July, 1937

THE FEDERAL ARCHITECT

Published by
THE ASSOCIATION OF FEDERAL ARCHITECTS

HOUSING NUMBER

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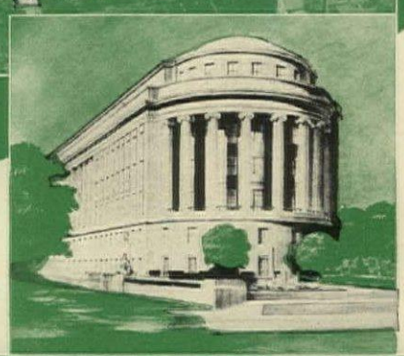
BUILDING.

3. POST OFFICE DEPARTMENT BUILDING

4. OLD HOUSE OF REPRESENTATIVES OFFICE BUILDING

5. DEPARTMENT OF AGRICULTURE BUILDING

6. At Right: APEX BUILDING



(1) *Architect:* David Lynn. *Consult*
Engineer for Air Conditioning: Char
S. Leopold. *Air Conditioning Contrac*
The Carrier Corporation.

(2) *Architect & Engineer:* U. S. Treasu
Department, Procurement Divisi
Consulting Architect: Waddy B. Wo
Heating Ventilating and Air Condition
Contractor: Riggs Distler & Company

(3) *Architect & Engineer:* U. S. Treasu
Department, Procurement Divisi
Consulting Architect: Delano & Aldri
Consulting Engineer: Syska & Hennes
Air Conditioning Contractor: Mehring
Hanson Co.

(4) *Architect:* David Lynn, Architect
Capitol. *Consulting Engineer for Air C*
ditioning: Charles S. Leopold. *Air Co*
tioning Contractor: Pennsylvania E
ineering Co.

(5) *Architect & Engineer:* U. S. Treasu
Department, Procurement Divisi
Consulting Engineer for Air Conditioni
Main Building: Charles S. Leopold.
Conditioning Contractors: Riggs Distle
Company, Carrier Corporation, Yo
Ice Machinery Corporation
Carbondale Company.

(6) *Architect & Engineer:* U. S. Treasu
Department, Procurement Divisi
Consulting Architect: Bennett-Parson
Frost. *Mechanical Engineer:* George
Luce, Jr. *Heating, Ventilating, and*
Conditioning Contractor: Mehring & H
son Company.

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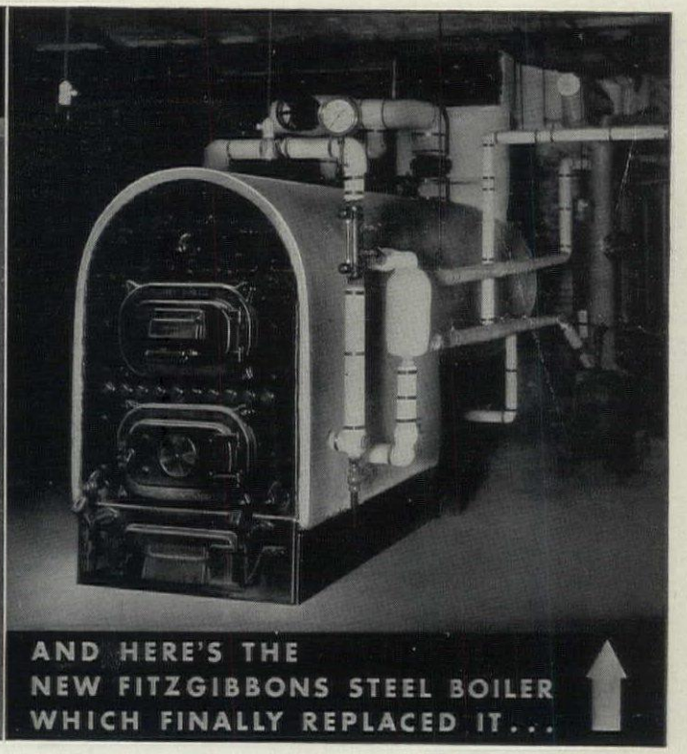

This FITZGIBBONS STEEL BOILER was installed at the Post Office in Oswego, N. Y., when Grover Cleveland started his first term as President. For 46 years *it provided outstanding heating service . . . finally was replaced by the modern FITZGIBBONS STEEL BOILER shown on the right— one of the "FS" series.*

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ARCHITECTURALLY SPEAKING

by

OTIS ELEVATOR COMPANY

IT WOULD be a strange sight indeed if, all of a sudden, wide cars, narrow cars, cars of every shape and size appeared on the railroad tracks of the country.

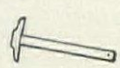
But railroad cars must all be able to operate on the same gauge track — that one restraining factor has helped set a precedent of car standardization.

Every elevator, however, has its own individual hatchway and tracks. Because of this, elevator standardization has not been an absolute necessity. But in the interest of economy and quicker delivery and installation of new equipment, there has been, this long while, a need for Elevator Standards.

Take, for instance, the small freight machine with a capacity of 2500 pounds at 50-feet-per-minute speed. Careful checking has disclosed that the dimensions specified for the car platform for this machine have varied only a few inches over a period of years. Obviously, this variation can be eliminated in favor of a standard for this machine. Obviously, a standard-size hatchway would mean a saving, all the way along the line, from the architect's office — through the engineering and order departments — the factory — and the installation.

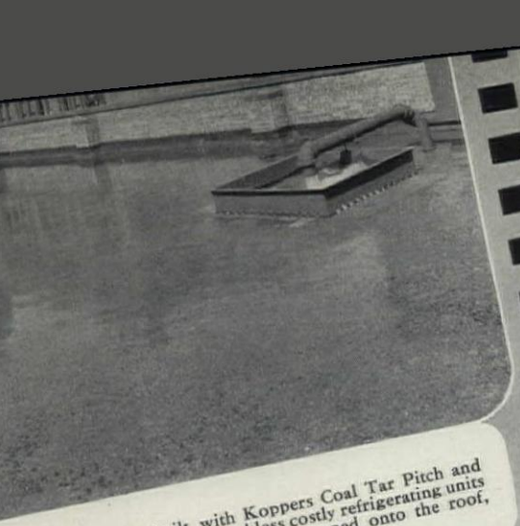
And most installations can readily conform to standards determined as best suited to conditions under which the machines will operate. Good examples are the standards established for apartment houses.

After a great deal of study and research, as in the cases mentioned, Elevator Standards have been determined for many types of Otis machines, both passenger and freight. More and more of these machines will be available, as the work of research on standard data progresses. And where a standard will fit a given installation, it will most assuredly mean a considerable saving to the man who buys it.



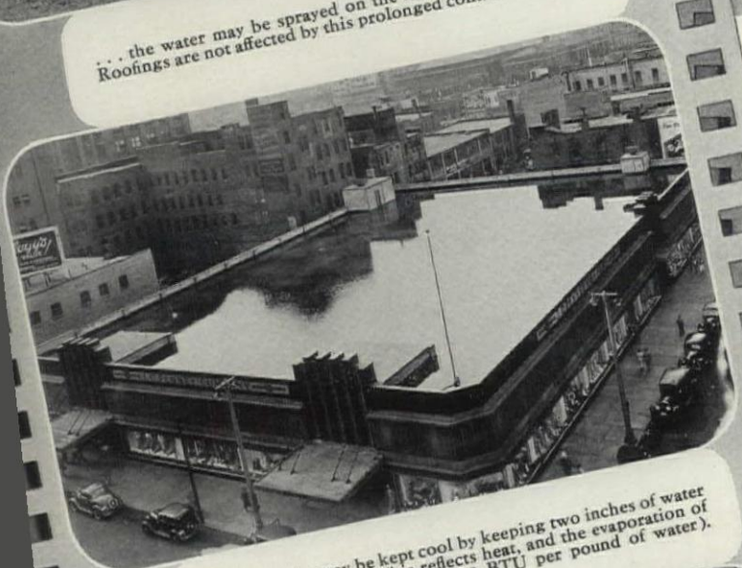
And may we mention the fact that Elevator Standards are not confined to equipment for a new installation? A standard of excellence has also been determined in the matter of maintenance of elevators. Otis Maintenance offers a life-extension service that cuts elevator depreciation to the bone.

The details of this service are definitely established — its quality is the same every day in every part of the country. Which means that the service contemplated in the specifications of an Otis Elevator can be delivered no matter where the job is located.

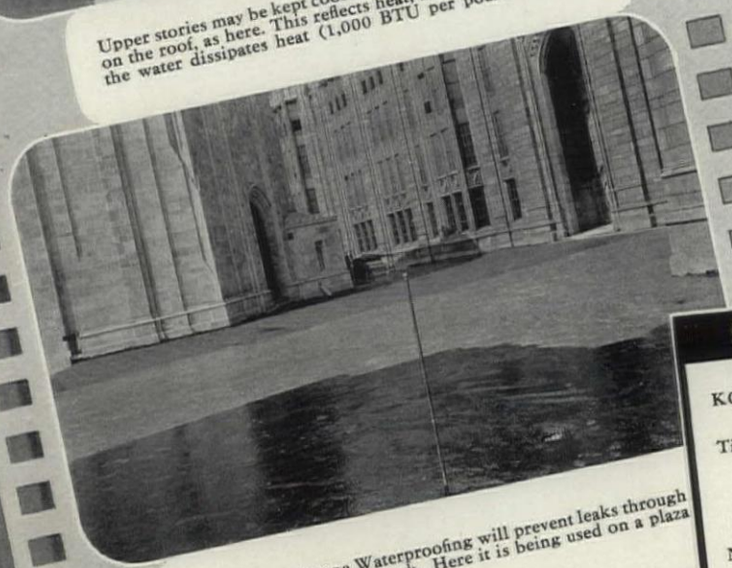


ater-cooled roofs, built with Koppers Coal Tar Pitch and elt permit the use of smaller and less costly refrigerating units or air-conditioning. Water may be pumped onto the roof, s here, or . . .

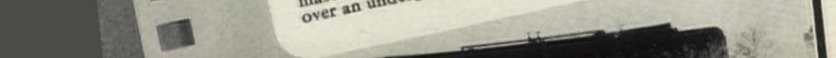
. . . the water may be sprayed on the roof, as here. Koppers Roofings are not affected by this prolonged contact with water.



Upper stories may be kept cool by keeping two inches of water on the roof, as here. This reflects heat, and the evaporation of the water dissipates heat (1,000 BTU per pound of water).



Koppers Membrane Waterproofing will prevent leaks through masonry and concrete work. Here it is being used on a plaza over an underground passage.



The Wood Preserving Corporation, a Koppers subsidiary, provides lumber and timber, pressure treated with creosote (as in these sills, floor joists and headers) or with salt solutions (as in this sub-flooring and these uprights) to resist termite attack and decay.

Koppers Tarmac, a coal tar paving used on thousands of miles of heavy-traffic highway, is also the most architecturally pleasing surface for private drives, walks, parking areas, etc. Economical, too.

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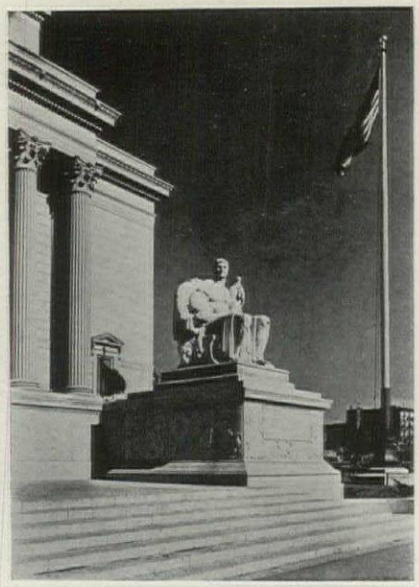

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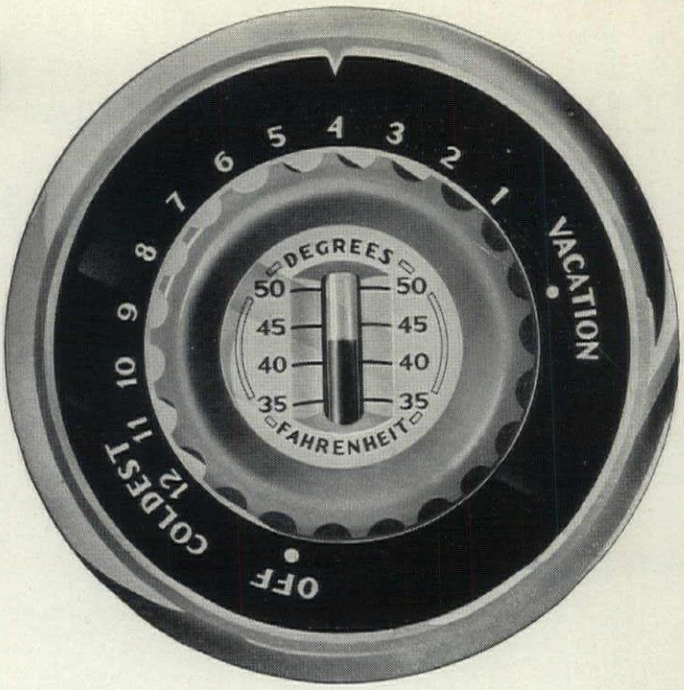
Money Saving Feature



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THAT PERMITS REFRIGERATOR CONTROL FOR LOWEST OPERATING COSTS

That's why it is important to consider Leonard before deciding on any refrigerator. Leonard is not only far more economical to operate—even in the hottest weather—but the Master Dial controls and reduces operating costs still lower. And remember, only Leonard has this vitally important money-saving improvement.

The new Leonard Electric is well worth investigating. And that's true not only because of the Master Dial, but because of Leonard's unfailing 56-year-old reputation for giving the public more for its money. In no other refrigerator made is there such a host of extra values, including Len-A-Dor Pedal—service shelf—vegetable drawer—rubber grids in all ice trays—new-type shelves . . . everything that makes a refrigerator truly modern!

We will be glad to send you complete information.

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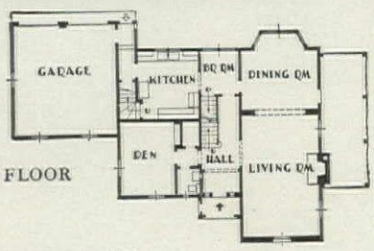
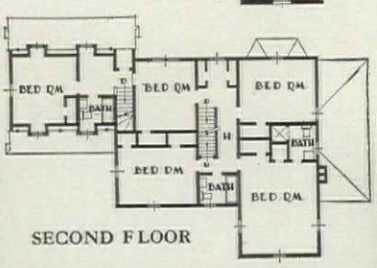
"THIS 'NEW AMERICAN' HOME WAS PLANNED AROUND THE KITCHEN"

SAYS PAUL B. SWEENEY
OF SWEENEY & BURDEN, ARCHITECTS, SYRACUSE, N. Y.



FIRST FLOOR



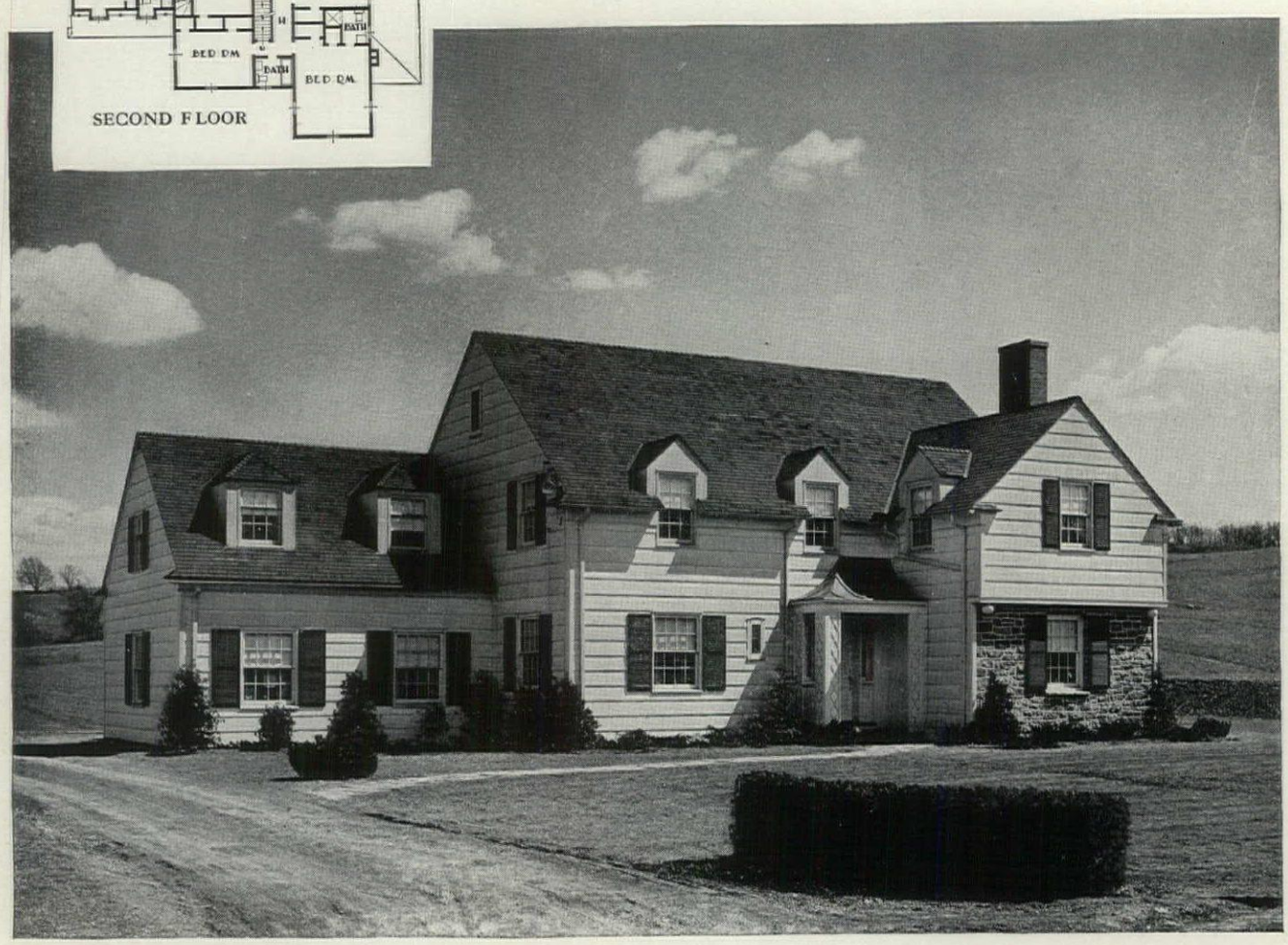
SECOND FLOOR

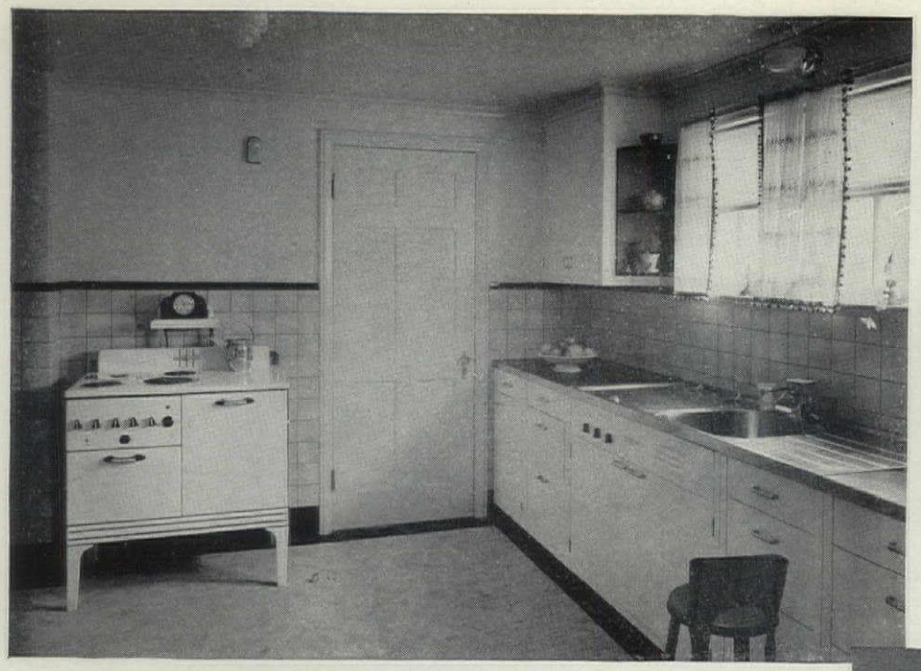
● "In planning this home for Dr. and Mrs. L. E. Sutton, our first consideration was ease of operation. So we decided to make it a 'New American' home.

"Mrs. Sutton was especially interested in three things—a well arranged, workable kitchen, a spacious living room, a recreation spot where the children could entertain without disturbing other members of the family.

"We accomplished all three. We installed a complete General Electric kitchen; ran the living room the entire width of the house with dining facilities at one end; provided a large playroom in the basement and a carpentry-workshop as well. A modern G-E Home Wiring System guarantees electrical adequacy, and G-E automatic heating and winter air-conditioning assures uniform even temperature. In this 'New American' Home *everything* works — for the greater health and freedom of its occupants."

Paul B. Sweeney





Visitors to the Sutton home never fail to admire its smart and smoothly efficient kitchen. Completely equipped with a G-E refrigerator, range, dishwasher and sink with Disposall (waste unit).

In one corner of the carpentry-workroom in the Sutton basement, stands this gleaming G-E air-conditioning and heating unit. It has turned in a 100% performance since its installation.

The Sutton house is an excellent example of modern wiring and scientific heating. No dark spots—or dim corners. The lamps used are Mazdas made by G-E—the kind that stay brighter, longer.

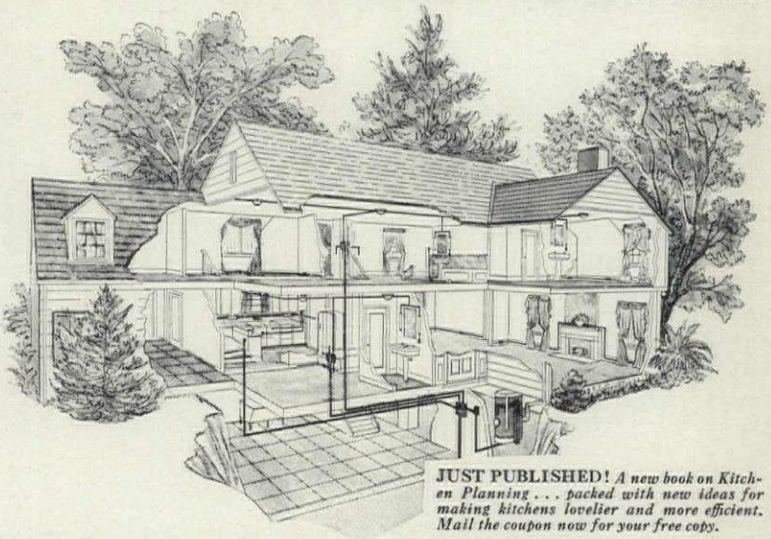
The G-E kitchen—heart of the "New American" Home

No feature of the Sutton Home has received more enthusiastic praise for the architects than the smoothly efficient G-E all-electric kitchen. It simplifies work—saves wasted steps and energy—makes housework easier. A G-E kitchen is the heart of every "New American" Home. It includes such labor saving devices as a General Electric refrigerator, range, dishwasher and sink with a General Electric Disposall (waste unit). General Electric Kitchen units are flexible enough to fit every type of floor plan. They may be installed complete — or piece by piece.

The phantom drawing below shows the efficient G-E Home (Planned) Wiring system in the Sutton house —which assures full current, adequate outlets and the elimination of blown-out fuses.

First Aid to Busy Architects

The General Electric Home Bureau serves architects and their clients — with technical advice and assistance on all home-electrification and air conditioning problems. We will check your plans from an electrical point of view — prepare wiring and heating specifications — scientific lighting plans — kitchen schemes — and Home Wiring (Planned Wiring) layouts. We can supply you with valuable data on new electrical materials, methods, and equipment. Let us help you on your next job. Address: The General Electric Home Bureau, 570 Lexington Ave., New York.



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JUDGE WETMORE WRITES

Coral Gables, Fla., June 15, 1937.

Dear Morris:

"We are fearfully and wonderfully made," particularly in the matter of faces.

Did you ever see the entire collection of the portraits in oil of the Secretaries of the Treasury? And do you think any fair minded individual would find fault with the expression: "good, bad and indifferent" as applied to them?

In the early '90's when we were making preparations for the Treasury Department's part of the Government Exhibit at the World's Columbian Exposition, in Chicago, it was suggested that visitors to the Government Building might be interested to see the portraits of the men who had graced the Treasury portfolio. A check-up was made from Alexander Hamilton, the first Secretary, to John G. Carlisle, the then incumbent, which showed the list to be incomplete by some ten or a dozen. Commissions for painting these were given to a number of artists. The painting of the portrait of Secretary Carlisle was given to Henry Ulke, a venerable artist whose studio was in the vicinity of the Treasury building on Fifteenth Street in one of the squares now included in the site of the Department of Commerce Building.

Important legislation affecting the fiscal operations of the government was pending, and Secretary Carlisle could not find time to go to the artist's studio to sit for his portrait, and this resulted in embarrassment and trouble for the artist which he related to me when, after having practically completed the portrait, he asked me and a number of others who were familiar with Secretary Carlisle's appearance to view the portrait and offer suggestions or make criticisms. When I reached the studio Mr. Ulke said: "Dis iss a very unsatisfactory vay to paint a portrait. Mr. Carlisle iss too busy to come to the studio. I can't paint in his office—too much interruption. I go up there, take a look at him, come back here and paint a little, then go back und take anodder look at him, und maybe come back und rub out vat I had done and do it over again. It makes me dink of the time ven I vas an art student in Berlin. Vun day a young man come to my teacher und say: 'I vant you to paint a portrait of my vadder.' 'All right' my teacher say, 'send him to me.' 'I can't' the young man say, 'because my vadder vas dead already.' 'Vell den' my teacher say, 'bring me his photograph.' 'I can't,' the young man say, 'because I haven't any photograph of him.' 'Mine Gott!' my teacher say, 'How do you dink I can paint a portrait of your vadder ven I never saw him; you have no photograph of him und he iss dead?' 'Vell' said the young man, 'I thought if I tell you how big he vas; the kind of complexion he had; the color of his hair und eyes, und how he vore his viskers maybe you could paint his picture—and besides I got a suit of his clothes. I vish you vould dry.' 'Oh vell' my teacher say, 'I'll see vat I can do.'

