGEPORT, CONN.—West Side Bank, 1418 State Street, is having plans prepared by L. Asheim, Architect, 211 State Street, for brick and steel bank on State Street. W. P. Kirk, president. $100,000.

BRIDGEPORT, CONN.—Sons of St. George Society, 176 Fairfield Avenue, proposes building two story brick and steel lodge and club house on Stratford Avenue. E. G. Southey, 983 Broad Street, Architect. $60,000.

BRIDGEPORT, CONN.—Columbia Graphophone Co., Barnum Avenue, soon receives bids for building six story, 80 x 240 ft., reinforced-concrete addition to plant. $200,000.

BRISTOL, CONN.—St. Cassimer Church Society, West Street, plans to build new brick church. Architect not selected. $100,000.

BRISTOL, CONN.—M. P. Tirello, 5 Meadow Street, purchased site on Park and Divinity Streets and plans to erect three story building. D. F. Crowley, 192 Main Street, engineer. $50,000.

GLASTONBURY, CONN.—Glastonbury Bank & Trust Co., 36 Main Street, purchased site on Main and Wells Streets and plans to build bank. Architect not selected. $50 000.

GROTON, CONN.—Odd Fellows Home of Connecticut, Groton, plans to build new infirmary at home here. About $75,000. Architect not selected.

HARTFORD, CONN.—Howard C. Buck of this city is contemplating constructing a $100,000 apartment house on Farmington Avenue.

HARTFORD, CONN.—Hartford School of Music, 91 Elm Street, purchased site on Collins and May Streets and plans to build conservatory. H. Cheney, President. $60,000.

HARTFORD, CONN.—Hartford Fire Insurance Co., 125 Trumbull Street, purchased site on Asylum Street and plans to build office. $1,000,000.

HARTFORD, CONN.—New Hotel, Inc., 226 Kenyon Street, purchased site on Trumbull Street and plans to build large hotel. C. E. Whitney, President. Architect not selected. $1,000,000.

NEW BRITAIN, CONN.—Plans are out for figures for one story, 50 x 100 ft., brick and mill construction factory, on Center Street, for Landers, Frary & Clark, Commercial and Center Streets. Davis & Brooks, Gold Street, Hartford, Architects.

NEW BRITAIN, CONN.—Hotel Beloin, 91 Church Street, plans to build extension to hotel, to provide about 30 new rooms and large banquet hall. Address F. Beloin. Architect not selected. $50,000.

NEW HAVEN, CONN.—New Haven Hospital, 330 Cedar Street, plans to erect children's building, nurses' building, service building and private room pavilion, on Cedar Street. $1,000,000.

NEW HAVEN, CONN.—Pallotti-Andretta Co., 630 Chapel Street, soon let contract for three story, 75 x 90 ft., brick, steel and concrete bank, on Olive and Chapel Streets. D. Guerriero, 647 Main Street, Hartford, Architect. $100,000.

NEW HAVEN, CONN.—P. J. Kelly & Co., 74 Orange Street, soon receive bids for building four story, brick and steel addition. W. H. Allen, 82 Church Street, Architect. $60,000.

NEW HAVEN, CONN.—Y. M. C. A., 152 Temple Street, purchased site on Chapel and Howe Streets and plans to build one and four story club and gymnasium. Architect not selected. Cost to exceed $50,000.

STRATFORD, CONN. (Bridgeport P. O.)—H. C. Lorell, 2419 Main Street, soon receives bids for building three story, 100 x 104 ft., brick and concrete. $60,000.

DISTRICT OF COLUMBIA

WASHINGTON, D. C.—Phillip M. Jullien is the architect for an apartment house costing $1,500,000, which will be erected in the northwest section at Sixteenth and R Streets. The exterior will be of limestone, terra cotta and light brick. Each apartment will have a balcony and other novelties.

WASHINGTON, D. C.—Eleven story office building, costing $500,000, will be erected in Washington, D. C.

FLORIDA

BROOKSVILLE, FLA.—W. O. Lemasters, Superintendent of Public Instruction, Hernando County, proposes erecting a school building in Special Tax District No. 1.

BROOKSVILLE, FLA.—W. O. Lemasters, Superintendent of Public Instruction, Hernando County, will build school in Special Tax District No. 7.

MANATEE, FLA.—Large tracts of timber in Manatee County, Florida, will be developed for the manufacture of fruit packages by Growers' Land & Livestock Corp., chartered with $500,000 capitalization by Tampa parties; operate plan with annual capacity 750,000 to 1,000,000 orange boxes; sawmill, crate factory, etc.

TAMPA, FLA.—A special election will be held June 17 for the purpose of issuing bonds to the amount of $150,000 for the construction of schools here.

GEORGIA

COLUMBUS, GA.—A ten story bank and office building will be constructed at the northwest corner of Broad and Twelfth Streets by the Merchants & Mechanics' Bank. $400,000.

SAVANNAH, GA.—An expenditure of $600,000 will be made for the repairs to the Savannah Terminal. recently damaged by fire.

SOPERTON, GA.—Citizens voted bond elections of $100,000 for the construction of the Treutlen Court House and jail.

ILLINOIS

ALTON, ILL.—Wesselbecker & Hillebrand, Architects, 805 Pontiac Building, St. Louis, Mo., have planned three story Alton Orphanage Asylum. $65,000.

CHICAGO, ILL.—I. Viehe-Naess, Architect, 64 East Van Buren Street, has prepared plans for building three story, 90 x 160 ft., brick and timber, on Clark Street and Belmont Avenue, for Lake View State Bank, 3160 North Clark Street. $80,000.

CHICAGO, ILL.—E. M. Bertha, 11 South La Salle Street, plans to build four story, 125 x 175 ft., theater and office, on Sixty-third Street and Cottage Grove Avenue. Architect not selected. $350,000.

CHICAGO, ILL.—Iron Mountain Co., 6416 Stoney Island Avenue, let contract for building one and two story, 110 x 400 ft., fireproof plant, on Ninety-fifth Street, near Cottage Grove Avenue, to E. P. Strandberg Co., 133 West Washington Street. $150,000.

CHICAGO, ILL.—A. B. Coffin, Architect, 39 West Adams Street, is receiving bids for four story, 90 x 166 ft., reinforced concrete factory on Van Buren Street and Cicero Avenue, for Balden Mfg. Co., 2300 South Western Avenue. $150,000.

CHICAGO, ILL.—Permits were issued last week for the following structures:

The building permits issued last week include many commercial structures. A permit was issued to Morris & Company, packers, for a nine story storage plant, at the stockyards, to cost $950,000. E. E. Meredith is the architect. Other permits issued include:

Three story brick factory, D. A. Raggio, owner; Mundie & Jensen, Architects. $200,000.

Three story brick factory, Hart, Schaffner & Marx, owners; Walter Company, Architects. $140,000.

Three story brick printing plant, Noble King, owner; A. L. Hinnelbean, Architect. $71,500.

Three story brick apartments, J. Siegel, owner; B. J. Bruns, Architect. $35,000.

Four story brick tankhouse, Agar Packing Company, owner; Henchier & McLaren, Architects. $50,000.

Three story brick flats, M. R. Plotke, owner; A. Tiesen, Architect. $160,000.

Five story clubhouse, Y. W. C. A., owner; A. S. Alschuler, Architect. $50,000.

Two story brick laboratory, City of Chicago, owner; J. Hunt, Architect. $64,000.

Three story brick factory, Western Felt Works, owner; R. C. Fletcher, Architect. $200,000.

In one day a total of forty-seven permits were issud. The list of permits includes many for small homes to cost $8,000 and less.

INDIANA

EASTHAVEN, IND.—Board of Trustees of the Eastern Indiana Hospital for the Insane will build a brick building. A. Hasecoster Architect, Richmond, Ind.

ELKHART, IND.—James A. Wetmore, Acting Supervising Architect, Treasury Department, Washington, D. C., authorized alterations to the United States Public Building here.

PRAIRIETON, IND.—Trustees of Farmers Chapel, United Brethren in Christ, of Prairieton Circuit, will construct a brick and stone church building here. Johnson & Miller, Architects, 105 S. Seventh Street, Terre Haute, Ind.

IOWA

DUBUQUE, IOWA.—Citizens voted an additional bond issue of $250,000 for the construction of a $715,000 high school building here.

JEFFERSON, IOWA.—Citizens voted an additional bond election for $35,000 for the construction of a new school building here.

SIOUX CITY, IOWA.—Western Terminal Elevator Co. let contract for builing 1,000,000 bushel, reinforced-concrete grain elevator, to Burrell Eng. & Construction Co., 327 South La Salle Street, Chicago. $300,000.

KANSAS

ANTHONY, KAN.—Board of Education soon lets contract for building two story school, 72 x 119 ft., reinforced-concrete and brick. W. Mampe, 559 Sheidley Building, Kansas City, Mo., Architect. $100,000.

ARKANSAS CITY, KAN.—Central Christian congregation will build two story, 66 x 114 ft., reinforced-concrete and brick church. W. L. McAtee, Arkansas City, Architect. $75,000.

JUNCTION CITY, KAN.—A bond election will be held to vote for issuing $40,000 in bonds to complete the Junction City Junior High School.

McPherson, Kan.—McPherson College is having plans prepared by W. E. Hulse & Co., Architects, Hutchinson, for Science Hall. $60,000.

Topeka, Kan.—The Walnut Grove Methodist Church will soon let contract for constructing a new $50,000 church building here.

Topeka, Kan.—Capper Publishing Co., Eighth and Jackson Streets, let contract for building two story, 75 x 100 ft., reinforced-concrete and brick addition to prnting plant, to F. M. Spencer & Son, 214 Mulvane Building. $50,000.

Wichita, Kan.—J. L. Leland, secretary, Board of Education, will erect the Washington grade school on Third Street, between Hydraulic and Penn Avenues. Lorentz Schmid, Architect.

Wichita, Kan.—American Cemetery Co., care G. A. Saxton, Secretary, 310 North Roosevelt Avenue, is having plans prepared by S. Lovell, Architect, 30 North Michigan Avenue, Chicago, for concrete and stone mausoleum, on Twenty-first and Hillside Avenue. $100,000.

KENTUCKY

Lee County, Ky.—Seventy-five acres of land have been purchased in Lee Country, Ky., by Lane Oil Co., Paris, Ky., incorporated; $600,000 capital.

Louisville, Ky.—White Star Refining Co., Detroit, Mich., will construct a new oil refinery here. $2,000,000.

Owensboro, Ky.—Southern Foundry & Manufacturing Co., Owensboro, Ky., incorporated; capital $400,000.

Paintsville, Ky.—Sixty thousand acres of hardwood timber and coal lands will be developed by Licking River Development Co., Paintsville, Ky.; organized with $750,000 capital.

Sturgis, Ky.—Citizens voted bond issue of $30,000 for the construction of a new high school building here.

MARYLAND

Baltimore, Md.—Oil refinery, costing $1,000,000, will be erected at Wagner's Point, Baltimore, by Mexican Petroleum Co., Los Angeles.

Baltimore, Md.—G. W. Hyde, 225 East Baltimore Street, soon receives bids for altering and building concrete and brick addition to lunch room at 206 West Fayette Street through to 106 Park Avenue. C. M. Anderson, 324 North Charles Street, Architect. $50,000.

Baltimore, Md.—St. Mary's Industrial School, Wilkens Avenue, is having plans prepared by H. I. Kavanaugh, Architect, 913 North Calvert Street, for two three story, 63 x 131 ft., reinforced-concrete and brick dormitories and class rooms, on Wilkens Avenue. O. B. Corrigan, Gilmer and Baker Streets, Chairman Building Committee. $700,000.

