PENCIL POINTS NOVEMBER [937]

DESIGNS O.R.EGGERJ.



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OTTO R. EGGERS, who for over a quarter of a century has worked quietly and modestly in the office of John Russell Pope, turning out designs and drawings that have won him the admiration of thousands of his fellow professionals. His rare talents are appraised and illustrated on the pages which follow





A carbon pencil study on cameo paper by Otto R. Eggers of an architectural detail—Yale University. An accurate visualization

OTTO R. EGGERS AS A DESIGNER

BY T. J. YOUNG

"MEET ME in New York at your earliest convenience," wired the late John Russell Pope, some twenty-four years ago, to Russell Whitehead, then Editor of "The Brickbuilder" of Boston. The office records report that Mr. Pope and Mr. Whitehead lunched at old Delmonico's; the expense memorandum indicates that it must have been an excellent repast; the following confirming correspondence makes the object of the meeting clear, in that it was agreed by Whitehead that he would not "tempt" Otto R. Eggers again by offering him commissions to be executed outside his regular duties in Pope's office.

Eggers had just finished a stunning design for the title page of "The Brickbuilder" and was making studies for the "dress" of the "White Pine Series of Architectural Monographs." Pope was fully aware, at that time, that Eggers' talents combined all those that made for a great architect, and he was anxious to have his career uninterrupted by arduous studies of what might be considered "potboilers." He appreciated the fact that Eggers was conscientiously giving his all to the solution of the problems on the boards, which involved the expenditure of long hours at the office; he knew also that the midnight oil must be burning elsewhere, for Eggers had produced designs and drawings of rare quality for others which required many, many hours of study. It was, however, no selfish request that was made by Mr. Pope. He was truly fond of Otto R. Eggers and wanted him to remain hale and hearty, but he desired above all to have him keep fit to cope with the important projects which were bound to meet his attention as the future unfolded. The practice of the office of John Russell Pope and the continuous part played by Eggers in the affairs of that office proved beyond a doubt the wisdom, good judgment, and affection which prompted Mr. Pope to suggest that Otto be "let alone" to work out his destiny.

Eggers had entered Mr. Pope's office in 1909. There and then began the friendship and appreciation which prompted Pope's telegram, four years later, and which even-

tually led to a partnership-a friendship and partnership culminated by Pope's death, on August 27, 1937. The architectural press, as well as the nation's newspapers, in announcing Mr. Pope's untimely passing, expressed gratification that Pope was not alone in the development of his many projects and that Otto R. Eggers, and with him Daniel Paul Higgins, formed a team of extraordinary effectiveness, well able to carry to completion his unfinished projects and to continue the practice of architecture.

The real New Yorker, born on Manhattan Island, is rarely encountered in the social and business life of the city. Eggers can boast that he is truly a native son, for he first saw the light of day on August 4, 1882, down on Greenwich Street. Both Mr. and Mrs. Eggers had fine old German ancestors. With a father who devoted his life to inventing valuable patented articles and a mother who was a skilled teacher of art and music, it is little wonder that their offspring should have inherited a passion for the profession he finally chose. We find him attending Public School No. 35 on 13th Street, and later an evening school on 46th Street, near Sixth Avenue, where his studies included architectural drawing.

With the enthusiasm of the seventeen-yearold lad, he secured a position in the office of Elliot Lynch, Architect. There he remained for about five years. It was during this period that he entered classes in Architecture at Cooper Union, New York, and a few years later joined the Hornbostel Atelier. Eggers' subsequent employers included Nathan C. Mellon, Grosvenor Atterbury, Egerton Swartwout, and Thomas Scott.

During the depression of 1907-1908, he returned to the office of Mr. Lynch, remaining there until he was employed by Mr. Pope.

Having won the LeBrun Scholarship in 1912, Eggers spent six months traveling and sketching in Europe. He was welcomed back to the office of John Russell Pope upon his return to the United States.

When the time was propitious, Eggers designed a most attractive house in Larchmont,



A rapid drafting room study made by Otto R. Eggers for the Payne Whitney Gymnasium—Yale University. Emphasis is placed upon the mass and fenestration of the building with a subordination of all architectural details

New York, where he and his family enjoy life in the suburbs, or that portion of his waking hours which are not spent at his office. It has been noted that Eggers is "always at the office" and that he seldom takes a vacation. His chief "hobbies," if they may be called that, are in close association with his profession, such as etching and modeling. His chief relaxation is to occupy his spare time by working on a competition or by a visit to the modeling shop where his powers of analysis and constructive criticism are seen to their best advantage. He is seldom willing to make a drastic criticism of a piece of architectural detail without being able to offer a solution for its correction. For years the architectural detail of the office of John Russell Pope has been recognized for its general excellence, and this was not achieved nor maintained by accident.

Otto R. Eggers has exerted more influence on the development of architectural draftsmanship and rendering in this country than any other man of his time, but paradoxically he is not a renderer, as the term is generally understood. His main interest lies not in the drawing as such, but in the study and presentation of architectural design. He is first and always a designer, and the rendered drawing

is to him a stage of design, as is the preliminary sketch. This fact explains why his drawings are distinct from the usual run of renderings, for they are studies of brick, stone, steel, or glass, seen under natural conditions, and are the work of one fundamentally interested in the study of a problem in design. To him the first rough perspective sketch of an embryo idea and the final presentation drawing are stages of study; the latter being an advanced development of the former. The designer first, then the draftsman, with the proper emphasis on each. His drawing is an instrument-a means to an end-but never allowed to become an end in itself. Even his most finished presentation drawings are made to contribute their share to the study of the final conception.