"Den my teacher paint a portrait und put it in a frame und hang it on de vall, und send for the young man. Ven he come he take yoost von look at the picture und say: 'Iss dat my vadder?' 'Ya', my teacher say, 'dot's your vadder.' 'Acht Gott' the young man say, 'How he vas changed since he vas dead.'"

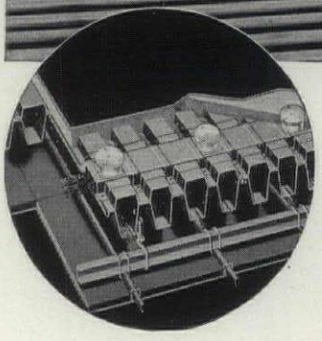
Just at this juncture I heard a piano being played most artistically, in another part of the house, and I commented on it. "Dat's my daughter" Mr. Ulke said proudly. "She iss a fine musician. I've got a son too. He iss an officer in the Coast Guard. He iss a fine boy." I said: "Mr. Ulke, do either of your children inherit your talent?"

I must have got on the end of an exposed nerve. Mr. Ulke bristled with scorn and indignation and fairly exploded as he exclaimed. "Heredity! Heredity! I don't believe in heredity. Vy I vonce knew a young men whose mudder vas a vet nurse."

And then there is the portrait of Leslie M. Shaw, painted by Chartrand, who came over from Paris to paint the President's portrait. It is said he painted Secretary Shaw's portrait in two sittings, and it is a wonderfully striking likeness, catching Mr. Shaw's lanky and ungainly figure in an awkward and ungraceful pose with one shoulder elevated above the other as he thrust his hands into the top pockets of his trousers. Some wag seeing the portrait said "I don't like it. The pose isn't characteristic." When asked in what particular it was not characteristic he replied: "Because he has got his hands in his own pockets."

(*Continued on page* 50)

This Floor in a Government Building gives it *a Longer Useful Life*



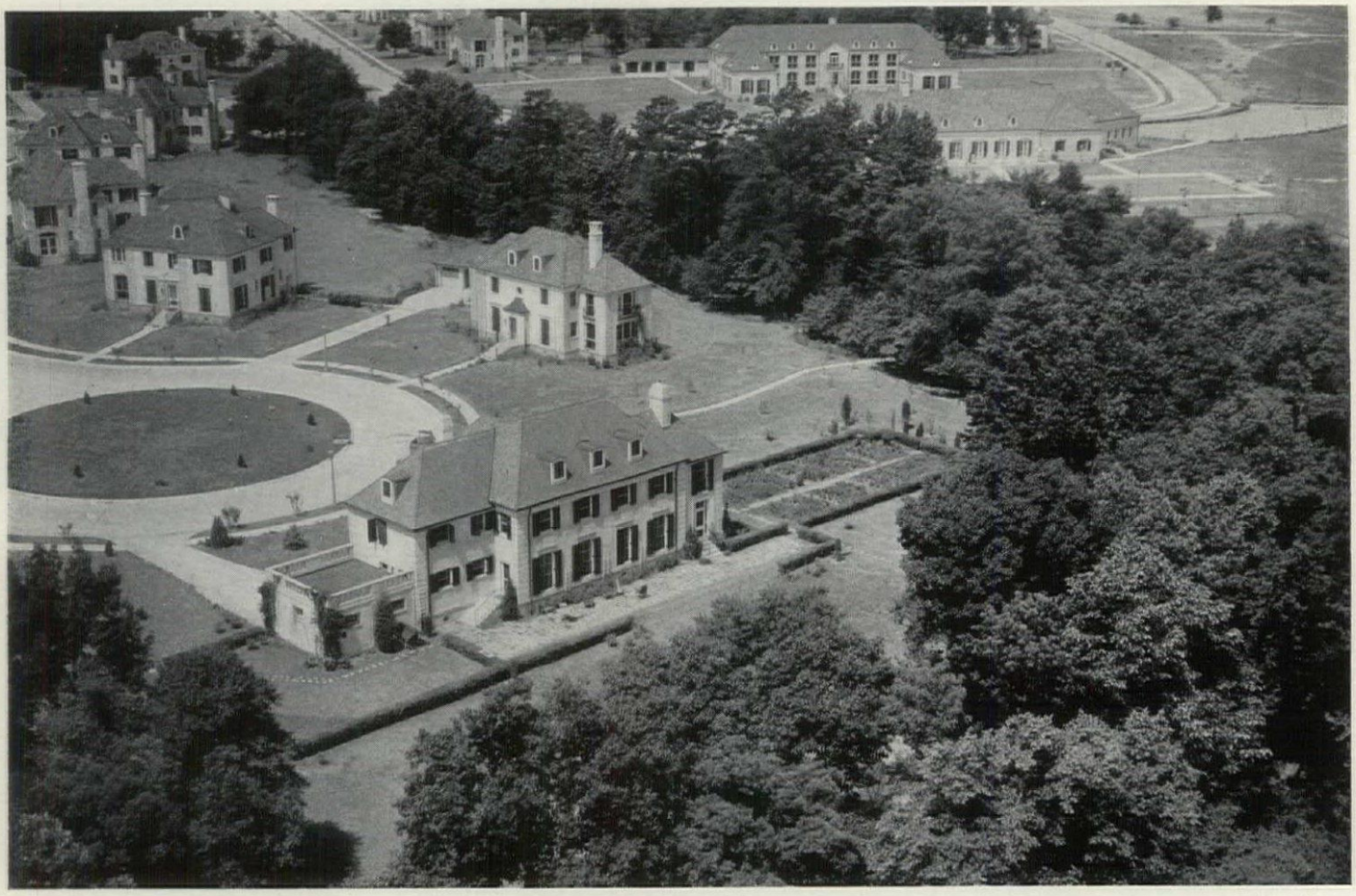
THE ROBERTSON FLOOR *in the buildings you design today insures their continued utility tomorrow. The slots shown in the floor illustrated above are prefabricated for the installation of Robertson electrical fittings, forming a header used to gather up the wiring in the floor cells. This floor is lightweight, strong, easy to install, requires only 2½" of concrete fill. Inset shows cellular structure of the floor and illustrates how every cell may be used as an electrical wireway.*

TWENTY or thirty years from now, the government buildings you design today will still be structurally sound. But will they be *electrically* sound? Will they be capable of meeting the many electrical requirements which that thirty years will have brought with them? Or will they find their life of real utility curtailed by inadequate electrical facilities?

You can make sure of giving your buildings permanent utility . . . both structurally and electrically . . . by using the Robertson Steel Floor. This revolutionary floor is not only an improved structural member whose use can speed up erection, cut dead weight in floor areas and increase safety. It is also a floor which provides a new, comprehensive electrical availability. Every one of the hollow steel cells which compose it may be used as a protected wireway for wiring distribution. It offers complete provision for today's electrical needs . . . and for tomorrow's. It permits electrical changes and additions to be made quickly, easily and economically. In a word, it insures your buildings against premature electrical obsolescence . . . an advantage of special importance to buildings housing electrified statistical services.

Here is a floor you can not afford to overlook. We invite you to write us—today—for our booklets "New Life For Buildings" and "Wiring Robertson Cellular Steel Floor." They are yours for the asking. H. H. Robertson Co., 2008 Grant Bldg., Pittsburgh, Pa.

●ROBERTSON STEEL FLOOR SYSTEM



A part of the Officers' Section at Maxwell Field, Alabama, showing in the foreground the quarters of the Commanding Officer, and at the upper right, the Officers' Mess and the apartment building for Bachelor Officers.

THE FEDERAL ARCHITECT

Published by the Association of Federal Architects
1700 Eye St., Washington, D. C.

Edwin Morris Observes

■ DO you know about these fuses that burn a little red light when they blow out? Or perhaps you live in an apartment house where the fuse problem, if when and as it springs to the forefront, is handled by the janitor in residence.

But suppose you live in a house. Have you ever arrived at that embarrassing moment, when guests have been gathered round, the lights of festivity flame high in every room, gaiety and laughter burble and resound, and suddenly the electric refrigerator, the oil-burner and all the other automatic equipment spring into action, heat goes on under chicken a la king on the electric stove and elsewhere under an assorted half-dozen percolators—and bingo! the house is in black darkness.

For a time you stumble about falling over guests and stepping on feet. You stagger downstairs, taking the best boiled shirt into the cobweb zone. Memory goeth back to the time when you propped the trusty flashlight, burglar-wise, under the left-arm-pit and systematically removed each of the ten fuses, screwing what you hoped was a good fuse into each spot in turn, until by gruelling trial and error at length illumination again returned.

By that time all husbands had comforted and kissed the wrong wives, fiancees suspected their appointed swains of having comforted and kissed the wrong fiancees, liquids had been spilled on pianos, cigarettes had burned edges of tables, and everybody was in a disagreeable mood and ready to go home or kick the hostess in the shins.

But that is a condition that no longer exists. There is this, you stumble as before to the electric panel board and there burns a little light to inform you that here is the source of trouble. Then all you have to do is to give the thing a little turn clock-wise, and the current is on again.

As a young man in Eustis, Maine, so aptly and neatly remarked one day last week, "What will they get up next?"

■ THERE has been a good deal of talk about modern architecture, to the effect that it was going to take a course of tearful penance for past sins. It was going to write down its thirty-nine articles of religion and squeeze itself in to fit them, with no room left for ideas or inspiration. And possibly that would have happened were it not for the fact that architects don't do penance very well. Heretics have entered, whose idea is to be free and easy. They want to do just as good architecture as is possible in the present highly restricted field.

They say, "We'll join your religion and agree to pass up the orders and all the old ornament except the Greek fret, and we are going to try to bring to the new architecture as much as possible of the values of the old architecture. But we realize the restrictions make it more difficult."

A fellow the other day wrote a book without once using the letter "E". It was restricting but it showed a possibility. Likewise you can accomplish architecture by agreeing not to do certain things. It is more difficult but it has a certain intriguing interest.

Once someone had the idea that a perfect building could only be built by the use of dimensions which were all multiples of the perfect number seven. A perfect building could result with that restriction but the designer would have to realize that his dimen-

sional restrictions were a handicap and not a means to an end.

So with this modern. The new fellows entering the field are coming with the idea that you cannot take a set of rules and simply by following them produce architecture. They realize rather that it is an intriguing stunt like playing baseball with skirts on. If you accomplish the result it's fun. But if you accomplish nothing you cannot take credit simply for following the rules. In other words you may not point to a building and say, "Look: Not an order nor a Classic ornament except the Greek fret" and claim it is good architecture on that account. In architecture they don't pay off on following rules.

We are in an artificial era where we have boxed in art with rules. Such an era comes every century or so. One looks back to that 18th century era of fixed rules and artificial grooves of thought. In it one could write poetry only in the couplet affected by Alexander Pope. The era demanded rules and stunts. It frowned upon anything which was natural or an evolution from the past.

They approved of nothing that wasn't done by rule. They went out and trimmed their trees to look like dogs and cats because they could not stand the traditional aspect of natural trees.

One of their social maneuvers was to play at being shepherds and shepherdesses, the costumes for which game were silks, brocades, wigs, silver-buckled shoes and the regular formal clothes of the drawing room.

In Virginia now you will find, handed down through many generations, some of the stilted jargon of the cultured people of that former age when even their language was boxed in with rules and regulations—the "cyar" and "cyurtain" and "cyarter" of the Virginians.

Such periods of stiff conventionality are caused by people tiring of the romantic methods of a previous generation which they feel are a sentimental and illogical outgrowth of years of tradition. They set up a tight code of rules to cure the situation.

It is part of the cycle that makes the world go around.

Architecture has now gone into a conventional era. It has taken on a set of purification rules. It has become pure as virtue itself. It looks back upon the excesses of McKim and Carrere and Bacon with hanging head, and dedicates itself to total abstinence, except in the matter of the Greek fret. A bare cell, a bare table, a penitential sack-cloth robe. All to purge itself for all the composite orders and egg-and-darts and naturalistic orders it has committed.

The present purification will go on for a while, a long while, and then—

About the end of the century you will find the young architects gathering round and they will be saying, "Did you fellows ever look into the fine inspired thing they did about the beginning of the century? None of this sterilized stuff we have been doing with plain walls and chopped-out ornament and only one style allowed. Those pre-contemporary guys were free as air. They let their imagination wave. They could work in any style they pleased, and they used columns—you know, round things.—"

■ WE note the following from a certain Construction Engineer's report: "The reinforcing steel had just been delivered the day previous to my visit which they said had delayed the progress of the work. I advised them I would not make any further visits unless they notified me."

■ QUITE a while ago, under the amusing direction of Harry Cunningham, the Washington Chapter of the Institute put on a non-architectural evening. The *leit-motiv* of this evening was that no member, guest, associate, waiter, check girl, busboy, sister, brother or stranger within the gate was to make use of the terms "architect" or "architecture".

The scheme was devised as a method of stimulating interest and of diverting concern to other than troubled waters. "Let's think about something else" was the vague thought or slogan. It was not by any means the feel-

ing that architecture was becoming an extinct concern of man, it was not the feeling that never again would linen be stretched upon drawing boards, never again Wealth erect Buildings, never again six per cent be anything but a rate of interest.

We have heard many architects assert that they *did* believe architecture to be obsolescent, on the way out, a mere memory of a profession that once used to be a great art and a means of personal support, but now was dying from simple lack of nourishment.

We maintain that such an attitude must be wrong. You cannot kill an art. We hear architects saying that they believe, with the return of prosperity, it will be the contractor and the engineer who will control building design. They are of the opinion that residential architecture will be in the grip of builders who will be able to hire architectural designers, or purchase for a small sum architectural designs.

They are of the opinion that tall building design and other commercial design will be dominated by the engineer who will purchase architecture to cover his supporting frame work.

The vogue of Moderne architecture which emphasized the super-importance of structural framework in architectural design, lends color to that possibility.

We think however, that the whole thought is impossible, out of reason. You cannot fool all the people all the time, and that phrase is the foundation for the permanence and continuing life of all the arts.

The public strays and wanders, but in the end it returns to the solid propositions that music must be produced by musical composers, sculpture by sculptors, paintings by painters, and architecture by architects.

It is not conceivable to us that music satisfactory to the public could be evolved by orchestras or mere players of instruments, that sculpture could be created by the unaided hands of stone carvers, that paintings come from the brushes of union labor, that architecture could rear its lovely head at the instigation merely of engineers or building contractors.

We would say the world then was upside down, that we had come to a point where our culture is on the rocks.

We have heard people say, "Of course, one should not enter the architectural profession. A man choosing his career should give thought to insurance, to the automotive trades and professions, to aeronautics, to air-conditioning, to electrical engineering."

Those are good professions. But there is going to be a bull market in architecture. It has been on the bear side for so long, it is time for a turn.

And when it turns there is going to be a scarcity of recruits. There has been underproduction in architects for a long strenuous period. Architects and architectural draftsmen have not been sprouting. Youth has not been going to the schools and the seasoned draftsmen have been diverted to the selling of electric razors and vacuum cleaners. The normal flow of man-power into the profession has been far below normal and the flow from it has been very great.

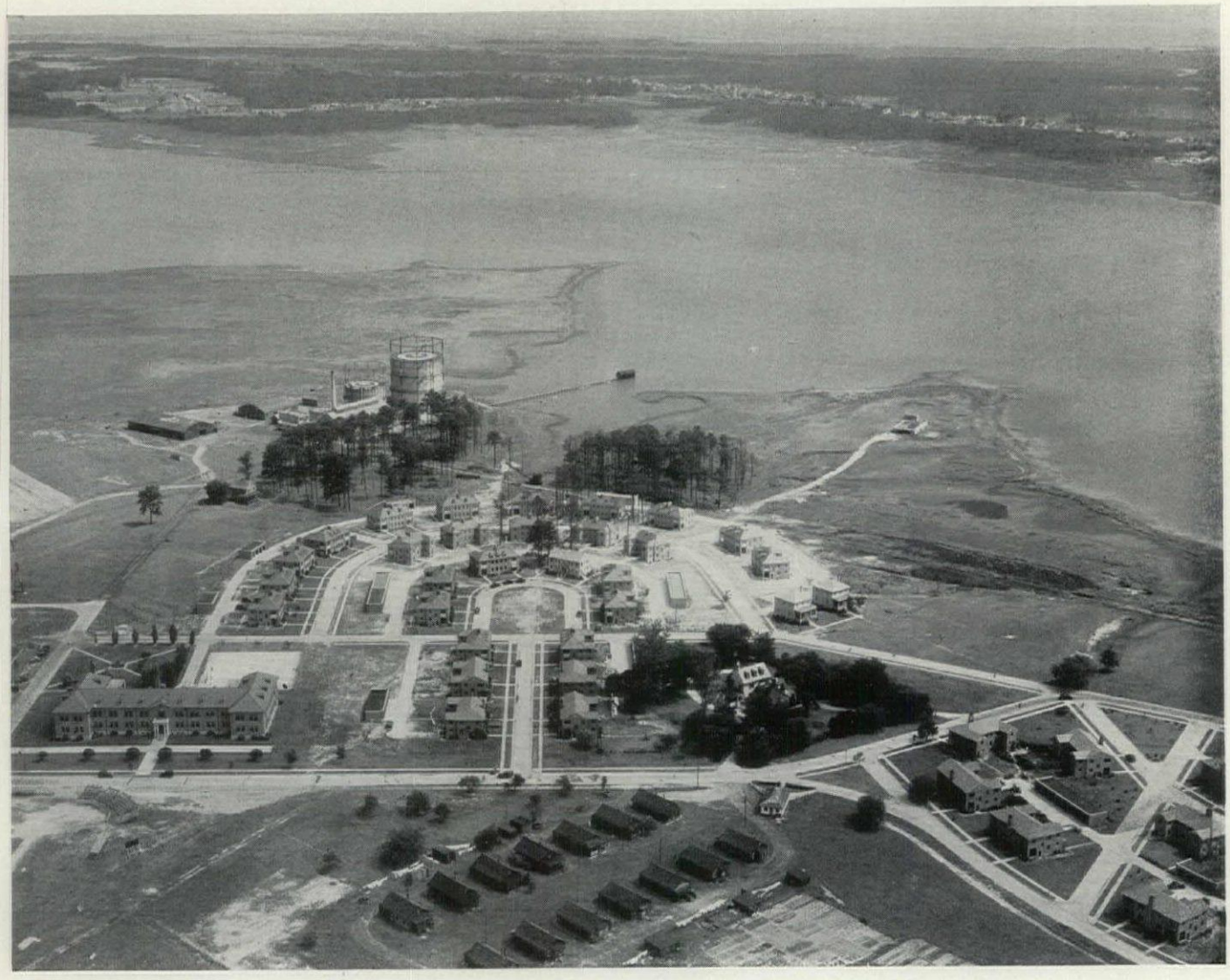
There appears to be a period ahead in which the profession will be undermanned. Young men will without doubt find it a fertile field, with the ranks just in front of them thinly populated.

There is an analogy, in reverse, to this situation in the condition of the army officer personnel that has existed since the war. The army came out of the war with a bulging portfolio of captains. There was the normal room at the top for deserving officers, but the "hump" of officers in the captain rank prevented promotion movement.

In the architectural world, instead of a hump there is a dimple. If the highest flowering of genius is among the men averaging thirty-five years of age, then it would appear that the decade beginning 1940 would be shy of trained, experienced architects and that the opportunity for success in that decade for architects and perhaps for members of all professions will be very great.

Life goes in rhythm. It is up and down. We remember reading once in a book of William Dean Howells a sentence which stated that a person of mature years was not so apt to be cast down by ill-fortune because experience had taught him that ill-fortune was usually followed by good.

Our great comfort during the Depression has been the thought that if we have sunk so deep and for so long a time into the depths, what a whale of a rebound into high places is due us!



An uncompleted group of two-family houses for Non-commissioned Officers at Langley Field, Virginia. At the left is the Enlisted Men's Barracks. In the trees is the old Colonial farmhouse of the original owner. Around it are grouped quarters of modified Colonial design, to the right are houses of a Mediterranean type. In the foreground are war-time shacks still in use.

House for the Commanding Officer, Aberdeen Proving Ground, Maryland. The portico faces the parade. The entrance front looks out over the head waters of Chesapeake Bay. The small building at the right is the old farm house, originally stone and later stucco. It has been utilized as a kitchen and service wing.

QUARTERS FOR THE ARMY

by L. M. LEISENRING

Supervising Architect, O. Q. M. G., War Department

THE average Army post is a complete community governed by its Commanding Officer and his staff and with well defined civic or administrative industrial and residential areas.

The residential areas are again divided into sections for the barracks for enlisted men—usually housed by units of organization—for the married non-commissioned officers and for the commissioned officers.

The commissioned officers are in the Army for life, that is, as much of it as they can live before the retiring age of sixty-four. In addition to their base pay they are entitled to quarters, according to their rank, and certain allowances for heat, light and subsistence.

The non-commissioned officers reinlist at stated periods if their record is good, and when married and in the upper three grades, are entitled to quarters and allowances.

If there are no quarters on the post, all are given the money to rent them, "Commutation of Quarters" it is called. This is based on a determined amount per room, the number of rooms allowed varying with *the* grade and rank of the officer. Generally this is uneconomical for the Government and unsatisfactory for many reasons. It is difficult to find quarters within reasonable distance of the post for the amounts allowed. The best discipline and efficiency are maintained with the officers close to their organizations and their commander. Only in rare cases are officers pleased with the commutation arrangement.

This is one of the chief reasons why officers and their families have continued to be quartered in all sorts of propped up and pinned together shacks until on some posts this has become a scandal regularly reported by inspecting officers and referred to by prominent Congressmen in their reports to the proper appropriating committees.

Policies as to Army Housing are determined by the General Staff and the Secretary of War. Appropriations are, of course, made by Congress, usually for specific purposes, but during the past few years, emergency funds have been made available for allocation by the President and Departmental Officials.

The basis for the construction of all quarters for commissioned officers is the statutory provision that no set for an officer of field grade or higher shall cost more than $14,500, nor for a company officer more than $12,500. This law has been in effect since 1927. Previous to that the limits were $12,000 and $9,000, respectively, with $15,000 allowed for

A formal layout of double houses for Non-commissioned Officers near the center of activities at Maxwell Field, Alabama.

general officers, the provision having been originally made by Congress in 1909 following, it must be admitted, some extravagances in a few places as to the types of quarters constructed.

The wisdom of some restriction as to cost is unquestioned (except that at large posts there should be an adequate allowance for quarters of the Commanding Officer), but this monetary restriction does not result in uniform housing at all posts, construction costs in different localities vary greatly. Also, costs go up or go down. Quarters built in 1913 could not have been built for the same money in 1920 and the quarters built then can not be considered for today.

The General Staff has set certain minimum requirements for officers' quarters by requiring for field officers four bed rooms and two baths, plus a small bed room and bath for a servant, and the usual kitchen, pantry, dining room and living room, and for company officers the same with three bed rooms.

No statutory limit has been set on the cost of quarters for non-commissioned officers, but the nature of things demands that the cost be kept well below these others. Some years ago they were given a kitchen, living room, bath and two bed rooms. Recently a great effort has been made to expand their sleeping quarters, for it is a fact that the non-coms often have the largest families on the post.

With the foregoing as general condition given to the Quartermaster General, his problems of design begin.

The Construction Division of the Quartermaster Corps maintains and operates, as well as constructs, all buildings and utilities at Army Posts. One of the first problems of design is the problem of maintenance after construction. Just as soon as a house is finished its maintenance begins and the original choice of materials must take this into account. Also its future operation greatly af-

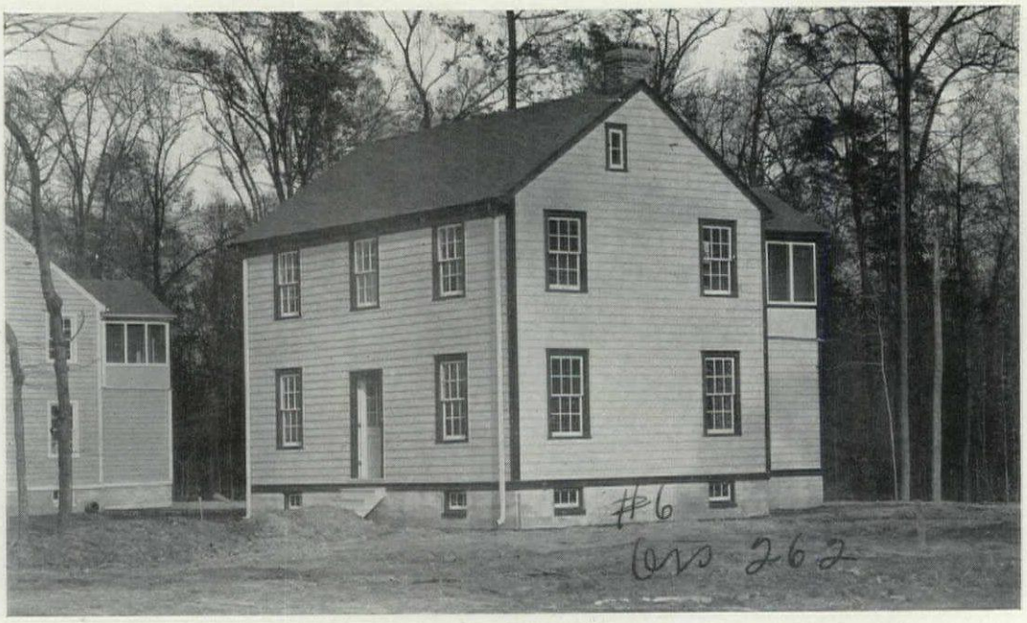
Air view of Maxwell Field, Alabama. There a slightly rolling and partly wooded area was used to advantage in an informal layout of Officers' Quarters, almost all of which were built at the same time.

fects its design. For instance: How is it to be heated—by coal, oil, or natural gas? If coal, what kind—hard or soft? and ipso facto the house has a large cellar, a small cellar or perhaps no cellar. This decision depends on what fuel is available at the lowest price at that particular post. Another question, what materials will best stand up under the local weather conditions or how about soil bearing values, the height of ground water level, how deep is the frost line and so on and so on? Such questions vitally affect the design of every part to meet the greatest variance in climatic conditions. For we build for the Army, and the Army is in every part of continental North America from Alaska to the Isthmus, in Porto Rico, Hawaii, and others of the Islands of the Sea.