Baltimore, Md.—Gardner Baking Co., care W. A. Gardner, 119 South Paca Street, plans to alter and build two and three story, 43 x 54 ft., and 24 x 56 ft., reinforced-concrete, steel and brick addition to bakery on Preston Street and Madison Avenue. E. H. Glidden and T. W. Pietsch, 1210 American Building, Architects. $85,000.

Sparrows Point, Md. (Baltimore P. O.)—Bethlehem Steel Corp. plans to double size of present tinplate plant; also build twelve sheet mills and additional open hearth furnace. C. M. Schwab, Chairman Board of Directors. $25,000,000.

MASSACHUSETTS

Attleboro, Mass.—F. Mossberg Co., care of W. R. Walker & Son, Architects, 17 Custom House Street, Providence, R. I., let contract for building one story, 60 x 140 ft., brick and timber machine shop to E. O. Dexter, Main Street. $30,000.

Boston, Mass.—Mayor Peters authorized the issuance of $130,000 to construct a hospital annex here.

Holyoke, Mass.—Plans have been completed for the construction of a new theater building here. $200,000.

Lowell, Mass.—Hamilton Mfg. Co., Jackson Street, let contract for building four story, 135 x 388 ft., brick and steel extension to mill, to J. J. Prindeville Co., South Framingham. $250,000.

New Bedford, Mass.—City receives bids in June for addition and alteration to three story brick high school. Smith & Howland, Pleasant Street, Architects. $200,000.

Worcester, Mass.—Holy Cross College, College Park, plans to build memorial chapel on campus. J. J. Carlin, president. Architect not selected. $150,000.

MICHIGAN

Detroit, Mich.—General Motors Corp., Boyer Campbell Building, had plans prepared by Esselstyn, Murphy & Hanford, 810 Marquette Building, for one story, 100 x 360 ft., heat treatment shop; one story, 360 x 600 ft., shop and and two story, 30 x 360 ft. office, concrete, brick and steel.

Flint, Mich.—Citizens Hotel Co., Ellicott Sq., Buffalo, N. Y., received bids for building Durand Hotel here, seven story, 100 x 200 ft., reinforced-concrete and steel. $743,000.

Houghton, Mich.—Supervising Architect, Treasury Department, Washington, D. C., will construct U. S. post office here.

Royal Oak, Mich.—City is having plans prepared by F. D. Madison, Architect, Royal Oak, for two story, reinforced-concrete, brick and steel school, in District No. 6, to include gymnasium and auditorium. $95,000.

Royal Oak, Mich.—C. A. Dunton, President Board of Education, care Stormfelt-Loveley Co., Detroit, proposes a school in Royal Oak Township. Van Leyen, Schilling & Keough, Architects, 1115-21 Union Trust Building, Detroit, Mich.

MINNESOTA

Austin, Minn.—Board of Education will build a three story high school building. G. L. Lockhart, 391 Endicott Building, St. Paul, Minn., Architect. $400,000.

Duluth, Minn.—S. S. Rumsey, Chief Engineer of the Oliver Mining Company, will construct hospital here.

Hibbing, Minn.—S. S. Rumsey, Architect, Wolvin Building, Duluth, Minn., will erect a two story mercantile building. $125,000.

Hibbing, Minn.—S. S. Rumsey, Architect, Wolvin Building, Duluth, Minn., has planned a three story hospital, on Fourth Avenue and Mesaba Street. $250,000.

Minneapolis, Minn.—Curtis Court Hotel Co., Tenth Street and Third Avenue, plans to build twelve story hotel, 52 x 165 ft., reinforced-concrete and brick, fireproof construction. Long, Lamereaux & Long, 1028 Andrus Building, Architects. $1,000 000

Minneapolis, Minn.—J. W. Cohen, 238 Plymouth Building, Minneapolis, proposes building two story, 132 x 157 ft., concrete, brick and steel theater, on Fourteenth Street and Nicollet Avenue. Buchner & Orth, St. Paul, Architects. $150,000.

Moorhead, Minn.—First State Bank receives bids about June 26 for building two story, 50 x 150 ft., reinforced-concrete, brick and steel, bank. Braseth & Rosatti, Fargo, N. D., Architects. $75,000.

Moose Lake, Minn.—C. F. Mahike, Clerk, Board of Education, has plans for two story school. F. A. Schweiger, Architect, Moose Lake, Minn. $50,000.

Owatonna, Minn.—Board of Education proposes building three story, reinforced-concrete and brick, high school. Jacobson & Jacobson, Owatonna, Architects. $350,000.

St. Hilaire, Minn.—C. Swanson, Clerk Board of Education, will build two story school, 57 x 90 ft. Sund & Dunham, 512 Essex Building, Minneapolis, Architects. $50,000.

St. Paul, Minn.—Board of Education, 1697 Edgerton Avenue, soon lets contract for building two story school, 46 x 80 ft., brick and hollow tile, on Edgerton Street, District No. 1. A. S. Devor, 487 Endicott Building, Architect. $50,000.

St. Paul, Minn.—Board of Education will build three story school, 40 x 65 ft., concrete and brick, on Van Dyke, Argyle and Chatsworth Streets. Foley Realty & Security Co., 209 Gilfillan Building, Architects. $65,000.

Waseca, Minn.—City plans to build hospital. Architect not selected. $50,000.

MISSOURI

Carthage, Mo.—Howard-Hulme-Dettrick Shoe Co. let contract for building two story, 97 x 100 ft., brick factory, on Fourth and Maple Streets, to L. W. Mason, Carthage. $35,000.

Chaffee, Mo.—Lindsay Architectural Co., Architects, 261-2 McCoy-Tanner Building, Sikeston, receives bids about July 15 for building four story, 86 x 120 ft., reinforced-concrete, fireproof hotel, here, for Union Building Co., Chaffee. $125,000.

Fulton, Mo.—City plans election to vote on $50,000 bonds to build municipal telephone exchange. W. R. Pemberton, Clerk.

Kansas City, Mo.—Armour & Co. is preparing to double its power capacity. An additional plant will be constructed to the north of the present power plant.

St. Louis, Mo.—Board of Education plans to build nine one, two and three story, concrete and brick, schools. Work to extend through period of five years. R. M. Milligan, Board of Education Building, Architect. $5,420,000.

NEBRASKA

Grand Island, Neb.—Citizens voted a bond issue of $298,000 for the construction of two new junior high schools, in addition to the present high school, a new ward building and additions to two other ward buildings.

Hastings, Neb.—A $75,000 hotel for self-supporting girls and a $40,000 maternity hospital and a perpetual home for nurses will soon be constructed here.

Lincoln, Neb.—Plans are now being prepared for the construction of a new school building at College View. $60,000.

Lincoln, Neb.—City voted $100,000 bonds which in addition to $100,000 subscribed will be used to build hospital. G. W. Bates, City Engineer.

Omaha, Neb.—A $2,000,000 building will be constructed on the southeast corner of Seventeenth and Lodge Strets, for docors and dentists.

Omaha, Neb.—The Drake Realty Construction Co. will soon begin constructing another series of apartment houses of three buildings to cost $180,000.

NEW JERSEY

Camden, N. J.—P. Merz, Architect, Pennsylvania Building, Philadelphia, soon receives bids for building one and three story, 65 x 75 ft., reinforced-concrete bank, for Broadway Trust Co., 1009 Broadway. $200,000.

Jersey City, N. J.—Arlington Co. plans to build brick and stone office and store, on Boulevard and Bergen Avenue. A. Davis, 10 Newark Avenue, Architect. D. Max, 341 Forest Street, interested. $70,000.

Newark, N. J.—City Trust Co., Roseville Avenue, plans to build bank on 50 x 100 ft. site. Architect not selected. $50,000.

Newark, N. J.—Board of Education will construct the Seymour Vocational School here. John H. and Wilson C. Ely, Architects, Firemen's Building, Newark, N. J.

NEW YORK

Albany, N. Y.—State Armory Commission, 158 State Street, Albany, N. Y, plans exterior improvement of the State Armory, Washington Avenue, Lark and Elk Streets.

Brooklyn, N. Y.—B. A. Cushman Sons, Inc., 49 Manhattan Street, New York City, propose building three story, 140 x 200 ft., brick and steel bakery, on Atlantic and Troy Avenues, here. L. S. Beardsley, 40 West Thirty-second Street, New York City, Architect and Engineer. $100,000.

Brooklyn, N. Y.—Magid, Katzman & Stroker, 58 Boerum Street, are having plans prepared by H. J. Nurick, Architect, 949 Broadway, for three story, 100 x 168 ft., reinforced-concrete and steel warehouse, garage and workshop, on Jefferson Street, Wyckoff and Flushing Avenues. $120,000.

Brooklyn, N. Y.—Avondale Building Corp., care Shampan & Shampan, Architects, 50 Court Street, had plans prepared for 90 x 120 ft., brick and steel theater (2500 seating capacity), on Kings Highway, Coney Island Avenue and East Twelfth Street. $250,000.

Buffalo, N. Y.—R. C. Fayfield, Architect, Iroquois Building, will design six story, 50 x 100 ft., brick and reinforced-concrete warehouse, for Robertson Cataract Co., 151 West Montauk Street. $80,000.

Dundee, N. Y.—Dundee Free Library had plans prepared by McCord & Ives, Architects, Rochester, for 28 x 48 ft., brick and hollow tile library. L. B. Earnest, Chairman. $80,000.

Endicott, N. Y.—H. E. Saylor is having plans prepared for five story, 50 x 100 ft., brick building, on Main Street and Washington Avenue. $60,000.

Herkimer, N. Y.—R. Earl, C. Moyer and C. T. Gloo soon receive bids for building 60 x 120 ft., brick and concrete theater, on Main and Green Streets. $75,000.

Lancaster, N. Y.—Board of Education is having plans prepared by J. C. Blaby, Architect, for three story brick addition. $65,000.

Long Island City, N. Y.—Steinway & Sons, 107 East Fourteenth Street, New York City, soon let contract for altering and building reinforced-concrete, steel and brick addition to factory on Ditman Avenue, between Fifteenth and Sixteenth Streets.

Middletown, N. Y.—State Hospital Commission, Albany, had plans prepared by L. F. Pilcher, State Architect, Albany, for 40 x 320 ft., building, with three wings, brick, hospital, for Middletown State Hospital here. $400,000.

New York, N. Y.—Mount Sinai Hospital, 100th Street and Madison Avenue, soon lets contract for building two story, 100 x 120 ft., brick and steel auditorium. A. W. Brunner, 101 Park Avenue, Architect. $150,000.

New York, N. Y.—G. Ker, Inc., 350 West Thirty-eighth Street, had plans prepared by G. H. Van Auken, Architect, 1265 Broadway, for five story, brick and steel loft and garage, at 354 West Thirty-seventh Street. $70,000.

New York, N. Y.—P. Chubb, 5 South William Street, had plans prepared by A. C. Jackson, Architect and Engineer, 501 Fifth Avenue, for altering six story brick and steel office, at 56 Stone Street. $75,000.

New York, N. Y.—Larimore & Co., 1 West Fortieth Street, is having plans prepared by Zipkes, Wolff & Kudroff, Architects, 25 West Forty-second Street, for six story, 34 x 100 ft., brick and steel office, at 15-17 West Forty-sixth Street. $80,000.

Watertown, N. Y.—Board of Education is having plans prepared for twenty-four room brick school on Cooper Street; eight room brick addition to school on Lansing Street. E. W. Sayles, City Engineer. $75,000.

YORKVILLE, N. Y.—Board of Education soon receives bids for building new school. Address F. Butterworth, Chairman. $70,000.

NORTH DAKOTA

BEACH, N. D.—City purchased site and is having plans prepared for two story, 82 x 115 ft., school. Architect not selected. $60,000.

BISMARCK, N. D.—State Legislature appropriated $200,000 to build memorial to soldiers and sailors on Capitol grounds. Architect not selected.