In studying a problem in design his talent for drawing is used at every step. He is the master of perspective, and each idea is examined by means of quickly drawn freehand perspective sketches in a rapid search for the flaws or virtues of the idea under consideration. Draftsmen working under his guidance for the first time are amazed at the rapidity with which a suggestion is turned into perspective for examination, and a perspective



Perspective study by Otto R. Eggers for detail and material of the central feature of the building on the opposite page. Payne Whitney Gymnasium—Yale University. Office of John Russell Pope, Architect. As usual, a convincingly truthful presentation



Quick drafting room sketch by Otto R. Eggers to study mass and fenestration. College Building—Yale University. It is just as bonest as his more careful study below for the lower story detail of a proposed building to bouse a bank



that is uncannily correct. In a short time he has, by rapid process of elimination, been able with the aid of his pencil to penetrate to the essence of the problem. This use of perspective at every stage of design, whether it be the mass of a building of complicated form or simply some small detail, is his guarantee that there can be no flaws in the finished structure, and accounts for the well studied complete appearance of all buildings that have come from his hand.

His fluency with the pencil is valuable on other phases of design, such as the examination of the effect of light and shade on some detail under consideration. His powers of observation are remarkably acute, as will be noted by anyone examining his drawings, and he brings these powers, plus a retentive memory, to bear when the effect of light and shade are under consideration. This knowledge of the effect of light on architecture is perhaps best exemplified by a study of some of his interior drawings. You will not find here any conventional casting of shadows at an orthodox angle. With unerring perception the reflected shades, shadows, and tones yield a representation of an interior that looks like an interior instead of an exterior turned outside in.

This knowledge of perspective and the effect of light and shade is always used with honesty of purpose, never to cover defects in the design nor by tricks of draftsmanship to draw attention away from some detail lacking in study. It is used always as a probe to find the sore spots, to eliminate the weakness in any conception, and as a method of seeking perfection.

In the study of the plan we find Eggers using the heritage left him by his father. His inventiveness and ingenuity are brought to bear on every planning problem, and, while this has not always proven an advantage on a plan of classical simplicity, its value is felt on buildings calling for an irregular plan or an elaborate domestic work. It is a delight to see him bring his ingenuity to bear on a recalcitrant plan of a large house, the owner of which has proven unusually difficult in his demands. There are almost no limits to the number of different solutions that can be offered until the pieces begin to pull together into an integrated whole. This mastery over domestic architecture, both plan and façade, can be seen by consulting the large list of great houses completed by Mr. Pope and Mr. Eggers during the past twenty years. Its variety and general excellence is probably unequalled in this country.

Members of the profession are so aware of Otto Eggers' contribution to the field of architecture that his time is very much in demand by frequent invitations to act on Juries of Award in important competitions throughout the country. At times these demands on his services have been frequent to the point of

(Continued on page 714)

This type of sketch is frequently resorted to by Otto Eggers to assist the client to a full visualization of a proposed design. Constitution Hall—Washington, D. C.







A rapid sketch made by Otto R. Eggers during the deliberations of the Church Committee to show them a Classic design, which might be considered, for a church on the same site as the one on the opposite page. This is the type that was finally decided upon



The final study by Otto R. Eggers of the Classic scheme decided upon by the Church Committee of The National City Christian Church, Washington, D. C. This design was developed from the sketch on page 689. Only a few changes were necessary



The simplicity of this design for a white shingled country church is admirably expressed by the presentation drawing made by Otto R. Eggers. One feels here absolute veracity of statement. This reproduction is about half the size of the original





A detail of the entrance to a garden, sketched by Otto R. Eggers to visualize to the client a scheme for the wall treatment which also gives a suggestion for the planting



Suggestion for a wood panelled interior. In these interior sketches Otto Eggers always inserts a feeling for scale assisted by the size and arrangement of furniture and the other accessories



Study by Otto R. Eggers of flying staircase in large country bouse. It is worth your while to examine the natural way the light falls in this rendering and in the one on the opposite page



Interior of a library of a city bouse. The original drawing made by Eggers suggests a color scheme for woodwork and drapes





An office building job gave rise to a number of pencil studies by Otto R. Eggers made to examine the effect of mass arrangements and their appearance under various possible conditions of light



A design suggestion by Otto R. Eggers for an office building in lower New York

700



Another study by Eggers for an office building proposed for erection in midtown New York



Eggers made this rapid sketch of a contemplated bank building to visualize a possible solution



A drafting room study by Otto R. Eggers of a monumental interior in a contemplated public building



A faithful study by Otto R. Eggers of an interior detail for the Metropolitan Museum

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Eggers' final study for the American Battle Monument at Montfaucon, France. Erected by the American Government and dedicated in July, 1937



A bird's-eye perspective by Otto R. Eggers showing a suggested grouping and development for Yale University at New Haven, Connecticut 6



Eggers' drawing in Chinese ink presenting the winning design by the office of John Russell Pope in the competition for the Theodore Roosevelt Memorial in Washington, D. C.