Of quite as much importance as all of these necessary practical considerations, perhaps of even more importance,—is the human side of the problem, for although the Army man and his wife have voluntarily agreed to move as often and on as short notice as orders require, they still are entitled to a home for themselves and their children.

In war time an army in the field will submit to all kinds of hardships and indignities to see the thing through. In peace time the morale of an army depends upon its treatment as individual human beings. It is the constant endeavor of those charged with the design of army housing to recognize the humanities.

This acknowledgment of the individual has lead to the construction of detached, individual houses wherever space and funds permitted. Double sets or semi-detached houses have frequently been built for company and non-commissioned officers and a few four-family types for juniors, company, or student officers have been used at the service schools, but very seldom have apartment houses been built and then only where space was not avail-



Company Officers' Quarters at Edgewood Arsenal, Maryland.
This is all that could be done with $9,000.00 *in* 1927.

able for other types. This has always been an open question and recent economy measures are leading to a restudy of this method of housing.

Strange as it may seem, the cost per unit of quarters in apartment houses is not less than in detached houses. The economy effected is in the extent of utilities, roads, walks and lawns to be laid out and cared for. It may be that this economy of space will result in more apartment construction regardless of whether space exists for a more open and extended general layout plan.

An example of apartments in a definitely restricted area are those for both commissioned and non-commissioned officers at Fort Jay on Governors Island, New York.

Apartments are the rule at Fort Leavenworth, Kansas, for an entirely different reason, this having once been a fully garrisoned post is now the Staff School and the apartments are the old barracks, more, or rather less, successfully altered into apartments for student officers where the students are largely of field rank. The construction of apartments has been thoroughly studied by the Quartermaster General's office and for the most part abandoned. One difficulty to be avoided is too much space to be cared for by others than the occupants. The least possible amount of public space is necessary. This has lead to a type of plan with one front and one rear stairway serving two apartments on each floor.

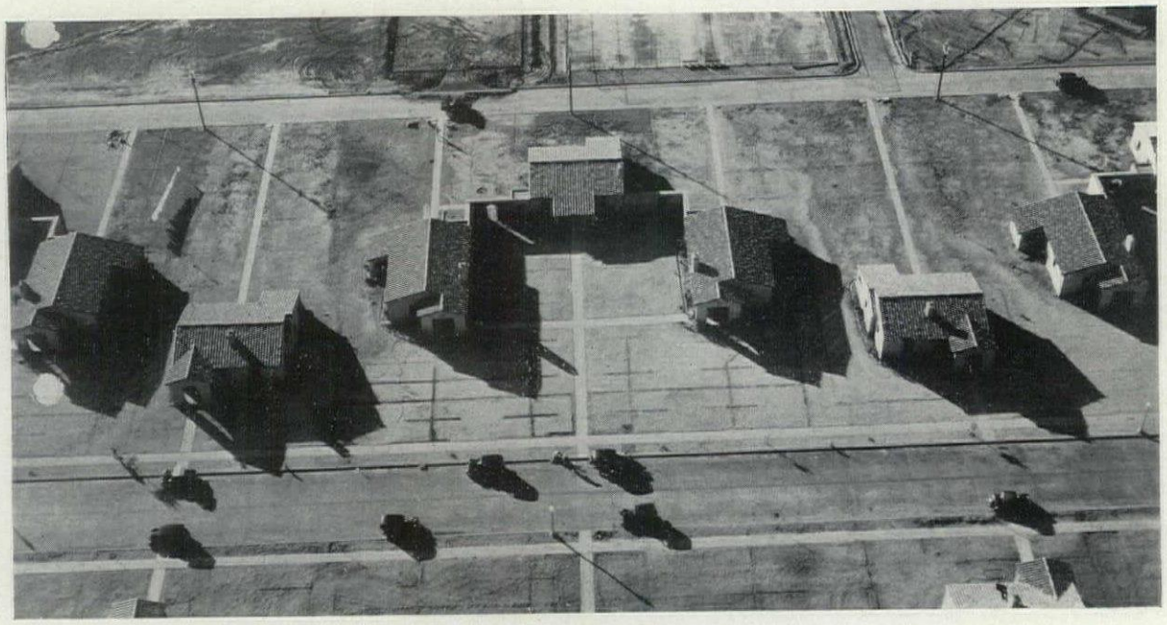
Two types of quarters not yet spoken of are those for bachelor officers and for Army nurses. These are practically always quartered in apartments, the nurses with one large bedroom and a bath shared with the occupant of a similar bedroom, the bachelors with a small bedroom, good sized study and bath. The bachelor quarters are often an adjunct to a central mess for all officers not keeping house, combined with some accommodations for transient officers and facilities for the social side of post activities.

With the problem of proper planning always to the fore, what can be said of Architectural Style? Years ago under Mid and Late-Victorian influence a type of quarters was evolved, large and considerably cut up as to plan, with porches and a turret or two, walls of pressed brick, slate roofs, and with considerable tin or other steel metal work. With over-emphasis on uniformity and standardization, these were built from Maine to Florida, California or the North West. Some

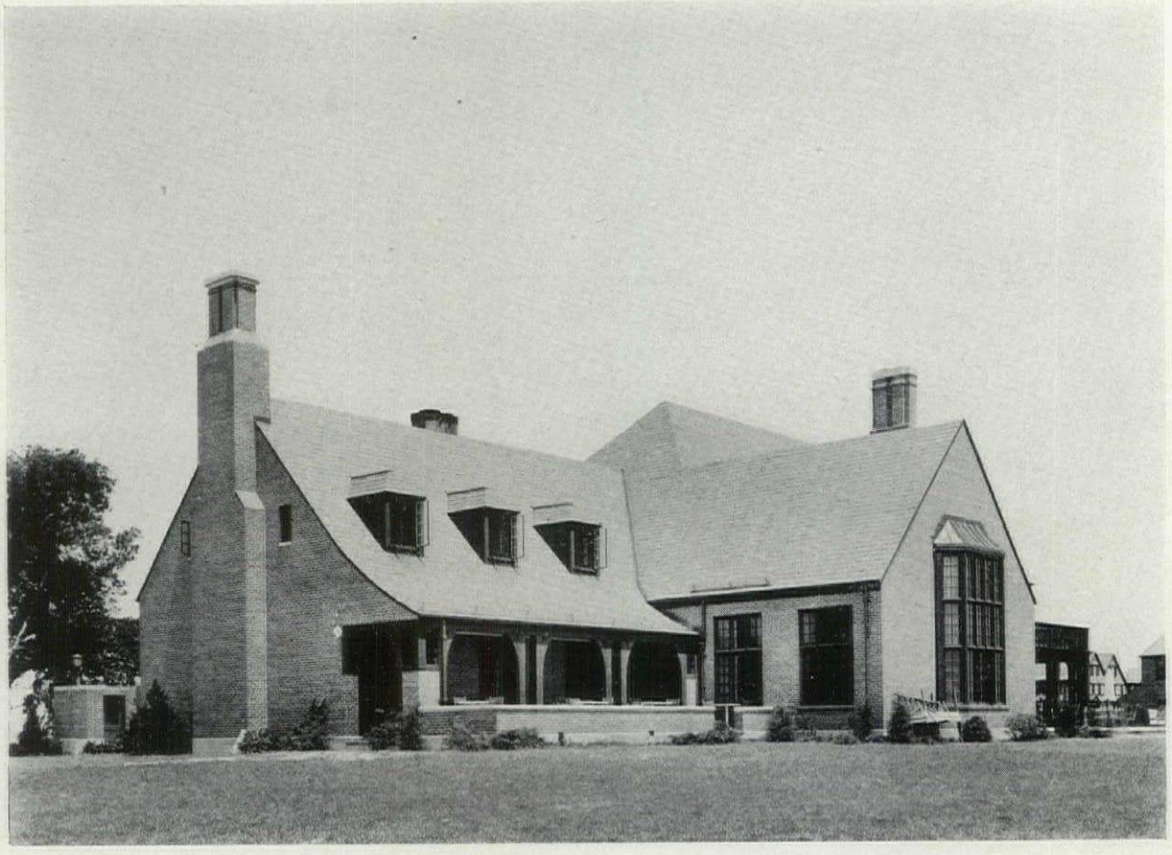
(*Continued on page* 22)

English type quarters for a Company Officer at Langley Field, Virginia.

A Field Officers' house at Fort Belvoir, Virginia



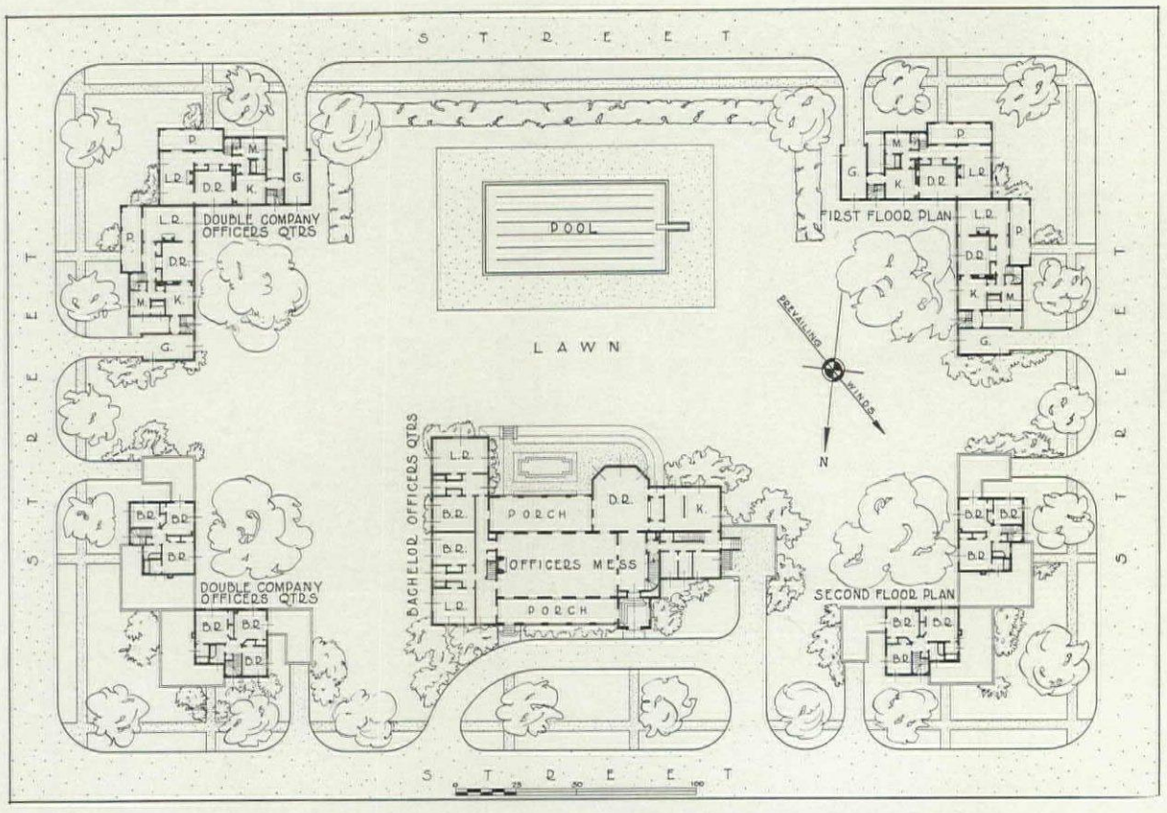
March Field, California. Groups of three and one Non-commissioned Officers' Quarters.



The Officers' Mess looking out over the water at Langley Field, Virginia.

Flat roofs and stuccoed walls in Hawaii. A group of houses for Non-commissioned Officers at Wheeler Field.

(Below) Field Officers' Quarters at Fort Clayton, Canal Zone. One-story buildings of typical "Zone" construction. The first floors are raised quite high above the ground as a protection against insects. The windows are protected by overhangs against rain, the windows being open at all times.



Company Officers' Quarters planned for the Sacramento Air Depot, California. Eight sets of quarters and a building for Bachelor Officers, the Officers' Mess, and a site for a pool occupy a very small area and take advantage of every breeze.

QUARTERS FOR THE ARMY

(*Continued from page* 18)

times funds required them to be built of frame, but the plan and general appearance were the same. If you saw one of these houses, you knew you were on an Army reservation. The War Department should not be too much blamed. The same lack of imagination was the rule in private and speculative building, and it was rather better than the wild wave of eclecticism that followed. But such errors of judgment and lack of proper adaptation of style to climate and historic traditions could not last.

To be sure, an Army post should have military character, but it should be the character of its *local* and its natural traditions.

It is now and has been for some years past our endeavor to choose such a suitable style and carry it through all the buildings of posts in that locality.

In all recent construction along the Eastern Seaboard, New England, and the middle Atlantic and some of the Central States we have used a free adaptation of the Colonial and Early Federal style. The materials, generally, red brick, slate roofs, wood windows, all are suitable and the style is indigenous.

In the South Atlantic and the Gulf States styles of the French and Spanish Colonial blended with frequent use of stucco walls, tile roofs, wood or steel sash have been used; while on the Mexican Border and in California, the Spanish Mission style has been used almost entirely. In California earthquake conditions have lead to the use of reinforced concrete, with that material exposed and the surface differently treated.

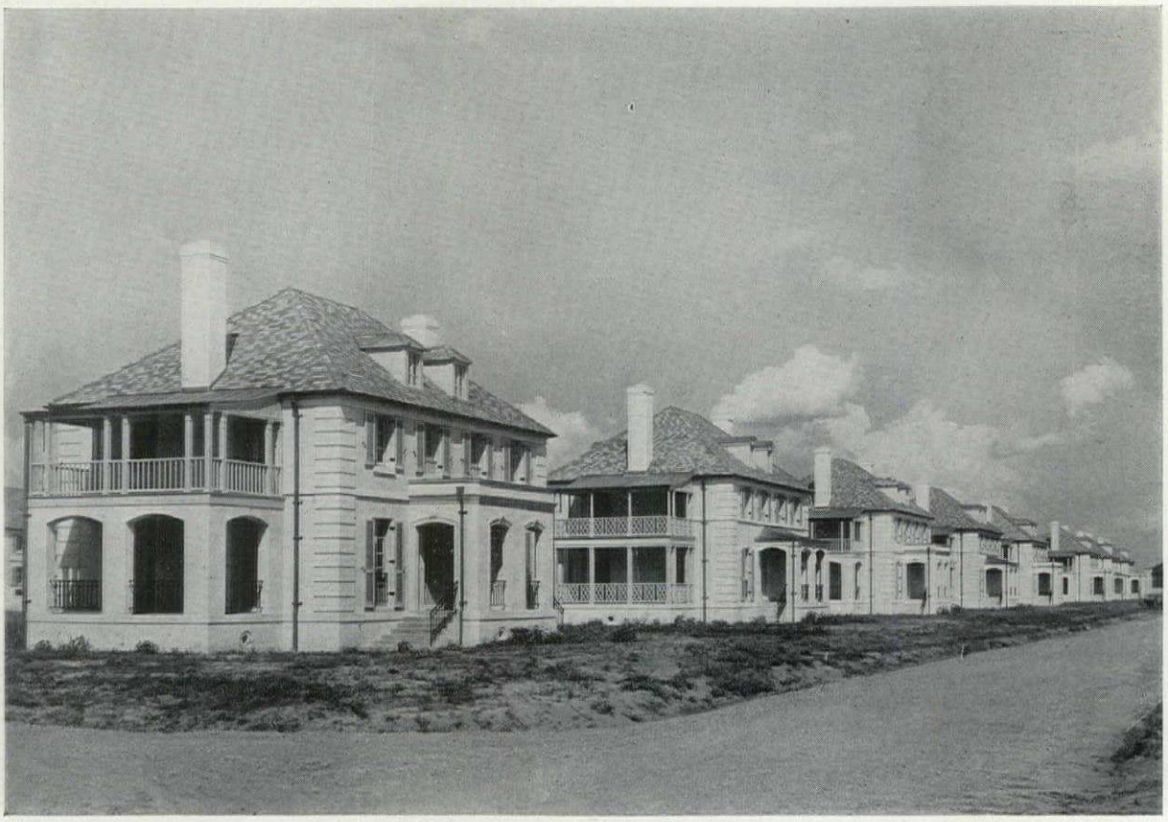
In some cases where new posts, particularly air fields, have been established the style has developed naturally along so called *modern* lines—flat roofs, no overhanging eaves. All very simple indeed.

Types are sometimes set down for us in advance,—for example, Langley Field, Virginia, started by the then separate Construction Staff of the Aviation Section of the Signal Corps. Large buildings were a type of Lombard Italian with patterned brickwork

(*Continued on page* 42)

Air view of Hamilton Field, California, showing the informal development of the Officers' Section on sharply rising and lightly wooded hills. The houses have "up hill" or "down hill" plans. Note the quaint pictures that are possible by looking at each individual house with its surrounding trees.

Company Officers' (Junior) Quarters at Aberdeen Proving Ground, Maryland.

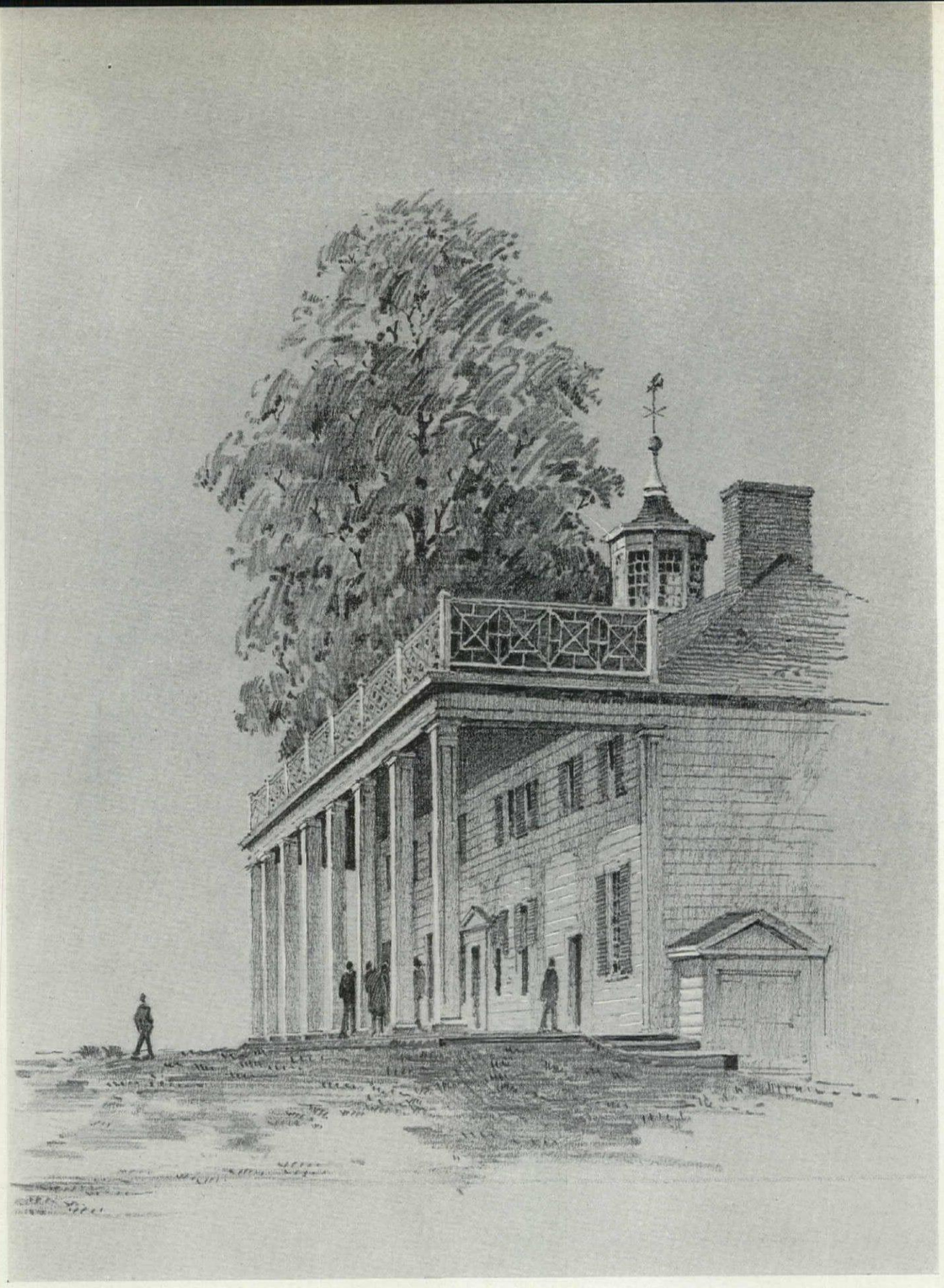


(Above) An avenue of double houses for Non-commissioned Officers at Barksdale Field, Louisiana. Note the variation in the treatment of side entrance porches. The photo was made before any planting and shows the need of it.

(Below) Concrete walls and tile roofs in California. A house for a Company Officer at March Field, near Los Angeles.

Center building of the Bachelor Officers' Quarters Group, Fort Belvoir, Virginia.

Quarters of the Commanding Officer, Fort Monmouth, New Jersey.



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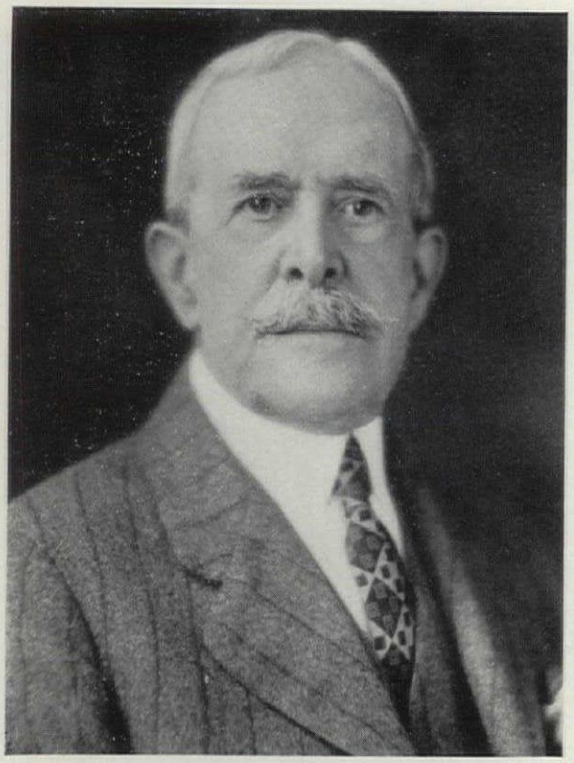


COLONEL DODGE OF MOUNT VERNON

AN important contribution to the cause of architecture has been made over a period of more than fifty years by a gentleman not at all an architect by training and education.

He was Colonel Harrison Howell Dodge, Superintendent of Washington's home, Mount Vernon. During his term of residence at Mount Vernon, where he lived from 1885 until his death this year, a greater time than did Washington himself, he devoted himself to painstaking archaeological research in connection with the mansion and to the most careful reconstruction and repair of the building and its surroundings.

It is quite probable that the scheme of meticulous research which Colonel Dodge followed at Mount Vernon set the pace for the microscopically complete investigation that was later put into effect at Williamsburg.

At any rate Colonel Dodge, at Mount Vernon, sought absolutely authentic restoration. There is the incident of the wall-paper in one of the rooms of the house. Fragments of this paper were found on the walls. After a series of investigations over a long period of years, investigations of an almost Sherlock Holmes character, the original blocks from which the wall paper was printed were found in Europe and from them the old wall paper reproduced.

Similarly certain black and white marble tiles of the front veranda which were worn thin by the feet of thousands of visitors were traced back, through a series of coincidences, to the ancient quarries in England and replacements made from the same stock.

Repairs to the mansion were continually going on. They were planned in the most ingenious manner to preserve the original material and the original appearance. Thousands and thousands of persons visited Mount Vernon one particular summer and I doubt if anyone knew that at that time the entire sill course which supported the first floor joists was in process of being replaced.

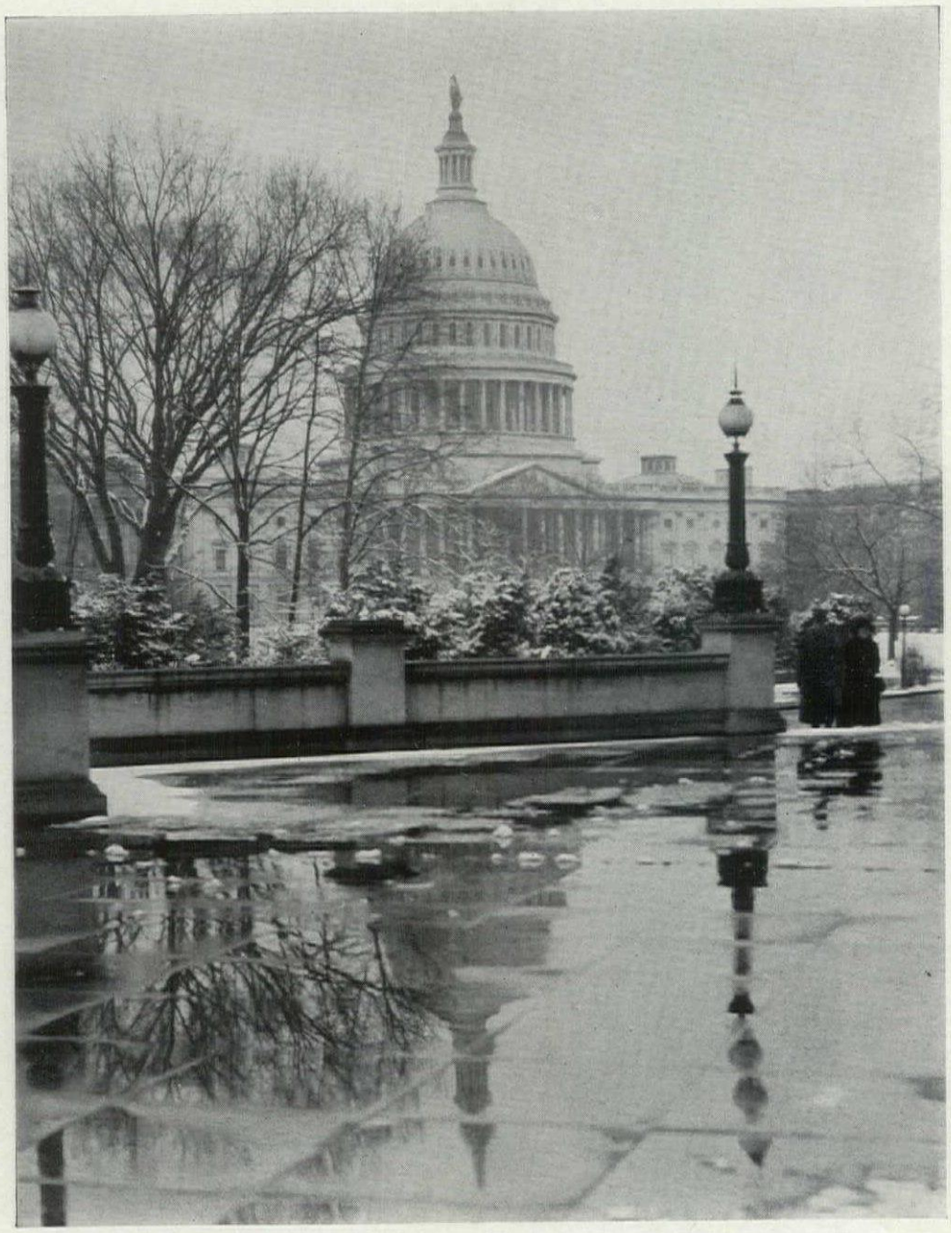
Colonel Dodge was a scholarly person of a most engaging personality. In addition to his intense architectural interest in Mount Vernon, he was the country's most versatile host. All guests of state to Washington, all distinguished foreigners visiting America and, at one time or another, nearly all distinguished Americans went to Mount Vernon; and the Superintendent had the distinction without doubt of meeting, during half a century, more celebrated personages than anyone else in the world.