DEVILS LAKE, N. D.—R. E. Cobb Co., Third and Cedar Streets, St. Paul, Minn., let contract for building concrete cold storage and meat packing plant, to H. C. Strucher, 405 Dakota Building, St. Paul, Minn. $60,000.

OHIO

AKRON, OHIO.—Plans are being prepared for the construction of a new addition to the Summit County Children's Home, to cost $100,000.

CLEVELAND, OHIO.—Guide Motor Lamp Co., 11,400 Madison Avenue, had plans prepared by A. C. Wolf, Architect, 805 Swetland Building, for two story, 60 x 180 ft., steel and brick factory and office, at 1500 West Madison Avenue. $40,000.

CLEVELAND, OHIO.—G. W. Hale, 340 Leader-News Building, had plans prepared by H. T. Jeffreys, Architect, 1836 Euclid Avenue, for three story, 165 x 180 ft., reinforced-concrete, steel and brick garage, on East Ninth Street and Bolivar Road. $150,000.

CLEVELAND, OHIO.—Haberman Provision Co., 2302 Broadway Avenue, proposes building two story, 46 x 60 ft., reinforced-concrete, steel and brick addition to factory, to J. A. Moffet Co., 1836 Euclid Avenue. $25,000.

CLEVELAND, OHIO.—Superior Foundry Co., 3310 East Seventy-first Street, let contract for building one story, 60 x 131 ft., concrete, steel and brick addition to foundry, to F. W. Ruple Co., 5103 Euclid Avenue. $30,000.

CLEVELAND, OHIO.—Van Dorn Tool Co., 2978 Woodhill Road, let contract for building four story, 50 x 100 ft., reinforced-concrete, steel and brick factory, to S. W. Emerson, 1900 Euclid Avenue. $100,000.

CLEVELAND, OHIO.—Corlett Realty Co., 12,613 Miles Avenue, is having plans prepared by W. S. Ferguson Co., Architects, 1900 Euclid Avenue, for two story, concrete, steel and brick theater, at 10,705 Miles Avenue. $85,000.

CLEVELAND, OHIO.—J. M. Halladay, 9414 Richmond Avenue, had plans prepared by Watson Eng. Co., Engineers, 1101 Hippodrome Building, for two story, 75 x 200 ft., concrete, steel and brick factory at 9414 Richmond Avenue. $150,000.

CLEVELAND, OHIO.—Union Garage Co., 517 Sloane Building, proposes building two story, 165 x 212 ft., concrete, steel and brick garage, on West St. Clair Avenue. G. A. Grieble, 517 Sloane Building, Architect.

COLUMBUS, OHIO.—The Franklin Building & Loan Co. will construct a six story brick building at High and Main Streets. $175,000.

DAYTON, OHIO.—Kurt-Te-Si Club Co., Dayton, plans to build two story, steel and concrete foundation, at Island Park. Schenck & Williams, Mutual Home Building, Architects. $50,000.

FAIRPOINT, OHIO.—Wheeling Township will vote on a bond issue of $85,000 for the construction of a school building here.

IRONTON, OHIO.—Ohio Valley Mining Car Mfg. Co., care M. E. Brown, Ohio Valley Machine Works, 713 Second Avenue, Huntington, W. Va., plans to build one story, 100 x 300 ft., fireproof plant, here. Architect not selected. $50,000.

MIAMISBURG, OHIO.—Weaver Bros. plan to build two story theater, 60 x 160 ft., brick and timber, on Main Street. R. Gebhart, 73 Callahan Bank Building, Dayton, Architect. $50,000.

WARREN, OHIO.—G. M. Bartholomew, Clerk, Board of Education, will construct an eight room brick and fireproof school building here. Miller & Son, Architects, Room 409-10 Dollar Bank Building, Youngstown, Ohio.

YOUNGSTOWN, OHIO.—A new hospital will be constructed at the intersection of East Dewey and Homewood Avenues, to cost $250,000. Charles F. Owsley, Architect.

YOUNGSTOWN, OHIO.—Board of Education proposes the construction of new school buildings. $200,000.

YOUNGSTOWN, OHIO.—Clerk of Board of Education will erect a school building of fireproof construction, known as the U. S. Grant Public School.

ZANESVILLE, OHIO.—Board of Education, Wayne Township, School District Muskingum County, will construct school building here. C. E. Handshy, Architect.

OKLAHOMA

OKLAHOMA CITY, OKLA.—A $100,000 sales office for Ford automobiles will be constructed on the corner of Fifth and Broadway this summer.

VINITI, OKLA.—Citizens voted bond issue of $150,000 for the construction of a new courthouse and soldier memorial building here.

OREGON

MARSHFIELD, ORE.—Elks Lodge is having plans prepared by Houghtaling & Dougan, Architects, Henry Building, Portland, for two story, 100 x 100 ft., home. G. Dix, Chairman. $50,000.

PORTLAND, ORE.—Plans are being prepared by Tourtellotte & Hummel, Architects, McKay Building, for constructing a school building at West Linn, Ore. $45,000.

ST. JOHNS, ORE.—Eagle Flour Mills Co., Portland, plans to build four unit flour mill, at municipal terminal, here. Plans include warehouse. $250,000.

TILLAMOOK, ORE.—Ackley & Miller is having plans prepared by Stokes & Zeller, Architects, Chamber of Commerce Building, Portland, for one story, 105 x 143 ft., reinforced-concrete garage.

WEST LINN, ORE.—Citizens voted bond issue of $45,000 for the construction of the Union High School here. Tourtellotte & Hummel, Architects, McKay Building.

PENNSYLVANIA

ALTOONA, PA.—Eagle Bakery let contract for building three story, 20 x 40 ft., brick addition to bakery, to H. Horn, Holidaysburg. $52,000.

CRESSON, PA.—More than $100,000 will be expended for improving and alterations at the Cresson Sanatorium.

DANVILLE, PA.—E. Geisinger, Seventh Street, is having plans prepared by F. G. Nelson, Architect, Connell Building, Scranton, for three story, 40 x 42 ft., reinforced-concrete hospital. $70,000.

FARRELL, PA.—A bond election will be held for issuing $150 000 worth of bonds for the purpose of constructing an addition to the high school here.

PHILADELPHIA, PA.—O. J. Maigne Co., 1017 Sansom Street, let contract for three story, brick and steel factory, to W. Linker Co., Ferry and Ninth Streets. $30,000.

RHODE ISLAND

CENTRAL FALLS (Pawtucket P. O.), R. I.—Sisters of Notre Dame, Broad Street, propose building three story, 45 x 65 ft., brick convent. W. F. Fontaine, Woonsocket, R. I., Architect. $50,000.

HOWARD, R. I.—State Penal and Charitable Commission, State House, Providence, is having plans prepared by E. F. Hall, Architect, 807 Union Trust Building, Providence, for new prison here. $370,000.

SOUTH CAROLINA

CHARLESTON, S. C.—City plans to build three story school, on St. Phillips Street. Benson & Borbal, 26 Broad Street, Architects. $50,000.

COLUMBIA, S. C.—City will build one story, 30 x 95 ft., brick and concrete abattoir, brick foundation, on Broad River Road, 2 miles from here. $40,000.

GREER, S. C.—Board of City School Commissioners plan to build high school. Architect not selected. $75,000.

SOUTH DAKOTA

ALEXANDRIA, S. D.—Board of Education is having plans prepared by Graber & Helleberg, Architects, Columbus, Neb., for building two story, brick, stone and reinforced-concrete school. $65,000.

ERWIN, S. D.—Board of Education is having plans prepared by K. T. Snyder, Engineer, 933 Plymouth Building, Minneapolis, Minn., for building two story, 65 x 134 ft., brick, reinforced-concrete and steel school. $100,000.

TEXAS

ARKANSAS PASS, TEX.—Texas Coastal Oil Co., Arkansas Pass, Tex., incorporated; capital. $1,000,000.

BEAUMONT, TEX.—Plans are being prepared for the construction of a big steel mill here for the Texas Steel Co.

BEAUMONT, TEX.—The Beaumont business men have announced that a hotel will be constructed here. $800,000.

BEAUMONT, TEX.—Plant for the manufacture of oil barrels will be erected at cost of $500,000 by Magnolia Petroleum Co., Beaumont, Tex.

BOWLE, TEX.—Building School Trustees plan to issue $150,000 bonds to build school.

DALLAS, TEX.—A $1,000,000 tool factory will be constructed here for the Guiberson Oil Well Specialty Corp.

DALLAS, TEX.—The Dallas Lodge No. 44, I. O. O. F., will construct a modern reinforced-concrete building, six stories high, on Pearl and Cabell Streets. $250,000.

DALLAS, TEX.—Plant for the manufacture of oil well machinery and implements will be erected by Guiberson Oil Well Specialty Co., Dallas, Tex.; organized with $1,000,000 capital.

DALLAS, TEX.—Federal Reserve Bank, Commerce and Martin Streets, proposes building five story bank, reinforced-concrete and steel. L. Talley, Cashier. Graham, Anderson, Probst & White, 80 East Jackson Boulevard, Chicago, Architects. $500,000.

FORT WORTH, TEX.—Mount Zion Baptist congregation plans to build church on Rosedale Street and Evans Avenue. $50,000.

FORT WORTH, TEX.—Tarrant County Memorial Association plans to construct memorial building. W. A. Hanger, President.

HILLSBORO, TEX. — Central Presbyterian congregation plans to build church. $50,000.

HOUSTON, TEX.—Dow Motor Co., 800 Walker Avenue, let contract for building reinforced-concrete and hollow tile garage, to A. Ness, 3210 Smith Street. $36,000.

PALESTINE, TEX.—Plans are under way for a new hotel to be built on the site of the Old Commercial Hotel.

RIVERSIDE, TEX.—City voted $50,000 bonds to build school.

THURBER, TEX.—Water storage reservoirs will be built at Thurber, Caddo Field and another location by Texas Pacific Coal & Oil Co., Thurber, Tex., who will organize $1,000,000 water company.

VIRGINIA

RICHMOND, VA.—The Johnson-Willis Hospital is contemplating constructing a strictly modern hospital. $200,000.

SHENANDOAH, VA.—Shenandoah Valley Milling Co., Shenandoah, Va., incorporated; capital, $750,000.

WASHINGTON

SEATTLE, WASH.—J. S. Graham, Second and Spring Streets, plans to build three story, 83 x 108 ft., brick and terra cotta store, on Second and Pine Streets. H. B. Pearce, Arcade Building, Architect. $500,000.

TACOMA, WASH.—Plans are being prepared for the construction of a three story Rich Reconstruction Clinic and Office Building at the corner of Division, Cliff and Broadway. $40,000.

WALLA WALLA, WASH.—A. M. Jensen Co. will construct a one story terra cotta building on E. Main Street. $100,000.

WEST VIRGINIA

CHESTER, W. VA.—Automobile tires will be manufactured by Cord Tire Corp., Chester, W. Va., incorporated; $500,000 capital.

LOGAN, W. VA.—Commissioners of Logan County plan to build new jail. Architect not selected. $100,000.

MOUNDSVILLE, W. VA.—Fifty thousand acres Texas oil land will be developed by Texas-West Virginia Oil Corp., organized by Moundsville, W. Va., parties with $1,000,000 capital.

WISCONSIN

EAU CLAIRE, WIS.—City had plans prepared by M. Tullgren & Sons, Architects, 425 East Water Street, Milwaukee, for six story, 90 x 125 ft., hotel. $350,000.

LANCASTER, WIS.—City plans to construct brick city hall and auditorium. Claude & Starck, Badger Annex, Madison, Architects. $100,000.

MADISON, WIS.—A $25,000 building is to be added to the Madison Tuberculosis Sanatorium on the McFarland Road near Madison. Alvin Small, Architect.

