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THE FEDERAL ARCHITECT

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ARCHITECTS

WASHINGTON, D. C.

INDIANA LIMESTONE



FOUR OF THE TWENTY SCULPTURED FIGURES ADORNING THE EXTERIOR OF THE RE-CONSTRUCTED PALACE OF FINE ARTS OF THE CHICAGO WORLDS COLUMBIAN EXPOSITION.

*Architects—Graham, Anderson, Probst & White
Sculptor—Henry Hering
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Federal Post Office, Boston. Architects: Cram and Ferguson, Boston. General Contractor: N. P. Severin Construction Company, Chicago. Subcontractor on Aluminum Work: Art Metal Construction Company, Jamestown, N.Y.

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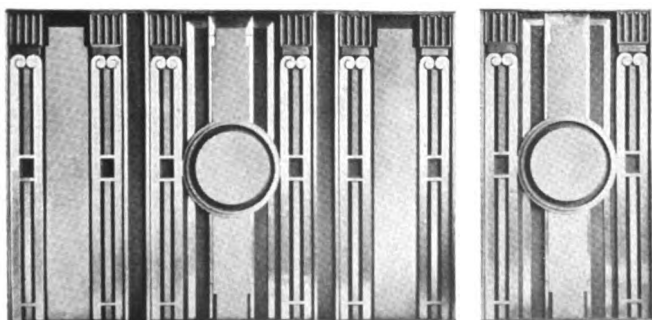
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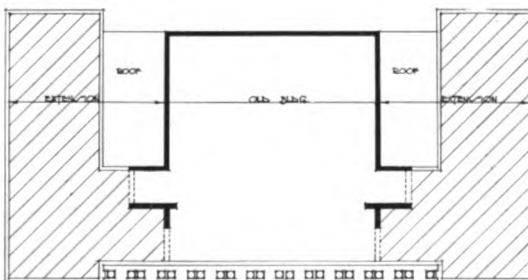




UNITED STATES POST OFFICE, COURT HOUSE AND CUSTOM HOUSE,
MEMPHIS, TENN.

Office of Supervising Architect, Architects

The building pictured above was the result of a remodelling of the structure below. The arches of the old building fixed the motif for the first story treatment and set the spacing of the columns above. The structural columns and the construction generally of the old building was retained and extended. The excellent effect of the completed building as compared with the uninspiring original shows the possibilities of good earnest architecture.



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■ A CERTAIN colored gentleman wandered into an automobile sales room. "Ambrose," said one of the sales resistance annihilators, "when are you going to buy that new car from us?" "Boss," stammered the negro, blushing, "I jest can't do nothin'. Dis yere Compression's got me."



■ ON June 30 President Hoover signed the Economy Bill reducing Government compensation by furlough, reducing leave and adding a number of uncomfortable things. The Compression got us, squeezed us in a good strong grip.

All this is a necessary part and result of present economic conditions. This cut was expected and received with equanimity. It is significant of the spirit of the Government employees that generally no effort was made to combat it. Certainly the Association of Federal Architects, which has had occasion to discuss and oppose several pieces of imminent legislation in the past year, made no move to hinder or lobby against salary reductions by either the direct-cut or furlough method. It was felt that if others in this country were taking cuts, we could not bring ourselves forward as deserving exemption.

However, there appears to be a difference between necessary discomfort inflicted upon us and discomfort which accomplishes nothing. As the President tersely commented, "It imposes unnecessary hardships—in minor matters of little consequence economically."

One of these matters of little consequence economically is the reduction of annual leave. First, the reduction does not take effect this fiscal year, which the bill was primarily framed to cover.

Second, because of the peculiar regulations in Government offices that differ from those of private business, it amounts to a practical abolition of vacations, which in a tropical city like Washington acts against the welfare and efficiency of the organizations.

The reason it is a practical abolition of vacations is because about half the former thirty days was lost by "leakage" leave. In other words, if one took an hour to enjoy a session with his dentist, or to meet the mother-in-law at Union Station, or to combat a blizzard, or to fix the kitchen sink, and on the same day was compelled to stay an hour overtime, the two did not cancel each other. The Government subtracted an hour of "leakage."

By this leakage about half the annual leave quoto is shown to be used up. The fifteen days now granted will be generally used up in small dribbles, leaving no time for vacations, necessary rest or relaxation.

It is believed that later, when the Depression may be over and the need for bearing down on the Government personnel has passed, the provision as to leave should be modified. Right now the motto is—You should be glad to have your jobs. This is true. But when normalcy returns, the old conditions will return and the jobs should be glad to have you.

■ **T**HERE has been a great deal of Uniting on the part of various industries. They have View-with-Alarm committees who scrutinize the materials architects elect to use.

The wood distributors assert too much iron is being used. The iron distributors say there is too much wood being used. The aluminum orators complain because of the excessive use of iron and wood. The bronze exhorters cry "Why so much iron, wood and aluminum?"

Industries A, B and C unite against Industry D, Industry A and C against B and D, and so on through all the combinations. This costs a lot of money and obviously the efforts neutralize each other.

The lowdown on the situation is as follows: The gentlemen representing the various industries, materials and building products are of inestimable value to the architectural profession. Architects rely upon them—for accurate and unprejudiced information. It is therefore a disappointment to any architect to have any material man recommend his material for any place where the architect after careful study has decided another product is better suited.



■ **T**HIS is the season of Sigh-Attica which is a disease caused by entering stuffy attic spaces and considering gloomily the dusty accumulation of things we sense are not valuable enough to keep, and fear are too valuable to throw away.

Here is a field of great endeavor for architects. It is stated that the building revival will begin with an increase in the construction of houses. Would it not be a boon to mankind to erect homes without attics, or with attics restricted?

The prospective home-builder should be questioned thoroughly before plans are drawn. Is he the type of person who

would indulge in attics to excess? Would he, in other words, have strength of character to take an attic or leave it?

If he could prove that he would be temperate about attics and not store therein alcohol chafing-dishes, carpet sweepers, broken golf equipment, boxes, worn-out rugs and other moth-creating truck, he should be allowed up to twelve-and-a-half per cent of the total cube. If not, he should be restricted to the regular Volstead one-half of one per cent.



■ **T**HE Association of Federal Architects dipped into architecture on the 25th of June, as such associations will. About sixty souls visited the naval-officer factory at Annapolis, the party consisting of architects, wives, daughters, sweethearts and others in the ball-and-chain category.

A special two-car train left Washington at one-thirty on one of those unusual, clear, cloudless days that a republican form of Government at long intervals bestows on its capital.

At Annapolis we were properly ushered through the ranking architectural gateway of the Institution, an achievement of the Allied Architects of the District of Columbia. It is really very simple and beautiful. The gates themselves of dull monel metal and dull bronze are surpassing examples of the understanding use of harmonious materials.

A guide met us and took us to the chapel and gave us the dimension from floor to lantern. Then we descended to a crypt where there was a tomb. We heard the name Jones mentioned and at first thought we were being conducted to Davy Jones' locker, which disturbed us not a little. However, we were reassured on learning that it was none other than our revered founder of the navy, John Paul Jones, whose body rests in an impressive sarcophagus.

Thence we visited dormitories, armories, swimming pools, gymnasiums, and

so on. Our purely architectural coterie was joined by the lay tourist and the unsophisticated visitor, thirsting for figures in feet and inches, statistics as to the actual number of bricks, and the like. Recruits came as to the bonus army, which our party soon resembled.

We went aboard ships and other ships. We slid down tubular hatchways into submarines to look through periscopes at scenes we could have viewed on deck without having to take all that trouble.

We at length acknowledged defeat. The inspiration of architecture wavered and attention centered upon the muscles used by the pedestrian. We were tired.

Thereupon it was decided to look at but one more exhibit. That was the well-equipped boat house designed in the Bureau of Yards and Docks. This is one of the few boat houses in existence where there are facilities for rowing practice in actual water, most of the colleges having their winter workouts on machines where the equivalent of water resistance is obtained by friction devices at the rowlocks.

The building is an attractive piece of architecture, a nice warmth of tone being obtained by the use of Briar Hill sandstone. This tone is altogether lacking in the main buildings of the Academy, where there is a plentiful use of a very even brick—an expensive product quite too unvaried to make the best brickwork. However, kindly ivy, one of our most talented architects, is working on the situation.

Our next step was in the direction of Greenbury Point, a resort turned over to us for the evening. Here our critical artistic inspection was invited to such materials as crab-salad, coffee, sandwiches, pie and other similar substances dear to the heart of the Registered Architect.

The committee in charge arranged a spectacular sunset to cheer our homeward steps. The sky was perhaps a thought too highly colored, showing more enthusiasm than restraint on the

part of the renderer. The feeling expressed was that so extensive a use of red was scarcely architectural. Nothing, however, was done about it.

In the gathering dusk we fell into our special cars, too comfortably tired to complain about anything.

All arrangements for the day clicked with precision and exactness. This is in great part due to the energy and enthusiasm of Ritter, who put his shoulder to the wheel in his usual manner. Southworth lent a fine Italian hand, as did Hart and Will. Keene, who undertook the supper arrangements, occupied the spectacular position and made a grandstand play.