A convincing study by Eggers for the Meadowbrook Hospital at Hempstead, Long Island, New York



Eggers' superb technique is unobtrusive in these honest perspective studies for a Mediaeval Museum on the Hudson River and (below) for a proposed moving picture studio





An able presentation of a simple country house done in Eggers' characteristically sympathetic yet straightforward manner



In this bird's-eye perspective of a stable group, Eggers made a convincingly natural and wholly undeceptive presentation sketch



For the study of a simple interior, Otto R. Eggers made this drawing in carbon pencil and wash which is free but accurate and honest in showing the effect



An interior of larger scale in the residence of Clarence McKay Lewis, the living room of an English type country house, as visualized by Eggers

(Continued from page 687)

embarrassment. However, he can rarely resist an invitation to assist on judgments of the scholastic competitions, and often appears as juror on the Paris Prize and LeBrun Scholarships. He served for three years as Chairman of the latter Scholarship Committee.

To his many friends his most outstanding characteristic is his uncompromising sincerity. No one has ever received flattery from Otto R. Eggers, nor can he bring himself to allow any illusion to exist in the mind of a client if he can rectify it, no matter how disadvantageous it may be to himself. There was the case, for example, of a new client describing his tribulations with a former architect and offering them as his reason for withdrawing his patronage. Eggers' reply to this was brief, "We have had our trouble with clients, too."

With him, this inherent honesty and sincerity is not made into a virtue; it is a necessity to a well ordered and efficient existence.

If his social philosophy could be expressed in a few words it might take the form of Lord Chesterfield's advice to his son: "Sincerity is the most compendious wisdom, an excellent instrument for the speedy dispatch of business. It creates confidence in those we have to deal with and brings things to an issue in few words."

Another rapid interior perspective made by Eggers during the study of the design of Clarence McKay Lewis' country house. The ability of a designer to work thus quickly in perspective is invaluable



CONTRASTS

BY RALPH WALKER, F. A. I. A.

To THE active "looker-out" for ideas, and to your commentator, there exists a most interesting theory of contrasts in the modern world, and one by one my fellow moderns expose themselves to this theory.

Simply expressed it is this: Look up the most atrocious example of mid-Victorian bad taste and then use it as a text as to how clean, how machine-like modern ideas are in contrast.

It is, after all, but a poor strawman, and lately it has been used so much that the straw is slightly frazzled and bedraggled and the idea is getting to be thoroughly old-fashioned.

Contrasts of this kind are absolutely childlike and valueless, and if pursued indefinitely will prove, without doubt, a negation to growth.

Healthy disputes, honest contrasting of ideas, are truly necessary to establish a broad rational approach to real progress.

But it is amusing to note that a group of men who loudly proclaim their rationalism are afraid to contrast that virtue against the best of the past, but rather must pick out one of the best known of decadent times, i.e. Victorianism, to show how good they are.

There has been an amazing growth of insensitive ugliness, largely because this feeling for contrast is so childlike and lacking in scientific understanding and as an appreciation of beauty becomes more and more an uncommon factor in our life.

Recently I passed through a town where my father once had a factory. It is an ugly New England factory town. I know it well. The natural beauty of a New England valley has been ruthlessly spoiled. The river which flows through it has become a thing of sadness and regret—it is a little better than a sewer. A new school has been built but unfortunately it offers no contrast to the ugliness caused by greed and carelessness, and it establishes itself as the ugliest building in an ugly community. It is doubly unfortunate because it seems a conscious modern attempt to prove that mankind has no fine qualities. It carries to a logical end the very insensitive materialism which made the ugly town in the first place.

What manner of men and women can we expect to come from such surroundings?

The artist, supposedly, makes his world.

It should be a world of quality, but in contrast—there is speed, there is comfort, there is materialism—all of which are without proper evaluations.

The contrast, developing all over the world, is one between fineness and crassness.

The school which should send boys and girls out into the world demanding quality, will send them out not only lacking an understanding of proportion, but thinking that ugly form and color are natural and desirable.

This ugliness is due to inhibited and monotonous ideas concerning an ideology of machine production and technique. They are fixed ideas.

More recently I sat one afternoon with two outstanding scientists and among their remarks were:—

"There never can be enough experimentation." "There exists today only the beginnings of knowledge."

Again, another man, also devoted to science:-

"An outside animal has moved indoors and we must learn what changes are necessary to make him fit the new circumstances."

"A far-sighted animal must readjust his sight and mentality to indoors."

You will note that in contrast there is no propaganda here. And here there are no disciples except those who know that an answer is still to be sought for.

In the scientific world of grown-ups there is never a contrast suggested against an acknowledged worst, but always the best that others have achieved is set up as the target against which further prowess is to be tested.

Kenneth Reid said the other day as we were looking over material for this magazine:— "Isn't it strange that in the past so much invention went into the use of a very few materials and what infinite variety was obtained and what amazing differences were developed, whereas today with many more materials at hand, with many more processes with which to accomplish results, these results all look alike and the differences are nil."

The modern world has upset many of our mental concepts, our viewpoints of the relationships of design to our life, and I, with pleasure, acknowledge the contributions of men like Corbusier and Gropius.

But in contrast again, back to the scientists for comments:---

"No man has every really contributed more than one idea."

"He generally spends the remainder of his life developing that one idea."

Deems Taylor, the other evening, said that the same was true of music.

Every new idea constitutes within itself a revolution.

"But unfortunately every revolution, without any exception, starts as a movement of liberation and finishes as a tyranny."

"This is the destiny of any new idea. It is crystallized into formulas so that it may be propagated."

The rational mind accepts anarchy of thought.

It is almost axiomatic to say that the more disciples an idea may have the less progress there may be expected and that fewer new ideas will develop.

* * * * *

There is not enough contrast between the stupid banalities of most of the buildings in Washington and the crude ugliness of most of the international school of architecture.

One wonders?