MILWAUKEE, WIS.—H. Tharinger, Architect, proposes building four story, 120 x 130 ft., brick and mill construction, factory, for Tharinger Bros. Macaroni Co., 1466 Holton Street. $125,000.

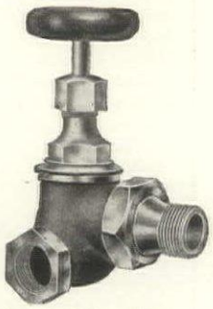
MILWAUKEE, WIS.—Plans are being prepared by A. C. Clas, Architect, for the construction of a new county hospital. $1,000,000.

SHEBOYGAN, WIS.—H. R. Prange Co., 731 North Eighth Street, plans to build one story, 60 x 90 ft., brick and reinforced-concrete threater, on Eighth Street. $80,000.

SHEBOYGAN, WIS.—Armour & Co., care A. Lotz, Chicago, let contract for building one story, 60 x 150 ft., brick, reinforced-concrete and steel cooler and warehouse, on South Water Stret, to J. L. Carnegie, 189 West Madison Street, Chcago. $55,000.

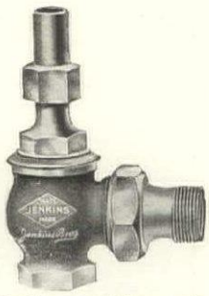
SHEBOYGAN, WIS.—United Phonographs Corp., care L. Jenkins, 1121 South Thirteenth Street, let contract for building three story, 72 x 120 ft., reinforced-concrete and steel factory, on Kentucky and Thirteenth Streets, to M. Stubenrauch, 1426 Maryland Avenue. $70,000.

Jenkins angle radiator valve with union.



Jenkins offset pattern corner radiator valve with union.

Jenkins offset globe radiator valve with union



Jenkins radiator valve with lock shield.

Heavier, stronger radiator valves

One of the main elements of satisfaction is a heating system, the installation of a strong, heavy radiator valve, is frequently overlooked.

The fact that steam, in the average heating system is maintained at a low pressure, is no reason why a valve of light construction will prove entirely satisfactory.

Radiator valves are subjected to the severe strains caused by expansion and contraction or lifting and settling in the piping, and to avoid break-downs they must be sufficiently strong to offset this common source of trouble.

Jenkins Radiator Valves are of stronger construction throughout. In their manufacture the best grade of steam metal is used. Their design provides more metal, especially at points where the strain and pressure is greatest.

Every installation of Jenkins valves carries with it twofold satisfaction — satisfaction for both yourself and the man who pays the bill.

Genuine Jenkins Valves are known by the Jenkins "Diamond Mark."

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Boston
Philadelphia

Chicago
Montreal
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2055-J

At the Architect's Service

What One Architect Found

An architect—speaking of the advertisements in an architectural journal that comes to his desk, said: "I find that I cannot afford to overlook even the small advertisements. In some of the smallest spaces I have found hints and suggestions that have been of the utmost assistance to me. I recall in particular one instance where—in a small picture of a building in (I think) a quarter-page ad.—I found just the idea that I had been seeking in working up a design of my own." The only thing exceptional about this case is the frankness of the architect making the admission. Issue after issue—in the advertising section of "The American Architect" and other high-class architectural journals—are presented data, details and information which, sometime and in some way, may be just the thing that an architect is seeking to round out his own ideas into finished form.

Ads. marked E.O.W. appear every other week Ads. marked E.F.W. appear every fourth week
Ads. marked O.A.M. appear once a month

DIGEST
Of Manufacturers' Data

ARCHITECTS OFFICE EQUIPMENT

INKS:

Higgins, Chas. M., & Co., 271 9th St., Brooklyn.

PASTES:

Higgins, Chas. M., & Co., 271 9th St., Brooklyn.

PENCILS:

Dixon Crucible Co., Jos., Jersey City, N. J.

CASEMENT WINDOWS

METAL:

Crittall Casement Window Co., Detroit, Mich. Crittall metal casement windows for office buildings, banks, public buildings, churches, university buildings, hospitals, residences, stores, factory offices, etc.

Pomeroy Co., Inc., S. H., 30 E. 42d St., N. Y.

CEMENT AND PLASTER

CEMENT:

Atlas Portland Cement Co., 30 Broad St., N. Y.

CORNER BEADS:

Milwaukee Corrugating Co., Milwaukee, Wis.

PLASTER:

Best Bros. Keene's Cement Co., Dept. C, Medicine Lodge, Kans., New York, Chicago. "Regular" for base and finish coats, general plastering; "Fine" for all ornamental plastering; Caen stone, etc.; "Coarse" and "Superfine" for art marble.

National Kellastone Co., The, Chicago, Ill.

SPECIALTIES:

Bostwick Steel Lath Co., The, Niles, Ohio. Bostwick Corner Bead, Ground Bead, Cement Stops, Wall Plugs and Wall Ties.

Truscon Steel Co., Dept. 68, Youngstown, Ohio. Representatives in principal cities. Corner beads, "Kahn" curb bars, "Truscon" slotted inserts; "Kahn" adjustable inserts; "Trus-Con" National socket inserts; "Kahn" elastic filler and armor plates for expansion joints.

STUCCO:

National Kellastone Co., The, Chicago, Ill.

COLUMNS

WOOD:

Hartmann-Sanders Co., Chicago, Ill.

CONCRETE REINFORCEMENT

REINFORCEMENT:

American Steel & Wire Co., Chicago-New York.

Berger, The, Mfg. Co., Canton, Ohio.

Bostwick Steel Lath Co., The, Niles, O. Bostwick "Truss-V-Rib."

Concrete Engineering Co., Omaha, Neb.

Truscon Steel Co., Dept. 68, Youngstown, Ohio. Representatives in principal cities. "Kahn" system reinforced concrete; "Kahn" bars; "Rib" bars; "Rib" lath; "Floretyles," "Floredome," etc.; flat and beamed ceilings of all types.

DAMPPROOFING

(See Water and Dampproofing)

DAYLIGHTING

Berger, The, Mfg. Co., Canton, Ohio.

DOORS AND TRIM

DOORS, STEEL:

Lupton's, David, Sons Co., Philadelphia, Pa.

HOLLOW STEEL DOORS:

Interior Metal Mfg. Co., Jamestown, N. Y.; Bankers Trust Bldg., 501 Fifth Ave., N.Y.C. Hollow steel doors in all standard sizes.

STEEL ROLLING DOORS:

Edwards Mfg. Co., The, 319-349 Eggleston Ave., Cincinnati, O. Send specifications for estimate.

THIS department is intended to assist our subscribers in readily determining the names and addresses of manufacturers of products in which they may be interested together with brief data about their material.

The headings and sub-headings are arranged alphabetically and have been selected in accordance with the intent of meeting the architect's thought in preparing his specifications.

If the information desired is not found here, it will gladly be supplied by the Service Department of THE AMERICAN ARCHITECT.

DUMB-WAITERS

Sedgwick Machine Wks., 159 W. 15th St., N.Y.

ELECTRICAL EQUIPMENT AND SUPPLIES

CONDUITS AND FITTINGS:

National Metal Molding Co., 1111 Fulton Bldg., Pittsburgh, Pa. "NATIONAL" metal molding for surface wiring; "SHERADUCT" and "ECONOMY" conduits, "FLEXSTEEL" armored cable and a complete line of fittings.

Youngstown (O.) Sheet & Tube Co. "Buckeye" rigid conduit. "Realflex" armored conductor.

LIGHTING SYSTEMS:

General Electric Co., Schenectady, N. Y.

OUTLET BOXES:

General Electric Co., Schenectady, N. Y.

POWER PLANT EQUIPMENT:

General Electric Co., Schenectady, N. Y.

RECEPTACLES:

General Electric Co., Schenectady, N. Y.

SOCKETS:

General Electric Co., Schenectady, N. Y.

SWITCHBOARDS:

General Electric Co., Schenectady, N. Y.

SWITCHES:

General Electric Co., Schenectady, N. Y.

WIRES AND CABLES (Insulated):

Atlantic Insulated Wire & Cable Co., 52 Vanderbilt Ave., New York City.

General Electric Co., Schenectady, N. Y.

Okonite Co., The, 501 Fifth Ave., N. Y. C. Caudee Potheads. "Mauson" and "Okonite" Tape.

ELEVATORS AND HOISTS

CONVEYORS:

Otis Elevator Co., 11th Ave. and 26th St., N. Y. C. Gravity spiral.

ELEVATORS:

American Elevator & Machine Co., Louisville, Ky.

Kaestner & Hecht Co., 500 South Throop St., Chicago, Ill.

Otis Elevator Co., 11th Ave. and 26th St., New York. Offices in principal cities of the world. Electric, hydraulic, belt and hand power, inclined freight elevators and escalators.

ELEVATORS AND HOISTS—Continued

ELEVATORS (Hand Power):

Sedgwick Machine Wks., 159 W. 15th St., N.Y.

ELEVATOR CABLE:

American Steel & Wire Co., Chicago-New York.

HOISTS (Ash):

Otis Elevator Co., 11th Ave. and 26th St., N. Y. C. Automatic coal and ash hoists, blast furnaces and ship hoists.

FIREPROOFING MATERIALS

CAGING OR FORMING

Mitchell-Tappen Co., 17 John St., N. Y. C.

METAL LATH:

Berger, The, Mfg. Co., Canton, Ohio.

Bostwick Steel Lath Co., The, Niles, O.; 135 N. 22nd St., Phila., Pa. Bostwick "Truss-Loop" and expanded metal in three types; "Diamond A," Niles and "Lock."

Milwaukee Corrugating Co., Milwaukee, Wis.

Truscon Steel Co., Dept. 68, Youngstown, O. Representatives in principal cities. "Hy-rib," "Rib" lath; "Diamond Mesh" lath.

FIRE PROTECTION

FIRE EXIT DEVICES:

Corbin, P. & F., New Britain, Conn.

FLOORS

COMPOSITION:

National Kellastone Co., The, Chicago, Ill.

PARQUET:

Wood-Mosaic Co., New Albany. Parquetry, hardwood flooring, veneer and lumber.

WOOD:

Oak Flooring Bureau, Ashland Block, Chicago, Ill.

FOUNDATIONS

PILES:

Raymond Concrete Pile Co., 149 Cedar St., N. Y. C. "Raymond" concrete piles are made by driving a reinforced steel shell which is left permanently in the ground. this shell is then filled with concrete.

FURNITURE AND DECORATIONS

DRAPERIES, UPHOLSTERIES, WALL COVERINGS:

Standard Textile Products Co., The, 320 Broadway, New York. "Sanitas" Tinted, Decorative and Glazed. Fast colors, sanitary. For private homes, hotels, auditoriums, institutions, etc.

METAL:

Canton Art Metal Co., Canton, Ohio.

HARDWARE

BOLTS:

Corbin, P. & F., New Britain, Conn.

BUILDERS' HARDWARE:

Corbin, P. & F., New Britain, Conn.

Stanley Works, The, New Britain, Conn.

BUTTS AND HINGES:

Corbin, P. & F., New Britain, Conn.

Lawson Mfg. Co., Superior and Franklin Sts., Chicago, Ill. "Nu" Jamb Hinge.

McKinney Mfg. Co., Pittsburgh, Pa.

Stanley Works, The, New Britain, Conn. (Ball-Bearing)—steel, brass, bronze.

ALPHABETICAL INDEX OF ADVERTISERS ON PAGE 18

HARDWARE—Continued

DOOR CHECKS:

Corbin, P. & F., New Britain, Conn.

GARAGE HARDWARE:

Stanley Works, The, New Britain, Conn. Garage door holders and garage door hinges.