■ **A**MONG the major items of the Relief Bill passed by Congress near the close of the last session and signed by President Hoover was the following provision for construction of public buildings:

“For emergency construction of public building projects outside the District of Columbia, such projects to be selected by the Secretary of the Treasury and the Postmaster General from the public building projects (specified in House Document No. 788, 71st Congress, 3rd session) \$100,000,000.00. Such projects shall be carried out within the limits of cost specified in such document, and in selecting such projects preference shall be given to places where Government facilities are housed in rented buildings under leases which will expire on or before July 1, 1934, or which may be terminated on or prior to that date by the Government.”





An Account Of The Restoration Of Arlington House Office Of The Quartermaster General War Department

By L. M. LEISENRING

Illustrated by photographs by Signal Corps, U. S. Army

THE Office of The Quartermaster General is charged with the administration and care of National Cemeteries. Among these is Arlington, rising in beautiful slopes above the Potomac River on the Virginia shore and overlooking the city of Washington.

From its heights there looks down over the Capital of the Nation one of the most distinguished homes of the early American Republic. This is Arlington House, the center of an original estate of 1100 acres, its construction started in 1803 by its owner, George Washington Parks Custis, grandson of Martha Washington and adopted son of General George Washington. Here the youthful Mr. Custis brought his still more youthful bride, Mary Lee Fitzhugh of Chatham, and furnished their home with priceless heirlooms from Mount

Vernon. Here in 1831, their only surviving child, Mary Ann Randolph Custis, became the bride of Lieutenant Robert Edward Lee, fresh from graduation honors at West Point, and here in 1861 General Lee made his momentous decision to join with the South in the War between the States.

Many other great names find association here. In 1824 General Lafayette was the guest of the adopted son of his former adored chief. But rich and poor were alike welcome and Mr. Custis maintained a public picnic ground at the onetime famous Custis Spring near the river.

Mrs. Custis died in 1853, Mr. Custis in 1857. Their graves lie to the southwest of the mansion in the family burial plot surrounded by an iron fence.

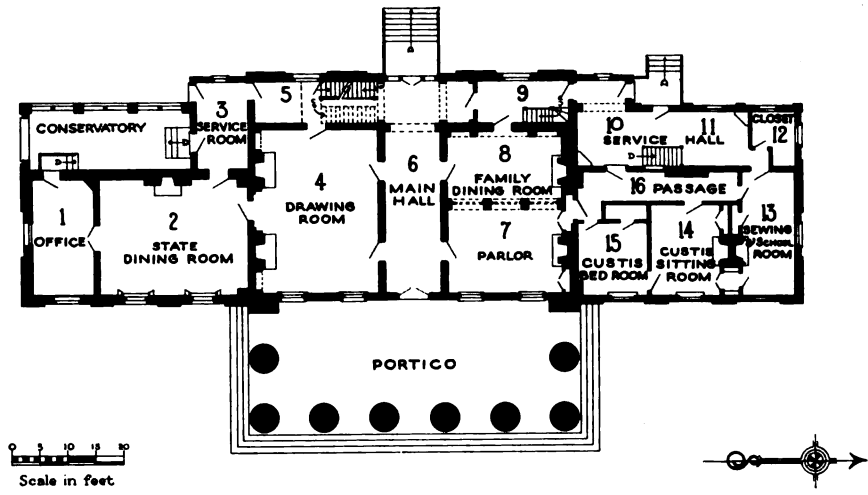
When Mrs. Lee followed her husband south, early in 1861, she took with her as many of her cherished possessions as she could hurriedly gather. Others had been left in the care of nearby friends and still others had been left at Arlington under the care of trusted slaves.

When the Union Army took possession of the heights of Arlington as a part of the fortifications which were built around the city, General McDowell had the Washington relics left there transferred to the Patent Office for safe keeping, and these were eventually returned to Mrs. Lee's son, George Washington Custis Lee.

The real property was seized for taxes and bid in for the United States Government for \$26,800.00 in 1864. The Courts finally decided the title to be in George Washington Custis Lee, the legatee of Mr. Custis, and in 1883, upon payment by the Government of \$150,-

The old flower garden to the south of the mansion, with its summer house, box bordered paths and flowerbeds and climbing vines, all surrounded by a white picket fence, much like Mount Vernon, survived long after the war but finally disappeared. The old vegetable garden to the north was built over with a large greenhouse and potting shed of glass and brick. The fine old stable, across the ravine among the trees to the west, in architectural style and materials, and with classic portico similar to the house, was burned some twenty odd years ago and replaced by an entirely unlike structure. There was little left of Arlington as it once was.

But the Congress, realizing the wealth of sentiment and historic interest surrounding the old place, by an Act approved March 4th, 1925, empowered the Secretary of War to undertake its restoration to its condition prior to the Civil War and to secure, when possible, articles



000.00, he finally transferred the title to the United States.

During the Civil War, thousands of dead from the battlefields and hospitals near and in Washington were buried at Arlington. Since then the old mansion house has been the administrative center of the cemetery and has been subject to the changes and alterations incident to such a use. For many years the second floor and the north portion of the main floor, also the old summer kitchen building, were used as quarters for cemetery personnel, the south rooms and the old smokehouse building being used respectively for offices and workshops. The only parts of the building open to visitors were the main hall, the large drawing room and the state dining room, all standing cold and bare with no reminder of the great days and personages associated with them.

of furniture and equipment which had been in the mansion, or replicas or other pieces suitable to the first half of the Nineteenth Century. A small appropriation for preliminary work was made in March, 1928, followed by additional funds as surveys and the work of research revealed what would be necessary for a true restoration.

The work has been a labor of love, not only by the Officers of the Quartermaster Corps and the architects of the Office of The Quartermaster General who planned it, and the professional people who have given their advice, but also by the journeymen and laborers who worked on the job with their hands. The work is now under the immediate supervision of Brigadier General Louis H. Bash, the present Chief of the Construction Division, and of Colonel Charles G. Mortimer, Q. M. C., Retired, the Superintendent of the Cemetery,



THE STATE DINING ROOM

both of whom have been indefatigable in their efforts to bring the restoration to success.

The furnishing of the house has been greatly aided by generous gifts from patriotic organizations and individuals and it is hoped that public funds and private interest and generosity will permit the continuance of the work, for as added knowledge continues to make new things desirable, it can properly be said that such an undertaking is never completely finished.

The architectural problems of the restoration have been those of the archaeologist and the historian. Structural revelations have been remarkably supplemented by corroborative evidence, by documents and by the recollections of some few who could remember back before the war.

The building is of massive proportions, the central part two stories high, 60 feet wide and 40 feet deep, faced by the Doric portico extending 25 feet in front of this. The north and south wings are each 40 feet long and 25 feet wide and back of these are lower wings for service and for the orangerie, or as the old slaves called it, the "Camelia House." The total length north and south is 140 feet.

The walls are of brick covered with stucco laid off with the lines of freestone and later painted as were so many of the early buildings of Washington. The eight columns of the hexastyle portico are of brick stuccoed, 23 feet high and 5 feet 3 inches in diameter, about midway between the dimensions and proportions of the columns of the Theseum at Athens and the Temple of Neptune at Paestum, each of which has been named by early writers as the prototype of Arlington.

Generally, the design has been attributed to Mr. Custis, but with due regard for his great versatility and interest in the arts, one sees here the work of the trained architect. Although the most diligent search has not revealed the original drawings, there is no reason

to doubt the statement of William Dunlap in his authoritative "Arts of Design in the United States," published in 1834, when he says that GEORGE HADFIELD * * * "gave the plan of the public offices, the City Hall, CUSTIS'S MANSION, * * *" and other buildings that we know were his. Mr. Howard Major and Mr. Fiske Kimball in recent books, both give Hadfield the credit for the design of Arlington. Hadfield, the young English architect who came to this country to take the place of the Frenchman, Hallett, in his work on the Capitol building, was a classicist and this house, begun in 1803, can well be considered the first important residence of the Greek Revival in America.

Mr. Custis found himself with a great plan, one that today makes Arlington House a completely adequate closure for the magnificent vista from the Lincoln Memorial out over the new Memorial Bridge. But although tremendously wealthy in lands and slaves lack of ready cash made its completion slow work. He solved his problem by building the two wings first and living in them while the central portion with its portico was rising between them. The four hips to the roofs of the two wings exist today, under the parts of the roofs extended to the main walls. The north wing had been designed as one large dining room with a central fireplace. The fireplace is blank, the chimney stopping short of the roof, while the wing was built with three small bed and sitting rooms as a sort of honeymoon cottage. The south wing had two rooms, the inevitable office and a fine room for entertaining. These continued in such use and Mr. and Mrs. Custis, after the marriage of their daughter and the advent of the seven Lee children returned downstairs to their honeymoon quarters and there lived out their days, Mr. Custis in his later years taking possession of the large drawing room across the hall as a studio for his historical paintings in which his adored foster



THE LARGE DRAWING ROOM

father was always the central figure.