He was not only interested in the restoration of the house but in its preservation. His great fear was fire and the most elaborate precautions were followed to fire-proof the buildings and to fire-protect them.

The grounds were reconstructed in the same careful spirit as was the mansion. The landscaping was carried forward in the original spirit with a fine combination of artistry and practical understanding.

In preserving and enhancing the beauty of this fine historic monument, Colonel Dodge has rendered a distinguished service to the cause of history and architecture.

He died May 19th in his 86th year. He had just finished his annual report to the Ladies' Association which controls and administers Mount Vernon. The end of his labors came while he was at the telephone making the statement that the report was completed.



The account in the following pages is a record of the history of the designing and construction of the Capitol, which developed in Congressional hearings and is too valuable to be lost. It is quite aside from the controversy that was entwined with it concerning the overhang of the dome.

SPEAKING OF THE CAPITOL

Excerpts of testimony by Dr. Leicester B. Holland before committees of Congress concerning the history of the building.

"HISTORICALLY, the Capitol at Washington is the most important structure in the United States. Other buildings, such as the Old South Church in Boston and Independence Hall in Philadelphia, are connected with important episodes in the history of the country. The Capitol is unique in that it both typifies the beginning and also marks the growth of the Nation. Like the great Gothic Cathedrals of Europe, its surpassing merit is not its completeness but its aspirations. Like them, too, the Capitol is not a creation but a growth, and its highest value lies in the fact that it never was, and never will be, finished."

The Capitol was begun almost as soon as it was decided that Washington should be the Capital City of the Nation, and L'Enfant had laid out the plans. Two buildings were essential for the establishment of the Government here—the Capitol, where the Government should sit, and the White House, where the President was to live—and they were begun together.

The Capitol is the first building since the time of the Romans, anywhere in the western world, planned to house a national government. European governments were housed in palaces or whatever buildings became handy. But this is the first instance of a building constructed from the ground up to be the headquarters of a national government.

The Capitol building and the White House were the first two buildings of the Federal Government in Washington, for the purpose of providing a house for the legislature and a residence for the President. A competition was announced for the building of these two, the first architectural competition held in this country. It was further announced that the Capitol was to be of brick, like the Capitol at Williamsburg and Annapolis and Independence Hall and Federal Hall in New York. Brick was the customary material for state houses and important buildings at that time.

The competition for the White House was won easily by Hobain. There was no difficulty. The competition for the Capitol produced a variety of plans of great difference in merit. None of them, however, seemed to be satisfactory.

Finally, Dr. Thornton, a very intelligent amateur, who had traveled abroad, submitted plans which seemed so far superior to any-

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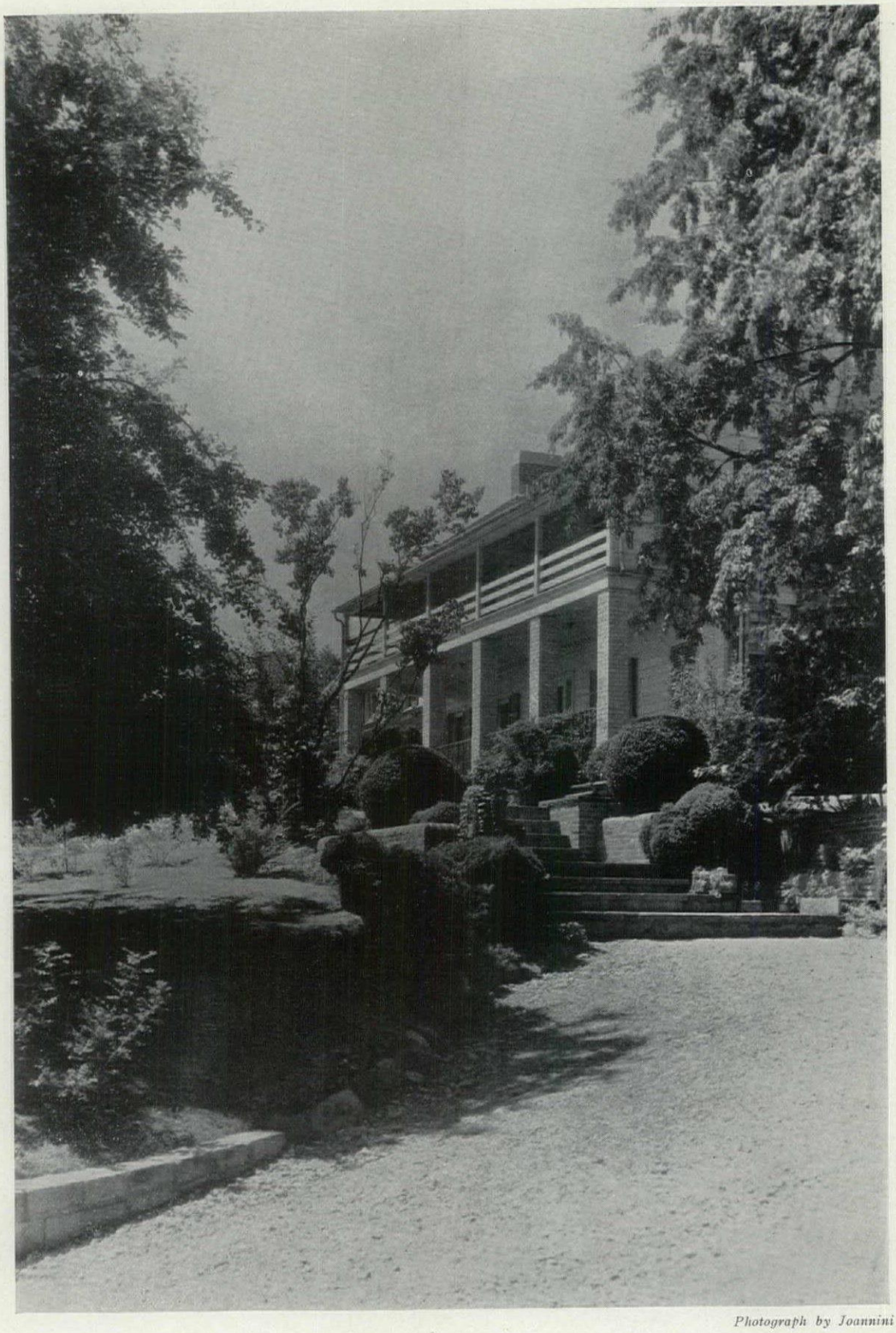


Photograph by Joannini

House designed and occupied by T. B. Everman and W. E. Humphrey, architects. Mr. Everman is in private practice. Mr. Humphrey has for several years been in the Supervising Architect's Office.

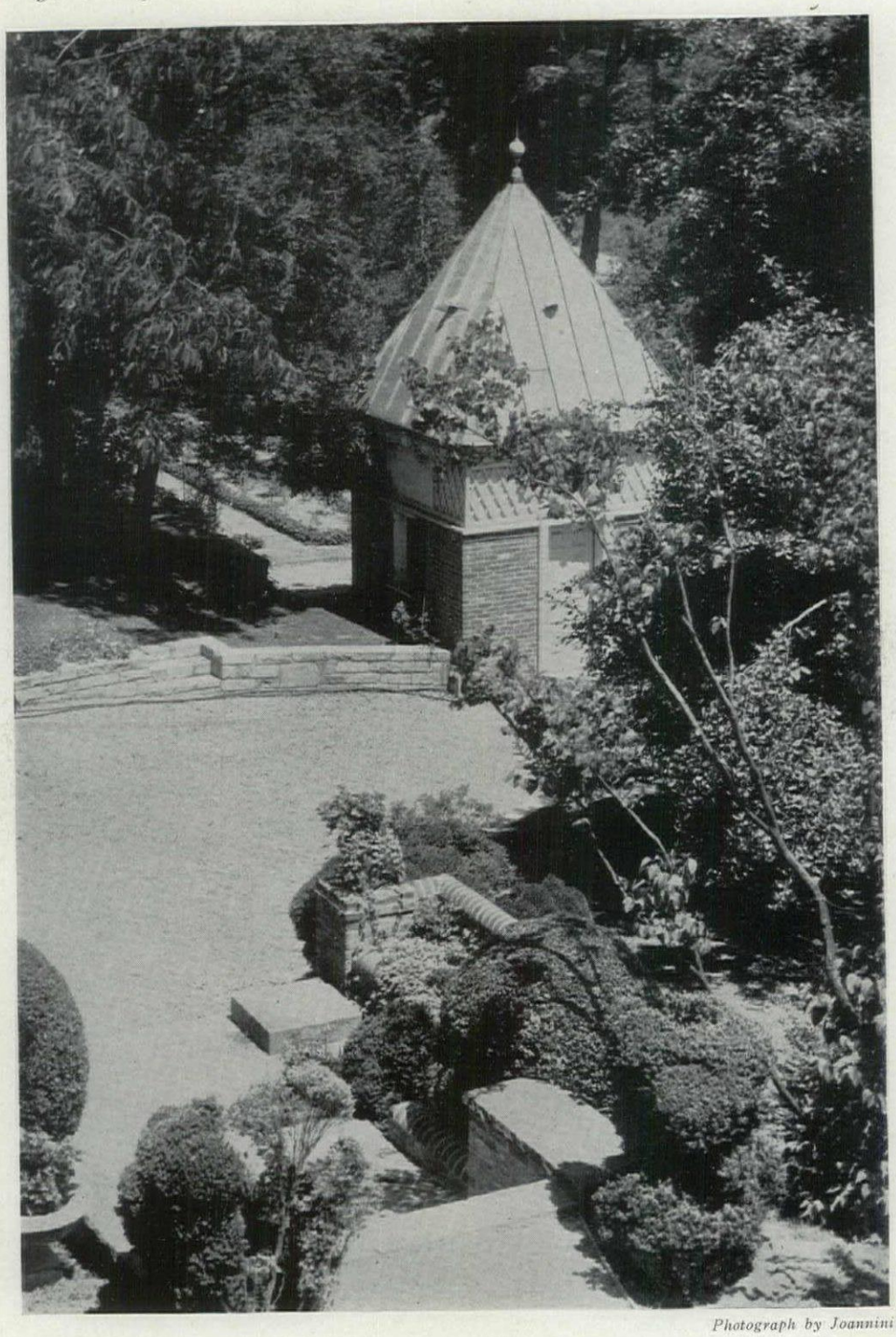
Photograph by Joannini

HOUSE FOR TWO ARCHITECTS

at Belle Haven, Virginia

JUST outside of Alexandria, on the shore of the Belle Haven Country Club and within sight of the broad expanse of the Potomac, along whose historic banks all is traditionally quiet and peaceful, Tox Everman, aided and abetted by his brother-in-law Bill Humphrey, selected a site for their house, which in pleasant seclusion and wide prospect was vastly like another important river residential site, Mt. Vernon. These two architects caused the long house to grow under loving touch of hand, as the saying is. It seems that every balustrade, every handrail, every little touch of hardware, every pleasant little spot of interest can be said to have had a former address in some Washington landmark torn down in the name of progress.

The house, therefore, is not only a thing of architectural beauty, but charmingly reflects the Washington tradition. On its porches one may recline in comfort, look lazily out upon the world and achieve content.

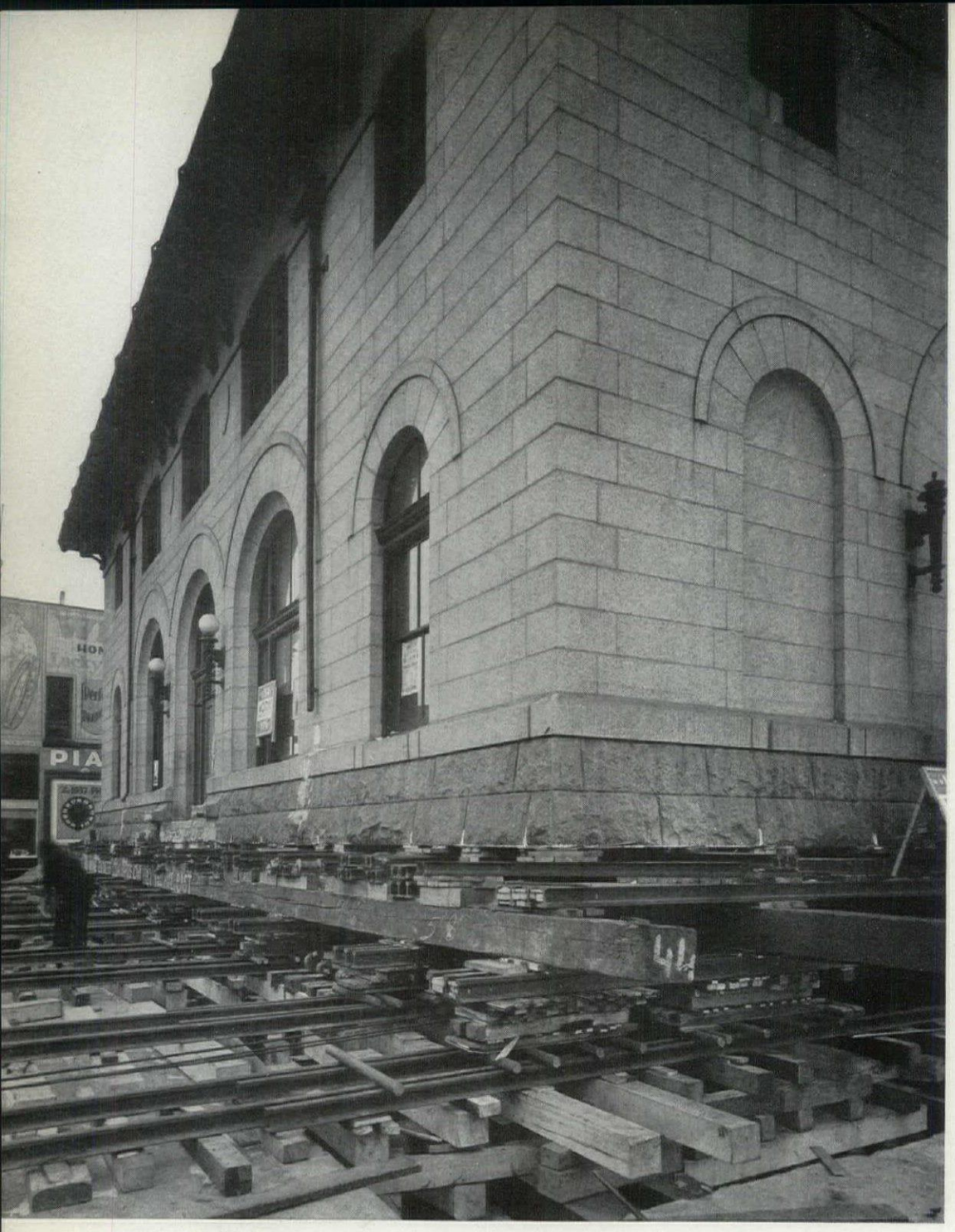


Photograph by Joannini

Entrance driveway and garden house for Everman-Humphrey house. The first photograph is taken from this driveway looking toward the house.

Photograph by Joannini

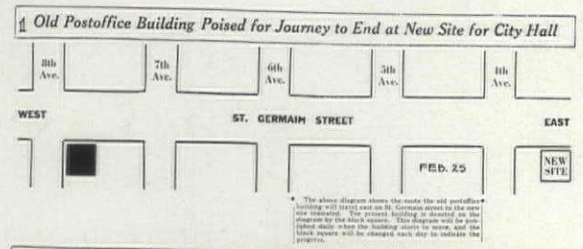
Another view of the Everman-Humphrey house.

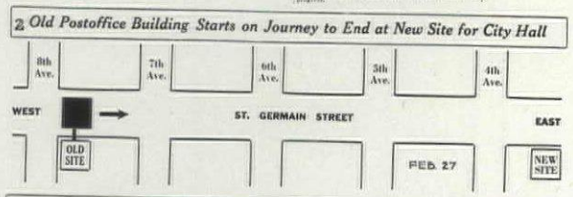


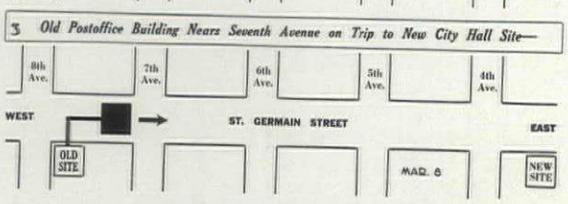
MOVING DAY IN ST. CLOUD

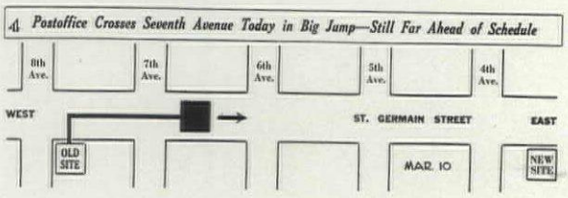
An interesting affair was put into motion when the city of St. Cloud, Minn., decided that the old Federal Building (which was to be replaced by a new one on the same site) would make a suitable city hall for St. Cloud. The contractors for the new Government building, McGough Brothers, were required by their contract to remove the old building. The city made an arrangement with the contractors and became sub-contractors for removal. In their capacity as sub-contractors they let a contract with a firm of building movers to give the structure a little ride down the main street of the town.

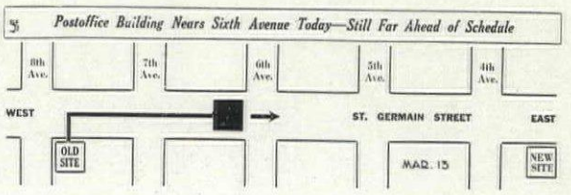
The building (during a cold snap of minus 20 degrees) was needled through and raised about 2 feet. Note the railroad-iron needles. Under the needles are 12 by 18 longleaf fir sills 90 feet long. The rails upon which the building is to move are laid, loose, upon wood blocking. The rollers which ride these rails are 2½ inch diameter chrome nickel. On these rest wood shoes with heavy steel plates.

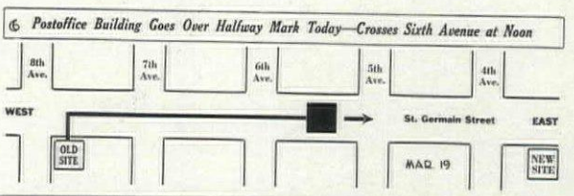


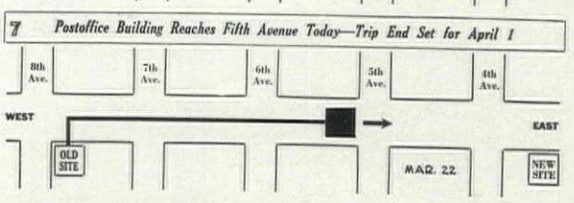


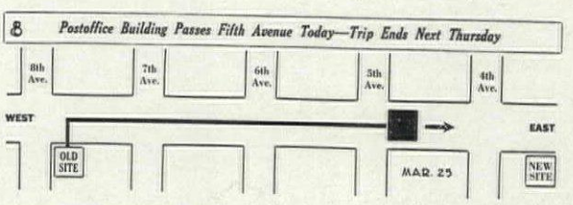


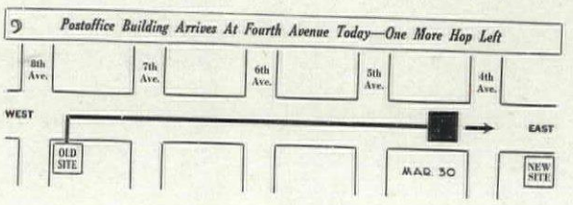








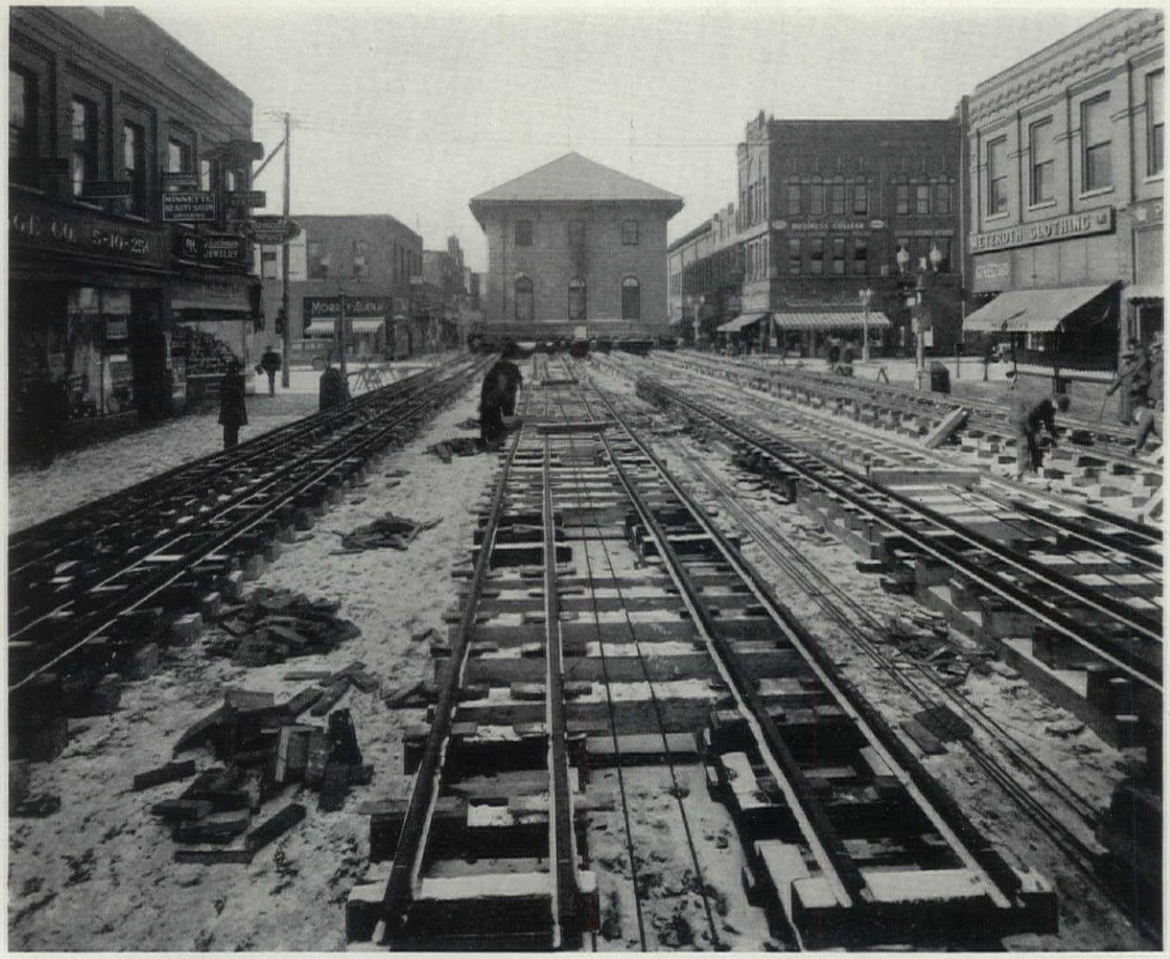




COURSE OF THE MOVING

The St. Cloud *Times and Journal-Press* printed at intervals maps showing the course and progress of the itinerant building. These are assembled above. Reading from top to bottom, the course of the structure from the old address to the new address can be seen. The dates on the maps show that it was a long process requiring patience and many arrangements. Not the least of these was the question of street traffic. While the speed of the building (say 12 inches an hour) could not be called reckless motion, yet the thing occupied most of the space from curb to curb and if any automobile met it, it was best for the automobile to make a detour rather than argue.

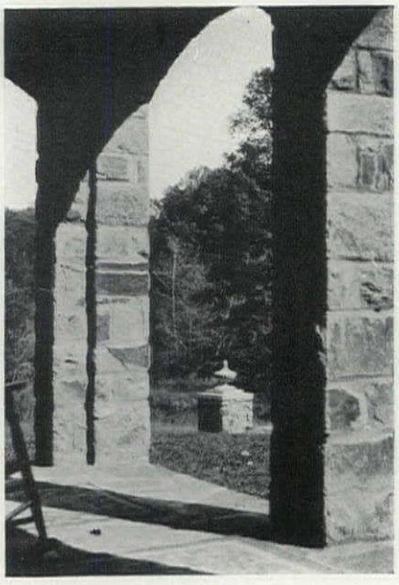
This shows the building ready for the take-off. It is all shored-up and roller-bearing, poised to move out into the middle of Germain Street, the gay white way, showing how even these old buildings will step out, if given the slightest leeway. When it progressed to the middle of the street, it moved sidewise toward its new location.