Is there no juice in the American way of life, or must we continue to copy ideas which make museums look like misconceived designs for gas ranges?

Or, must we agree with:—"It is probably true that in the absence of any sense of form, and above *all else* in the absence of any new directing genius in America, our architects are best advised to accept European modern architecture."

In contrast: Of course we Americans live lives which are so European you cannot tell us apart. Shall we try to persuade the Europeans that the reverse is true?

In continuation: A very able designer says:—"All the buildings at the Paris Exposition, especially the steel and glass ones, already look old-fashioned."

And that is especially true of the displays inside the buildings where the modernists come out a very bad second-rate best. The great dogma concerning functionalism fails on the very first basis of function—an understanding of the human intelligence.

The modern quality of insensitiveness is nowhere better exposed than in the way exhibits are displayed in Paris.

Irrationalism is generally in contrast to legibility—a chaos of ill-digested ideas.

In fact a new age of faith has come into existence:—If it looks all right, if it is in the manner agreed upon by *the* school now fashionable, then you must have faith even though you cannot possibly read the bad display or understand it if you could.

In contrast: Newspaper advertising in the New York papers is a remarkable and clean job of intelligently bringing selling clarity into the natural confusion of a great daily.

Why? Because it is based on an amazing knowledge of human reactions.

It starts from a proper beginning, and, not strangely, this advertising arrives at an outstanding job of typographical beauty.

In contrast to modern architecture, modern advertising, an entirely new *art*, is achieving a new beauty which is born of an understanding that *taste* (that word which brings snorts from most moderns) has an appeal that brings results.

Strangely enough the contrast between Victorianism and ultra-modernism is, after all, not so great, for here fundamentally are two examples of the possibilities of ugliness in design: one, is the idea that beauty is achieved by the mere piling on of ill-arranged detail; while the other, by what amounts to a strip tease act in decoration, believes that if no detail exists then a larger amount of beauty naturally will follow.

Where in the contrast between the Victorian idea of plenitude and the modernist misunderstanding paucity, is the home of imagination.


W ITH THEIR ancient tradition of woodworking, and their abundance of good timber, the Scandinavian countries furnish a rich fund of inspiration for the designer in wood. We see in their work a freshness and a new angle, as well as a use of mouldings obviously not a re-hashing of the trite old classical types. Instead of stone mouldings adapted to wood, we find mouldings which sprang from the material and from the woodworking tools themselves.

To the American designer, accustomed as he is to paring down casings, frames and rails to the last one-eighth of an inch, these generous sections may prove something of a shock, but the richness of effect and play of shadow more than justify what may seem extravagance in dimensions. We arrive at a door and enframement which is a rich ornament in itself, instead of a thin



and miserly means of shutting one room from another. However, these lavish measurements may be reduced, and a charming and unusual effect may still be obtained.

As is readily seen, the modern work stems truly from the old traditions. Casings and panels from the ancient Hanseatic museum in Bergen may be found repeated in the most modern of hotels and public buildings. Here, as in most other fields of design, we find the Scandinavians retaining the best of their ancient art, and adapting it with a fresh point of view to their unexcelled modern structures. It is in detail especially that we may learn from the Norsemen.

MEASURED DRAWINGS AND COMMENT BY DOROTHY BRINK INGEMANN

SOME OBSERVATIONS ON BUILDING-PART II

BY MAURICE FEATHER

EDITOR'S NOTE:—Last month Architect Maurice Feather of Boston gave you the impressions he received of Florida while on a recent trip. Now he continues with Charleston, Williamsburg, Washington, and New York. The illustrations are from his notebook.

Charleston

GEOGRAPHICALLY, Tampa and Jacksonville are far southern cities, yet distinctly northern, particularly the latter, in their passion for modernity and incessant bustle. Charleston on the contrary, by a day's journey the most northern of the three, is genuinely southern, dignified and leisurely. After the easy familiarity and rather nondescript character of the Florida business centers, the aloof assurance and consciousness of worth of this old Carolina seaport seems like the hall marks of a city in another planet. It would be difficult to imagine a more unified city. Everywhere the same leisurely but ordered activity, without haste vet without sloth, everywhere buildings of about the same height and the same materials and physical characteristics, and everywhere - the same house plan. To one who has not seen this phenomenon for himself, it is next to inconceivable how few departures one finds from the one plan type. Long narrow house, end to the street, principal rooms strung out in a long line facing onto the inevitable long side porch (one, two, or three stories high) then skirting the side of the porch, the service drive to the rear and beyond the drive, the garden separated from the street by a brick wall. Whether it was that Charleston was largely built in a few decades without changing styles, or because there was evolved early a type of house plan suited to the climate and way of life, this devotion to the one type or variant thereof is astonishing to the last degree. Even in the colored sections -where, alas!, squalor and dilapidation reign -one finds rows on rows of wooden frame houses on a reduced version of the one plan type, even to the side porch, though this porch come within two feet of the adjoining house! With such subservience to one idea in plan, one would expect a large degree of monotony, and such is indeed the case in the poorer quarters where the gardens are omitted. Elsewhere the result is wholly satisfactory: the gardens interspersed between the houses, the occasional desertion of brick for wood, the interesting garden walls, etc., make a stroll nearly anywhere a delightful experience.

Charleston's churches, church-yards, ironwork, etc., are too well known for comment here. The city is not growing with any rapidity, so the volume of new building is very small. A word only about the characteristic brickwork. The bricks are $2\frac{3}{4}$ " high, often quite light in color, almost invariably set with $\frac{1}{2}$ " to $\frac{3}{4}$ " mortar joint. There is much use of the Flemish bond, and moulded brick abounds, though not to the extent one finds it further north in Virginia.