Another departure from the original plan that was made during the first construction was the division of the large room north of the main hall into two smaller rooms by three arches; the center with double doors and the sides with plastered panels under fan lights. These were evidently soon removed for it was under the central one of these arches that Miss Custis became the bride of Lieutenant Lee.

All ancient changes have been respected but later day alterations have been corrected. These were readily distinguished for the former were made with the hewn timbers, split laths, hand forged nails and other materials of the period. In the main framework few nails were used, all timbers were hewn, each piece numbered (even the outlookers supporting the cornice) and pinned together with wooden pegs. The main roof is supported by immense trusses spanning the full width of sixty feet. The roofs had been covered with shingles but as some years ago these were replaced with slates, the restoration has not gone so far as to change them.

One of the principal restorations on the exterior was the replacing of the balustrades around the roofs of the two wings, which had disappeared.

In the interior the restoration of fireplaces and mantels, old floors, old hardware, chandeliers, hangings, portraits and furniture immediately appear, but back of all these has been a complete rebuilding of crumbling walls and

chimneys, rotted framework and unsafe floors. The heating plant has been removed from the main building and for safety placed in a modern out building from which heat is brought to concealed outlets. A concealed automatic fire alarm system protects every room. An obsolete electric wiring system has been removed and a modern system installed, but instead of simulating candles and sperm oil lamps with imitation fixtures, the new system is to base-board outlets only, for electric cleaning or for flood lights if desired.

The dependent buildings, which played so important a part in the family life of the period, have been given equal care. Their restoration has been a problem of the greatest interest as they had been greatly changed. The north building housed the summer kitchen, the south building the smoke house, and the store room for food supplies. Both housed also quarters for the house and body servants.

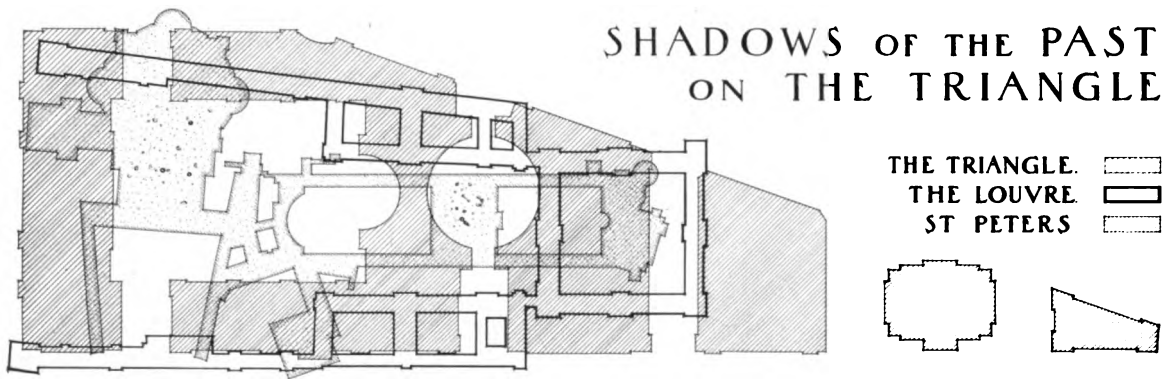
The old stable has been practically duplicated by altering the modern stable and adding replicas of the old wings and front portico. It now houses the offices of the cemetery which by this arrangement are now happily removed from the mansion.

The gardens should now have their turn. Studies have been made for their restoration and it is hoped that with these once more framing the group of fine old buildings, Arlington House, surrounded by the honored soldier dead, will picture to the people of today and of the future, the great men and the great days of its past.



ARLINGTON HOUSE

From a watercolor drawing made in 1853 by Benson J. Lossing, the Historian, and now in the mansion.



Shadows

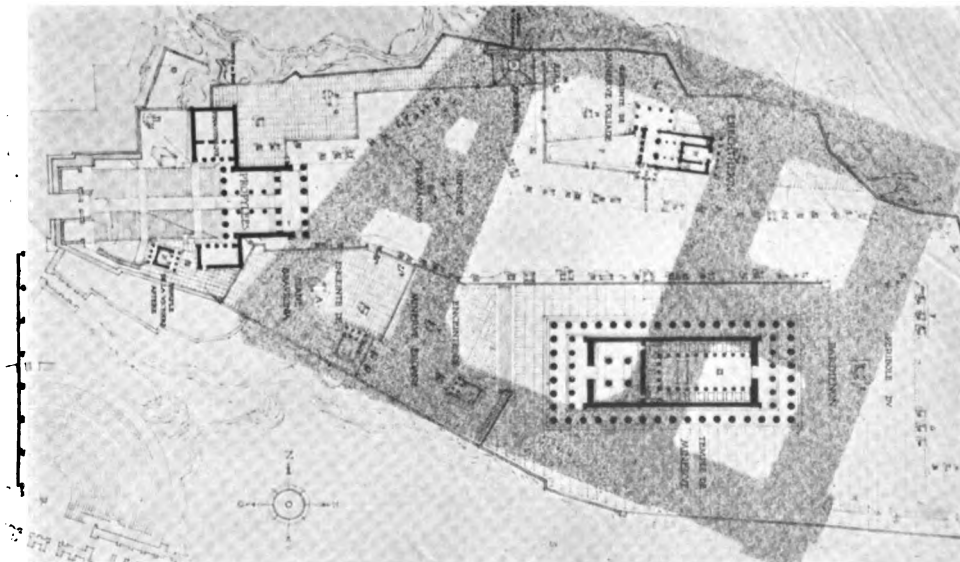
Graphic Comparison of Ancient and Modern Monumental Buildings

SOME newspapers had, in a conjectural way, made the claim that the Agricultural building at Washington when completed would, in point of ground area, be the largest building in the world.

This interesting idea, calling attention to the greater scale of modern buildings and particularly of modern American buildings caused us to make an investigation.

This investigation showed that the Agricultural Building, while a large structure, did not top the list. But research into the matter brought forth so many illuminating comparisons between ancient projects and new ones, that it appears desirable to make mention of them as a matter of general interest.

During the course of this investigation the recent government buildings and some of the



SHADOW OF DEPARTMENT OF JUSTICE BUILDING UPON THE ACROPOLIS

largest monuments of antiquity were laid out at the same scale; and the plans of the former dropped as shadows upon the latter. In some cases total eclipse occurred. In others our modern layout failed to cover the ancient one.

Perhaps had we been among the sophisticated who have visited many times the Plaza of St. Marks, the Vatican and the Acropolis, we should have had in our mind's eye a clear conception of their relation to our American buildings.

actual existence while the Triangle is a projected matter, not all of which has now been put under construction.

The Louvre is nearly fifty per cent larger than the Agricultural Building in ground area. Of course the greater number of stories of the latter makes it considerably larger. But then some of the metropolitan skyscrapers though of smaller ground area, are of greater volume than either the Louvre or the Agricultural Building.



SHADOW OF DEPARTMENT OF COMMERCE BUILDING UPON ST. MARKS PLAZA

As it was we were filled with naive surprise at the shadow the long Commerce Building would throw upon the plaza of St. Marks and at the shadow on the historic expanse of the Acropolis by the Department of Justice building.

The Louvre, which is a structure built piecemeal at various times, extends over a wide area. Its ground spread is not so extensive as that of the Washington Triangle development. It, however, has the advantage of being in

To bring two of the ancient large projects into comparison with the Triangle a drawing was made which is reproduced herewith showing both the Louvre and the Vatican superimposed on the Washington group. This is interesting as showing the mutual relation between the two European projects and their relation to the more modern one.

Perhaps the most diverting shadow is the one cast by the Agricultural Building upon the city of Pompei. Note how the modern build-

ing nearly covers the entire city. This impressed us more than any of the other comparisons, as it called attention to the pathetic smallness of the old cities, which were pointed to by that ancient civilization with pride and wonder.

Someone has said that it is difficult to feel sure that we have progressed beyond the point attained by those living in earlier days, because so few vivid comparisons come to our attention. The relationship of the Agricultural building

to the old Roman City is certainly vivid.

We do not feel any comfort as a result of that. It would seem, on the contrary, to have been more entertaining to have lived within the comfortable confines of the old metropolis. The feeling that arises in us is one rather of awe and trepidation at the size of our modern projects and centers of civilization. The fear arises that these may be too big and far-reaching, like our business and economic structure which periodically collapses, as at present.



SHADOW OF DEPARTMENT OF AGRICULTURE BUILDING
UPON THE CITY OF POMPEI



THE copper industry appears to have had its beginnings considerably before the Depression—about 10,000 years ago, when primitive people of the world—in Europe, Asia and the two Americas—used copper and the copper alloys extensively. Later—so much later as to be almost modern—about 3700 B. C.—the Egyptian King Seneferu operated copper mines. So far as known, however, there were no securities of his corporation, that being an improvement of a still later era.

Previous to the discovery of America, our own North American Indians got the copper idea, which was later to be adopted by our generation and those immediately preceding it.

It is interesting to note that the source of copper supply of the Indians was the same one which is still an extensive copper producing area—the Lake Superior region. That great glacial flow, operated, before the introduction of the frigidaire, as a complete ice monopoly, ripped great masses of copper from beds in which they had been deposited by geological processes and moving southward strewed them over the Lake region. And here today are the greatest deposits of nugget copper in the world.