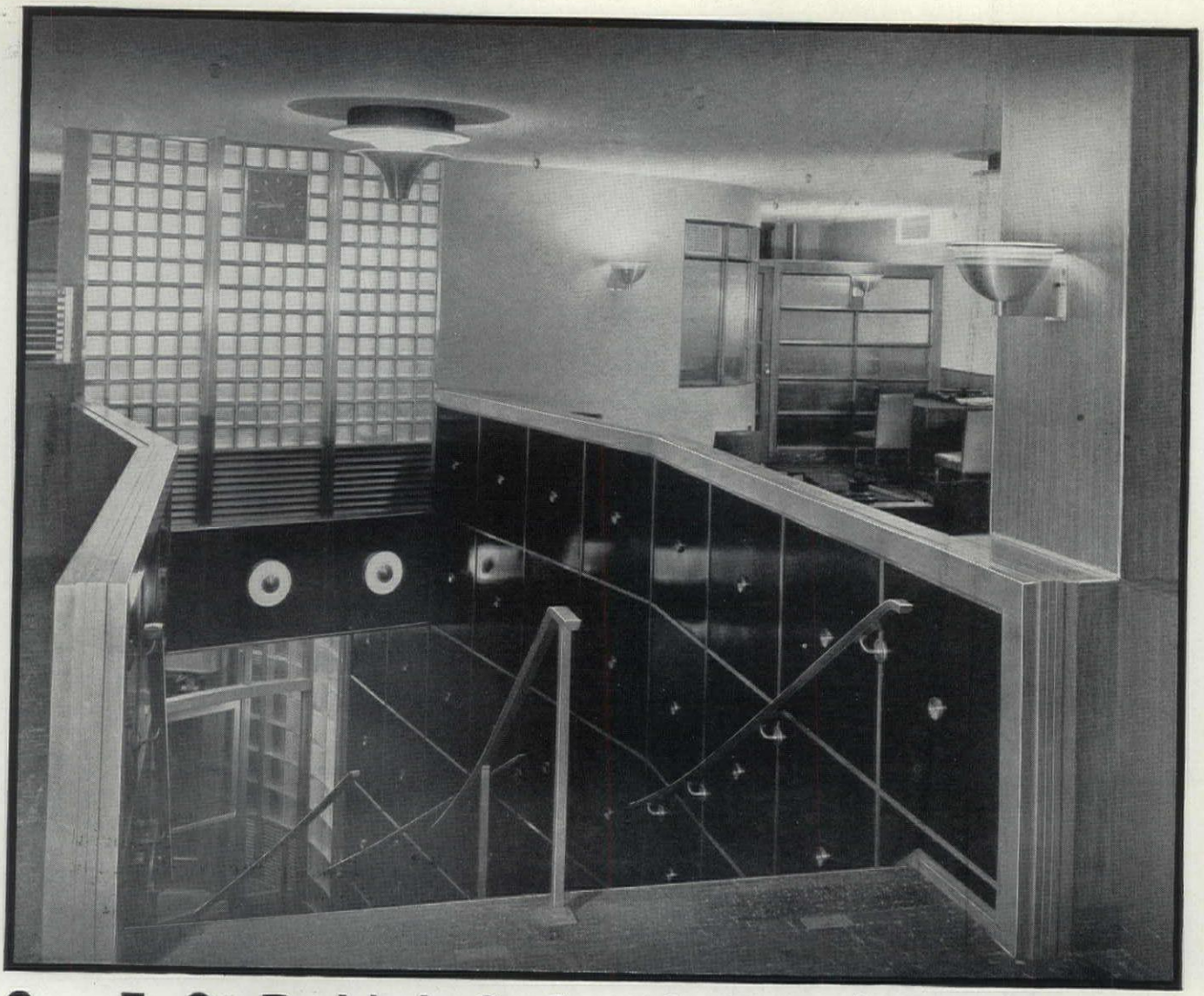
Here it comes. This is a view taken down St. Germain Street during the moving manoeuver. The street is 60 feet wide from curb to curb, and the building 48 feet, which with careful manipulation gave ample clearance. The structure weighed 2500 tons and was said to be the largest vehicle which has traversed these streets. The manufacture of souvenirs by placing pennies on the rails to be flattened out became a matter of interest to the citizens.

The building is now in place in its final location and breathes happily as a municipal instead of a Federal building.

Who knows? This may set a far-reaching precedent in the matter of city plans. Municipalities dissatisfied with their layouts, now have the method of cure demonstrated. They can move buildings around like chess-men; forming plazas, civic centers and boulevards. All that was needed was someone to blaze the trail.



Next to children and next to the precious fruits of professional accomplishment, one is apt to hold his home —his house, his grounds and the material things within his gates. Here is a home that shows the results, over a period of years, of careful planning and planting. It is all the result of the architectural designing of its owner Arthur Blakeslee of the Supervising Architect's office. Much of the landscaping and exterior accessories is due to his own manual effort. While the dimensions of the place are not those of the plutocrat's, its scheme and carefully arranged screening foliage give it the luxurious aloofness of a large estate.



A FORMICA STAIRWAY

by Eugene Schoen

• THIS Formica stairway covered by blocks of black Formica at the National Safety Bank & Trust Company, New York, was designed by Eugene Schoen. This novel method of applying Formica produced a very modern and attractive result.

For interior and exterior walls Formica provides a very handsome and a thoroughly modern covering. There are more than 70 colors, and combinations of two or more colors on the same sheet are possible. It is crack proof, easy to keep clean, requires no maintenance.

Let us send you our literature including 36 plates of suggested designs.

THE FORMICA INSULATION CO.
4620 Spring Grove Avenue • Cincinnati, Ohio

FORMICA

FOR BUILDING PURPOSES

AMERICAN RADIATOR EXHIBIT IN NEW YORK

WHEN in New York we went to the gold and black building Mr. Hood designed for the American Radiator Corporation, facing the park back of the Public Library.

The Radiator Corporation, together with the Standard Sanitary Manufacturing Company, the Standard Air Conditioning Company and others have set up in the basement and first floor of the building a miniature exposition, commemorative purpose unstated, but doubtless intended to celebrate the invention of the bath-tub or of the vapo-orifice valve.

The exhibition consists of a very complete plumbing layout planned with considerable imagination and feel for color and materials: a symposium of unit air-conditioning apparatus suitable for residences; a boiler show into which the actual heating arrangements of the building enter, and a set-up of all the radiators, valves, coils, thermostats and the like to form a complete encyclopaedia of all the things that make it possible to have the right kind of air at the right time and in the right place at the exactly right temperature.

It is a fascinating set-up, full of many devices, gadgets and showings of the internal viscera of boilers and radiators with diaramas to explain the theory of radiation. There are also actual piping installations at full size and in models to show how things fit together.

The Standard Sanitary exhibit is one of those very trim and exquisite set-ups of various colored plumbing fixtures, with especial reference to the luxurious square tubs where you can sit on the edge and gaze into the limpid depths of your bath before plunging in.

There are these extensive kitchen cupboard arrangements, consisting of a sink before a window opening upon a beautiful landscape (actually shown) and surrounded by myriads of metal cupboards and roller-bearing drawers.

The washing of dishes with such environment at once becomes a poetic as well as an efficient operation. One pictures the efficient help-mate saying "Towel? In the drawer marked T-13." "Waffle Iron? In the space marked W-4." The sort of thing that takes the "Ow!" out of housekeeping.

The Standard Air Conditioning Company space is full of intriguing units that you place in the window to provide a blast of filtered air of such unsullied serenity that it may safely be breathed by the veriest babe in arms.

Then there are units which are both air-conditioning and air-cooling in their results, designed for living rooms, etc. They occupy little space and considering what they accomplish are inexpensive.

In the American Radiator exhibits there is a very diverting display of the convector type of radiator. This is a development of the concealed radiation scheme. An enamelled metal enclosure of color to match the room fits in the under-window space.

Its lower and upper opening causes a movement of air over the radiator which pulls the heat out of it at a faster rate and therefore permits a smaller radiator to be placed therein. The radiator itself is ridiculously tiny, as compared with the open type of the same efficiency. It looks more like a bedside radio than a heating unit. This convector is a real achievement as it actually conceals the radiator and frees space for other purposes without reducing efficiency.

One of the most entertaining features of the show is the sample installations of threadless brass and copper pipe. There are no scars nor wrench marks. All the bends, unions and elbows are made to fit the pipes snugly and a blow torch completely unites them.

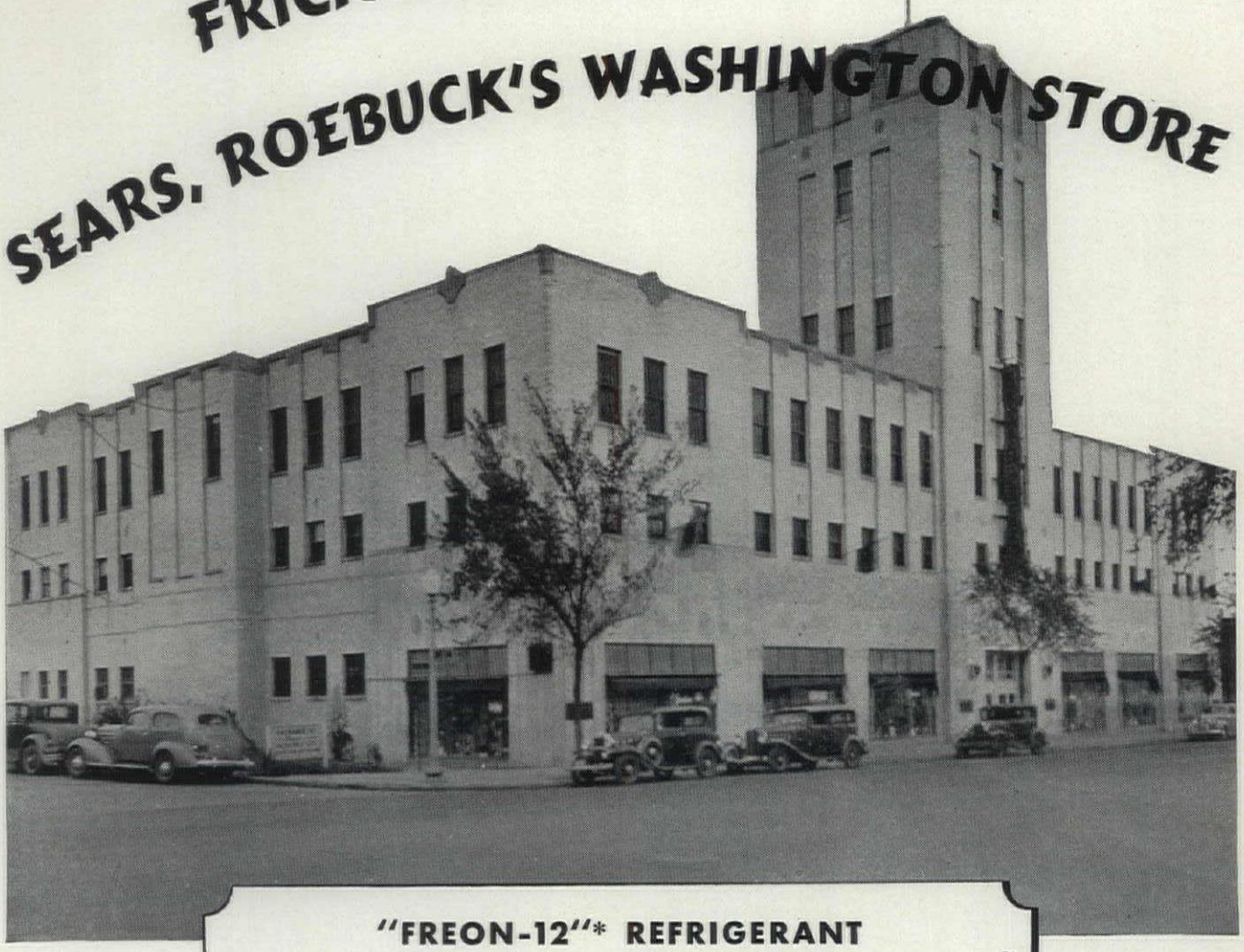
An interesting stunt is a stand of a half a dozen large size brass pipes extending from floor to ceiling with mirrors top and bottom. The effect is curious. The pipes seem to extend a couple of miles up, and down.

One of the quaint things is a tiny gas-fired boiler about the size of a Gladstone bag, which is said to be capable of heating a small house.

The hook-ups of boilers with gas-burners and oil-burners on the fuel side and with

(*Continued on page 67*)

FRICK INSTALLATION COOLS SEARS, ROEBUCK'S WASHINGTON STORE



"FREON-12"* REFRIGERANT USED IN NEW 120-TON JOB

SIX 20-ton Frick compressors cool the basement and three floors of the department store of Sears, Roebuck & Company in Washington, D. C. "Freon-12" is the refrigerant used.

Most outstanding air conditioning installations in the United States and abroad use "Freon" refrigerants. Such large installations as those in the Department of Justice Building, the Post Office Building, the Senate Office and the Archives Buildings, the Administration Building of the Department of Agriculture, all use "Freon" refrigerants. And now the new installation for the United States Capitol is added to the list using "Freon" refrigerants.

"Freon" refrigerants are non-toxic, non-flammable, non-explosive. They are odorless when mixed with air up to 20% by volume. They do not harm foods, fabrics or furs.

"Freon" refrigerants meet all the specifications for safety set by the Underwriters' Laboratories of Chicago. They have been tested by the U. S. Bureau of Mines. 99½% of all mechanically cooled railroad trains use "Freon" refrigerants. They are used in ships, in mines deep underground, in hotels, restaurants, department stores, homes, schools, hospitals, offices, factories—in every type of installation, large or small.

Be sure to specify "Freon" refrigerants for your cooling system.

KINETIC

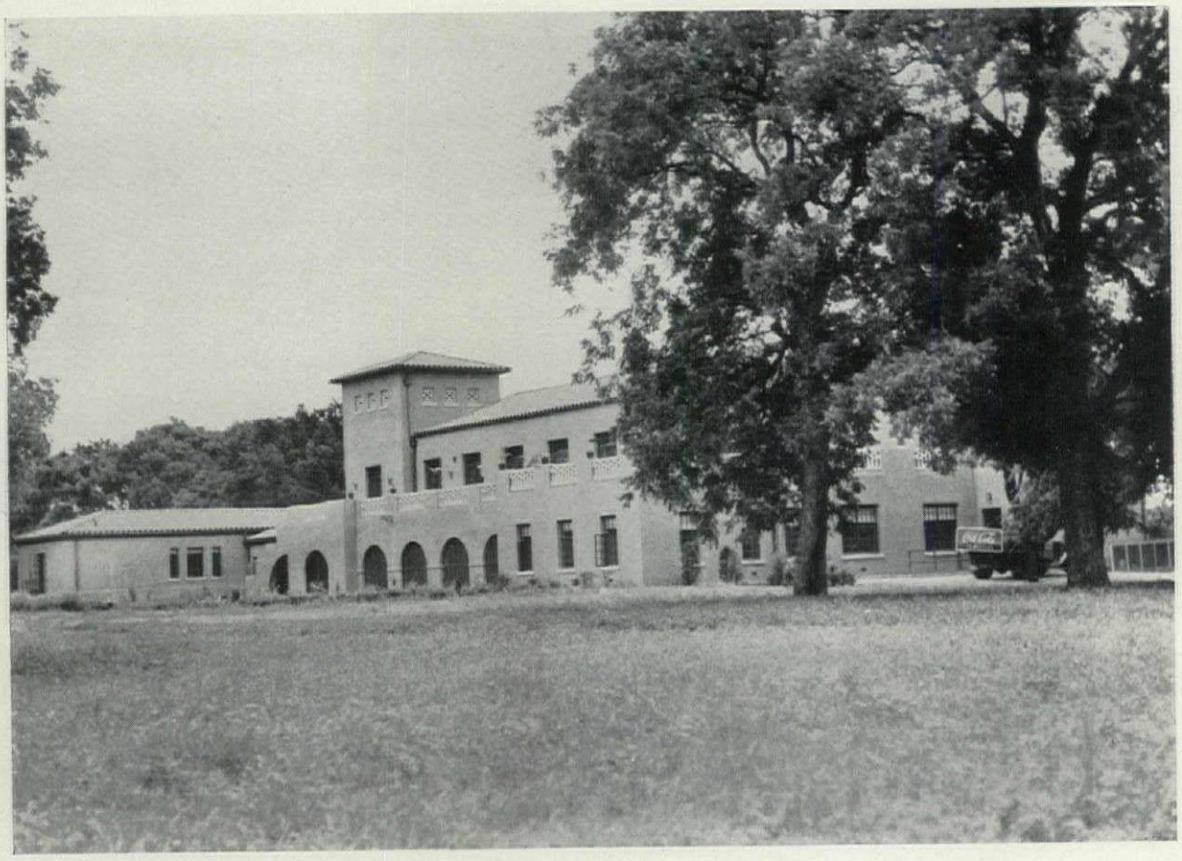
*"Freon" is Kinetic's registered trade mark for its fluorine refrigerants.

FREON

REG. U. S. PAT. OFF.

safe refrigerants

KINETIC CHEMICALS, INC., TENTH & MARKET STREETS, WILMINGTON, DELAWARE



Garden front of the Officers' Mess, Fort Sill, Oklahoma. The wing at the left has quarters for transient officers.

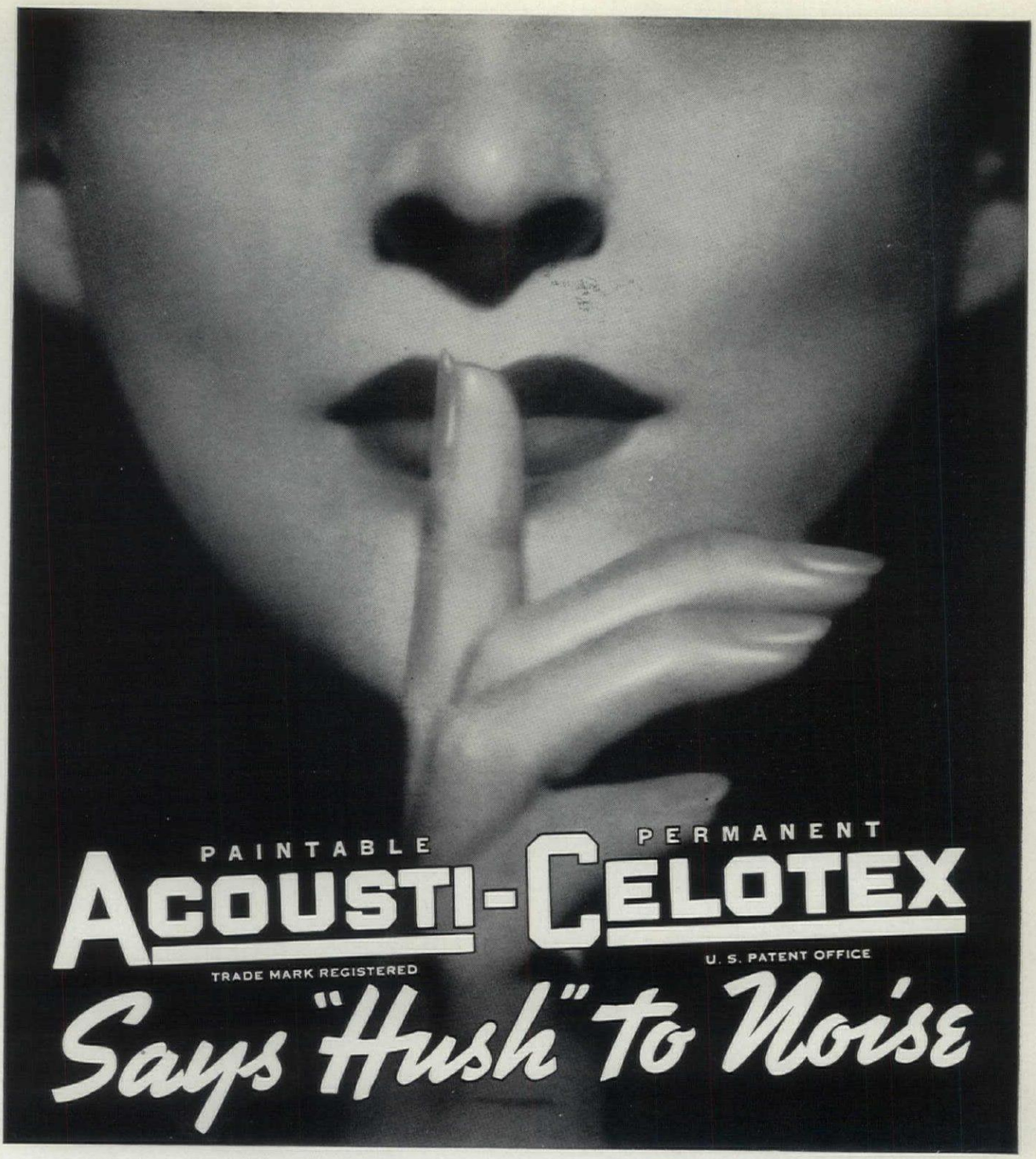
QUARTERS FOR THE ARMY

(*Continued from page 22*)

and quarters were a quite exact English Tudor or Jacobean Cottage type. New construction at this post has been carefully studied to carry out this scheme and with considerable success. The Air Corps officials liked this style and specially requested its use in Ohio at the large Fairfield Depot.

The most recent work of all is the new Air Corps Depot near Sacramento, California. Here large technical buildings set the stage in a modern type of concrete and steel construction, which has been reflected in the quarters, which are of a flat roof type. A recent Staff directive as to concentration has been put into effect by the "Around the corner" double company type shown in the illustrations. Here the summer is long, hot and dry, and every breeze must be courted. So the plans are double on the first floor only and all rooms have cross drafts. Of course, the flat roofs are thoroughly insulated against the beating summer sun.

Always there arises the question of how much variation is proper between one house and its neighbor. This has been the subject of much study both as to individual design and grouping. One can not have too much variety and maintain a sense of order and dignity. In some new posts, such as Randolph Field, Barksdale Field, Maxwell Field, and Fort Geo. G. Meade, several types of



ACOUSTI-CELOTEX, with its patented noise-trapping perforations, is ideally suited for government buildings. It is time-tested, paintable and permanent!

It is quickly installed over old or new ceilings. It can be painted repeatedly with the same durable lead and oil paints used on other surfaces without loss of sound-absorbing efficiency. Thus—light-reflecting values are maintained at minimum cost and permanent sound-conditioning is assured with Acousti-Celotex.

Acousti-Celotex is obtainable on the supply schedule in government departments.

Write us for full particulars about Acousti-Celotex, and for free copy of the 1937 edition of the booklet "Less Noise... Better Hearing."

THE CELOTEX CORPORATION • 919 NORTH MICHIGAN AVENUE • CHICAGO, ILLINOIS

A type of house for a Company Officer at Barksdale Field, Louisiana, with the living room in one wing. Outside blinds are useful in this part of the country.

both field and company quarters have been alternated in location. At Fort Belvoir a general type of plan with different entrances, porches and garage has been introduced. At this post and at Bolling Field the so called "Mount Vernon" type has been used, that is, there is no back yard nor service road. The house faces the *view* with a garden front and faces the main drive with an entrance front meeting a condition where view and breeze come from one side and the approach is from the other.

The War Department as an old line Government establishment is conservative and must be shown the value of new methods and materials before it adopts them. But the Army is and must be absolutely up to date in its methods and materials for defense. The Construction Division is in accord with these military characteristics. It examines and is inclined to wait for new materials to prove their worth, but it is on the *qui-vive* for everything that will keep the men in quarters as up to date as they must be on the battlefield. This requires the technical forces of construction to be always on their mettle, and it makes their jobs worthy of the best effort that is in them. We believe that the results are showing in our quarters as well as in our other Army buildings.

THE MOST SENSIBLE SILL FOR ANY WINDOW!

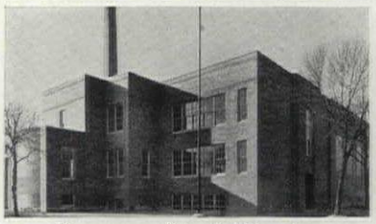
METHOD OF INSTALLATION OF EXTRUDED ALCOA ALUMINUM SILL

One piece of metal that cannot rust; formed by extrusion to a contour that meets the specifications of what a sill should really do. That gives you a picture of Alcoa Aluminum Window Sills.

First cost is low. Painting is unnecessary because Aluminum cannot rust, never streaks or stains adjoining surfaces. Aluminum sills are good looking, and stay that way.

Thinness possible with Aluminum sills allows sealing of the ends into mortar joints to make them weather-tight. Setting is simple. Light weight makes them easy to handle.

That Aluminum sills are truly economical is high-lighted by their extensive use in many low-rent projects. * What is good economy there, is likewise good economy on any type of building. Aluminum Company of America, 2147 Gulf Building, Pittsburgh, Pennsylvania.



Tippecanoe School, Milwaukee

Residence E. W. Romberger, Atlanta

*Cleveland's Cedar Central Housing Project. Other projects on which window sills of Alcoa Aluminum were used; Atlantic City, N. J., Stanley Holmes Village; Atlanta, Ga., University Housing Project; Camden, N. J., Westfield Acres; Boston, Mass., Old Harbor Village; Chicago, Ill., Julia C. Lathrop; Cleveland, O., West Side and Outhwaite Projects; Enid, Okla., Cherokee Terrace; Memphis, Tenn., Dixie Homes; Miami, Fla., 62d St.; Milwaukee, Wisc., Parklawn; New York, N. Y., Ten Eyck Houses & Harlem River Homes; Oklahoma City, Okla., Will Rogers Housing Project; Omaha, Nebr., Logan-Fontelle; Stamford, Conn., Fairfield Court; Washington, D. C., Langston Terrace; Wayne, Pa., Highland Homes.

ALUMINUM SILLS ARE ECONOMICAL ON ALL TYPES OF BUILDINGS

Cities Service Building, New York

ALCOA ALUMINUM

A PANORAMA view of a wooded section of Chevy Chase, taken in the Hard Hat era (circa 1910). Many of these hats were later made into trench helmets. The men who are clustered about, all unconscious that a picture is being taken, are from left to right:

Olmstead, of Murphy and Olmstead; Rider, (now of Supervising Architects Office); Smith, (of the District of Columbia Smith's. Whereabouts now unknown); Wilkinson, (facile pen and ink renderer); Fenton; Langille, (now Construction Engineer Procurement Division); Deacon, (now of Supervising Architect's Office); Streeter, (now of Supervising Architect's Office); Finlynson; Armiger, (now of Supervising Architect's Office); Litzau, (now of Supervising Architect's Office); Parker (deceased); Clarke, (now of Supervising Architect's Office); Lix, (now Construction Engineer, Procurement Division); Moore, (practicing architect in Washington, D. C.); Lane, (now of Supervising Architect's Office).