HEATING, VENTILATION, PLUMBING

BLOWERS AND EXHAUSTERS:

Buffalo Forge Co., Buffalo, N. Y.

BOILERS:

American Radiator Co., Chicago, Ill.

CLOSETS:

Clow, James B., & Sons, Chicago, Ill.
Maddock's, Thomas, Sons Co., Trenton, N. J.

DRINKING FOUNTAINS:

Cahill Iron Works, The, Chattanooga, Tenn.
Clow, James B., & Sons, Chicago, Ill.
Maddock's, Thomas, Sons Co., Trenton, N. J.

LAVATORIES:

Cahill Iron Works, The, Chattanooga, Tenn.
Clow, James B., & Sons, Chicago, Ill.
Maddock's, Thomas, Sons Co., Trenton, N. J.

OZONATING EQUIPMENT:

Pitts & Kitts Mfg. & Supply Co., 50 Park Place, New York City.

PIPE (Steel):

Youngstown Sheet & Tube Co., Youngstown, O.

RADIATORS:

American Radiator Co., Chicago, Ill.
Clow, James B., & Sons, Chicago, Ill.

RANGES, ELECTRIC:

Edison Electric Appliance Co., Inc., Chicago, Ill. "Hughes" electric ranges.

SINKS:

Cahill Iron Works, The, Chattanooga, Tenn.
Maddock's, Thomas, Sons Co., Trenton, N. J.

SINKS (Slop):

Cahill Iron Works, The, Chattanooga, Tenn.
Maddock's, Thomas, Sons Co., Trenton, N. J.

TANKS (Closet):

Cahill Iron Works, The, Chattanooga, Tenn.
Maddock's, Thomas, Sons Co., Trenton, N. J.

TEMPERATURE INSTRUMENTS:

Taylor Instrument Co., Rochester, N. Y.

TEMPERATURE REGULATORS:

Johnson Service Co., Milwaukee, Wis.
Vapor Heating Co., York, Pa.

TRAPS (Steam):

Jenkins Bros., 80 White St., N. Y. C.

TUBS (Bath):

Cahill Iron Works, The, Chattanooga, Tenn.
Maddock's, Thomas, Sons Co., Trenton, N. J.

TUBS (Laundry):

Cahill Iron Works, The, Chattanooga, Tenn.
Maddock's, Thomas, Sons Co., Trenton, N. J.

URINALS:

Cahill Iron Works, The, Chattanooga, Tenn.
Clow, James B., & Sons, Chicago, Ill.
Maddock's, Thomas, Sons Co., Trenton, N. J.

VALVES (Air):

Hoffman Specialty Co., 130 No. Fifth Ave., Chicago, Ill. Siphon Air valves; Siphon Air and Vacuum valves; "Air Lines" valves; Junior Quick Vent Air Valve; Quick Vent "Float" air valve; Quick Vent "Float" Air and Vacuum valve; Return Line valve for vapor, vapor vacuum, modulating and vacuum heating systems; vapor vent valve.

Jenkins Bros., 80 White St., N. Y. C.

VALVES (Radiator):

Jenkins Bros., 80 White St., N. Y. C.

HEATING, VENTILATION, PLUMBING—Continued

VALVES (Steam):

Jenkins Bros., 80 White St., N. Y. C.

VALVES (Water Line):

Jenkins Bros., 80 White St., N. Y. C.

VAPOR HEATING SYSTEMS:

American Dist. Steam Co., No. Tonowanda, N.Y.
Moline Heat, Moline, Ill.
Vapor Heating Co., York, Pa.

VENTILATORS:

Burt Mfg. Co., The, 77 Main St., Akron, O. Manufacturers of all types of ventilators, both stationary and revolving.

Milwaukee Corrugating Co., Milwaukee, Wis.

WATER PURIFYING APPARATUS:

Pitt & Kitts Mfg. & Supply Co., 50 Park Place, New York City.

WATER SYSTEMS:

Deming Co., Salem, O.

HOISTS

(See Elevators and Hoists)

INSULATION (Sound and Heat)

BUILDING:

Cabot, Samuel, Inc., Boston. "Cabot's Quilt."

Hydrex Felt & Eng. Co., 120 Liberty St., N. Y.

PIPE (Heat and Power):

Magnesia Association of America, The, 702 Bulletin Bldg., Philadelphia, Pa. Distributors of Standard Specifications for the correct application of 85% magnesia pipe and boiler coverings to every description of heaitng and power service.

MARBLE

Appalachian Marble Co., Knoxville, Tenn.

MUSICAL INSTRUMENTS

ORGANS:

Kimball, W. W., Co., Chicago, Ill.

ORNAMENTAL BRONZE AND IRON

Polachek, John, Bronze & Iron Co., 480 Hancock St., Long Island City, N. Y.

PAINTS, VARNISHES, STAINS

PAINT (Steel Protective):

Dixon, Joseph, Crucible Co., Jersey City, N. J.

STAINS:

Cabot, Samuel, Inc., Boston. "Cabot's" Creosote Stains, Stucco Stains, Brick Stains, Old Virginia White and Old Virginia Tints.

PARTITIONS

METAL:

Berger, The, Mfg. Co., Canton, Ohio.

Interior Metal Mfg. Co., Jamestown, N. Y.; Bankers Trust Bldg., 501 Fifth Ave., N.Y.C. Interchangeable Hollow Metal Partitions.

Lupton's, David, Sons Co., Philadelphia, Pa.

PERGOLAS

Hartmann-Sanders Co., Chicago, Ill.

PIPE AND BOILER COVERINGS

INSULATION:

Magnesia Association of America, The, 702 Bulletin Bldg., Philadelphia, Pa. Distributors of Standard Specifications for the correct application of 85% magnesia pipe and boiler coverings to every description of heating and power service.

PLASTER

(See Cement and Plaster)

PLUMBING

(See Heating, Ventilation, Plumbing)

REFRIGERATION

REFRIGERATING APPARATUS:

Automatic Refrigerating Co., Hartford, Conn.

ROOFING

ASPHALT:

Carey, Philip, Co., The, Lockland, Cincinnati, Ohio. Carey Flexible Cement Roofing. A roofing for all classes of buildings, flat or steep surfaces; concrete, tile or wood sheathing construction. Made of a flexible asphalt cement in sheets 26 in. wide by 36 ft. long.

CANVAS:

Hydrex Felt. & Eng. Co., 120 Liberty St., N.Y.

SHEET METAL:

American Sheet & Tin Plate Co., Frick Bldg., Pittsburgh, Pa.

SHINGLES, METAL:

Milwaukee Corrugating Co., Milwaukee, Wis.

SLATE:

General Slate Co., 148 State St., Boston, Mass.
Rising & Nelson Slate Co., West Pawlet, Vt.; 101 Park Ave. Special slate to architect's design.

TILE (Reinforced-Cement):

American Cement Tile Mfg. Co., Pittsburgh and New York. "Bonanza" roofing tile.

SAFETY TREADS

Structural Slate Co., The, Pen Argyl, Pa.

SASH

(See Window)

SHADES

PORCH AND WINDOW:

Aeroshade Co., The, 962 Oakland Ave., Waukesha, Ill. "Aerolux" ventilating porch shades and window shades. Window shades for public and factory buildings.

SHEET METAL

American Sheet & Tin Plate Co., Frick Bldg., Pittsburgh, Pa.

FORMED PRODUCTS:

American Sheet & Tin Plate Co., Frick Bldg., Pittsburgh, Pa.
Berger, The, Mfg. Co., Canton, Ohio.

METAL CEILINGS:

Berger, The, Mfg. Co., Canton, Ohio.
Canton Art Metal Co., Canton, Ohio.
Milwaukee Corrugating Co., Milwaukee, Wis.

SKYLIGHTS, ROLLED STEEL

Lupton's, David, Sons Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.

STAINS

(See Paints, Varnishes and Stains)

ALPHABETICAL INDEX OF ADVERTISERS ON PAGE 18

STRUCTURAL STEEL

PRESSED STEEL CONSTRUCTION:

Berger, The, Mfg. Co., Canton, Ohio. "Metal Lumber." Pressed Steel Joints and structural members.

Truscon Steel Co., Dept. 68, Youngstown, O. Representatives in principal cities. "Kahn" pressed steel beams, joists, studs, plates, etc.

STUCCO AND WALL BOARD

PLASTER BOARD:

Bishopric Mfg. Co., 744 Este Ave., Cincinnati, O. Bishopric Stucco or Plastic Board. The dove-tailed key locks the plaster. Made of creosoted lath, asphalt-mastic and heavy fibre board.

STUCCO:

National Kellastone Co., The, Chicago, Ill.

TERRA COTTA

N. Y. Arch. Terra Cotta Co., Tel. Astoria 700.

TILE

(See Flooring and Roofing)

VACUUM CLEANERS

American Radiator Co., Chicago, Ill.

VARNISHES

(See Paints, Varnishes, Stains)

VENTILATION

(See Heating, Ventilation, Plumbing)

WATER AND DAMPPROOFING

Cabot, Samuel, Inc., 141 Milk St., Boston.

Hydrex Felt & Eng. Co., 120 Liberty St., N. Y.

WALL BOARD

(See Stucco and Wall Board)

WEATHER STRIPS

Monarch Metal Weatherstrip Co., St. Louis, Mo.

WELLS

Carter, R. B., Co., 152 Chambers St., N. Y. C.

WINDOWS, METAL

Crittall Casement Window Co., Detroit, Mich. Solid steel and bronze windows for office buildings, banks, public buildings, churches, university buildings, hospitals, residences, stores, factory offices, etc.

Detroit Steel Products Company, Detroit, Mich. Fenestra Solid Steel Windows; Standard side wall horizontally pivoted—Counterbalanced vertical sliding sash—Center pivoted and top hung continuous sash for monitor. Immediate shipment from warehouse on standard sizes. Representatives in principal cities.

WINDOWS, METAL—Continued

Lupton's, David, Sons Co., Philadelphia, Pa.

Pomeroy, S. H., Co., Inc., 30 E. 42d St., N. Y.

Truscon Steel Co., Dept. 68, Youngstown, O. Representatives in principal cities. "United" steel sash in all types; horizontal and vertical pivoted sash; counterbalanced and counterweighted sliding sash; center pivoted and top hung continuous sash; steel and glass partitions; sliding and swinging partitions; sliding and swinging doors; casement sash of all designs.

Winslow Bros. Co., 547 W. 27th St., New York City.

WIRE GLASS

Mississippi Wire Glass Co., 216 5th Ave., N.Y.C. Polished Wire Glass—"Romanesque," "Syenite," "Maze," "Pentecor," "Ribbed," "Rough." Figured Wire Glass—"Apex," "Romanesque," "Syenite," "Maze," "Florentine," "Figure No. 2," "Ondoyant," "Pentecor," "Ribbed," "Rough."

WOOD

OAK:

Oak Flooring Bureau, Ashland Block, Chicago, Ill.

PINE:

Long-Bell Lumber Co., R. A., Long Bldg., Kansas City, Mo.

WALNUT:

American Walnut Mfrs. Assn., Room 408, 115 Broadway, New York.

RATES for Classified Advertisements

243 West 39th St., New York

Positions Wanted, 75 cents for 25 words or less and 2 cents for each additional word; **Help Wanted, Special Notices, Competitions, Proposals,** etc., $1 for 25 words or less and 3 cents for each additional word. Ten lines or more 30 cents per line. Copy received until 12 m. Friday. **PAYMENTS STRICTLY IN ADVANCE.**

Position Wanted advertisements of men who have been serving in the army and who desire to make connection with architects' offices will be inserted free of charge.