THE ROMANCE OF MONTANA

In the Lake Region of Michigan the copper industry of the United States centered until the latter part of the nineteenth century. Quite by accident in 1864 a small pit left open by some forgotten miner in Montana brought to

light the fact that there was an underlying copper-bearing soil. This discovery had a far-reaching effect on the industry, eventually moving its center of gravity to the far west and building up the rough and picturesque scene of Montana at the close of the last century.

This was the era that produced Will Rogers and Charlie Russell. Rogers is too well known to need comment. Russell was a man of extraordinary natural artistic ability, and of a homely humor similar to that possessed by Rogers.

The exhibition of Russell's artistic work, in the old saloon at Helena—now a drug store—where the artist used to barter pictures and statuettes for drinks, is very interesting. The work is a compelling picture of the rough and virile 80's and 90's. The square buttes, the buffalo, the Indians, the men of the plain, are all caught with a realism on canvas, on paper and in figures. A fine statuette, not bigger than a man's hand, is of a riderless horse, almost too perfect with its microscopic detail of bridle, saddle, blanket and lariat—a reminder of the day when a man without a horse or a horse without a man was a tragedy.

This work of Russell's gives a picture of the life of a state growing to a rough but sturdy prosperity on the wave of copper. It is significant that the state will place a statue of Charlie Russell in Statuary Hall of the Capitol as a foremost citizen of Montana.

A pioneer of these days was W. A. Clark, later elected Senator from Montana, whose

wealth enabled him to build the curiously ornate Fifth Avenue mansion in New York and whose rough and ready life is commemorated by the beautiful wing of the Corcoran Art Gallery filled with priceless works of art indicative of high culture.

As a proof of the value of mother earth in the copper region at that time, it is stated that when a certain hotel at Helena was built the contractor excavated for the foundations and subsurface work without charge, in order to obtain the copper-laden dirt.

COPPER OUT OF NEXT TO NOTHING

The romance of industry is always emphasized when a useless material is made of great

where, frequently as far as a mile underground, electric locomotives haul the ore over a system of tracks. The ore dumped into skips is hoisted to the surface sometimes at the rate of a mile a minute, no speed regulations existing for this type of traffic.

EXTRACTING COPPER

1. *Crusher Stuff.*

There are three general methods of extracting copper. In one, common in the Lake Superior Region, ore is crushed and the copper separated from the waste. It is then melted in the smelter, air is blown upon it to oxidize it, and it is cast into ingots, cakes, billets and wire bars.



COPPER SURFACE MINE, BISBEE, ARIZONA

value through the ingenuity of someone who perfects a process for deriving a marketable product from it. A discovery of this nature put Utah on the copper map. By means of this discovery a low-grade ore known as porophyry, which actually contains less than two per cent of copper, yields the metal in commercial quantities, by reason of the fact that literally a mountain of it exists.

In addition to America, which is the largest copper producer in the world, there are also mines in Africa and in Europe. Spain has a famous copper mine, Rio Tinto, which was worked by Phoenicians as early as 1240 B. C. From this mine still come extensive quantities of the metal.

METHODS OF MINING

There are two methods of mining—surface and undersurface. In the surface mining, steam shovels scoop the ore from the banks and load it into cars. The same process is repeated, generally, in underground mining,

2. *"Leeching."*

In another method, used at surface mines, the ore is "leached." After being crushed, sulphuric acid percolates through it, dissolving the copper. The sulphuric-copper solution runs into tanks in which electric current deposits copper on cathodes, which after being sufficiently incrustated with copper, are sent to furnaces for melting and casting.

3. *"Blister Copper."*

The third process is used particularly for ores with a high sulphur content. The ore is roasted to eliminate sulphur and is then melted. From this melting process flows a slag which is waste and there is left a matter which is essentially copper but contains, as well, iron, sulphur and valuable metals such as gold, silver and platinum. The matter while in molten condition has air blown upon it and contrary to what might be expected, there is the paradox of the substance being heated instead of cooled—due to oxidation.

Copper so produced is about 98 per cent pure, the 2 per cent being gold, silver and other valuable metals. It is called "blister" copper.

REFINERY SHAPES

The following shapes cast by the refineries have been mentioned. Their purpose in manufacture is as follows:

Cakes—for the rolling mills.

Billets—for the tube and pipe extrusion mills.

Bars—for the wire mills.

Cakes are passed through one set of rolls and back through another and the process continued until sheet copper results.

Billets are used in manufacturing extruded products. The heated billet is placed in a hydraulic press, having a plunger which forces it through dies into the shape desired.

In the manufacture of copper tube, the heated billet is forced over a steel point on a long rod, and becomes a thick irregularly shaped hollow cylinder, which is reduced by successive dies to finished tubes of the size required.

Bars are heated at the wire mills and passed through rolls which reduce and elongate them. When the rod is sufficiently reduced in area, it is drawn through a series of progressively smaller dies, until it becomes wire of the desired gauge.

BRASS

The most common and generally useful product of copper is brass—an alloy of copper and zinc. There is no standard rule governing the proportion of the two materials. Copper must predominate and different shades and finishes are obtained by using varying formulas.

The United States leads the world in the

production of copper and also in the manufacture. When Connecticut gave up the manufacture of wooden nutmegs, it took on that of brass and bronze.

This was the outcome of the fact that formerly in the Naugatuck valley, there were some small copper mines. The Connecticut state of mind built up an industry out of this suggestion of supply, and long after the small mines ceased to yield, the industry continued. As a result, Waterbury is the important brass center of the country.

Copper, with its bronze and brass sister products, is far-reaching. These metals weave themselves closely into our lives. Our hardware, our lighting fixtures, our automobiles abound with brass. Some of us surreptitiously wear brass watches and brass collar buttons. In our home are brass andirons, brass candlesticks. Some of us use brass-lined plumbing pipes, others use lye at intervals.

Brass and bronze have come to be the symbol for authority. Capitols, court-houses and municipal buildings have brass doors. Within, the unimportant citizens are kept *in* lines and *out* of holy places by means of brass rails. The policemen wear brass badges and brass upon their hats.

Our riches are based upon gold, our government authority upon brass and bronze. And when a dead politician becomes, after a lapse of years, a remembered statesman, the brass of his career is forgotten and his memory is perpetuated in a statue of bronze.

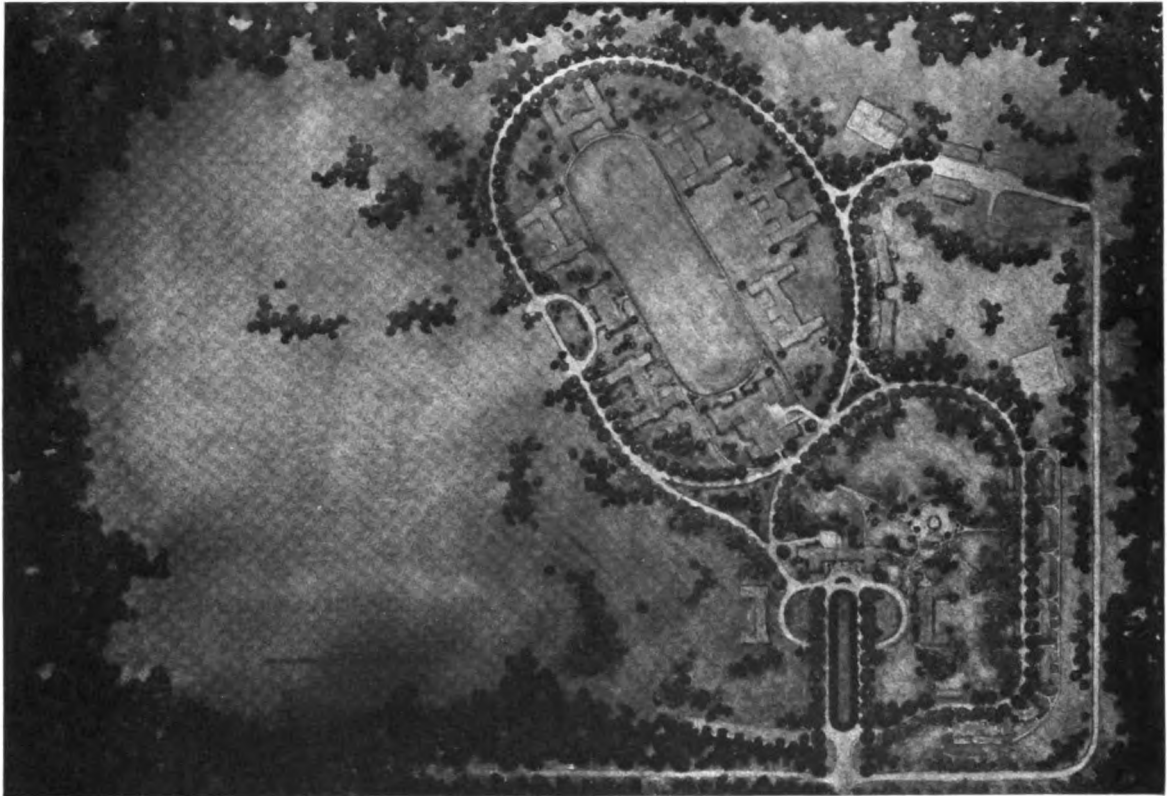
And there we have the excuse for copper and bronze. They stand up, where rust doth corrupt. They are permanent.