This print was sent us by Louis Langille who thought we would be interested in this relic of the late McKim, Meade and White days. Our dietician service states that the food in the picture is not hot-dogs as a hasty glance might indicate, but oysters, proving almost conclusively that the ancient festivity surprised by the candid camera was an Oyster Roast.

THE LANE CONCRETE-RIB WALL

A very interesting structural development is the Lane concrete-rib wall. The problems in connection with poured concrete exterior walls have been many, among them the questions of exterior finish, damp-proofing and insulation. It has long been thought that if these three latter questions could be successfully solved, the poured concrete wall would take its place as one of the foremost types of building construction.

The Lane wall offers an ingenious and effective solution. It gives an easy base for exterior facing, an almost impervious defense against dampness and a highly resistant insulating set-up.

The construction consists of a thin wall with vertical ribs inside and out, staggered, so that they give structural stability without offering at any point solid concrete from exterior to interior. Moisture and thermal energy have to proceed along a devious path to penetrate such a wall.

This invention is intended as the purely structural portion of a wall. It can be used as a support and backing for any of the conventional exterior architectural finishes. It also provides convenient means of supporting the interior finish such as plaster, wall board, wood paneling, etc. Its structural stability is not dependent on the architectural finish, hence this finish material can be kept at a minimum thickness.

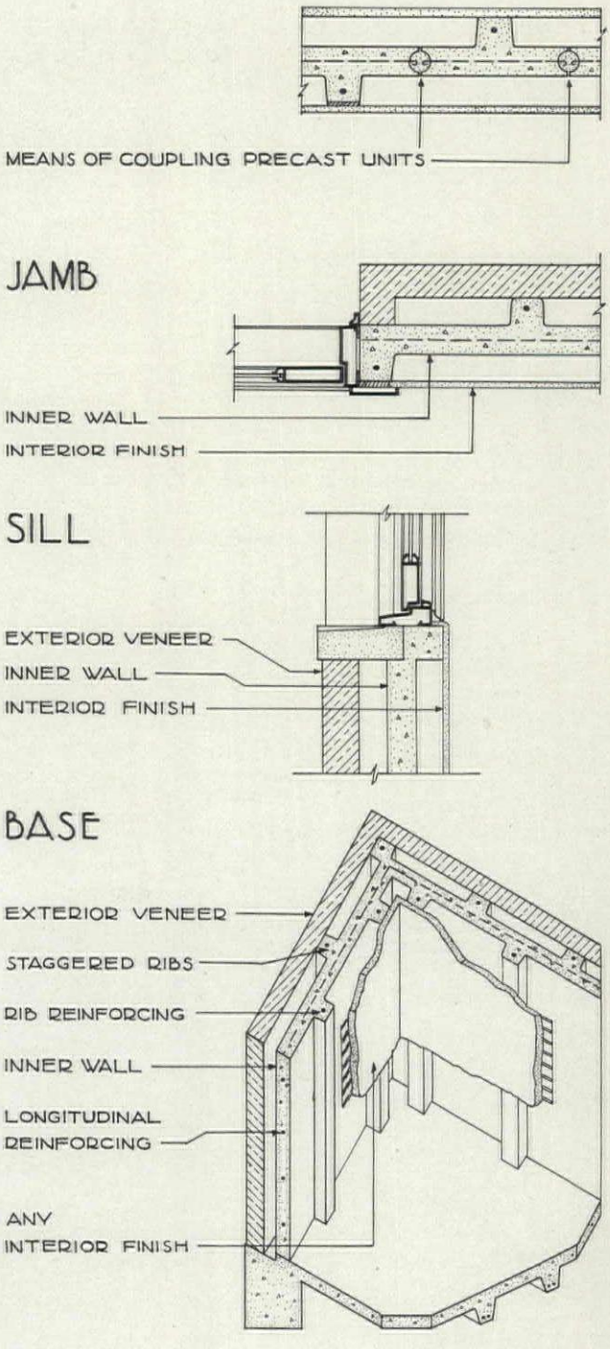
The ribs extend from floor to floor and are reinforced in the outer areas. With this arrangement there is mutual lateral support of the ribs and the thin inner wall. The ribs act as reinforced concrete columns and can be proportioned for any desired vertical load. They can be reinforced for earthquake or wind loads, taking the bending from loads on the face of the wall, while the inner wall takes any horizontal stress parallel to the wall.

Masonry facings are anchored to the ribs in the conventional manner and the metal lath or plaster board is secured to the inner ribs in the same manner as they would be to the ribs of a metal pan slab. This wall construction lends itself to prefabrication. The units can be cast in story heights and of such widths as methods of handling will permit. It can be cast in single rib units as indicated in the sketch or in any widths that can be handled. Forms can be made of wood or the conventional metal pans.

The inventor believes that with modern machinery, walls for light construction such as dwellings, small apartment buildings, etc., could be cast in units extending from floor to floor in height and from opening to opening in width with other units for the wall above and below and above doors. In this manner modern methods can be brought to small building construction. Architectural variation can be accomplished by varying the exterior veneer.

The shape and reinforcing of this wall make it

(*Continued on page* 58)



Drawing Showing the Concrete-Rib Wall

POETRY DIVISION

In a certain way these poems are pathetic and one should have handkerchiefs before beginning to read.

THE BALLAD OF CHARLIE McGOFFUS

(There is Subtle Irony in this Poem—Editor)

A field engineer named Charlie McGoffus,
Worked all day in the field and all night in the office,
Checking contracts and vouchers and estimates too,
To be picked all to bits by the Washington crew.

For the boys in D. C. in their double-lensed specs,
Their sallow complexions and fried collar necks,
Care not for the time nor the money they waste,
If a carbon is missing, a comma misplaced,
And they bounce back the paper with ill-concealed jeers,
To harass the hard-working field engineers.

To get back to Charlie, he struggled along,
'Till an ache in his head told him something was wrong,
He went to the doctor and "Doctor" said he,
"There's a buzz in my brain, what's the matter with me?"

Well, the medico thumped as medicos do,
And he tested his pulse and his reflexes, too,
And his head and his heart and his throat and each lung,
And Charlie said "ah" and he stuck out his tongue,
Then the doctor said "God, what a narrow escape,
But a quick operation will put you in shape."

"Your brain's overworked like a motor run down,
And you're flirting with death every time you turn round,
I must take out your brain for complete overhauling;
In the interim, take a respite from your calling."

So Charlie McGoffus went under the knife,
He struggled home brainless and kissed his own wife,
While old Doctor Loomis and two other men
Were putting his brain in order again.
Well, the weeks rolled along and Charlie McGoffus,
Never called for his brain at the medico's office.

The doctor got worried, gave Charlie a ring,
Said, "You'd better come over and get the dammed thing."
"Thanks, Doc, I don't need it," said Charlie McGoffus,
"I'm being transferred to the Washington Office."

So Charlie now wears a fried collar to work,
And he hides in the lairs where the auditors lurk,
And his letters bring tremors of anger and fear
To the heart of each hard-working field engineer,
And the pride and the joy of the Washington Office,
Is brainless, predacious, young Charlie McGoffus.

THE DISTRICT ENGINEER'S DREAM

(Or The Morning After The Night Before)

District Engineer Richey sends this one. He will neither affirm nor deny authorship, but suspicion points a finger.

I dreamed a dream as I slumbered in bed,
As a pleasing vision passed through my head.
It seemed as I dreamed in sleep profound,
That a perfect building at last I found.

By close inspecting, and by testing too,
No "Defect" or "Omission" was brought to view.
Not an item was found to be corrected.
The work was better than was expected.

Not a thing was wrong, not a thing was missed.
Nothing could be found to make up a "List."
By close inspection from basement to roof,
Nothing was found to cause any reproof.

Inspection all over, and note book not used,
All parties concerned were greatly enthused.
Then the contractor said with much exultation,
"This surely demands a slight celebration."

I could not refuse his kind invitation,
And so 'twas accepted, with no hesitation.
And over our cups, we cussed and discussed
A few former matters over which we had fussed.

The repast was over, all about to depart,
And then my dream ended, I awoke with a start.
It all was a vision, at least so it seemed
And this perfect building was just what I dreamed.

And now when a contractor requests me to dine,
I will take his food, and also his wine,
But rude to the host perhaps it will seem,
I will refuse LOBSTER, for it sure makes me dream.

ANNOUNCEMENT

The Bureau of Agricultural Engineering, U. S. Department of Agriculture, has moved from their old quarters on the south side of the South Building to beautiful new offices on the Independence Avenue (north) side of the building. The branch telephone numbers remain the same: J. E. Miller, 4438; H. A. Magnuson, 2788; H. E. Forsberg, 2773.

WHAT THEY FOUND IN THE CORNER-STONE AT CINCINNATI

The following letter comes from Calvin H. Cool, construction engineering on the reconstruction of the Cincinnati, Ohio, Post Office and Court House.

"Attached is a record of the contents found in the copper box removed from the building. This box was located in the building structure immediately back of the capitals on the granite columns of the first floor level at the southwest corner of the building."

OFFICIAL LIST OF CONTENTS FOUND IN COPPER CORNER STONE BOX (13" x 10½" square and 10" high) JUNE 4, 1937, CINCINNATI, OHIO, POST OFFICE AND COURT HOUSE.

1. One 24" folding rule.
2. NEWSPAPERS:

One—Cincinnati Volksfreund dated July 24, 1877.
One—Cincinnati Freie Presse dated July 24, 1877.
One—Cincinnati Enquirer dated July 24, 1877.
One—Cincinnati Commercial dated July 24, 1877.
One—Cincinnati Daily Gazette dated July 24, 1877.
One—Cincinnati Daily Star dated July 23, 1877.
One—Cincinnati Daily Times dated July 23, 1877.

3. Two Maps—Post Route—Ohio and Indiana.
4. BOOKS:
   - One—Report of Supervising Architect of Treasury Department—dated 1876.
   - One—The Ninth Census of The United States—dated 1870. (Three Sections):
     - Vital Statistics
     - Population and Social Statistics
     - Industry and Wealth
   - One—United States Official Register — dated 1875.
   - One—Finance Report—dated 1876.
5. STAMPS:

   The following issue of stamps, compliments of the Secretary of the Interior:
   (India Proof Specimens)
   - One Envelope—Newspaper and Periodical Stamps—1874.
   - One Envelope—U. S. Official Postage Stamps (Interior Dept.)—1873.
   - One Envelope—U. S. Official Postage Stamps (Dept. of Justice)—1873.
   - One Envelope—U. S. Official Postage Stamps (Dept. of Agriculture)—1873.
   - One Envelope—U. S. Official Postage Stamps (Navy Dept.)—1873.
   - One Envelope—U. S. Official Postage Stamps (War Dept.)—1873.
6. GOLD COINS:
   - One—Twenty Dollar—1876
   - One—Ten Dollar—1876
   - One—Five Dollar—1876
   - One—Three Dollar—1876
   - One—Two and One Half Dollar—1876
   - One—One Dollar—1876
7. SILVER COINS:
   - One—One Dollar—1876
   - One—Fifty Cent—1876
   - One—Twenty-Five Cent—1876
   - One—Twenty Cent—1876
   - One—Ten Cent—1876
   - One—Five Cent—1876 (Nickel)
   - One—Three Cent—1876
   - One—One Cent—1876 (Copper)
8. ONE BRASS TABLET WITH THE FOLLOWING INSCRIPTION:

   THIS TABLET OF THE U. S. CUSTOM HOUSE AND POST OFFICE, CINCINNATI, OHIO, DEPOSITED JULY 24th, 1877.
   R. B. Hayes, President of U. S.
   Thos. L. Young, Governor of Ohio.
   R. M. Moore, Mayor.

   ARCHITECTS

   A. B. Mullett, W. A. Potter, James G. Hill.

   SUPERTINTENDING ARCHITECT

   Saml. Hannaford

	Rate of Wages
Harvey Janes, Asst. Supt.	$7.00 Per Diem
Frank McCord, Clerk	6.00 Per Diem
John M. Mullane, Asst. Clerk	4.00 Per Diem
Lambert DeCamp, Weighmaster & Inspector	5.00 Per Diem
Richard Watters, Foreman of Stone Setting	5.00 Per Diem
David Cunningham Foreman of Bricklayers	5.00 Per Diem
James C. Moore, Foreman of Derricks	4.50 Per Diem
Chas. A. Handman, Foreman of Steam Engines	3.50 Per Diem

   Stone Cutters 3.00 Bricklayers 3.00
   Laborers 1.50 to 2.00

   DISBURSING AGENT & PAYMASTER

   Reuben H. Stevenson
9. PHOTOGRAPHS:
   - One—Carl Schurz—Secretary of the Interior
   - One—D. M. Key—Postmaster General of U. S.
   - One—John Sherman—Secretary of the Treasury
   - One—James G. Hill—Supervising Architect

JUDGE WETMORE WRITES

(*Continued from page* 8)

And then there is the portrait of Secretary Dix who at the beginning of the Civil War sent the famous telegram to the commanding officer of the Revenue Cutter Harriet Lane at the Port of New Orleans: "If anyone attempts to haul down the American flag shoot him on the spot." And the portrait of Secretary Gresham who in a subsequent Administration became Secretary of State; and Cortelyou who was afterwards Postmaster General; and Chase and Tawney who were later members of the United States Supreme Court; and Folger and Manning who are said to have worked themselves to death in office; and Windom who dropped dead at the conclusion of a speech at a banquet in New York City; and Thomas of Virginia who hardly got his seat warm before his state seceded from the Union and he resigned to share its fortunes—and misfortunes.

One could go on indefinitely, and if the portraits were half as noteworthy as the Secretaries they are supposed to depict, the collection would possess great artistic merit.

I've often wondered, with his nice taste and fine discrimination in matters artistic, what Secretary Mellon's reaction was when he first saw the Treasury art gallery, the best about a portion of which is the frames.

Anyway, Ed, I don't know why I should get "all het up" over the quality, from an artistic standpoint, of this collection of portraits because—and I hope you will pardon me if I include you with myself—there is no danger of either of us having our portraits in that distinguished company.

Most of us have sense enough not to rush wittingly into a situation where we are hopelessly outclassed, for that is right where our inferiority complex, if we have one, starts in on its forty hour a week. In this connection I may say that there was a time when, for the particular purpose, my signature was just as essential as those of the members of the Cabinet alongside which it was placed. That was when as Acting Supervising Architect, I signed the sketch plans and estimate sheets for many a public building, as required by law. I felt out of place, as I do now, in finding my last letter assigned to a place in the forefront of the THE FEDERAL ARCHITECT along with the contributions of prominent writers. I seem to be in the situation of the old horse belonging to a farmer that the late Congressman Vestal of Indiana used to tell about. This farmer owned a stallion that he entered year after year in the races at the county fairs. He usually was a winner. In course of time, however, when this once idol of the local turf, like King Solomon "was old and infirm and gat him no heat" the younger horses invariably outran him. Finally someone asked the farmer why he persisted in entering this old horse in the races and whether he expected him ever to win again. The farmer replied: "No; I don't expect him to win, but I like to see him lather himself in good company." And, Ed, perhaps that's why I persist in breaking into your columns.

We read that "pride goeth before a fall," and I would dislike to say anything that would cause you to topple over, and yet I cannot help saying that I'd think your pride in the April number of THE FEDERAL ARCHITECT would make you hold your nose so high in the air that you wouldn't dare to go out in the rain for fear of being drowned.

Sincerely yours,
"The Judge"

SOME MORE LETTERS

Kansas City, Mo.
May 4, 1937.

THE FEDERAL ARCHITECT,
Washington, D. C.
Gentlemen:

I am herewith quoting the fondest words in the American language, viz: "Enclosed herewith please find check."

The enclosed check in amount of $1.50 is for a two year subscription to THE FEDERAL ARCHITECT which is gratefully received and read from cover to cover with much interest.

With best wishes and continued success to the entire staff, I am

Cordially yours,
K. L. HULLSICK,
Assistant District Engineer.

Algona, Iowa.
May 10, 1937.

THE FEDERAL ARCHITECT,
Washington, D. C.
Gentlemen:

One never misses the water till the well runs dry, so since I missed the April issue, methinks it will take a little belated priming, such as the enclosed check, for I certainly don't want the well of magazines to run completely dry.

Sincerely,
FRANK R. BURTON,
Construction Engineer.

Flora, Illinois
July 6, 1937

Editor, FEDERAL ARCHITECT:

The enclosed check for a two-year subscription to THE FEDERAL ARCHITECT is overdue, but the check is good.

One of the jobs I used to have after returning to the office after superintending the construction of a building—especially hospitals—was to make suggestions, and if approved, to see that they were incorporated in the future standard drawings and specifications.

No doubt each engineer has found some thing on the drawings or specifications which might be made a little clearer or need a slight change in detail to be better in his mind. How would such a discussion work in THE FEDERAL ARCHITECT? Or would it be an impurtenance? (You might have too many letters to edit the magazine)!

At any rate it is a good magazine and I believe it makes the field men feel that there is some persons in the Office except those who write letters.

Your articles on building materials are instructive and I appreciate them. If there are recent published pamphlets or books on materials, their composition and use, a list of them would give us an opportunity to obtain them. There is so much in building materials which changes and is added to that its a continuous study to try to keep up.

Very truly yours,
GEORGE C. SEIBERT,
Construction Engineer.

SPEAKING OF THE CAPITOL

(Continued from page 29)

thing else that had been presented that they were immediately adopted by the Commission. Washington, who was consulted about all matters of this sort, and Jefferson, his Secretary of State, were enthusiastic in their praise of Dr. Thornton's plan.

Work was started and the cornerstone was laid by Washington, acting as Grand Master pro tem. Work ran along rapidly on the north section of the old building, the part where the old Supreme Court room now is, which was the Senate wing of the original building. This was under roof by the time Washington died and was occupied when the Federal Government came to Washington in 1800. Then work on the opposite wing, the south wing, was commenced. Thornton retired in 1803, and the south wing was completed by Latrobe.

In the course of the discussion of these designs it was originally suggested that the Capitol should be built of marble, that marble might be imported from Europe, in order to have it on a par with the greater buildings of Europe. But the Government at that time was recovering from a long war. The Colonies, now the independent States, were not particularly rich; and it was felt that execution in marble would be a severe and wholly unwarranted drain upon the resources of the country. Consequently, it was decided that a local stone should be used. Imported marble was barred out. The quarries of sandstone in Virginia, from which the stone had been drawn for Washington's church at Pohick, were used both for the Capitol and for the White House.

To quote from Mr. Moore again:

"The Capitol has ever been the peculiar charge of the President of the United States. Jefferson, who had been associated with Washington in the selection of the original plans, took a keen personal interest in the completion of the north wing. With none of the modesty that his illustrious predecessor had professed as to knowledge of architecture, Jefferson undertook to say which one of the Grecian buildings should serve as a model for the builders; and he also watched over Thornton's plans to save them from serious change at the hands of zealous superintendents, eager to magnify their office and to put the impress of their incompetency on

the designs."

The first section to be finished as has been said was the northern half, completed in 1800; then the southern half, completed in 1811; while the central part, where the rotunda is, was not built at all, but simply a wooden passage connected these two sections north and south.

So the building stood at the time of the War of 1812. Then, as you know, the British captured the city and set fire to it, burning the Capitol and the White House. I have a picture which is of interest. It is a rare print. It shows in the foreground Admiral Sir George Cockburn, G. C. G., Rear Admiral of the Red, and so forth. In the background is the city of Washington showing Pennsylvania Avenue and Capitol Hill. On it is very accurately portrayed those two wings of the Capitol then standing, with a low space between. The flames are pouring merrily out of the building; while the admiral toasts his coat tails in complacency. It is interesting to see how accurately those details are shown, because those are the walls which are still standing on Capitol Hill, just as they were after the fire, except that they have been repaired.

Again to quote from Mr. Moore:
"The burning of the Capitol by the British during the War of 1812 was deeply resented by the American people as an outrage against those laws of civilized warfare which protect public edifices as monuments of the arts. From the date of the destruction of the building, in August 1814 until December 1819, Congress occupied other quarters. Happily, the strong walls withstood the effect of the fire and, thanks to President Madison, Thornton's plans were not materially altered, either in the rebuilding or the construction of the central portion begun in 1818 under the superintendence of Charles Bulfinch."

Bulfinch was the great architect of the North, Bulfinch of Boston, who did everything of importance in Massachusetts, which was almost—that is, the capital of Massachusetts was—the capital, so to speak, of New England in the early years of the American Republic. Bulfinch was the architect of the statehouse on Boston Common, and it is rather interesting, as a parallel, that a good many years ago there was serious consideration of altering Bulfinch's statehouse on Boston Common, and there was such a storm of opposition aroused that any such idea was abandoned. The Bulfinch front was very prominent in the newspapers; and if any Massachusetts man hears the phrase, "Bulfinch front," he immediately knows that it is the statehouse on Boston Common.

The "Bulfinch front" of the Capitol at Washington is the central portico on the eastern side. But the middle part of the western side, which had not been built at all before the fire, is also the work of Bulfinch.

A drawing made by Bulfinch of the Capitol shows it as it was completed in 1832, with a dome of wood. It shows the original sandstone walls, built by Dr. Thornton under the supervision of Washington, and, later of Jefferson. The interior had to be all rebuilt; but the walls merely had to be painted. The central part was Bulfinch's addition.

Now, the building at this time was absolutely completed; and, if you are familiar, as I presume you are, with the looks of the Capitol at the present time, you will realize that, with the exception of the dome, all that is standing in exactly that same form at the present time.

Thus a little over a hundred years ago, the Capitol was completed. But the country grows. By 1850 it was no longer 13 states along the Atlantic seaboard. It had spread from ocean to ocean and the number of States had increased. The number of Senators had increased; the number of Representatives had increased very much; and, with the conquest of California it was impossible for the old building to house the new Government.

It became necessary to enlarge the Capitol. Mills was Architect of the Capitol at that time and he prepared a plan which would add on to the middle of the western front a large block, not unlike the suggested addition of Walter's, of later period, to house the new quarters. But President Fillmore objected very seriously. He said that it would destroy the appearance of the old Capitol, turning it into a Greek cross. Mills thereupon resigned.

Walter, who was assistant to Mills at that time, was called in to prepare his plan.

Again quoting from Mr. Moore:
"'It was desirable,' wisely says President Fillmore, 'not to impair the harmony and

beauty of the present building, which, as a specimen of architecture, is so universally admired. Keeping these objects in view, I concluded to make the additions by wings detached from the present building, yet connected with it by corridors. This mode of enlargement will leave the present Capitol uninjured.' Fortunately, he selected Thomas U. Walter, a man who proved great enough to design the wings in conformity with the central building. Thornton, himself, had he lived long enough to do the work, could not have carried out his own plans with greater perfection of detail. As a result, the Capitol stands today as an architectural unit."

The Capitol was then completed; but, as Walter had been called upon to make additions which would give space for the expansion of government, and to form a composition out of the whole which was about twice as large as it had been before, it was necessary to remove Bulfinch's wooden dome and place upon it the great iron construction which you see now.

You have heard it said more than once that that dome should be eventually done over in marble. The reason that Walter used iron instead of marble or stone was because he built it upon the old foundations of the rotunda, the old walls of the rotunda, which Bulfinch had erected. The earth of Capitol Hill is none too solid. The hill is full of springs; and he did not dare put the weight of a masonry mass on top of those old walls.

The dome could not be reconstructed now in masonry without tearing out the whole of the central part of the Capitol and going down and putting in new foundations. It is my opinion that that will never be done; and, personally, I am rather glad that it will never be done, because that iron dome is not a thing of which anybody has any business to be ashamed.

At the time it was built Walter was confronted with the necessity of putting up a large, monumental dome on walls which were not designed for it. He was a man of great ability and great ingenuity; and it occurred to him that this might be done in iron.

The dome, as I have said, and as you have seen in drawings before, rests firmly upon the old circular walls which Bulfinch erected, though it is larger than the old dome, and

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UNPUBLISHED FRAGMENT OF THE AUTOBIOGRAPHY OF ROBERT MILLS

(Mr. Richard X. Evans, a descendant of Robert Mills, writes: "Having just seen a copy of the beautiful April issue of THE FEDERAL ARCHITECT, *and noticed therein a copy of a medallion depicting the architect Robert Mills, I am taking the liberty of sending to the magazine, for any disposition it cares to make of it, the enclosed type-written copy of the fragment of Mills' autobiography. So far as I know this has never been published. The original manuscript is part of my collection of the architect's correspondence.")*

The author of this work has the honor of being the first American citizen that entered upon the Study of Architecture as a profession, in the practice of which he has continued to this year. In 1800, the year in which the Congress of our Union decreed that the Seat of the General Government should be removed to the then named Federal City, afterwards called the City of Washington, the author was sent by his father to that City, and he was placed in the office of James Hoban, Esq., then Architect of the public buildings erecting there; namely: the north wing of the Capitol and the President's Mansion and the Executive Buildings.

President John Adams occupied the Mansion some little time before the sitting of Congress, and the Executive Office-buildings were also occupied by the several Departments of the Government, all of which were accommodated in two buildings, one of which, the Navy Department Building, is now standing. In this building the War, Navy, Postmaster General, Secretary of State and Patent Offices were kept. The Treasury Dept. occupied the whole of the other building, which stood where the centre block of the Treasury Building now stands.

During the first session of Congress here, both houses occupied the north wing of the Capitol, then just completed.

The House of Representatives, however, soon found that accommodation too cramped, and the order was given, the year after, to erect a temporary Hall upon the foundation of the south wing, which had been previously laid: this was done, and the succeeding new Congress, under the administration of President Jefferson, sat in it. This Hall, from its shape being oval or elliptical in its plan, turned out to be an excellent speaking and hearing room. The original foundation had been laid of this form, and a superstructure of brick, about 20 feet high, and covered by a suitable roof, was then laid.

When President Jefferson took his seat, the author was honored with his confidence and patronage. President Jefferson gave him free access to his library, which contained some valuable and rare works on architecture, which were then not available in the country. Mr. Jefferson was peculiarly partial to architecture, and possessed a good taste in this branch of the fine arts. He appeared highly pleased that an American youth had engaged in the study of this science, and gave the author every encouragement to persevere in it, though many obstacles transpired to defeat success; but the time was not far distant when the country would appreciate the art and encourage the artist. About this period, the author took the opportunity of visiting the Eastern States, with the view to examine the progress and improvement there in architecture and the fine arts. He made drawings of all the principal buildings then erected, and, by means of letters, given to him by President Jefferson, he had access everywhere.