HELP WANTED

ARCHITECTURAL designers, superintendents and tracers wanted. Our calls for these men come from all States in the Mississippi valley. We charge no registration fee and our rates are reasonable. Registration blanks sent on application. (Architects needing men—communicate with us.) Architects Agency, 115 S. Dearborn St., Chicago. (t.f. 2272)

ARCHITECTURAL Draughtsman—I have opening for experienced draughtsmen in offices at Chattanooga, Tenn., and Dallas, Texas, and want men capable of advancing to permanent responsible positions. R. H. Hunt, James Bldg., Chattanooga, Tenn. (2268-69-70-71)

TECHNICAL men of experience capable of making intelligent sketches and to supervise and assist in the execution of complete working drawings and details. Also designers of exterior and interior work. Large commercial and monumental work, as Masonic Temples, theatre, libraries and office buildings. Write, stating salary and give references. Clausen & Kruse, 315 Central Building, Davenport, Iowa. (2268-69-70)

WANTED—Experienced architectural draftsman. F. H. Ellerbe, 692 Endicott Bldg., St. Paul, Minn. (2269-70-71)

DRAFTSMEN—First-class experienced architectural or structural men for commercial or domestic work. Send samples of recent work, with experience, salary wanted and reporting date, first letter. Permanent work under best conditions. Smith, Hinchman & Grylls, Washington Arcade Building, Detroit, Mich. (2269-2270)

WANTED—Four general draftsmen for high-class commercial buildings. State experience, qualifications and salary. Richards, McCarty & Bulford, Columbus, Ohio. (2270-71)

WANTED—An Architectural Draftsman capable of making preliminary sketches and full working drawings for residential and commercial buildings. Office located in Connecticut. A splendid opportunity for a first-class man who desires advancement and later on an interest in the business. State age, experience, salary, nationality. Address 70-A, care The American Architect. (2270)

A GOOD designer and renderer with previous good office experience. Chiefly on ecclesiastical work. Permanent position to right man; must be expert. Reply, stating experience, salary expected, etc. W. E. N. Hunter, Architect, 1306-7 Chamber of Commerce, Detroit, Mich. (2270-71-72-73)

ARCHITECTURAL designers and draftsmen needed for positions in many different states, salaries $30 to $50 per week. No advance fee if you mention this advertisement. Address Archt. Dept., The Engineering Agency, Monadnock Bldg., Chicago, Ill. (Twenty-sixth year.) (2270-71)

WANTED—Architectural draftsmen having general office experience. For St. Louis, Missouri, office. Must have some knowledge of residential work. Permanent positions with chance for advancement for right men. Give experience and salary desired in first letter. Address 70-C, care The American Architect. (2270-71)

WANTED—Several experienced architectural draftsmen at once. Give references, experience, salary and time could report for business. Stanley & Scheibel, Architects, 1301 Wick Bldg., Youngstown, Ohio. (2270-71-72)

WANTED—A first class and experienced draughtsman at once in southern city. Apply by letter stating references, salary expected, and reporting time and age. Address A. C. Wirth, Greensboro, N. C. (2270)

WANTED—Two or three draftsmen for detailing large hotels. Steady positions for good men. Esenwein & Johnson, Architects, 781 Ellicott Square, Buffalo, N. Y. (2270)

POSITIONS WANTED

STAINED Glass Artist, practical, English, American and German experience, desires connection with architects for carrying out stained glass windows. Architects' own designs, cartoons or suggestions in any style. Small commission or inquiries esteemed. Selection and painting done personally. Ernest Wm. Barker, 30 Goring Road, New Southgate, London, N 11, England. (2270-71)

ARCHITECTURAL draughtsman with several years' experience in the office and some field supervision desires position. Has had experience on various types of work, including Residential, Commercial and Industrial Buildings. Seeking permanent connection offering opportunities for advancement. Address 70-B, care The American Architect. (2270)

SPECIAL NOTICES

FOR SALE—Plate illustrations from architectural magazines, $2.00 per hundred. State which class of buildings desired. Address L. Joseph, care The American Architect. (2270, 2271, 2272)

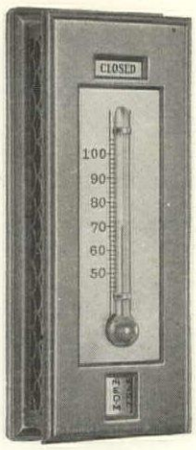
WANTED—We will pay 35 cents each for copies of The American Architect for June 4, 1919. The American Architect, 243 W. 39th St., New York City. (2270)

ARCHITECT, discharged army officer, wishes to sublet working space in New York office above 23rd St. Address 70-D, care The American Architect. (2270)

PROPOSALS

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 17, 1919.—Proposals will be opened in this office at 3 p. m., July 15, 1919, for the construction complete of medical officers' quarters at United States Marine Hospital, Wilmington, N. C. Drawings and specifications may be obtained from the custodian at Wilmington, N. C., or at this office, in the discretion of the Supervising Architect. Jas. A. Wetmore, Acting Supervising Architect. (2270-71)

NOTICE TO CONTRACTORS: Sealed proposals for New Boiler, Stokers, etc., and Coal and Ash Handling Equipment, New Central Heating and Lighting Plant, Central Islip State Hospital, Central Islip, N. Y., will be received by the State Hospital Commission, Capitol, Albany, N. Y., until 3 o'clock p. m. on Tuesday, July 1, 1919, when they will be publicly opened and read. Proposals shall be enclosed in an envelope furnished by the State Architect, sealed and addressed, and shall be accompanied by a certified check in the sum of five per cent (5%) of the amount of the proposal. The contractors to whom the awards are made will be required to furnish surety company bond in the sum of fifty per cent (50%) of the amount of the contract within thirty (30) days after official notice of award of contract and in accordance with the terms of specifications Nos. 3276 and 3277. The right is reserved to reject any or all bids. Drawings and specifications may be consulted at the Central Islip State Hospital, Central Islip, New York; at the New York Office of the Department of Architecture, Room 618, Hall of Records Building, and at the Department of Architecture, Capitol, Albany, N. Y. Drawings and specifications and blank forms of proposal may be obtained at the Department of Architecture, Capitol, Albany, N. Y., upon reasonable notice to and in the discretion of the State Architect, L. F. Pilcher, Capitol, Albany, N. Y.
Dated: June 10, 1919. (2270)



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(For Everlasting Economy)

See Sweet's Catalog, Page 319

A thought which we would like to submit for the consideration of the Architectural profession is this: Why not take more frequent advantage in the construction of CHURCHES of the beauty, the cleanliness, the attractiveness, the color, the welcoming effect of *Oak Flooring?*

The cost certainly permits it and the certain approval of the congregation more than justifies it.

Is this not worth thinking about?

OAK FLOORING
MANUFACTURERS' ASSOCIATION
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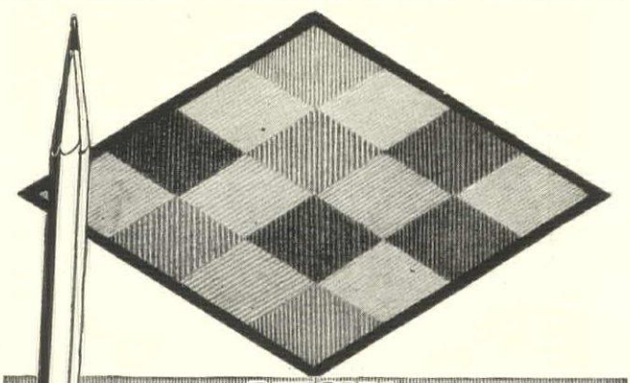

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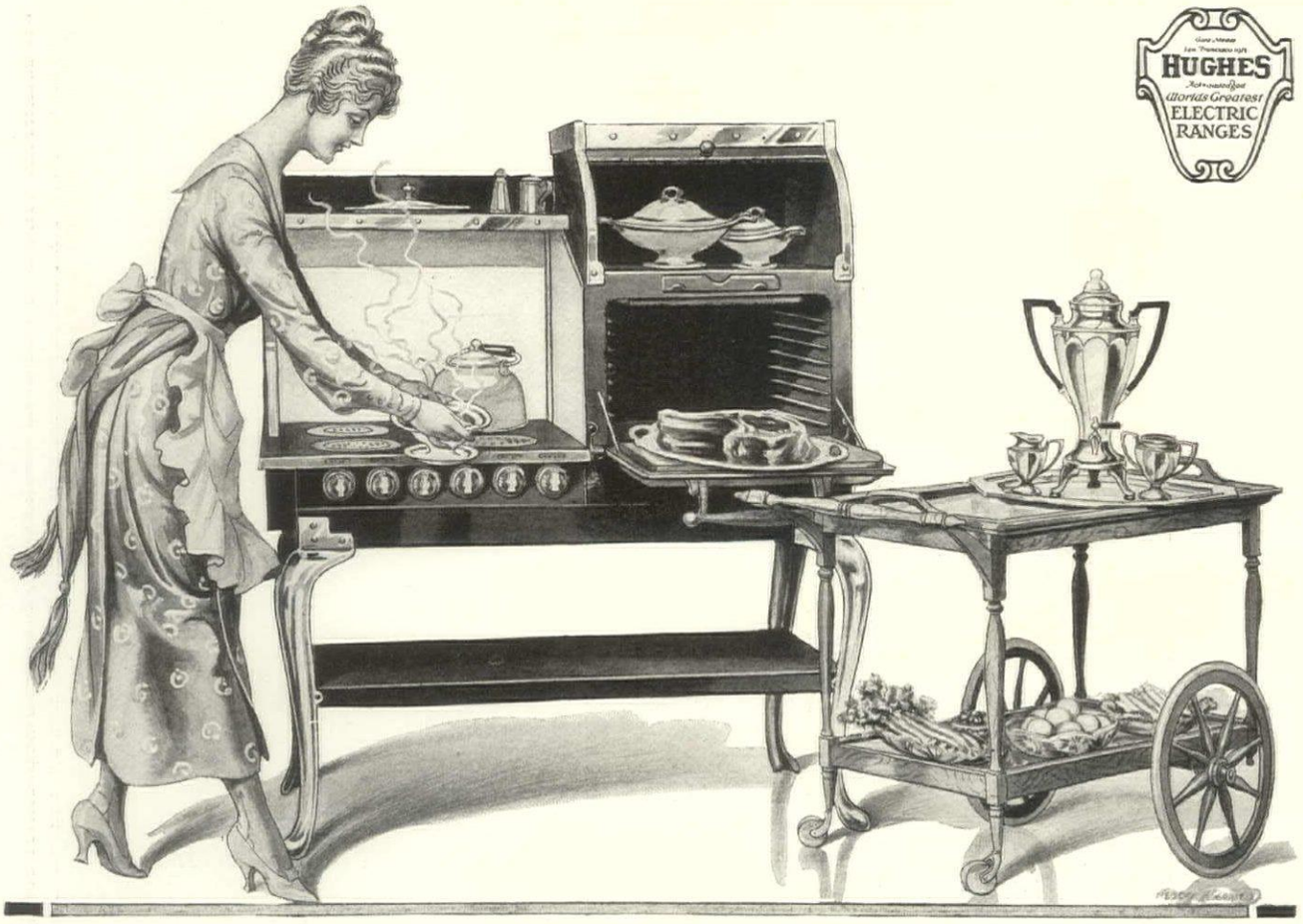

Some 40,000 to 50,000 kitchens are now electrically equipped—in cities where a cooking rate is available—and the majority of these kitchens are fitted as above with a

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Most homes now have several lamp-socket appliances. Their use is very much facilitated when convenient wall sockets are provided and these should be included in the specifications.

Range installation calls for heavy-duty wiring which is best placed during construction.

Whenever your client is served by a Central Station which offers a special cooking rate, he will naturally expect your electric specifications to cover optional Range installation.

Our Engineering Department will gladly cooperate with you in preparing specifications covering small appliances or Electric Range. Address our nearest office.

Perhaps you would like our informative booklet on Electric Cooking.