MINING FOR COPPER BELOW SURFACE

Veterans' Administration Hospital, Waco, Texas

Future Development of Immense Site Receives Careful Study for Elaborate Scheme



LANDSCAPE PLAN

THE new Veterans' Administration Hospital at Waco, Texas, occupies a site nearly one square mile in extent, lying about two miles southwest of the city. The present capacity of the patients' buildings will be 308.

The initial construction forms but a portion of the future layout and an elaborate scheme for the eventual development of the site through additional construction of buildings and roads has been already planned. This plan when it is completely worked out will, with the buildings now finished, comprise one of the largest hospitals of this character in the country.

One must appreciate the fact that the somewhat scattered effect of the buildings at present is due to this great plan for the future. As one by one the additional structures arise the magnitude of the whole project will become evident.

The largest building, known as the Main Hospital Building, facing the esplanade and principal entrance, is designed to contain the

offices for the hospital administration, the clinics, the operating suite, and a patient bed capacity of 144.

On the south of the main building we come to the Dining Hall and kitchen. This building contains the main kitchen of the hospital group and dining rooms for patients and personnel. As the hospital grows, additional wings to this structure are designed to keep pace with the expansion.

To the southeast of the Dining Hall is another patients building known as the Continued Treatment Building. This will have accommodations for 164 ambulant patients on two floors, with a basement for storage and services.

Adjoining the Continued Treatment Building is the Recreation Building. This structure will eventually form the central feature of the group of six future patients buildings having a capacity of approximately 950 including the present Continued Treatment Building. In the Recreation Building will be found a large auditorium with stage and complete



CONTINUED TREATMENT BUILDING, VETERANS' ADMINISTRATION HOSPITAL, WACO, TEXAS

Construction Division, Veterans' Administration, Architects

equipment for theatrical entertainment and motion pictures, as well as social, reading and lounge rooms, where those patients physically able to circulate may find relaxation and enjoyment. The importance of activities to be found here in the upbuilding of mind and body are manifest and this structure plays an important part in this carefully worked out scheme.

Near the main entrance and to the northeast of the Main Building are found the Nurses Quarters, and five residences for the Medical Staff. Eventually three or more additional double houses will be erected in the vicinity, forming a distinct residential area.

Farther to the west are the Attendants Quarters and the Service group of buildings containing the storehouse, the garage, the boiler house, the laundry and other smaller structures each one of which has its own particular function to perform in the making of this institution a complete working unit, a veritable city in itself.

The style of architecture chosen for this group of buildings was a modified northern Italian Renaissance. It was felt that this style using light golden brown colored brick walls, stone trim and vari-colored tile roofs would create an atmosphere symbolic of strength, dignity and beauty which will be further enhanced as the interesting landscaping of the grounds is accomplished.

The development of the grounds from the bare cotton field acquired has already been started, and some of the large native trees moved in can be seen in the accompanying photographs.

The design provides for a baseball diamond, tennis courts, and other outside recreational facilities which have been found useful in treatment of mental cases; floors and vegetable gardens for the patients; and show gardens to beautify the grounds and provide quiet spaces for rest and relaxation.

The planting will be mostly of native material already acclimated.



RECREATION BUILDING

RECENT CONTRACTS AWARDED IN OFFICE OF SUPERVISING ARCHITECT

Peru, Illinois, P. O., construction; contractor, Tulley Larga, 1205 W. 11th St., Gary, Indiana	\$61,700.00	Washington, D. C., P. O., extension and remodeling; contractor, B-W Construction Co., 720 North Wabash Ave., Chicago, Illinois	\$2,999,000.00
Lapeer, Michigan, P. O., construction; contractor, Misch Bros., Inc., 3001 Gratio Ave., Detroit, Mich.	56,300.00	Detroit, Mich., M. H., construction new addition, Nurses' Home, etc., Sea Wall & Light Tower foundations; contractor, Otto Misch Co., 159 East Columbia, Detroit, Mich....	395,600.00
Canton, Ohio, P. O., construction; contractor, The Gibbons-Grable Co., 311 Mellett Building, Canton, Ohio.	267,100.00	Coatesville, Pa., P. O., construction; contractor, Samuel Plato, P. O. Box 64, Medina, New York.	78,800.00
Baton Rouge, La., P. O. & Ct. H., contractor, Algernon Blair, 1209 First Nat. Bank Building, Montgomery, Ala.	308,760.00	Lewisburg, Pa., P. O., construction; contractor, Hanson Bros. Co., 127 North Dearborn St., Chicago, Illinois.	165,747.00
Westminster, Md., P. O., construction; contractor, Brooklyn & Queens Screen Mfg. Co., Inc., Mitchell Field, Hempstead, Long Island, N. Y....	73,375.00	Winona, Mississippi, P. O., construction; contractor, Rosen & Fischel, Inc., 11 S. LaSalle St., Chicago, Illinois.	50,000.00
Norfolk, Va., P. O. & Ct. H., foundations; contractor, Virginia Engineering Co., Inc., First National Bank Bldg., Newport News, Va.	210,500.00	Miami, Okla., P. O., Ct. H., etc., construction; contractor, James I. Barnes, Barnes Building, Logansport, Indiana.	146,200.00
Lynchburg, Va., P. O., construction; contractor, Larga Construction Co., Inc., 3672 Adams St., Gary, Indiana.	338,300.00	Mankato, Minn., P. O. & Ct. H., extension and remodeling; contractor, C. H. Peterson & Co., Inc., 1036 Builders Exchange, Minneapolis, Minn...	179,500.00
Chicago, Ill., Appraisers' Stores, excavation & foundations; contractor, B-W Construction Co., 720 N. Wabash Ave., Chicago, Illinois.	74,800.00	Baltimore, Md., M. H., construction main building, power house, laundry, etc.; contractor, W. E. O'Neil Construction Co., 308 West Washington St., Chicago, Illinois.	809,900.00
Louisville, Ky., M. H., construction new hospital, and alterations present building; contractor, Hanson Brothers Co., 127 North Dearborn St., Chicago, Illinois.	274,836.00	Newcastle, Wyoming, P. O., construction; contractor, Phelps-Drake Co., 825 Metropolitan Life Bldg., Minneapolis, Minn.	54,500.00
Cincinnati, Ohio, P. O., excavation, pile foundations, etc., contractor, MacArthur Concrete Pile Corporation, 19 West 44th Street, New York City.	131,547.00	San Ysidro, Calif., Insp. Sta., construction; contractor, Robert E. McKee, 1918 Texas St., El Paso, Texas.	93,800.00
New Orleans, La., M. H., construction personnel quarters; contractor, R. P. Farnsworth & Co., Inc., 925 Maritime Building, New Orleans, La...	90,495.00	New York, N. Y., Addition to P. O., excavation and construction of substructure of addition; contractor, James Stewart & Co., Inc., 230 Park Ave., New York, New York. Cost not to exceed.	1,800,000.00
Miami, Fla., Q. S., construction; contractor, Prescott - White Corporation, 121 East 27th St., New York, N. Y....	57,711.00	Jacksonville, Fla., Ct. H., construction foundations; contractor, J. A. Jones Construction Co., Charlotte, North Carolina.	41,644.00
Terre Haute, Ind., P. O., construction; contractor, National Construction Co., 631 Tower Building, Washington, D. C...	439,000.00	Bucyrus, Ohio, P. O., construction; contractor, P. W. John-	