Williamsburg

FROM the Wren Building of William and Mary College, seven-eighths of a mile down Duke of Gloucester Street to the Old State House and back again, stopping at the Raleigh Tavern, the Governor's Palace, Bruton Parish Church, etc., etc., is surely as pleasing a circuit for its length as one could well hope to traverse. It would be hard to find a more perfect object lesson in the solid benefits derivable from communal planning which, though requiring the subordination of the parts to the whole, and the subjection to the common goal of the wishes of the individual, invariably results in the creation of a powerful and harmonious ensemble attainable in no other way. Williamsburg is today a delightful example of what nearly any well-to-do American community might be, with a sensible use of building restrictions and a very slight surrender on the part of the individual of his hitherto inalienable right to build as hideously as he pleased on his own land. Wherever one looks, the prospect is pleasing. Yet, in spite of the variety naturally resulting from the assem-







bling of dwellings, business premises, library, collegiate buildings, etc., the underlying unity is there; due, it would seem, to style and to restriction of building materials practically to three-red brick, white painted wood, and uniform roof tile throughout on brick or frame buildings alike. These three elements are the threads - the warp, so to speak which, running through the entire restored fabric and weaving it into a close-knit entity, give it a homogeneity to which our average American community is a total stranger. Boston, it has been pointed out, was a beautiful and unified city up till about 1830-or, in other words, until the impact of our nineteenth century eclecticism. We can enjoy old Boston in prints, engravings, etc. Vital, alive, restored Williamsburg, we can see in reality.

Washington

It is as difficult to write about our capital city, as it is satisfactorily to see it. It is so vast, so immersed in its affairs, so impersonal, it is hard to get a grip on it anywhere. But after the passage of even a short time, the jumbled and blurred impressions of a few days' visit clarify and certain considerations emerge.

The North side of the Mall from the Monument to the Archives, gives one food for thought. On close view, a building like the Department of Labor may seem vigorous to the point of brutality. The same accusation may be levelled at the new Commerce building. But a few minutes contemplation from across the Mall is apt to reconcile the beholder to the "lifted" scale of these buildings and inevitably raise the question, "Are they not better in scale and more adequate to their task of lining the grandiose Mall than the older buildings around and including the Capitolwhich, it must be confessed, look slightly anæmic by comparison?" In any case, this row of departmental Buildings fronting on the Mall and backing up to Pennsylvania Avenue forms a stupendous group. The most easterly of the row, Pope's new Archives, is beautifully designed in the classic manner, exquisitely detailed, a handsome and dignified building in every respect. West of the monument are the very vital Pan-American buildings, the Academy of Art and Sciences (more unappetizing in reality than in photographs), the wretched, bloodless, Public Health Building, and finally, the new Federal Reserve-this latter a very successful essay in the semi-modern manner in which Cret is skilled. The new Department of the Interior building, at N. W. 21st Street, while interesting in mass, is so heavily detailed as to be brutal to the point of thuggishness. At the other end of the Mall, behind the Capitol,

are the various legislative office buildings and the Supreme Court, a handsome and successful performance in the classic vein.

The modern manner has as yet made very little impression due without doubt, to the Government's policy of adhering fairly closely to the Classic or Renaissance tradition in the interest of continuity and harmony. This is, perhaps, fortunate. Though one soon gets a surfeit of columns, porticos, pilasters, and cornices, there is no doubt that as far as dignity and continuity are concerned the result is much better thus than if the dogs of modernism were unleashed and allowed to run riot. As has been noted, the Federal Reserve, though tinged with the modern spirit, is a meritorious performance. The only other major building to depart from the Renaissance tradition. namely the Department of Justice, does not seem to achieve any result sufficient to justify the dissonance in style which it introduces.

New York

THERE *is* still a town called by that name. Not the old, complacent, self-assured and bumptious city of 1929, but a nicer New York, after the rigors of the past six years, with more than a suggestion of chastened reasonableness instead of unlimited egotistical "bounce."

An analogy might be drawn between this new and agreeable spirit and the character of the group of buildings forming the Rockefeller Center. Saved by their stark simplicity from the extravagances and vagaries so common to modernistic work, they exhibit the quality of chastened severity and unimpeachable logic to the highest degree. Ignoring the question of whether it is economically or artistically profitable to pile them so high, these buildings show a bullet-like directness in solving the problem, utterly ruthless in elimination of the irrelevant and the adventitious, very sparing of ornament yet compensating for its partial or total absence by the use of good, if not necessarily rich, materials. Real progress has been made since the days when the Woolworth Tower was the thing. One feels this group of buildings analogous to the man who, after the five depression years, has emerged, stripped of the false economic notions of the 'twenties but strengthened by adversity, with his ideas coordinated and his house in order.

Reams might be written about the shop fronts without even scratching the surface of the subject. It may suffice to mention a few salient points. The multiple show windowthat is, the arrangement with a specialty show case separating the entrance passage into two -flourishes wherever there is frontage sufficient to permit it. No doubt it has demonstrated its worth or it would have been abandoned before now. Certainly the extra show window displays more goods, but just as certainly it acts as a deterrent to one's impulse to enter. The saw-tooth front window, also, is found surprisingly often, and of recent installation. What possible end it serves it is hard to see-certainly as an enticement to enter it cannot compete with the straight stream-line face, and its only possible advantage would seem to be that it might retard a departing shopper long enough for him to become reinterested in the show window's contents. The type of window with the curved glass corner is much used and its advantages are obvious.