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Manufacturers of the four well known lines of household electrical appliances

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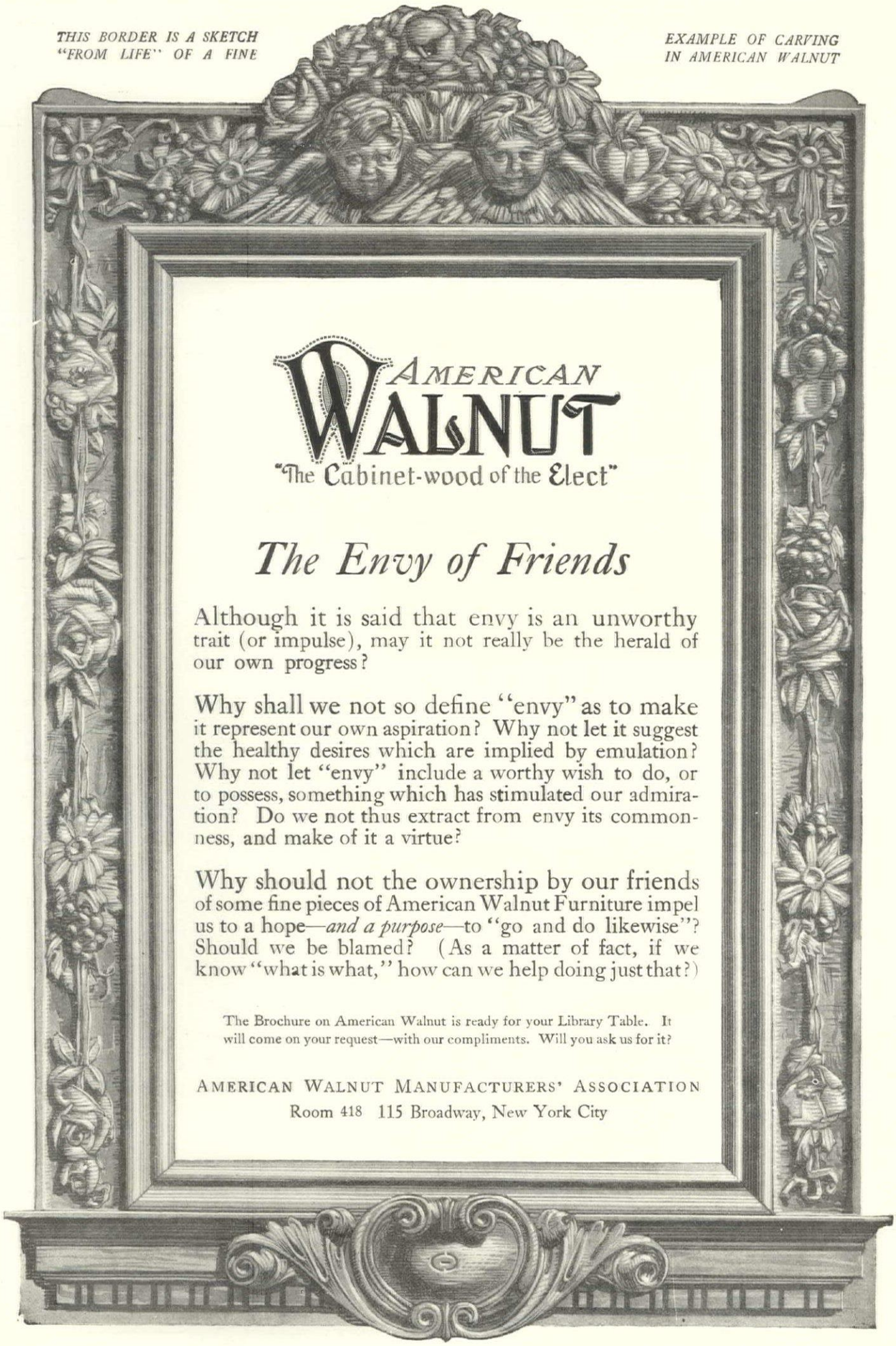
THIS BORDER IS A SKETCH "FROM LIFE" OF A FINE EXAMPLE OF CARVING IN AMERICAN WALNUT



AMERICAN WALNUT

"The Cabinet-wood of the Elect"

The Envy of Friends

Although it is said that envy is an unworthy trait (or impulse), may it not really be the herald of our own progress?

Why shall we not so define "envy" as to make it represent our own aspiration? Why not let it suggest the healthy desires which are implied by emulation? Why not let "envy" include a worthy wish to do, or to possess, something which has stimulated our admiration? Do we not thus extract from envy its commonness, and make of it a virtue?

Why should not the ownership by our friends of some fine pieces of American Walnut Furniture impel us to a hope—*and a purpose*—to "go and do likewise"? Should we be blamed? (As a matter of fact, if we know "what is what," how can we help doing just that?)

The Brochure on American Walnut is ready for your Library Table. It will come on your request—with our compliments. Will you ask us for it?

AMERICAN WALNUT MANUFACTURERS' ASSOCIATION
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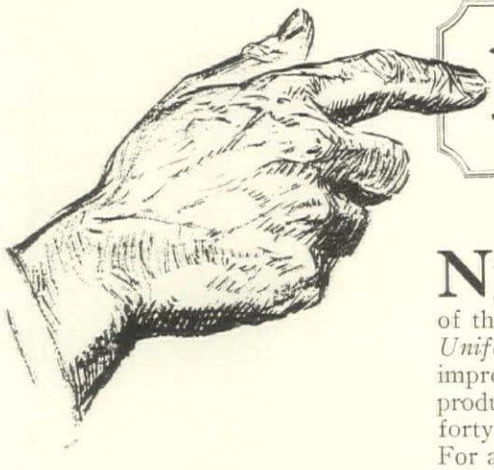
This is The Mark on Quality Lumber



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NATURE gave to Southern Pine its wonderful *Strength* and *Durability*, but it is the work of the manufacturer to give to lumber *Quality* and *Uniformity*. This can be accomplished only by improved milling methods and careful grading. The product of The Long-Bell Lumber Company has forty-four years of lumber experience behind it. For a quarter of a century its mills have striven for a goal and that goal was a lumber so nearly perfect that it would be worthy of the maker's name. The goal has been reached. Every piece of the 550 million feet annual output now bears the trade-marked name **LONG-BELL**. It is the company's mark of *Accomplishment*. It is the consumer's mark of *Assurance*.

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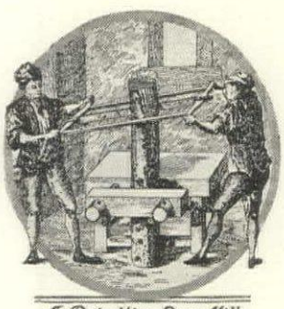
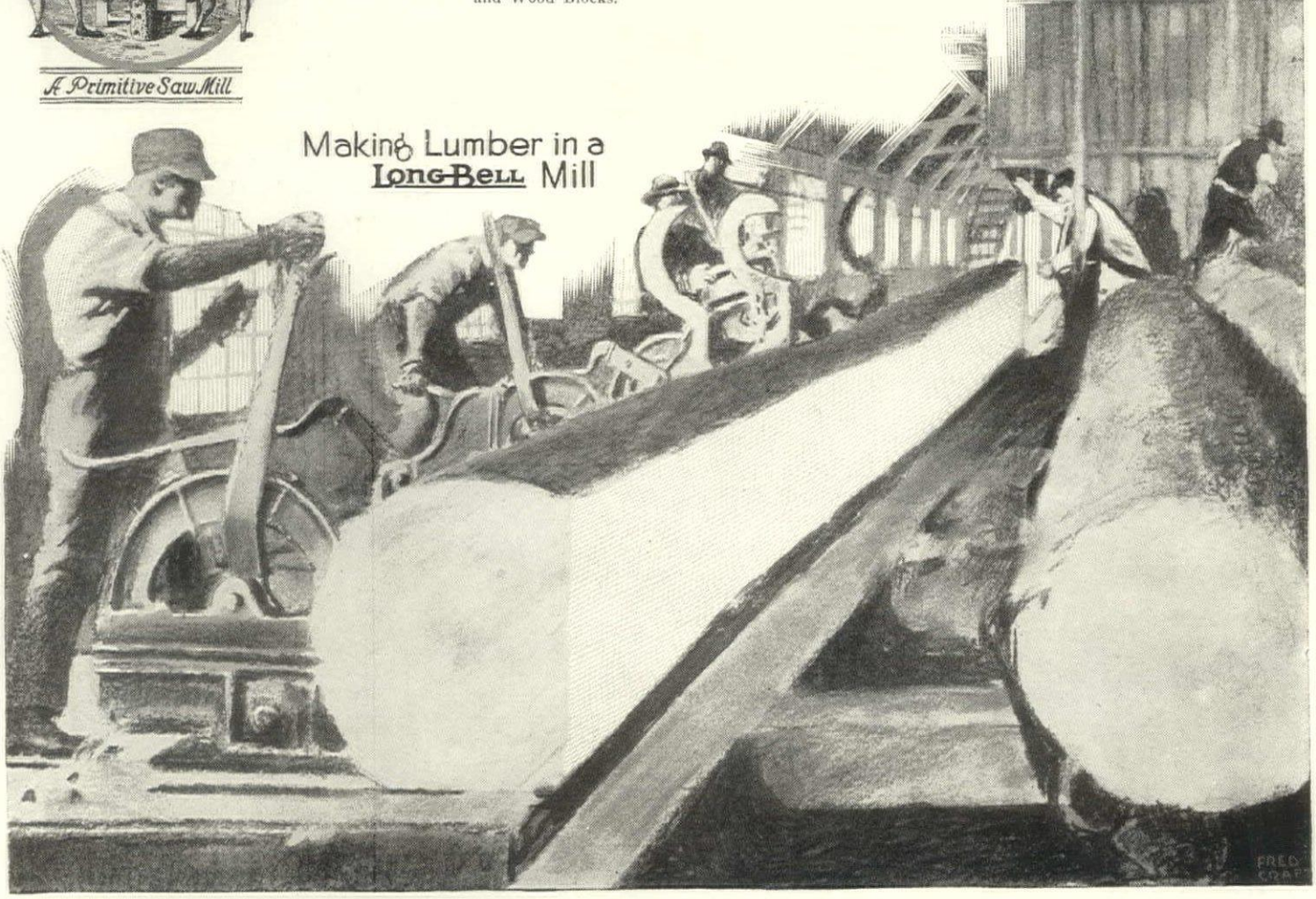
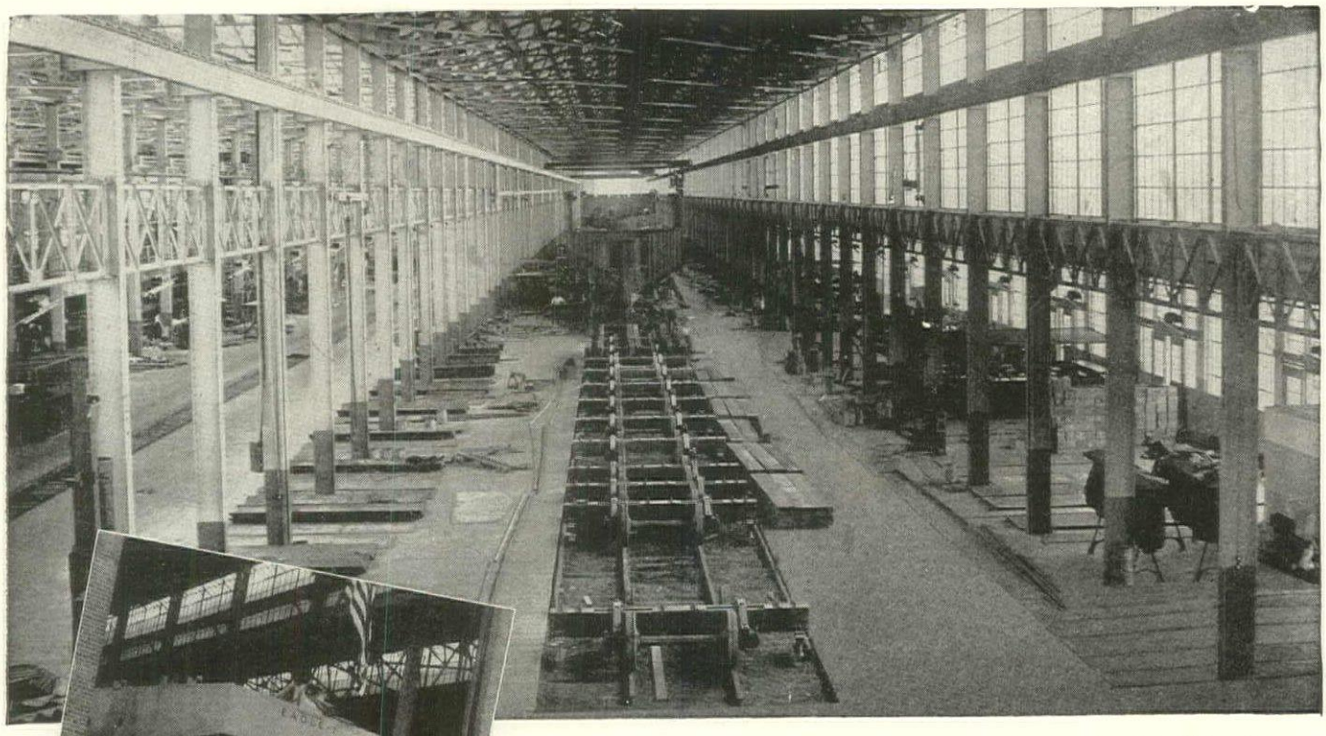