RECENT CONTRACTS AWARDED IN OFFICE OF SUPERVISING ARCHITECT

son, Portsmouth, Ohio.....	\$74,900.00	Labor Dept. & Interstate Commerce Comm. Bldg. & Connecting Wing, Washington, D. C., construction; contractor, Great Lakes Construction Co., 333 N. Michigan Ave., Chicago, Illinois.....	\$8,846,000.00
Plainview, Texas, P. O., construction; contractor, W. B. Smith, Box 727, El Dorado, Arkansas.....	89,750.00	Post Office Department Building, Washington, D. C., construction; contractor, McCloskey & Company, 1620 Thompson St., Phila., Pa....	7,642,000.00
Petaluma, California, P. O., construction; contractor, William Spivock, 582 Market St., San Francisco, California.....	91,700.00	Lawrenceville, Illinois, P. O., construction; contractor, North-Moller Co., 120 W. Cortland St., Jackson, Mich...	52,989.00
Meridian, Miss., P. O. & Ct. H., construction; contractor, Ralph Sollitt & Sons Const. Co., 528 E. Sample St., South Bend, Indiana.....	314,000.00	Paterson, New Jersey, P. O., construction; contractor, Wallace Construction Co., Inc., 52 Vanderbilt Ave., New York, New York.....	377,758.00
Department Agriculture, Ext. Bldg., Washington, D. C., completion construction; contractor, Aronberg-Fried Company, Inc., 155 East 44th St., New York, New York.....	5,380,000.00	Jackson, Michigan, P. O., construction; contractor, North-Moller Co., Jackson, Mich....	305,189.00
Dover, Delaware, P. O., construction; contractor, Conneen Construction Co., Inc., 770 Schuylkill Ave., Philadelphia, Pa.....	72,295.00	Torrington, Wyoming, P. O., construction; contractor, Building Reconstruction, Inc., One North LaSalle St., Chicago, Illinois.....	55,112.00
Knoxville, Tenn., P. O. & Ct. H., construction; contractor, A. W. Kutsche & Co., 2111 Woodward Ave., Detroit, Michigan.....	932,950.00	Sanford, Maine, P. O., construction; contractor, V & M construction Corporation, 68 Cowles Ave., Yonkers, N. Y....	63,498.00
Department Agriculture, Ext. Bldg., Washington, D. C., elevator plant; contractor, Westinghouse Electric Elevator Co., 1500 North Branch St., Chicago, Illinois.....	263,750.00	Jefferson City, Mo., P. O., construction; contractor, A. W. Kutsche & Company, 2111 Woodward Ave., Detroit, Michigan.....	249,000.00
Dover, Ohio, P. O., construction; contractor, Patterson Engineering Co., Inc., 8044 Wheeler Ave., Detroit, Mich..	58,300.00	Alameda, California, P. O., extension and remodeling; contractor, W. G. Thornally, 354 Hobart St., Oakland, Calif...	63,800.00
Spencer, Iowa, P. O., construction; contractor, Midwest Contracting Co., 752 Builders Exchange, Minneapolis, Minn...	72,789.00	Cape Charles, Va., P. O., construction; contractor, Samford Bros., Inc., 301 Washington Ave., Montgomery, Ala...	53,883.00
Chattanooga, Tenn., P. O., construction; contractor, Ralph Sollitt & Sons Construction Co., South Bend, Indiana....	813,600.00	Kenosha, Wisconsin, P. O., construction; contractor, Anderson & Co., 1632-6 W. 75th Place, Chicago, Illinois.....	156,700.00
Nyack, New York, P. O., construction; contractor, Charles Anderson, Fort Montgomery, New York.....	92,900.00	Joilet, Illinois, P. O., extension and remodeling; contractor, George E. Vonville, 1033 Wentworth Ave., Calumet City, Illinois.....	99,000.00
Lynchburg, Va., P. O. & Ct. H., construction; contractor, Ralph Sollitt & Sons Construction Co., South Bend, Indiana.....	338,300.00	Williamstown, Mass., P. O., construction; contractor, United Construction Engineering Corp., 60 Knowles St., Paw-	
Putman, Conn., P. O., construction; contractor, Tremaglio Brothers, 1500 Highland Ave., Waterbury, Conn.....	69,900.00		

RECENT CONTRACTS AWARDED IN OFFICE OF SUPERVISING ARCHITECT

Pawtucket, Rhode Island.....	\$77,360.00	Chicago, Illinois.....	\$340,400.00
Niagara Falls, New York, P. O., extension and remodeling; contractor, James Devault, Canton, Ohio.....	107,000.00	Newark, New Jersey, P. O. & Ct. H., construction; contractor, N. P. Severin Co., 222 West Adams Street, Chicago, Illinois.....	2,868,000.00
Quincy, Massachusetts, P. O., extension and remodeling; contractor, Supreme Construction Co., Inc., 122 E. 42nd St., New York, New York.....	123,250.00	Patchogue, Long Island, N. Y., P. O., construction; contractor, Major Constructors, Inc., 263 West 38th St., New York, New York.....	111,000.00
Norristown, Pa., P. O., construction; contractor, Ralph S. Herzog, 10 South 18th St., Philadelphia, Pa.....	178,380.00	National Institute of Health, Washington, D. C., construction of Administration and Laboratory buildings; contractor, Wills, Taylor & Mafera Corporation, 303 West 42nd Street, New York, New York.....	572,000.00
Rouses Point, N. Y., Insp. Sta. (St. John's Highway); construction; contractor, United Construction Engineering Corporation, 60 Knowles St., Pawtucket, Rhode Island.....	63,900.00	Salem, Massachusetts, P. O., construction; contractor, Louis B. Cadario and Sons, 260 Fremont St., Boston, Mass.....	185,000.00
New York, New York, Ct. H., excavation and foundations; contractor, George J. Atwell Foundation Corp., 136 East 57th St., New York, N. Y.....	387,267.00	Newark, New Jersey, P. O. & Ct. H., elevator plant; contractor, Otis Elevator Co., 810 18th St., N. W., Washington, D. C.....	124,500.00
Hagerstown, Ind., P. O., construction; contractor, Prosser Howells, 3655 Madison St., Gary, Indiana.....	49,500.00	Sioux City, Iowa, P. O., construction; contractor, Pike & Cook Co., Inc., 416 South Fifth St., Minneapolis, Minn.....	550,245.00
Labor Dept. & Interstate Comm. Com. Bldg. & Connecting Wing, Wash., D. C., construction; contractor, James Stewart & Co., Inc., 230 Park Avenue, New York, New York.....	9,081,000.00	Department of Justice Bldg., Washington, D. C., construction; contractor, George A. Fuller Co., Munsey Building, Washington, D. C.....	7,667,000.00
Post Office Dept., Washington, D. C., elevator plant; contractor, A. B. See Elevator Co., Inc., 52 Vesey Street, New York, New York.....	337,753.00	San Angelo, Texas, P. O. & Ct. H., extension and remodeling; contractor, Christy - Dolph-Cannon Construction Co., Dallas, Texas.....	119,800.00
Labor Dept. & Interstate Comm. Com. Bldg. & Connecting Wing, Wash., D. C., elevator plant; contractor, Westinghouse Electric Elevator Co., 1500 N. Branch St., Chi-		Elko, Nevada, P. O., construction; contractor, Carl C. Madson Construction Co., 515 Williams St., Denver, Colorado...	94,000.00

RECENT CONTRACTS AWARDED BY BUREAU OF YARDS AND DOCKS, NAVY DEPARTMENT

Sunnyvale, Cal., Industrial Bldgs; contractor, Robt. E. McKee, Los Angeles, Cal.....	\$165,700.00	Sunnyvale, Cal., Boiler Pl. Equip. and Piping Systems; contractor, Fred. W. Snook Co., San Francisco, Cal.....	\$84,627.00
Pearl Harbor, T. H., Paving and Runways; contractor, Ralph E. Woolley, Honolulu, T. H.....	161,650.00	Quantico, Va., Road Const. and Improvements; contractor, Robt. C. Lassiter, Raleigh, N. C.....	71,730.00
Sunnyvale, Cal., Helium Purif. Plant; contractor, The Helium Co., Inc., Louisville, Ky.....	133,500.00	Sunnyvale, Cal., Underground Elec. Dist. Light. Systems; contractor, NePage McKenny Co., San Francisco, Cal.....	62,887.00
Hampton Roads, Va., dredging; contractor, The Arundel Corp., Baltimore, Md.....	120,000.00		

RECENT CONTRACTS AWARDED IN CONSTRUCTION SERVICE, VETERANS' ADMINISTRATION

Roseburg, Oregon, Vet. Adm. Home, Gen. Const. of Buildings; contractor, Murch Bros. Constr. Co., St. Louis, Mo....	\$663,000.00	Wichita, Kansas, Vet. Adm. Hospital, Plumbing, Heating and Elec. Work; contractor, Connor & Ripstra, Wichita, Kans..	\$180,616.00
Roseburg, Oregon, Vet. Adm. Home, Plumbing, Heating and Elec. Work; contractor, Redmon Heating Co., Louisville, Ky.	264,723.00	Ruthland Heights, Mass., Vet. Adm. Hospital, Const. Admin. & Clinical Bldg; contractor, W. P. Thurston Co., Inc., Richmond, Va.	202,500.00
Togus, Maine, Vet. Adm. Home, General Const. Work; contractor, C. Smith & Sons, Inc., Hartford, Conn.	374,000.00	Hines, Ill., Vet. Adm. Hospital, Const. of Nurses Quarters; contractor, Anderson & Co., Chicago, Ill.	63,770.00
Perry Point, Md., Vet. Adm. Hospital, Nurses and Attendants Quarters; contractor, The J. L. Robinson Constr. Co., Baltimore, Md.	238,259.00	Des Moines, Ia., Vet. Adm. Hospital, Const. Buildings; contractor, H. G. Christman Co., South Bend, Ind.	661,500.00
Togus, Maine, Vet. Adm. Home, Plumbing, Heating and Elec. Work; contractor, The D. C. Engineering Co., Washington, D. C.	89,500.00	Des Moines, Ia., Vet. Adm. Hospital, Plumbing, Heating, and Elec. Work; contractor, C. A. Hooper, Madison, Wis.....	226,010.00
Danville, Illinois, Vet. Adm. Home, Hospital Building No. 1; contractor, H. B. Ryan Co., Chicago, Ill.	265,000.00	Danville, Ill., Vet. Adm. Home, Plumbing, Heating and Elec. Work; contractor, Tibbetts Plum. & Heating Co., Union City, Ind.	96,900.00
Wichita, Kansas, Vet. Adm. Hospital, General Const. of Buildings; contractor, Henry B. Ryan Co., Chicago, Illinois...	513,000.00	Danville, Ill., Vet. Adm. Home, New Boilers, Etc.; contractor, H. J. Osterfeld Co., Dayton, Ohio	60,131.00