A very noticeable trend is the inclusion of the second story in the scheme of the design. This is done in various ways, the most effective of which is to keep it practically blank, as a foil to the complication of the show windows below, and also as a background for large-scale signs. Occasionally, it is pierced with show windows for specialty exhibits, but these are generally kept very small, lest they reduce the blank wall effectiveness of this solid second story.

New York, the chastened, has not yet forgotten how to deal in superlatives. One may, like a "hick," gaze skyward at that tenantless monstrosity in tin and old leather, the Empire State Building, the "Tallest Building in the World." One may while away an evening at the French Casino and with a bottle of Nuits St. George savor again, if faintly, the atmosphere of the Boulevard Rochechouart and the Place Pigalle at 3 A.M. Or one may drop into the Commodore and sip one's "buttermilk" at the "Longest Bar in the World." We pause here, lest this treatise on building and building materials degenerate into a catalogue of New York's Possibilities of Liquid Refreshment. But in what better way could anything end than with an oyster or two and a slight "bending of the elbow"?

Check up on this with Mr. Hubert Ripley, père or fils.

A WORLDIN TRANSITION

BY ROBERT L. ANDERSON

EDITOR'S NOTE:—This article is the second of an extended series of connected discussions by Mr. Anderson which was started in the October issue under the heading "Road to the Future."

To the charge that contemporary opinion conceives the architect as a messiah whose high mission is the reconstruction of the universe, it can be objected that gross misrepresentation has been practiced; that the true significance of current opinion respecting the relation of the architect to society has been fantastically distorted. It can be argued, for instance, that to read into the statements of men like Joseph Hudnut, Wallace Harrison, and R. L. Duffus the thought that they are setting up the architect as a messianic dictator who will reconstruct civilization is as malicious as it is insane.

As a matter of fact, from one point of view such objection is completely valid. For it is undoubtedly true that those urging the architect to be resolute in using his technology for the reconstruction of the world are moved by the very highest motives; motives having nothing whatever to do with messiahs or dictators. It is not that they consciously conceive the architect as a messianic dictator coercing order from disorder, but rather that they have a deep conviction that the architect should descend from what is commonly referred to as his "ivory tower" and assume his share of the common responsibility confronting society as a whole. They believe, in effect, that the architect should consider himself not simply as a member of an isolated group, as has been the practice in the past, but as a member of society at large; an individual cognizant not only of the restricted horizons of a special world, but of the larger horizons of humanity as well. This, I take it, is the true significance of what these men are attempting to say, and from this point of view it is indeed malicious, it is indeed insane, to charge that they conceive the architect as a messiah come to reconstruct the universe.

Yet if in reality this is what contemporary opinion is attempting to say, it must be admitted, I think, that what actually is said is something vastly different. There may be no intent to portray the architect as the Superman to whom all things-even politico-economic reconstruction - are feasible. Yet it is scarcely possible to formulate such conclusion as to the true intention from the statements themselves. For taken literally they say, if they say anything at all, that the architect is indeed this Superman who will reconstruct our badly mismanaged world. Wallace Harrison, for instance, specifically says that the architect must take his place as the "originator of both better buildings and a better society to control those buildings." If that means anything, it means that the architect is to be the creator not only of better buildings but of a better state of society; that he is to blue-print not only buildings but Utopia as well. Mr. Duffus apparently feels the same way. For his desire to see the architects "someday rising in rebellion" is born of the realization that before the architect as "master builder" can arrange society in more Utopian pattern there must first take place a rebellion against those "bankers, real estate developers, industrialists, or politicians" who are still, as they have been in the past, the real builders of society.

Now I do not wish to be unjust to honest men; neither do I desire maliciously to pervert the truth. But, after considering the evidence, I am forced to conclude that contemporary opinion of the type in question either is completely unable to express its true meaning, or that (consciously or unconsciously) it actually believes that the architect is a miraculous Superman gestating Utopia. And of the two possible conclusions it is the latter, I am convinced, which is substantially correct. Fantastic as it may appear, even to those holding such opinions, the notion is abroad that the architect is indeed the messiah upon whose coming waits the long expected millenium.

Nor in such notion is there as much of fantasy as, on the surface, might appear. On the contrary it can be shown, I think, that among contemporary men it was inevitable that such belief should gain currency. Utterly illogical, fantastic in the extreme, nevertheless the



The doorway of the Church of the Madonna del Soccorso in Aquila, Italy, to which Robert L. Anderson refers in this article. The plate is reproduced from "Italian Doorways" by C. B. McGrew; J. H. Jansen of Cleveland, Obio, publishers

thought that the architect is to reconstruct the universe is only to be expected of a world in transition where men are required, as we have been, to rise one morning with a new set of ideas, the ones with which we went to bed having been jettisoned while we slept. For while most of us were born in a world which still confessed the Religion of Art, we live in a world confessing the Religion of the Social Ideal. Human nature being what it is, it was inevitable that, temporarily at least, the two should have been confused.

As a matter of fact, history is studded with the record of similar misunderstandings. Undoubtedly the architect of the doorway of the Church of the Madonna del Soccorso in Aquila, to give but one example, thought he was designing a completely integrated door. And yet, because his world was neither purely mediæval nor purely Renaissance but hung, instead, imperfectly between the two, he designed a door wherein the fundamental conception is Romanesque, and only the surface details are Renaissance. Likewise with the contemporary notion that the architect is to reconstruct the world. It is the product of an era of transition: the fundamental conception derives from the nineteenth-century Religion of Art, the details from our twentieth-century Religion of the Social Ideal.