A Primitive Saw Mill

Making Lumber in a LONG-BELL Mill





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The first Eagle leaves building

The Eagle passes "from daylight to daylight."

From Daylight to Daylight

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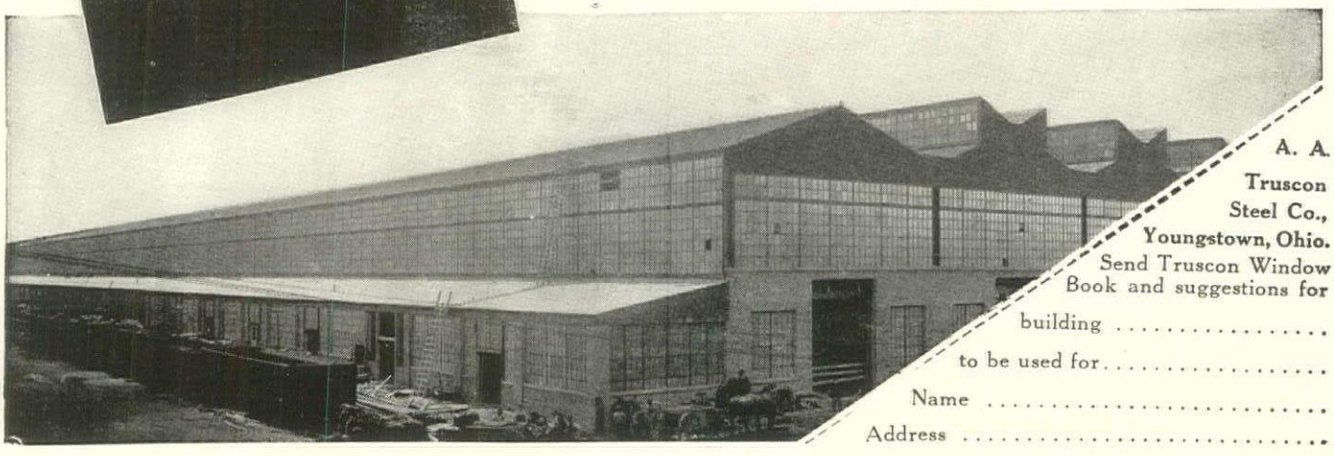

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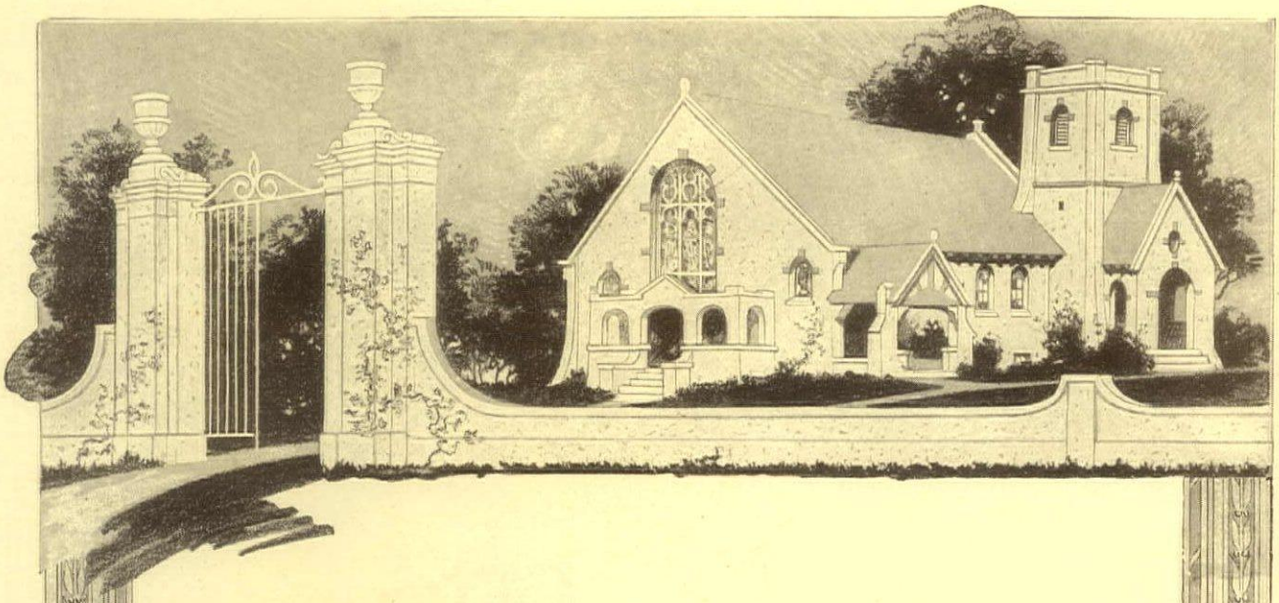

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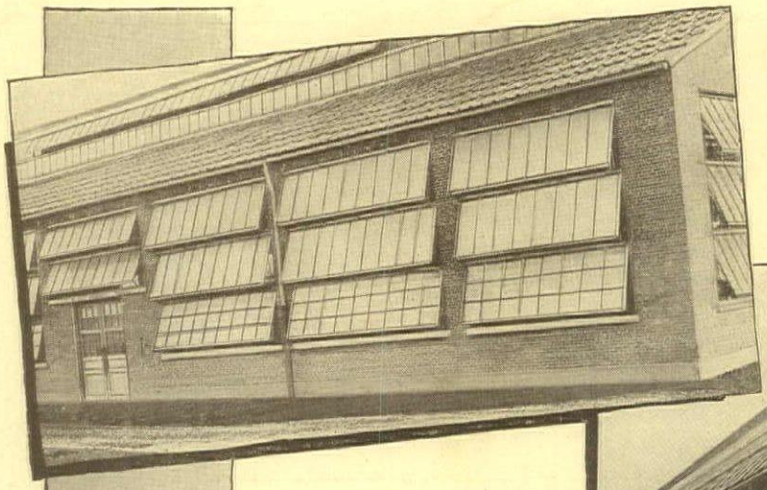

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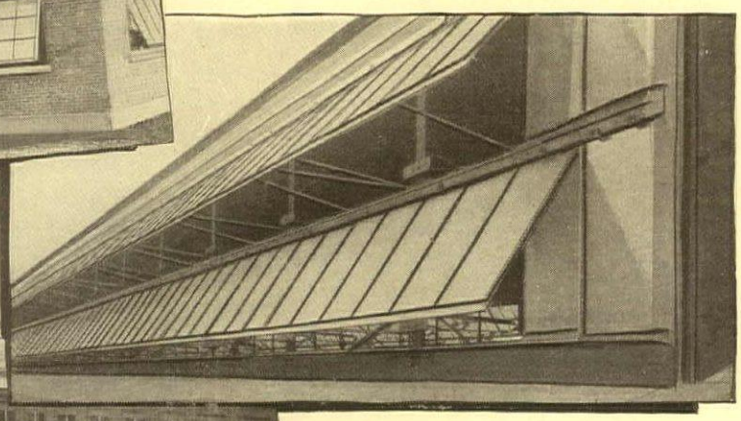

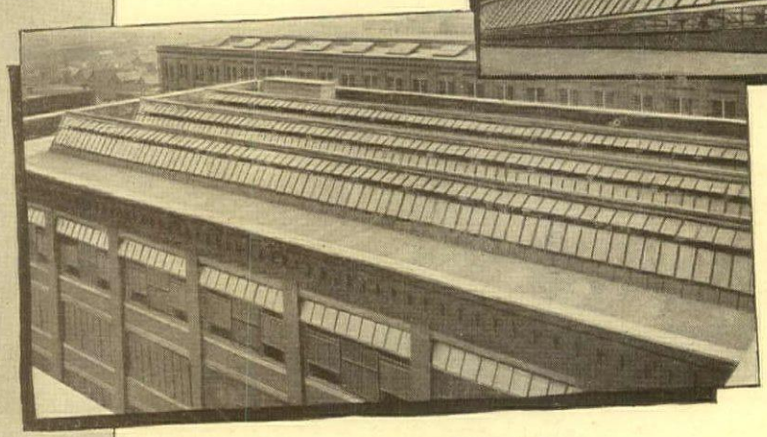

Pond Continuous Sash in sawtooth roof. For maximum ventilation the sawtooth sash lines may be operated in groups by electric motors. This construction, on the top floor of a multi-story factory, enables all the most exacting work to be done under ideal conditions. A building so designed may be made wider or higher than would otherwise be practicable.

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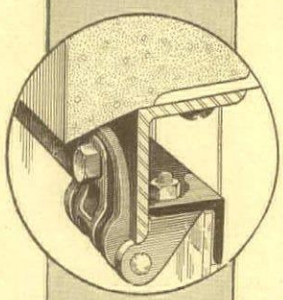
POND CONTINUOUS SASH does just that. When hung outside of structural work, with under-lapping storm panels at the ends of lines, it is fully weather-protecting. The Pond Operating Device, with spirals and counterweights to balance the load when open, renders control of long lines easy.

Wider buildings, better planned buildings, and larger output follow the correct use of Pond Continuous Sash.

We gladly cooperate with architects and engineers. Shall we send booklets on the use of Pond Continuous Sash?



Malleable iron hinges are used, spaced four feet on centers, with bronze pins

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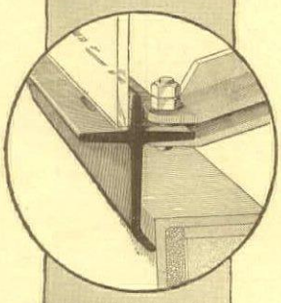

Patented sill member. Drip holes prevent pocketing water when sash is open. Opposite flanges take thrust of operator without strain on glass

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Pond Continuous Sash is top-hung under an overhanging angle, and overlaps storm panels 2 feet wide at the ends. Its 20-foot units are connected by weather proof expansion caps giving needed flexibility for alignment with steel work.

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