CONTRACTS RECENTLY AWARDED IN QUARTERMASTER GENERAL'S OFFICE

Barksdale Field, La., A. C. Barracks; contractor, Tom Wood, Sherman, Texas.....	\$104,700.00	Ofc. Qtrs., Hangar, Parachute Annex, A. C. Whse., Radio Bldg., Oil and Dope Hs.; contractor, J. D. Hannah Co., San Francisco, Cal.	\$850,675.00
Barksdale Field, La., Drainage Syst., Flying Fld.; contractor, Geo. J. Robinson Co., Pine Bluff, Ark.	78,448.39	Langley Field, Va., Theatre and Gym.; contractor, Rogers & Leventhal, Inc., Chattanooga, Tenn.	79,191.00
Langley Field, Va., Elec. Dist. and St. Lighting; contractor, L. M. Myers Const. Co., New York, N. Y.....	95,132.70	Langley Field, Va., Roads, Curbs, etc.; contractor, Brooks Const. Co., Norfolk, Va.....	96,350.00
Bolling Field, D. C., A. C. and Q. M. Whses, Q. M. Maint. Bldg., Fire Sta. and Grdhs.; contractor, Harman Eng. Co., Chicago, Ill.	96,979.00	Fort Mason, Cal., Ext. to Pier No. 2; contractor, Duncanson Harrelson Co., San Francisco, Cal.	68,777.00
Hamilton Field, Cal., Flying Fld. Drainage; contractor, Earl W. Heple, San Jose, Cal.....	55,844.00	Wheeler Field, T. H., Sewer Line, Septic Tank, etc.; contractor, Marks Const. Co., Honolulu, T. H.....	64,888.00
Hamilton Field, Cal., Roads, Curbs, Gutters, etc.; contractor, Pacific States Const. Co., San Francisco, Cal.	57,148.18	Wheeler Field, T. H., Runways, Aprons, and Drains; contractor, Ralph E. Woolley, Honolulu, T. H.....	97,329.00
Hamilton Field, Cal., Barrack,			



U. S. VETERANS HOSPITAL
Hartford, Conn.

Construction Div., Veterans' Administration, Architects.

For the Exteriors and Interiors

The U. S. Veterans' Hospital at Hartford, Conn., shown above, is a very fine example of the use of Atlantic Terra Cotta for decorative trim in conjunction with brick. The semi-luminous gray color imparts a pleasing contrast that accentuates the design and gives that expression of cheerfulness and life so necessary in a building devoted to the sick.

The design, too, perfectly adapts itself to the use of Atlantic Terra Cotta. Repetition of ornament, such as occurs in the pier capitals, the urns, the balustrade units, as well as the details of the cornices, piers, sills and other features, can be more economically manufactured in Terra Cotta than in any other building material.

This economy, plus the many other advantages of Atlantic Terra Cotta, such as its permanence, its fire resistance, its ease of erection and its almost unlimited selection of everlasting colors, has given this material preference in a great number of State, County and Municipal Hospitals. Other recent Government Hospitals which have used it are the U. S. Veterans' Hospitals at Somerset Hills, N. J., Coatesville, Pa., Tuscaloosa, Ala., and Hutington, W. Va., as well as the Clinical Building, Veterans' Hospital, Augusta, Ga., and Barracks No. 8 of the U. S. Soldiers' Home, Johnson City, Tenn.

ATLANTIC TERRA COTTA COMPANY

19 WEST 44TH STREET, NEW YORK

Southern Branch: Atlanta Terra Cotta Co., Atlanta, Ga.

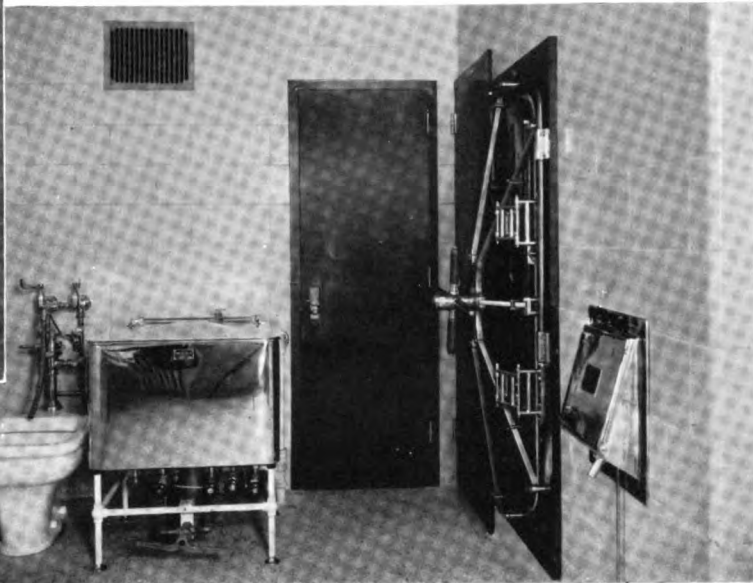
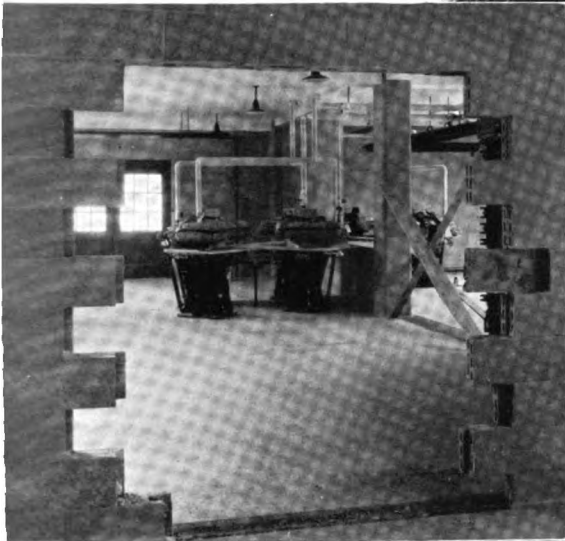
Washington Representative: Chas. S. Salin & Co., 907-15th St., N.W.

ATLANTIC TERRA COTTA

BROOKLYN STATE HOSPITAL
 Creedmoor, L. I., N. Y.
Wm. E. Haugaard, Archt.



PILGRIM STATE HOSPITAL
 Pine Aire, L. I., N. Y.
Wm. E. Haugaard, Archt.



HOSPITAL FOR CONTAGIOUS DISEASES
 Springfield, Mass.
Kirkham and Parlett, Archts.

f Hospitals and Institutions

Atlantic Wall Units are becoming the standard among interior wall facing materials for hospital use. Their sanitary values, their soft, cheerful colors, their resistance to fire, their economy in cost and erection are causing them to be used wherever the best is required in modern hospital construction.

Pictured above are three typical installations. The top view shows a continuous flow bath room faced with Atlantic Wall Units in a rich green glaze, a restful color considered beneficial to those required to take this type of treatment. Under this is shown a sterilization room, one of the many sections in this up-to-date Springfield hospital faced with this versatile material. The other illustration of a section of wall construction in a laundry of the new Pilgrim's State Hospital clearly shows the simplicity of erection of Atlantic Wall Units.

Atlantic Wall Units have an appropriate use in practically every type of building. The new Post Office at Trenton, N. J., for instance, will have a wainscot of this material in all the work rooms.

You are invited to write for illustrated booklets in regard to either Atlantic Terra Cotta or machine made Atlantic Wall Units.