During Mr. Jefferson's administration, Congress made appropriations to complete the south wing of the Capitol, and the President was authorized to appoint an architect. He nominated J. B. H. Latrobe, Esq., an eminent architect, originally from England, where he had held a distinguished position under that government. The architectural design of the Capitol never having been properly studied, since the original plan of Dr. William Thornton had been adopted, Mr. Latrobe entered upon his professional duties "de novo", and revised the whole plan of the Capitol, the result of which may be seen in the present building, especially in the East front. The West front, in the centre projection, was the arrangement of a succeeding architect, Mr. Bulfinch, planned with a view to provide for a Library Room.

When Mr. Latrobe took his seat as architect of the Capitol, the author was advised by President Jefferson to pursue his studies in Mr. L's office; and he, being introduced to that gentleman, remained several years in his office.

Mr. Latrobe, combining the engineer with the architect, the author was soon after detached and sent upon a survey of a route for a canal to connect the waters of the Chesapeake with those of Delaware Bay, upon the completion of which, the office was removed to Philadelphia, where the author was engaged in carrying out several of the plans projected by Mr. Latrobe.

Previous to this the author designed several buildings of large dimensions, among which were the Circular Church in Charleston, S. C., a design for a penitentiary for the same State, besides other structures. In 1800, the author entered upon the independent practice of his profession in Philadelphia, where he designed and erected a number of buildings, among which were: 1st—the Circular Church of the Baptists—90 feet in diameter—on Sampson Street, Philadelphia; 2ndly, the wing buildings, for offices to the State House, called Independence Hall; 3rdly, the Washington Hall; 4thly, the Unitarian Church; 5thly, the great arch bridge over the Schuylkill near the location of the present waterworks. This bridge is composed of a single arch of a 360-ft. chord, which rises but 19 feet, the longest arch then in the world: it was carried into execution by that celebrated bridge-builder Lewis ———, who had previously established his reputation in this branch of business in several places. This bridge was completed and was in use many years, but it was accidentally burned down about 6 or 8 years ago.

The author was one of the founders of the "So-

(*Continued on page* 59)

CONCERNING AIR-CONDITIONING

By W. R. LOCKHART

Most of us, in thinking of air conditioning, consider it as air *cooling*, and our thoughts in connection with air conditioning do not usually go beyond the point where we consider it as a means of being more comfortable in summer. We seldom think of it as a year 'round function, and overlook the finer points that render it a real boon to humanity.

As a matter of fact air cooling is only one of the several functions of air conditioning systems. In the American Society of Heating and Ventilating Engineers Code of Ventilation Standards we find the following definition of air conditioning: "The simultaneous control of all, or only the first three, of those factors affecting both the physical and chemical conditions of the atmosphere within any structure. These factors include temperature, humidity, (air) motion, distribution, dust, bacteria, odors, toxic gases, and ionization, most of which affect, in greater or lesser degree, human health, or comfort."

Enlarging upon this definition, we would draw your attention to the fact that air conditioning provides control of temperatures and humidity in *all seasons* of the year, and that a properly designed and installed air conditioning System provides these temperatures and humidities without drafts, and in an unobtrusive manner. The ideal air conditioned structure is never hot, never chilly, never drafty and never depressing. It is a livening, energizing atmosphere. It produces none of the inconvenience or annoyance that we have heretofore experienced when the extremes of heat or cold, dryness or moisture exist in the outside weather. Air conditioning reproduces, completely, all of the ideal natural conditions of the atmosphere that call us to the mountains and the seashore, without any of the undesirable features that Mother Nature might capriciously inject.

Air conditioning can give you mountain atmosphere, without its winds and temperature variations; it can give the invigorating qualities of the seashore air, without its dampness and heat. It can give the all-pureness of air as nature made it without pollen, dust, or drafts.

How can we control the dust and bacteria content of air? By proper filtration and washing.

How can we control the odors in the air? By adequate ventilation, possibly with ionization to produce sufficient ozone to destroy the causes of the odors, and give the exhilarating tang that nature causes.

How can we control its temperature and humidity? By cooling, and heating, or a combination of both, as the requirements of the season dictate.

Let us compare a completely air conditioned structure, such as is usually erected today, with the non-air conditioned structure of the sort that was usually erected, until the last few years:

1. The air conditioning structure will be more comfortable, both in summer and in winter. In summertime, it will be cool (not chilled), and no matter what the temperature is on the street, proper air conditioning will render the occupants of the building pleasantly and unconsciously comfortable. In the wintertime, the same feeling of comfort will exist because the air will be humidified and not merely heated. These conditions will mean that frequent trips to the water cooler in the summertime will be eliminated, and that it will be unnecessary to open and close windows, or doors, to obtain the proper amount of fresh air, or breeze. The minds of the occupants will be freed of all thoughts about how hot it is, or how cold, or how dry, or how damp. Smudged, damp hands will not soil letters, or reports. Elbows will not stick to furniture because of damp skin. Complexions will require less attention. There will no longer be the continued, unending discussion about the heat in summer.

2. Those damp days when rain comes down like a mist

(*Continued on page* 56)

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will not cause clothing to adhere to chairs, or desks. We can't eliminate the mist outdoors with all its upsetting effects, but we can eliminate it inside buildings.

3. Those days in the winter time when our mucous membranes are painfully dry, will be eliminated because the air in the building will be humidified. It is interesting to note that the average amount of moisture, in the ordinary office or home, is less, on most cold winter days, than the moisture content of the air in Death Valley. Death Valley is so dry that it will not support plant life, and yet without air conditioning we deliberately create in our residences and our offices an atmosphere that is even dryer.

4. The air filter and the air washer which form a part of the air conditioning system will remove dust, dirt, or pollen from the air that is drawn into the building, and as a result such troublesome nuisances as hay fever, rose fever, and nasal irritations are eliminated, resulting in fewer absences and more efficient work from office personnel. Air conditioning has been found to give very definite relief from hay fever, and has quite frequently been used by leading physicians and hospitals.

5. Because the windows of the air conditioned rooms will be permanently closed, and because all the air brought from the outside atmosphere will be thoroughly filtered and cleansed, before it enters the building, the cost of cleaning and janitorial service will be reduced. Street dirt and dust cannot enter.

6. The closing of the windows (in some cases they are eliminated entirely) means that street noises will no longer disturb telephone conversations, or concentration on the problems in hand. Street cars and automobile horns, and news boys crying "Extra!" will not upset the occupants of the air conditioned office.

7. Because the windows of the air conditioned building are kept closed, the sudden breeze that could enter and blow the papers on the desks into confusion need no longer take the time of employees, or executives.

8. Because of the fact that the interior of the air conditioned building is constantly sealed and supplied with only clean, pure air, the painting and decorating will retain its original appearance and serviceability for a much longer length of time. It will not be necessary to wash the walls or stone-work of the interior so often.

9. The air in the interior of the conditioned building will never be dry, and the woodwork and furniture will not curl, or crack. We all know how the wood floors of the average building tend to become uneven and lose their finish and separate, as they dry out over a period of years. In a humidified atmosphere, this condition will not occur, because the air will not need to rob its surroundings, including the people, as well as the furniture and woodwork, of the moisture which it tends to acquire from every available source in wintertime.

A statement that proper air conditioning is beneficial to the health and comfort of humans can be made without fear of contradiction. However, a statement that air conditioning is a profitable investment, from the employer's viewpoint, must be substantiated.

The reason for the fact that the cost versus return phase of office air conditioning has been investigated in but a few cases is probably because of the necessity for elaborate, protracted tests that most employers are not inclined to make. That it is profitable is best evidenced by the fact that such employers have continued to install air conditioning after their first venture.

An employee who is working in a conditioned area, and who needs to give no thought whatever to the opening or the closing of windows, to the noises in the street, to the breezes or drafts that we normally experience, or to the temperature outside—be it one hundred degrees or zero degrees—will produce more and better work than if he or she had all these normal circumstances to put up with. How much more work, or how much better work results from air conditioning has been determined in only a few isolated instances.

For example, the American Tobacco Company, in their Philadelphia plant, found that after air conditioning was installed the production of their wrapping room increased 10% over the previous year, and at the same time, the rejects made by the inspectors after the cigars were produced, fell from between 3% and 4%, to between ½% and 1%.

That air conditioning is beneficial to the health of the people living or working in an air conditioned atmosphere has been shown by several groups of employers who made various investigations to find out what benefits had been obtained.

Mr. H. H. Mather, of the Philadelphia Electric Company, has written the following:

"The first studies to determine the effect of air conditioning on health were made in the main office of the Philadelphia Electric Company, at 1000 Chestnut Street, where a complete air conditioning system was installed on the main floor in June, 1931.

"Comparison was made of 45 employees who had been in the office for one complete year, before, and one complete year after the air conditioning had been installed. Only diseases of the respiratory tract and other minor illnesses, where the air breathed had a vital relation to good health, were considered. A reduction of 33% in lost time was found to have taken place during the first year of operation. Analysis for the second year of operation showed a reduction in lost time of 46%.

"In short, during the first year of operation, absences due to respiratory illness had been reduced from 3.34 days per person per year to 2.21 days per person per year. The second year of operation showed a further decrease to 1.79 days of absence per person."

Mr. Mather further states:

"Studies in the New Kensington office of the Philadelphia Electric Co. were carried out along different lines. Here the air conditioning system had been installed at the time the office was built, and offered no opportunity to make before and after studies of employees. It was, therefore, decided to compare health records of men and women employed in this office with health records for a similar office that was not air conditioned. The Frankford office was selected for this comparison.

"The lost time analysis covered a period from September 1, 1932, to August 31, 1933. During this period, absences due to colds, coughs, grippe, and other minor causes was found to be 56% less at the air conditioned Kensington office than at the Frankford office, which was not air conditioned."

At the plant of the American Tobacco Co., in Philadelphia, Mr. Mather found that lost time, due to illness, or indifference to work, was reduced from 75 employees absent one half day for seventy-five days, to only five employees absent one half day per seventy-five days.

There are other evidences of increased employee efficiency and decreased employee sickness because of air conditioning, but not all of these evidences are in a tangible form.

For instance, Mr. L. S. Harrison, of the International Business Machine Corporation, at Endicott, N. Y., wrote the following in the September, 1934 issue of the Heating, Piping and Air Conditioning Magazine: "Without quoting dollars and cents figures, we have turned out more new products in the last year and a half, since the (air conditioning) system was installed, and accomplished more actual production at less expense than ever before. Whereas, the air conditioning system cannot be credited with the entire saving, we feel very well repaid for the installation. The results obtained in the engineering laboratory (which includes the office space) are best endorsed by the fact that we are now in the process of installing a complete air conditioning system in our factory machine room."

Another proof of all-around benefits of air conditioning is the fact that in 1933, the Humble Oil & Refining Co., of Houston, Texas, installed a complete air conditioning system for one of their large office buildings in that city. After a year of use of that air conditioned building, in 1934 they proceeded to air-condition another of their office buildings in Houston. While we have no figures on the actual benefits derived from air conditioning in this instance, it is evident that the first experience of the Humble Oil Company was sufficient to justify the continuation of their air conditioning program.

(*Continued on page* 58)

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Pittsburgh Plate Glass Company,
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Please send me, without obligation, your new book entitled "Carrara Modern Structural Glass."

Name_____

Street_____

City_____ State_____

(*Continued from page* 56)

There is no question of the commercial value of air conditioning to the department store owner, the theatre owner, or the office building owner who leases his space. All of these people have time and time again found that air conditioning greatly increases the revenue obtained from their business.

Air conditioning is one of the biggest forward steps that humanity has made. It is more personally and completely beneficial than any other single item in our daily existence. We carefully prepare our food, and drinking water; we carefully clothe ourselves; we just as carefully avoid reckless driving, and now we are carefully and completely preparing the very air we breathe.

CLASSICAL ARCHITECTURE IN 1937

(Reprinted from the Washington Post)

To the Editor of The Post—Sir: Some of your correspondents appear to be displeased with the design and location of the proposed memorial to Thomas Jefferson. Yet the published sketch of the project indicates nothing inappropriate. Obviously, it has been inspired by a building of the University of Virginia designed by Jefferson himself. And it was chiefly as the founder of that institution that this great man hoped to be remembered.

Perhaps the proposed memorial does vaguely recall the Roman Pantheon, which, as its name indicates, was designed as a temple to all the gods. We must nevertheless observe that this famous building, whose huge concrete dome has shown no structural defect during nearly two thousand years, is now a Christian church—Santa Maria Rotonda. Indeed, it has had that holy status for more than thirteen hundred years. It is therefore theologically impossible to impute to it any taint of original sin.

There is, of course, no typically American style of architecture. Even the much-vaunted skyscraper appears not to have originated with us. Ancient Rome is said to have possessed tall tenement houses. And skyscrapers of a crude sort were recently discovered in a remote region of Arabia. Had our early settlers found here an indigenous architecture such as the Spanish invaders found in Mexico, it is improbable that they would have copied it. For they were, in such matters, not favorable toward anything alien to their traditions. The simplified classical style commonly termed "colonial" is, in fact, neither colonial nor American. There are more "colonial" (which is to say Georgian) buildings in English cities than in our own.

Buildings modeled on those of ancient Rome are not necessarily un-American. The founding fathers believed that they were creating a government similar to the Roman republic, which came to an end just before the birth of Christ. They therefore saw nothing incongruous in calling our highest legislative body a Senate—doubtless recalling that the word designating that celebrated Roman institution meant, literally, an assembly of old men. Not only did they style our chief governmental building the "Capitol," after the Capitolium, a famous Roman temple of Jupiter; they even referred to a sluggish stream at the foot of Capitol Hill as Tiber Creek.

All buildings erected in the eighteenth century—both here and in Europe—were in the Neo-Roman, or Renaissance, style. Gothic architecture (ultimately, so called, because it was assumed to symbolize the crudity of the Goths, though actually it arose in the region of Paris) was then held in contempt. But Renaissance architecture requires a formal landscape setting, and the Mall, as now being developed, is entirely in harmony with the intentions of the designer of this city. The Mall is, however, incomplete without a building near the Tidal Basin terminating its transverse axis and balancing the White House. And this is what the proposed Jefferson Memorial is designed to do.

Since Occidental civilization is based on that of Hellenized Rome, it is difficult to understand how, or why, certain modern sophisticates hope to dispossess us of that heritage. We must continue to speak a language written in Roman letters, and with a vocabulary at least half Latin or Greek. We still "inaugurate" our Presidents, even though we may not, on such occasions, follow the Roman practice of consulting augurs. We speak of "disasters," probably without recalling that this word means, literally, something caused by an unfavorable star. We employ the Latin term "auspicious," though we no longer observe the flight of birds to determine the probable success of our undertakings. Also, we do not hesitate to refer to situations as "ominous," though we scarcely share the Roman belief in omens. It is possible, however, that panics may still be caused by that goat-footed god, Pan, who frightened shepherds. At any rate, such veiled classical illusions give color and picturesqueness to our speech, even if we have largely forgotten their origin.

That we still have a taste for architectural styles based on that of Rome (which was, in turn, based on that of Greece) need not mean that we must cease to enjoy the benefits of modern civilization. While we have learned much in two thousand years, it is doubtful whether this knowledge has increased our capacity to create beauty. Nor are we likely soon to outstrip classical antiquity in that respect. The history of many of the fine arts largely refutes the theory of progress. Perhaps our great absorption in science and in "practical" problems has atrophied our more humane instincts. Or it may be that progress in one field necessarily implies retrogression in others.

CHARLES H. PROBERT.

Washington, Feb. 26.

THE LANE WALL

(*Continued from page* 47)

capable of withstanding large handling stresses. Joints are placed in the inner wall where they do not come in contact with either the exterior or interior finish. When the units are cast a half-cylinder is formed in the inner wall portion at the joint, leaving the reinforcing for the inner wall projecting a small distance. When the units are butted a small cylinder is formed extending the height of the unit. This cylinder is filled with cement grout, making practically a monolithic construction.

The advantages claimed for this wall are: Required vertical supporting value and high lateral rigidity with a minimum of material. Also, as previously stated there is no path for direct conduction from the exterior to the interior face of the wall; that is, at every point in the wall there is an air space insulating the exterior facing from the interior plaster or finish. This will resist the conduction of heat, moisture or sound.

Air spaces can be used as chases for pipes and conduits and can be filled with insulating material if special insulation is desired.

This process of building concrete walls has been patented by Orley B. Lane of the Supervising Architects Office.

SPEAKING OF THE CAPITOL

(Continued from page 53)

much higher.

The ring of columns on it is carried on brackets around the central drum and they spread the whole thing out on the building. A skirting has been added. The skirting is an octagonal wall of cast iron. It is not even roofed over. You can see the sky between one and the other. It spans from point to point like a great vertical iron girdle. It is nothing but a screen. It might be stage scenery, so far as any structural function goes. In order to do this evenly all around the building, the eastern part of the skirting comes outside of the back wall of the portico.

Now, iron construction was just beginning to come into use at that time. When that dome was built there was no other structure of iron anywhere comparable in size to it; and his solution of the problem is a triumph of engineering. It is a monument to the initiative and the daring and the skill of American architects and American manufacturers at that time, that they could turn out that material, which is not rolled steel, such as we can get without batting an eyelid from Bethlehem mills at the present time, but it is all cast iron. But, if we think of it now, if we think of building with iron now, we might say "It is a cheap substitute for stone." In those days it was something fine; it was something daring. And it was the forerunner of all the steel construction, the great skyscrapers of our cities at the present time. It is a great piece of architecture.

ROBERT MILLS

(Continued from page 54)

ciety of Artists," in Philadelphia, and, whilst acting as corresponding secretary to the same, received a diploma as P.A., from the Academy of Fine Arts of that city.

In the capacity of Secretary, the Author had an opportunity of corresponding with Mr. Jefferson, who was the patron of the Society, and received from him many kind letters in reply. He was highly pleased and gratified at the progress making in the fine arts in the country. There was no man that took a greater interest in the improvement of his country than Mr. Jefferson; nor was there anyone that contributed more to the progress of the fine arts in the United States, especially in architecture than he. This was a hobby with him, and after the author had made the general plan of his Mansion at "Monticello", he himself made all the details in working drawings for the workmen; every moulding, etc. etc.

CONTRACTS AWARDED IN THE CONSTRUCTION SERVICE VETERANS' ADMINISTRATION

Northampton, Mass., Additions to Center Bldg. No. 4, Vets'. Admin. Facility. New England General Contracting Co., 341 State St., New Haven, Conn. $154,100

Los Angeles, Calif., Additions to Kitchen Bldg. No. 63, Vets'. Admin. Facility Sarver & Zoss, Inc., 1015 W. 4th St., Los Angeles, Calif..... 129,900

Kecoughtan, Va., Hospital Bldg. No. 110, Vets'. Admin. Facility. Virginia Engineering Co., Inc., Newport News, Va. 694,100

Roseburg, Ore., O. T. Shops Bldg., Vets'. Admin. Facility. George Isaacson Co., 334 Worcester Bldg., Portland, Ore. 39,995

Jefferson Barracks, Mo., Dining Hall No. 23, Vets'. Admin. Facility. J. S. Alberici, 1719 Boatman's Bank Bldg., St. Louis, Mo..... 150,000

Togus, Me., Recreation Bldg. No. 210, Vets'. Admin. Facility. Industrial Fireproofing Corp., 11 West 42nd St., New York, N. Y.... 184,613

White River Junction, Vt., Buildings and Utilities, Vets'. Admin. Facility. Virginia Engineering Co., Inc., Nelson Bldg., Newport News, Va. 509,000

Hot Springs, S. D., Addition to Hospital Bldg. No. 12, Vets'. Admin. Facility. Henry H. Hackett, Rapid City, S. D. 159,175

Lincoln, Neb., Utility Shops Bldg. No. 24, Vets'. Admin. Facility. W. J. Assenmacher Co., 625 N. 17th St., Lincoln, Neb..... 31,227

Bath, N. Y., Boilers, Fuel Burning Equipment and Outside Services Vets'. Admin. Facility. A. Dierks & Co., Inc., 166 Lexington Ave., New York, N. Y. 70,330

LIST OF CONTRACTS AWARDED—WAR DEPARTMENT

Bolling Field, Night Lighting Installation, The Whiteley Elec. Co., Baltimore, Md. $5,298.98

Hamilton Field, Construction of Landing Mat, Union Paving Co., San Francisco, Calif..... 85,000.00

Albrook Field, Night Lighting System, Electric Service Co., Panama City 1,480.85

Luke Field, Landing Mat Marker, Light Installation, H. H. Walker, Inc., Los Angeles, Calif. 4,474.00

Wheeler Field, Floodlight Installation, The Hawaiian Electric Co., Ltd., Honolulu, T. H. 2,280.00

Ft. Sherman, Construction of Quarters for NCO, Manuel P. Calderon, Panama 11,994.00

Plattsburg Barracks, Mechanical work for Central Heating Plant and Auxiliaries for Hospital, Dock & Coal Co., Inc., Plattsburg, N. Y. 10,265.00

Hickam Field, Construction of Water Pipe at Air Corps Hangars, E. E. Black, Ltd., Honolulu, T. H. 2,786.00

Hickam Field, Construction of Elec. Distribution System including Kamehameha, Ft., H. H. Walker, Inc., Los Angeles, Calif... 191,300.00

Hickam Field, Sealing 3 Artesian Wells, City Welding Co., Honolulu, T. H. 3,960.00

Hickam Field, Construction of Railroad and Highway, Max W. Moody, Honolulu, T. H... 38,694.00

Langley Field Runway Lighting & Controls, Whiteley Electric Co., Baltimore, Md. 4,996.53

March Field, Floodlight Installation, Underground Construction Co. Berkeley, Calif. ... 1,732.00

Sacramento Air Depot, Construction of Air Corps Chemical Storage Bldg., Air Corps Paint, Oil and Dope Storage Bldg., AC Reclamation Bldg. and Standard Post Ord. Mag.-Mild Explosives, Eaton & Smith, San Francisco, Calif. 86,600.00

Sacramento Air Depot, Construction of Barracks, Post Exchange and Hospital, MacDonald & Kahn Co., Ltd., San Francisco, Calif. 279,622.00

Sacramento Air Depot, Construction of Depot Supply Bldg. Head House, Wings of Warehouse and Bays, Eaton & Smith, San Francisco, Calif. 920,099.00

Sacramento Air Depot, Construction of Sanitary Sewers, J. W. Terrell, Sacramento, Calif. 17,700.00

Schofield Barracks, Add. Sewage Disposal Plant Including Sewage Tank Sprinkling Filter, together with Piping, Manhole, Etc. Chlorinator for Sewage Effluent, Ralph E. Woolley, Honolulu, T. H. 49,000.00

Ft. Snelling, Alterations and Additions to Station Hospital, H. B. Kilstofte, Winona, Minn. 29,730.00

West Point QM Garage, Freight Receiving Warehouse and Enclosing Walls for Coal Storage James S. Mozzicato, Medford, Mass. 149,900.00

West Point, Construction of Ordnance and Engineering Laboratory, Charles B. Saxon, Inc., New York, N. Y. 230,860.00

March Field Runways and Storm Drains, Metropolitan Construction Co., Los Angeles, Calif. 87,000.00

CONTRACTS AWARDED BY PROCUREMENT DIVISION, PUBLIC BUILDINGS BRANCH

Newport, Tennessee, P. O.—construction—Clarence M. Morrison, P. O. Box 172, Shelby, N. C. $38,244.00

Turtle Creek, Pa., P. O.—construction—Mermins Construction Company, 339 Fifth Avenue, Pittsburgh, Pa. 59,700.00

Louisburg, N. C., P. O.—construction—L. S. Gallimore, 215 Waston Building, Greensboro, N. C. 36,490.00

Powell, Wyoming, P. O.—construction—Busboom & Rauh, 153 South Santa Fe Avenue, Salina, Kansas 62,900.00

Irvine, Kentucky, P. O.—construction—N. S. Ikerd, 1416 14th St., Bedford, Indiana 39,570.00

Negaunee, Michigan, P. O.—construction—F. E. Wester, 717 West Washington St., Marquette, Michigan 47,555.00

Waterloo, Iowa, P. O. & CT. H.—construction, etc.—John E. Ericsson Company, 123 W. Madison Street, Chicago, Illinois 340,460.00

Larchmont, N. Y., P. O.—construction—Structural Engineering Corporation, 110 East 42nd Street, New York, N. Y. 91,483.00

Giddings, Texas, P. O.—construction—E. B. Snead, 619 Littlefield Building, Austin, Tex. 43,000.00

Hebron, Nebraska, P. O.—construction—Busboom & Rauh, 153 South Santa Fe Avenue, Salina, Kansas 40,325.00

Sylvester, Georgia, P. O.—construction—J. M. Raymond Construction Co., 710 Atlantic National Bank Bldg., Jacksonville, Florida .. 39,889.00

Clinton, Mass., P. O.—construction—Bergen Essex Construction Co., Inc., Chicopee Falls, Mass. 64,303.00

Provo, Utah, P. O.—construction—L. F. Dow Company, 111 West 7th Street, Los Angeles, California 143,761.00

Lakewood, N. J., P. O.—construction—Pozzi & Filice, 379 Hamilton Avenue, Trenton, New Jersey 83,080.00

Horton, Kansas, P. O.—construction—Bowers & Ingram, 627 College Avenue, Topeka, Kansas 41,883.00

Fairfield, Maine, P. O.—construction, etc.—Wm. H. McPherson, 22 Hodsdon Street, Bangor, Maine 39,599.00

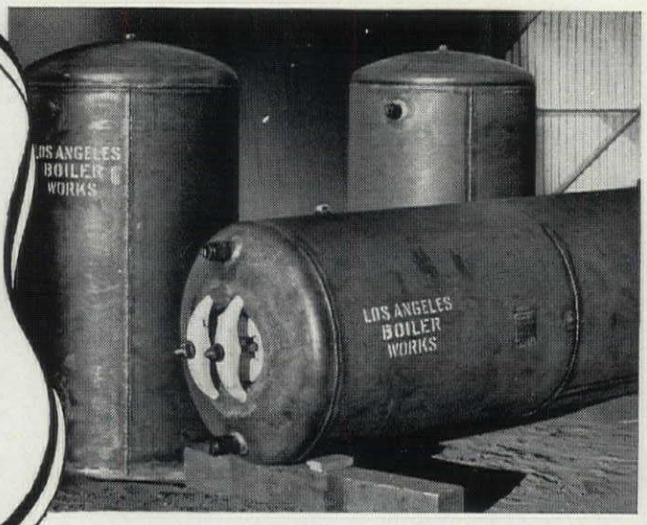
Alice, Texas, P. O.—construction—Chamberlain & Strain, 609 National Bank of Commerce Bldg., San Antonio, Texas 42,589.00

Reedsburg, Wisconsin, P. O.—construction—Dean Construction Co., 5141 Queen Avenue South, Minneapolis, Minnesota 51,279.00

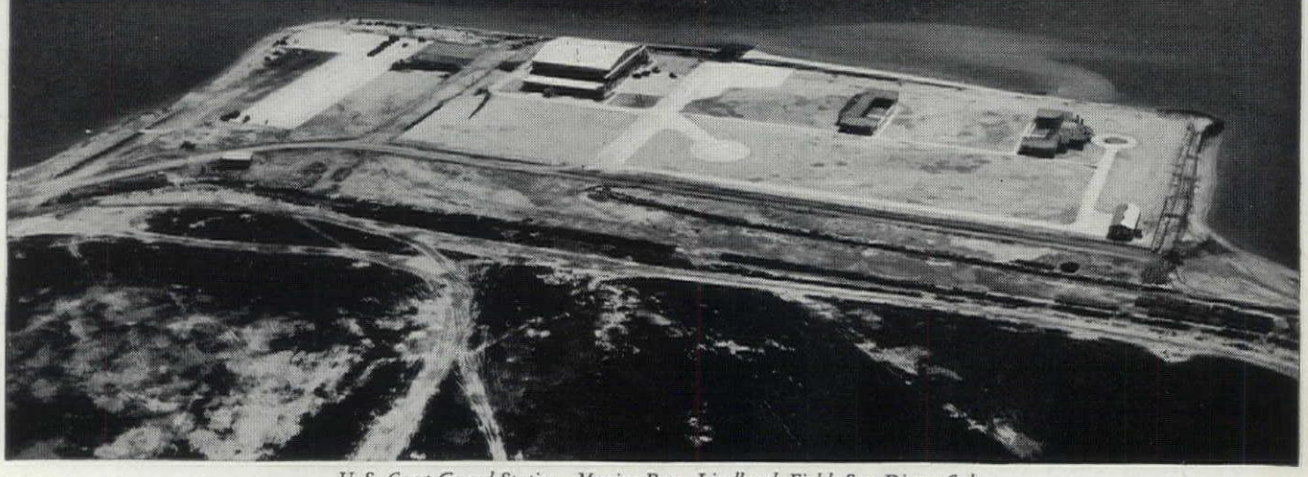
Guymon, Oklahoma, P. O.—construction—The H. W. Underhill Construction Co., 235 North Waco Avenue, Wichita, Kansas 45,299.00

(*Continued on page 62*)

U. S. GOVERNMENT has Non-Rust Tanks of Everdur Silicon Bronze in new Coast Guard Station at San Diego



Three 36" diameter EVERDUR tanks are now in use at the new U. S. Coast Guard Station at San Diego, Cal. They were made for Crane Co., San Diego Branch, by the Los Angeles Boiler Works to comply with U. S. Government Specification WWP-541.