The moderns have educated us in the notion that Romanticism in architecture is a disgraceful thing. They are talking about Romantic forms—columns, entablatures, etc. all that inherited Romantic impedimenta of the past. It is time to turn our attention to the history of inherited impedimenta in the form of Romantic ideas—their ideas.





These two Christmas cards and the bookplate designed and drawn by Arthur A. Stoughton, Architect, are to remind you that Yuletide Season is nearly upon us. Stoughton has made a hobby of pen-and-ink drawing and, as may be seen, has achieved much skill in this medium



Rendering in pencil by Harrison John Overture

HISTORY AND ARCHITECTURE

BY LEOPOLD ARNAUD

EDITOR'S NOTE: —We feel that this article, originally published in the "Columbia University Quarterly," is important and well worth reprinting. Leopold Arnaud is Dean of the School of Architecture of Columbia University.

THE value of the history of architecture as a study for those who are preparing themselves to be practicing architects has been the subject of verbose dispute, ever since the word "modernistic," meaning perhaps, super-contemporary, has wedged its way into the vocabulary. Though the word may not have a definite meaning, its significance is definite and important, for it indicates reaction against intrenched conservatism. There is consequently the noise of argument between the supporters of the old school, the moderns and the ultramoderns.

Most schools of architecture now well known were founded, or were completely reorganized, in the nineteenth century, and grew in the atmosphere of eclecticism. Undue importance was given to the history of architecture, treated as archaeology rather than as a consideration of the interrelation of art, structure and social development. The Western world was fascinated by the novelty, as well as by the intrinsic interest, of the new science of archaeology. Creative art being then in the depths of decline, academic imitation took its place. This condition was particularly acute in America, intensified by the fact that the country was passing through a phase of cultural development during which, suddenly conscious of its youthful crudity, it craved the mellowed beauties of Europe, copying rather than adapting the styles that had evolved through the centuries. It was considered necessary, therefore, that the young architect should acquire a complete repertoire of the classics-to be repeated upon request. Immediately he began to learn the Orders as the standard of beauty for all time.

The inevitable reaction has come. The extremists would have it that the student is hampered by knowing what has been done before, and that he should study modern forms only. Comparison is made with the doctor who knows nothing of the history of his science (unless he acquires it as a hobby), as the study of discarded theories would only clutter his memory, and add nothing to his understanding of present findings. But the two subjects have no basis for comparison. There is no relation whatever between an aesthetic ideal and a discarded theory. A masterpiece of art can be an object of enduring use and pleasure, whereas an outmoded scientific theory can be nothing more than a stepping-stone, forever left behind.

History is too intricate and penetrating a subject to be dismissed summarily, and it is surprising that its value should be questioned in an age that is definitely "history-minded." It is generally conceded that the study of the past helps us to understand the present and mould the future. How necessary then, is this study in the training of an architect; for architecture is the art of building beautifully, and as an art it is a living expression of the social and political status of the people. The history of architecture combines the development of civilization with that of structure; it is not merely a tabulation of the sequence of styles, but includes an analysis of the reasons -social, political, racial and regional-that caused the differences in the manner of expression.

Like political periods, stylistic periods will be found to follow the cycle of growth, flower and decay. During the early phase, the expression is chaste, simple, experimental; as familiarity with the new structural and aesthetic principles develops, the manner is freer and more decorative, increasing finally to blatant self-confidence that shows itself in exuberance of ornament and technical ingenuity. The sincerity and restraint of the early phase is lost, and decline follows. Having traced this process through its many recurrences, the student will gain a flexibility of mind that will save him from the fallacy of considering the conditions of his own day as static; he will detect error in the rigid tenets of the extremists who, not seeming to realize that we are now passing through the *very* early stages of a cycle, fail to see that an undecorated style is in conformity with the present phase of the evolutionary process, but think rather that ornament is banished forever, just because machines have been invented, and new uses have been found for steel and concrete.

The study of architectural history is a practical demonstration of what can be done, what should not be done, and why. The evidence of trial, error and success can be studied through the buildings that have been erected in every age. If a structural or aesthetic principle has been inadequately applied, the result can be clearly seen. Or if a building is beautiful, the elements that have produced that beauty can be analysed; and it will be found that this beauty does not result only from correct externals - finely balanced relation of voids and solids, interesting play of light and shade, or tasteful application of ornamentbut proceeds also from essential rightness and fitness of plan, logical use of material, practical adaptation to usage and conformity to the ideals of the period. The record of experiment has an importance, different in architecture than in pure science, because the same problems recur, though in different form; though the various structural and aesthetic principles pass through periods of favor and disfavor, they are never wholly discarded and will return on the curve of a new cycle.

The cultivation of taste and discernment is an essential factor in the training of an architect. It is not always realized how undeveloped, in this respect, is the average beginner. After repeatedly analysing the beauty of great buildings in all their aspects and qualitiesmass, plan, decorative detail, craftsmanship -the student will absorb (in proportion to his receptivity) a sense of beauty. Balance, variation, monumentality, delicacy, spaciousness, refinement, exuberance, restraint - all are potential attributes of architecture. They must not remain as abstractions to the student; they must be illustrated by concrete achievement. For this, the whole history of building is needed, as each period excels in certain qualities. These lessons may be later applied to a warehouse or an airport in an entirely contemporary manner; but the historic examples will have helped the student to know what effects can be obtained. His own narrow

experience could not give him the same understanding.