ATLANTIC TERRA COTTA COMPANY
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 Southern Branch: Atlanta Terra Cotta Co., Atlanta, Ga.
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ATLANTIC WALL UNITS

FEDERAL SEABOARD TERRA COTTA

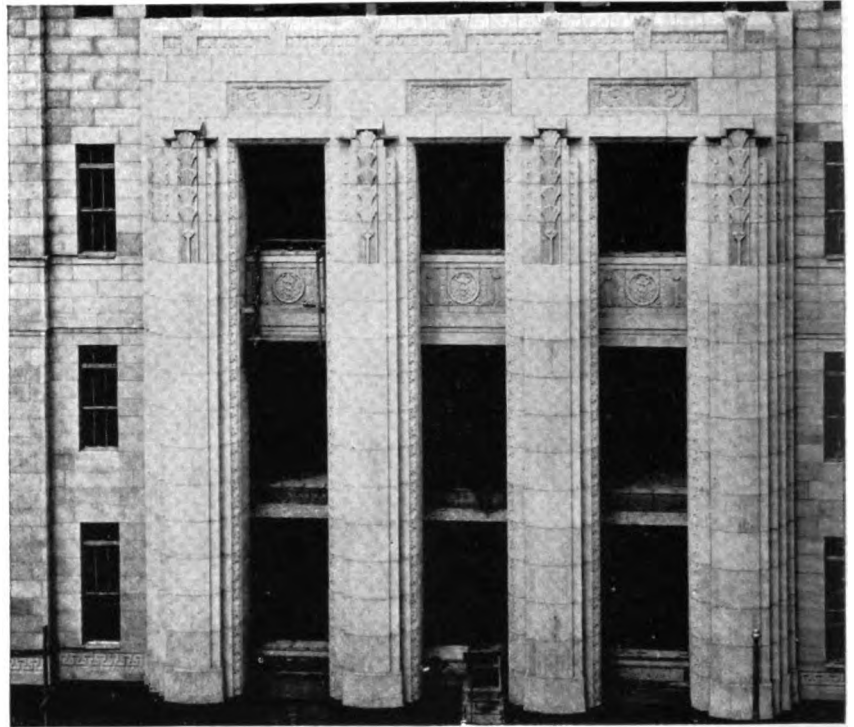
FEDERAL BUILDING, BOSTON, MASS.
Office of Supervising Architect, *Architect*
Cram & Ferguson, *Associates*
N. P. Severin Co., *Builder*



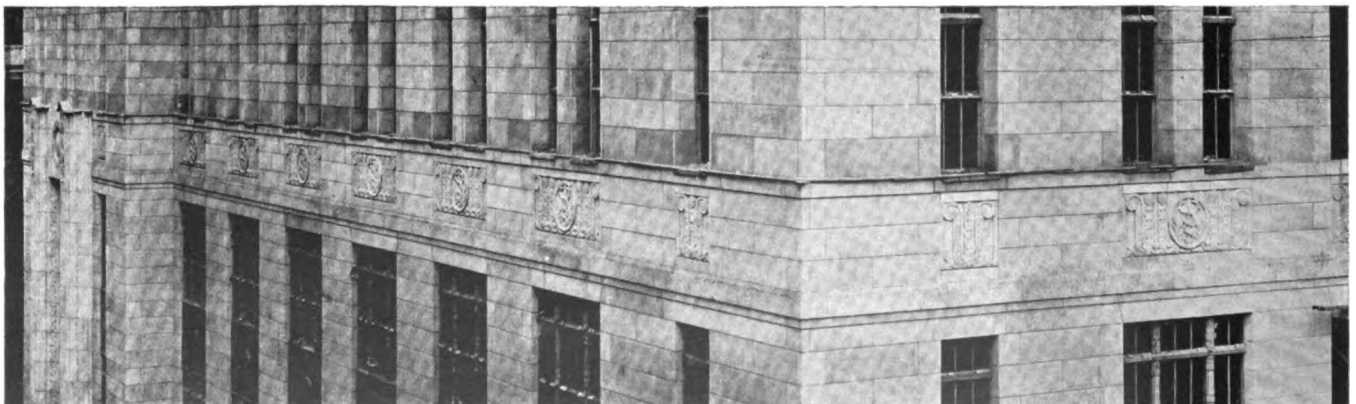
The carved decorations are of Federal Seaboard Terra Cotta successfully matching in color and joint scale the granite and limestone of the facades.



**FEDERAL SEABOARD
TERRA COTTA CORPORATION
10 E. 40th STREET, NEW YORK CITY**



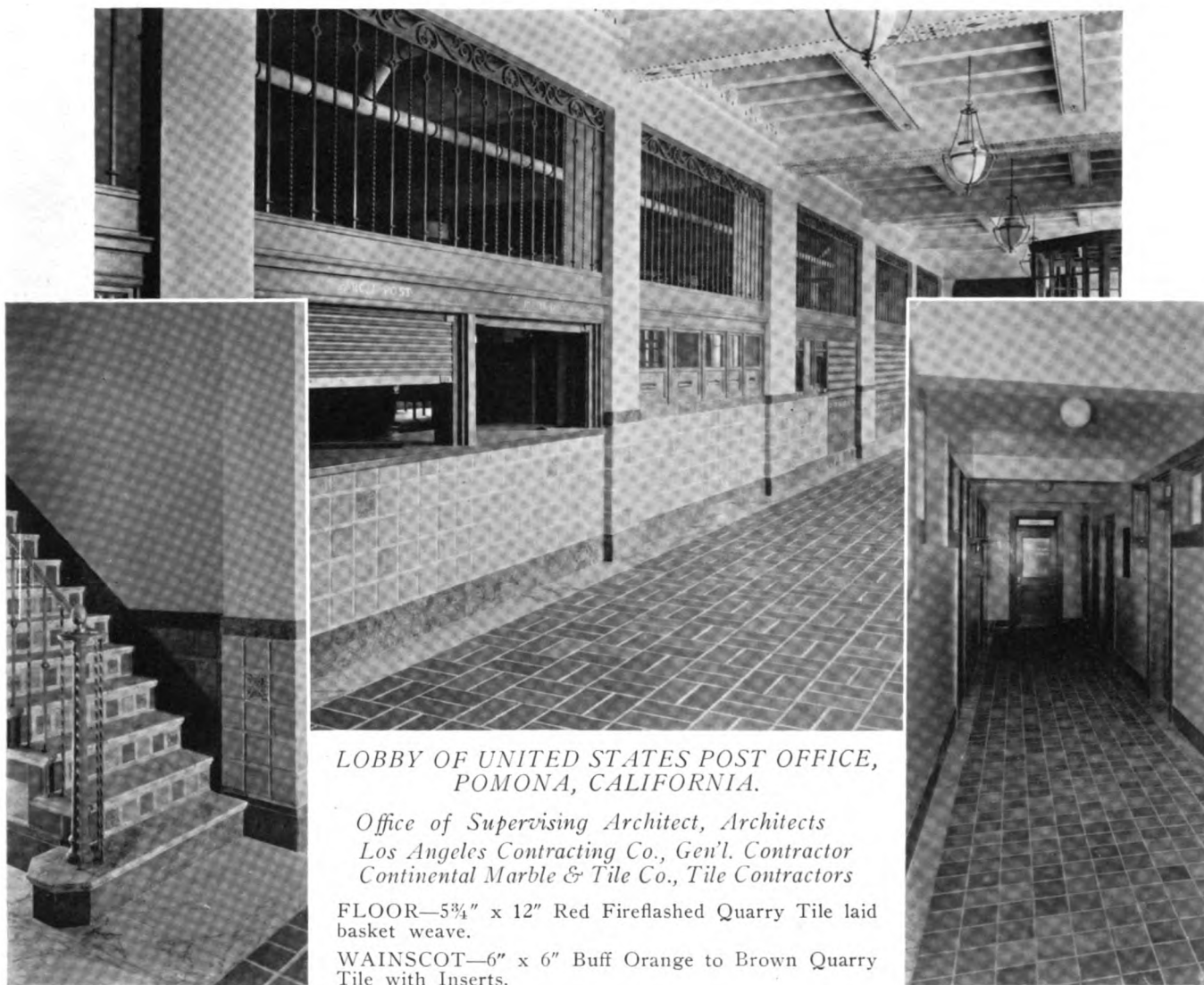
Detail of terra cotta granite spandrel panel. Note jointing scale.



THE TREND IS TO QUARRY TILE

for floors and wainscots in Public Buildings

Beautiful - Durable - Economical



STAIRWAY

CORRIDORS

LOBBY OF UNITED STATES POST OFFICE,
POMONA, CALIFORNIA.

*Office of Supervising Architect, Architects
Los Angeles Contracting Co., Gen'l. Contractor
Continental Marble & Tile Co., Tile Contractors*

FLOOR—5¾" x 12" Red Fireflashed Quarry Tile laid
basket weave.

WAINSCOT—6" x 6" Buff Orange to Brown Quarry
Tile with Inserts.

THESE illustrations show one of the many Federal Buildings,
designed by the office of the Supervising Architect, in which
Quarry Tile has been used.

*Representatives in
principal cities.*

ROMANY TILES

*Special Booklet
upon request*

MANUFACTURED BY
UNITED STATES QUARRY TILE CO. PARKERSBURG, W. VA.

MEMBER ASSOCIATED TILE MANUFACTURERS



BRONZE

for Beauty,
Dignity and
Permanency



LOBBY, POST OFFICE, LOWELL, MASS.;
Office Supervising Architect, Architects; Frederick F. Meloy, Contractor.



Interesting bronze treatment of stairway in lobby
of Post Office at Lowell, Mass.

IN this important Post Office . . . as well as in numerous others throughout the country . . . the architects have chosen wisely.

There is warmth to Bronze . . . solidity . . . richness in tone . . . and more, there is the knowledge that the cost of maintaining such a lobby will be at a minimum.

The use of Bronze, coupled with the use of Copper and Brass for roofs, for flashings, gutters, downspouts and cornices—for piping—and the use of Brass and Bronze for hardware means the best in building materials. These metals stand through the years and insure to the Federal Architect the confidence that his service to the Government is complete.

The Copper & Brass Research Association has published a book on ornamental Bronze, as well as other subjects, and the illustrations have been selected by a group of leading architects after consideration of architectural harmony. This book will be sent to any Federal architect upon request or to any private architect engaged in Government work.

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