U. S. Coast Guard Station, Marine Base, Lindbergh Field, San Diego, Cal.

NOTHING was spared in assuring the absolute efficiency of this splendid Coast Guard Base. For these heater shells, The American Brass Company's copper-silicon alloy, EVERDUR, assures long life...freedom from rust ...and the elimination for all time of troublesome rust-repairs and heavy replacement expense.

EVERDUR is a sturdy alloy. It combines the corrosion-resisting qualities of copper with the strength of steel. Yet its fabricating cost is relatively low, and it is readily welded by usual methods. EVERDUR storage water heaters for every purpose are obtainable from leading equipment manufacturers throughout the country.

ANACONDA

Everdur Metal

RUSTLESS AS COPPER
STRONG AS STEEL

37164

THE AMERICAN BRASS COMPANY, General Offices: WATERBURY, CONNECTICUT

Offices and Agencies in Principal Cities • In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont.

*EVERDUR is a trade-mark of The American Brass Company, registered in the United States Patent Office.

(*Continued from page* 60)

Ely, Nevada, P. O.—construction—E. & E. J. Pfotzer, 5305 Haverford Avenue, Philadelphia, Pa. 65,800.00

Hollidays Cove, W. Va., P. O.—construction—James I. Barnes, New Zimmerman Building, Springfield, Ohio 59,180.00

Tecumseh, Nebraska, P. O.—construction—Thos. L. Dawson Company, 2035 Washington St., Kansas City, Missouri 42,200.00

Rockford, Michigan, P. O.—construction—James I. Barnes, 501 North Lansing, Mt. Pleasant, Michigan 39,986.00

Middlebury. Indiana, P. O.—construction—James I. Barnes, State Exchange Bank Bldg., Culver, Indiana 39,610.00

Sacramento, California, P. O. & CT. H.—construction of additional stories and remodeling, etc.—K. E. Parker Company, 135 South Park, San Francisco, California 206,300.00

Coudersport, Pa., P. O—construction—James I. Barnes, Charlottesville, Va. 54,100.00

Nevada, Iowa, P. O. — construction — The Weitz Company, Inc., 713 Mulberry Street, Des Moines, Iowa 47,100.00

Shawano, Wisconsin, P. O.—construction—Mads Madson Company, 4303 Bryant Avenue South, Minneapolis, Minnesota 50,962.00

La Plata, Missouri, P. O.—construction—James I. Barnes, 215 Wilhoit Building, Springfield, Missouri 47,000.00

Ottawa, Ohio, P. O.—construction—The Geo. H. Whike Construction Co., 603-5 Geo. D. Harter Bank Bldg., Canton, Ohio 48,740.00

Blissfield, Michigan, P. O.—construction—Henry Dattner, 1515-21 Barlum Tower, Detroit, Michigan 43,691.00

Sandstone, Minnesota, Federal Jail—construction of the buildings, etc.—N. P. Severin Company, 222 West Adams Street, Chicago, Illinois 674,377.00

Louisa, Ky., Agriculture and Post Office Bldg.—construction—Upchurch Construction Co., 112 North McDonough St., Montgomery, Alabama 43,949.00

Lovelock, Nevada, Agriculture & P. O. Bldg.—construction—Lundberg-Richter Co., Inc., Fredericksburg, Va. 60,700.00

Cincinnati, Ohio, Post Office Annex—miscellaneous repairs—The M. Marcus Building Co., 2109-2115 Reading Road, Cincinnati, Ohio 32,070.00

Paris, Missouri, Agriculture & P. O. Bldg.—construction—James I. Barnes, Wilhoit Building, Springfield, Missouri 45,547.00

Munising, Michigan, P. O.—construction—Sorensen-Gross Construction Co., 2305 Lapsor Street, Flint, Michigan 46,100.00

Greensboro, Ga., Agriculture & P. O. Bldg.—construction—Murphey Pound, Hill Building, Columbus, Georgia 41,745.00

Vineyard Haven, Mass., Public Health Service Marine Hospital—construction of new kitchen, dining room and surgical unit, Bay State Construction Co., Bay State Building, Lawrence, Massachusetts 39,876.54

Waurika, Oklahoma, P. O.—construction—J. J. Fritch, 504 Construction Building, Dallas, Texas 43,400.00

East Grand Forks, Minnesota, P. O.—construction—Johnson-Gillanders Co., 424 N. 3rd Street, Grand Forks, North Dakota.... 45,685.00

Boyertown, Pa., P. O.—construction—J. L. Robinson Construction Co., 1100 Block Pierce Street, Baltimore, Md. 48,800.00

Mount Vernon, Missouri, P. O.—construction—James I. Barnes, Wilhoit Building, Springfield, Missouri 42,175.00

Bonners Ferry, Idaho, P. O.—construction—L. H. Hoffman, 715 S. W. Columbia Street, Portland, Oregon 125,000.00

Anderson, S. C., P. O. & CT. H.—construction—Beers Construction Co., 70 Ellis Street, N. E., Atlanta, Ga. 167,040.00

Carville, La., M. H.—new boiler, refrigerating plant, etc.—Mr. W. C. Spratt, Law Building, Fredericksburg, Va. 53,600.00

Portsmouth, Ohio, Post Office Garage—remodeling—Smythe & Co., Room 214, 1416 F. St., N. W., Washington, D. C. 23,727.00

Ranger, Texas, P. O.—construction—Bonded Construction Corporation, 110 East 42nd Street, New York, N. Y. 42,314.00

Edmond, Oklahoma, P. O.—construction—McMillan Construction Co., 360 Broadway Tower, Enid, Oklahoma 42,675.00

Bloomfield, Iowa, P. O.—construction—Harlan Contracting Co., Box 107, Harlan, Iowa ... 42,530.00

Vacaville, California, P. O.—construction—K. E. Parker Company, 135 South Park, San Francisco, California 67,760.00

California, Missouri, P. O.—construction—James I. Barnes, Wilhoit Building, Springfield, Missouri, ... 46,300.00

Downey, California, P. O.—construction—Sarver & Zoss, Inc., 1013 West 4th Street, Los Angeles, California 53,400.00

Sturgis, S. Dakota, P. O.—construction—Henry Carlson Co., 201-3 Edwards Building, Sioux Falls, S. Dakota 47,770.00

Mansfield, Massachusetts, P. O.—construction—Tremaglio Bros., 1500 Highland Avenue, Waterbury, Connecticut 45,999.00

Saint James, Minnesota, P. O.—construction—Geo. E. Carlstrom Construction Co., 732 Park Avenue, Mankato, Minnesota 42,929.00

Orient, Maine, Inspection Station—construction—H. P. Cummings Construction Co., 14 Prospect Street, Ware, Mass. 17,800.00

Fulton, N. Y., P. O.—extension and remodeling—Laudson Construction Co., Inc., 33 West 42nd Street, New York, N. Y. 38,067.00

Boonville, N. Y., P. O.—construction—Structural Engineering Corporation, 110 East 42nd Street, New York, N. Y. 51,217.00

Saint Anthony, Idaho, P. O.—construction—E. R. Viesko, 2060 South High Street, Salem, Oregon 48,889.00

Anthony, Kansas, P. O.—construction—Busboom & Rauh, 153 S. Santa Fe Avenue, Salina, Kansas 48,000.00

Edinburg, Texas, P. O.—construction—Algernon Blair, 1209 First National Bank Bldg., Montgomery, Alabama 54,582.00

Rockville, Indiana, P. O.—construction—James I. Barnes, Barnes Building, Logansport, Indiana, ... 37,610.00

Covington, La., P. O.—construction—R. P. Farnsworth & Co., Inc., 212 Nashville Avenue, New Orleans, La. 43,998.00

Rensselaer, Indiana, P. O.—construction—James C. Miller, Atlas Building, Campbellsville, Kentucky 44,937.00

Piggott, Arkansas, Agriculture & P. O. Bldg.—construction—Charles H. Barnes, 312½ Fifth Street, Logansport, Indiana 43,652.00

Jasper, Indiana, P. O.—construction—J. Fred Boggs & Son, Austin, Indiana 46,030.00

Wellston, Ohio, P. O.—construction—Mutual Construction Company, 550 West Boston Avenue, Youngstown, Ohio 41,385.00

Johnson City, Tennessee, P. O.—construction—Algernon Blair, 1209 First National Bank Bldg., Montgomery, Alabama 197,571.00

Walpole, Mass., P. O.—construction—Bergen Essex Construction Co., Inc., 194 Garden Avenue, Belleville, N. J. 52,300.00

Marion, Iowa, P. O.—construction—Nolvik & Paterson, 415 North Madison, Mason City, Iowa 52,031.00

Tulare, California, P. O.—construction—MacDonald Construction Co., 3829 W. Pine Blvd., St. Louis, Missouri 63,676.00

Weatherford, Oklahoma, P. O.—construction—Upchurch Construction Company, 112 North McDonough, Montgomery, Alabama 42,479.00

RECENT CONTRACTS AWARDED BY DEPARTMENT OF AGRICULTURE—PLANS BY BUREAU OF AGRICULTURAL ENGINEERING

Auburn, Alabama—Laboratory and several small farm buildings—Animal Disease Laboratory, Bureau of Animal Industry; Batson-Cook Company, West Point, Georgia 62,834.00

Dubois, Idaho—Laboratory and Residence—Western Sheep Breeding Laboratory, Bureau of Animal Industry; Fred R. Comb Company, Minneapolis, Minnesota 54,051.00

PLANS BY FOREST SERVICE

Coshocton, Ohio—Buildings and Utilities—North Appalachian Watershed Experiment, Soil Conservation Service; Ang Construction Company, Orrville, Ohio 59,500.00

Waco, Texas—Buildings and Utilities, Texas Experiment Watershed Project, Soil Conservation Service; F. A. Mote, Dallas, Texas 59,688.00

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

April 1 through June 30, 1937

Radio towers, High Power Radio Station, Naval Academy, Annapolis, Md. Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa..... $283,770.00

Gantry Crane and Transfer Car, Naval Proving Ground, Dahlgren, Va. Dravo Corporation, Pittsburgh, Pa. 153,890.00

Turbo Alternator, Condenser and Auxiliaries, Navy Yard, Washington, D. C.

(a) Turbo Alternator, Allis-Chalmers Mfg. Co., Milwaukee, Wis. 135,000.00

(b) Condenser and Auxiliaries, Condenser Service & Engineering Co., Inc., Hoboken, N. J. 31,889.00

Extension of Quay Wall and Dredging, Destroyer Base, San Diego, Calif.

(a) Items 1, 2 and 3, Robert T. Dawson, San Diego, Calif. 54,450.00

(b) Item 4, Standard Dredging Co., Los Angeles, Calif. 48,000.00

Dredging, Navy Yard, New York, Morris & Cumings Dredging Co., Inc., New York, N. Y. 85,000.00

Dredging, Naval Operating Base, Norfolk, Va. Norfolk Dredging Co., Norfolk, Va. 73,904.00

Alterations and Improvements to Hangar, Navy Yard, Philadelphia, Pa. Rafferty-Kennedy Co., Philadelphia, Pa. 74,588.00

Shore protection and road, Naval Academy, Annapolis, Md. Roberts Paving Co., Washington, D. C. 58,589.00

Clearing Timber and Brush, Naval Radio Receiving Station, Cheltenham, Md. W. C. Spratt, Fredericksburg, Virginia 44,000.00

Improvement to Boat House and Pier, Naval Air Station, Anacostia, D. C. W. F. Martens, Newport News, Virginia 31,860.00

Improvement to Electric System Isherwood Hall, Naval Academy, Annapolis, Md. Ross Electric Construction Co., Inc., Philadelphia, Pa. 35,600.00

One Barracks Building and One Combined Mess Hall-Galley-Barracks Building and

(*Continued on page 65*)

(*Continued from page 63*)

Services, Naval Operating Base (Air Sta.), San Diego, Calif. B. O. Larsen, San Diego, Calif.	540,000.00
Additional Facilities for Parking Seaplanes, Naval Operating Base (Air Sta.), San Diego, Calif. V. R. Dennis Construction Co., San Diego, Calif.	82,544.00

DEGREE-DAY HANDBOOK FOR CHECKING HEATING PLANT OPERATION AND PREDICTING FUEL CONSUMPTION . . . . . .

[*Degree-Day Handbook, by Clifford Strock and C. H. B. Hotchkiss; published by The Industrial Press, 148 Lafayette St., New York. 298 pages, 6 x 9 in., green semi-flexible binding, 29 tables; 27 illustrations, including a degree-day map of the United States. Price, $3.*]

In order to consolidate the considerable amount of degree-day data which has been accumulated over a period of years and in order to present in compact and usable form complete information on the applications and derivation of the degree-day unit, *Heating & Ventilating* has published its new Degree-Day Handbook. This book is useful both to the operating engineer as a guide to operating efficiency of his plant, and to the designing engineer in estimating fuel consumptions of buildings.

In a 60-page table, figures showing the normal number of degree-days, by months, for 1064 cities are presented. These figures are based on averages covering periods from 10 to 50 years.

For the first time the actual number of degree-days by months in recent heating seasons (1927-36) for 54 large cities is available between the covers of one book. The book embodies also a new idea in determining the average temperature of the heating season by using the idea of the degree-day. This information, presented in a table covering 411 cities, gives not only the average temperature for the heating season but the length of the season in days, the beginning and ending dates of the heating season, together with recommended design temperatures, and record high and low temperatures.

The book contains 14 reference tables included in which are tables of degree-days for industrial heating, tables on the heating value of various fuels and fuel constants for predicting fuel consumption.

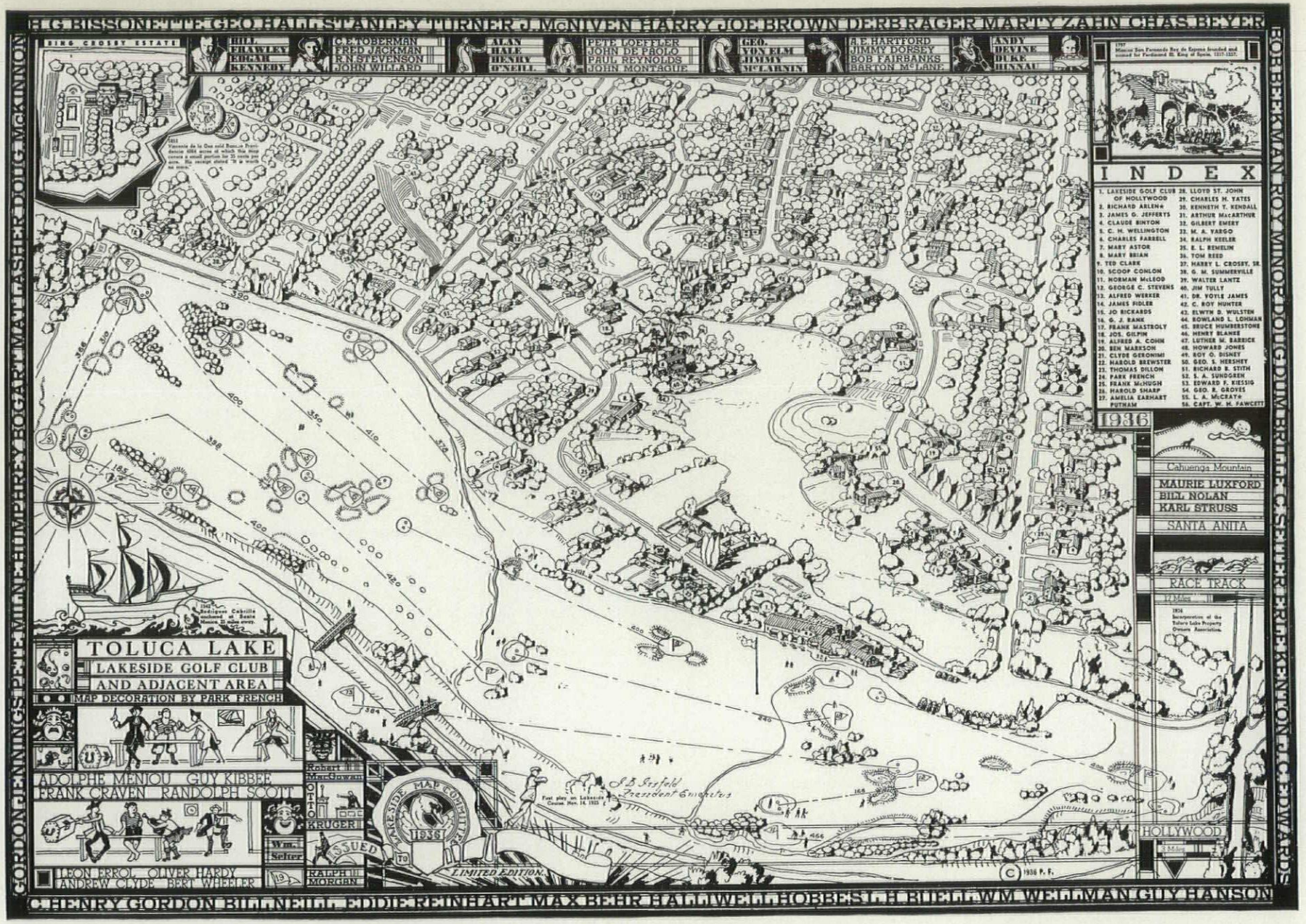
The second portion of the book is devoted to three chapters describing how use has been made of the degree-day. The first includes practical examples showing how various operating engineers have made use of the degree-day in industrial plants, commercial buildings, school buildings, and in district heating work. The second chapter covers customer relations work and sales promotion and illustrates by examples how the degree-day unit has been used to promote the sales of various fuels. The third of these chapters is entitled "Use of The Degree-Day in Market Research."

A chapter is devoted to telling how the base temperature of 65F was established, summarizing the work which has been done in checking the accuracy of the figure 65. This chapter is followed by one on use of the degree-day in predicting fuel consumption and explains the theory upon which the degree-day is based. It includes formulas showing how the degree-day was originally applied in predicting fuel consumption, and also contains an entirely new formula for predicting fuel consumption, the derivation of which explains how to predict fuel consumption even in southern climates in the United States.

The book closes with a useful chapter on summer cooling data for 18 cities. This includes a count of the actual number of hours that the dry bulb temperature was above 75F, 80F, 85F, 90F, 95F, and 100F for each of the summer months of the past five years for the 18 cities.

David A. Molitor of the Supervising Architect's Office has compiled a very scholarly pamphlet, based upon years of research and practical construction experience, entitled "Structural Engineering Problems."

It deals with structural frames, wind bracing, retaining walls, sheet piling, wave pressure on breakwaters and other kindred problems. The pamphlet has been printed and is procurable through Mr. Molitor.



TOLUCA LAKE

This little map concerns itself with persons connected with the motion picture industry, an activity flourishing near Los Angeles. It seems a lake was found; and thereafter named Lake Toluca. There was naturally some disagreement among producers in wasting such a beautiful title on a mere lake which would never appear before the camera, the feeling being that the next time a great, glorious, unprecedented movie star was discovered she could be called Lucia Toluca and with that name produce millions upon millions in box office receipts or something. But to the lasting credit of the industry the valued title was attached to the mere lake.

Thereupon a golf course was purchased and set out adjacent to the lake, houses were built round about, and the picture folk attracted by the charming setting went out there to live. The index is a little fine for reading without your magnifying glass but with perseverance you can see where many distinguished persons live. There are so many names printed all around, one gets the impression that the motion picture profession is a very large business. Also one gets the impression that talent in the profession carries with it an instinct as to how and where to live.

The map was prepared by Park French, an architect who has been responsible for a good deal of the architecture you have seen in motion pictures.

PERFORATED ACOUSTICAL TILE FOR VENTILATION

By E. B. Bailey

The rather old problem of giving a room ventilation, acoustical, and architectural treatment all at once is being met in a rather new way by the War Dept. in the new theatre at Fort Benning, Ga. All three of the birds are being slain with one tile—acoustical tile with the perforations going all the way through. This tile is being mechanically suspended on the ceilings of the rooms treated so there will be free passage of air from the furred space above, which serves as a plenum chamber, to the room below.

I understand the idea is not entirely original with the War Dept., but it is new and bright. The Bureau of Standards expresses the opinion that although they have not tested this tile yet, it should not be materially different in efficiency from the regular tile with the perforations going only part way through. It eliminates the disfiguring grille and supplies fresh air practically uniformly over the ceiling area.

AMERICAN RADIATOR EXHIBIT

(*Continued from page* 40)

air-conditioning apparatus and air-cooling apparatus on the other shows how greatly the scope of the heating business has increased.

When one considers that central heating in its first stages consisted of simply a receptacle for fuel with a duct system attached, so that generally speaking coal-shovelling resulted in heat and the lack of it in none, the possibilities of present heating systems are marvelous. Now there enters into the system the responsibility for automatic operation, one-degree temperature control, air-filtering, uniform distribution of heat and so on. There is a long jump from the tin-smith to the heating engineer.

A thermostat is shown which has a direct radiator connection so that it responds to either the air temperature or the radiator temperature with the result that a drop in either calls for heat. This prevents radiators from becoming cold before the drop in house temperature demands heat, thus avoiding wide temperature fluctuation.

A number of very beautifully executed diaramas emphasize in pleasant sugar-coated form some of the abstract laws of physics (not susceptible of Supreme Court interpretation) which are concerned with the science of heating.

One aberration is conspicuous. There is a little scene representing four cultured persons in luxurious surroundings playing bridge. Every detail is complete—one might even check the hands and predict whether there is a game-going combination in them.

One error, however! In the tense situation, with the first lead about to be placed upon the board, dummy remarks with an excess of geniality "I want to explain about this heating system of mine."

With all due respect to the American Radiator Company, any person in the dummy position who made a conversational crack like that at that moment would in nine hundred and ninety-nine cases out of a thousand find himself smartly rapped over the bean with a piano stool.

Aside from that little error, his remarks are full of pith and point and worthy of careful consideration.

The visiting architect to New York should certainly set aside a part of his day to visit this very interesting and illuminating show.

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NECROLOGY

JOHN W. GINDER

Mr. John W. Ginder, Superintendent of the Architectural Engineering Section of the Supervising Architect's Office, died July 16 at his home in Riverdale, Maryland, after a short illness.

Mr. Ginder was born in St. Louis, August 24, 1862. His early training was in a wood-working mill where he learned all the processes of producing finished mill-work, beginning with the tree with the bark on. Nearly all the processes were by hand. He graduated into the building industry and then into architecture. He practiced architecture in St. Louis for a number of years and he used to show the drawings for a city hall which his firm won in competition.

He was appointed to the Supervising Architect's Office April 9, 1900, as a computer at a salary of $1400 per annum. He was made Assistant Superintendent of the Computing Division in 1910 and Superintendent in 1912, following the death of Mr. Plant. The Computing Division was later called the Architectural Engineering Division and then the Architectural Engineering Section.

He had made a life-long study of building materials, was on the Federal Specification Board and on numerous other governmental committees concerned with materials and their use. During the World War when there was a shortage of all products and an enormous amount of construction in progress, he served on certain committees concerned with such construction and products.

He was especially interested in matters affecting personnel and personnel organizations. In this connection he acted in an advisory capacity when the reclassification law was put into operation.

Because of his excellent record and service, he was exempted from compulsory retirement by executive order August 24, 1932.

He was loved for his kindly disposition, his gentle method of speech and his facility for sound advice. He had many friends and was universally looked up to because of his knowledge and experience. The old poem of Halleck's said—

"None knew thee but to love thee
Nor named thee but to praise."

The words might well have been applied to John Ginder. His loss will be greatly felt in the Supervising Architect's Office.

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