The study of the history of architecture is inevitably a refutation of the extremist's theory that the creative artist is hampered by the study of existing forms. Men of genius are known to have studied thoroughly the work of their predecessors, deriving therefrom the rudiments of their knowledge. The historic styles of enduring beauty show clear evidence of the derivatives from which they evolved. The burst of creative energy that usually marks the apex of a cycle is but the flowering of a healthy plant that has its roots in the past. The mistake of the extremists of our day is that they are making a laborious, self-conscious departure.

The question then, is not: *shall* the history of architecture be taught; but *how* shall it be taught? What should be the point of emphasis? Throughout, that the historic styles shall not be regarded as a compilation of forms to copy, but as a fertile, well-worked terrain from which new forms will grow. And how shall this study be correlated with the others?

In all professional schools, and so too in a school of architecture, it is essential for the student to realize that only *one* subject is being taught—in this instance architecture. But the subject is so complex that it must be divided, each division being offered by a specialist who, at the same time, knows the profession as a whole. In other words, the staff should be made up of architects well versed in modern practice.

For generations, architectural students have begun their training by drawing the Five Orders as given in Vignola's compilation founded on Vitruvius. This method was supposed to instill in the tyro a knowledge of "beauty and proportion" (limited, of course, to the standards of the ancients) and to be the basis of the "cultural knowledge of the profession." But unfortunately this system instilled rigid, stylistic principles in the mind of the beginner, making him think of architecture as a period dress or decorative covering, applied to an underlying mass, and only imperfectly related to it. This method, followed in almost all schools, both American and European, has done more than any one thing to hamper the free development of architecture.

In order to express himself in the vocabulary of his own age, the student of architecture should *begin* to design without any special knowledge of historic forms. Similarly, a baby learns to talk by hearing current, spoken language. But a man, wishing to use language effectively, will study grammar, etymology, and ancient and foreign writings, as well as the literature of his own time and country. Furthermore, to obviate a limited conception of architecture, the beginner should be made to realize its breadth and scope. His introduction to the subject should be as free as possible, not hampered by the Orders or bound by the limits of some ancient and unfamiliar civilization. The student should begin his studies with a survey of architecture in its fullest sense: building as an art, a science and a social expression. He should, therefore, see what is being done today, for he will understand the present better than the past. Contemporary needs and problems should be analysed, modern methods and materials should be investigated in all their potential applications; and the important relation of engineering to architecture should be seriously studied. Only after this general introduction through current history should the student begin the study of the past; then he will learn the Orders in their proper chronological place. Stripped of artificial and and pedantic importance, invaluable lessons can be derived from them: the tradition and reasoning that produced their development, the evolution of their detail, the enduring influence that they have had on succeeding styles.

Throughout, the problems and solutions of the past should be brought into relation with those of the present. The history of architecture will then be a great experimental laboratory as well as a cultural agent.

Finding that the solution of difficulties caused the progressive development of structure and design, the student will not be distracted by the chatter about practical circumstances hampering the creative artist; nor will he be discouraged by the bewildering complexity of contemporary problems. He will consider these as his working materials, knowing that beauty born of logic can result from their proper use.

Though the lives of great men seem to prove

the contrary, it will be repeated now and then, that genius needs no school, and that the gifted architect will solve his problems in a creative manner without looking to the works of his predecessors. Be that as it may concerning genius, the vast majority of students do not come under this classification, and the "average" youth is certainly guided and improved by studying the past in the proper way. The "middle range" is of tremendous importance, because, as it constitutes a majority in the schools, so too it constitutes a majority in the profession, and the work it produces will be the greatest, quantitatively. It is imperative then to bring the standard of this mass of building as high as possible, for it will give the country its characteristic aspect.

As the student assimilates all the branches of his profession, he will be confronted by the fact that he must solve problems hitherto unknown; that he must cope with complex mechanisms; that he must use materials having entirely new structural possibilities, requiring a new canon of proportions. But history will help him to realize that man is still the standard of measure, and that many of his problems endure through the ages. Despite all the ado about modern civilization, such considerations as topography, climate, tradition and the requirements of the human being in all the phases of his gregarious living, have their age-old significance quite unchanged, differing rather in externals than in essence. For all our steel beams, electric wiring, structural glass and bakelite, our contemporary architecture has its foundations grounded in the bed-rock of the past.

AUTHOR'S NOTE: At the time of writing, Monsieur le Corbusier was visiting the United States. During a conversation he said to me: "I have studied with passion the history of architecture. Only with a full knowledge of the past can we hope to cope with the present and the future, and solve our problems adequately and intelligently." Coming from a professed radical, I consider this a most pertinent comment. L.A.



Mantucket , own

"Nantucket Town," a drawing by Ruth Haviland Sutton of Springfield, Massachusetts, done with litho-pencil on tracing paper. This reproduction has been reduced to about half the original size

WAR DOES IT GET US?

THE GREAT ARCHITECT LAYS DOWN A BARRAGE

BY EUGENE RASKIN

"SUPPOSE you put down that paper," said the Great Architect. "And wipe that concerned expression off your face. After all, there's nothing to worry about."

"Nothing to worry about?" I exclaimed. "Why, man—don't you know what's going on? War in Spain, war in China, thousands being killed, the powers arming—Heaven only knows how soon we may all be involved! And you sit there, patting your vanished waist-line, and say there's nothing to worry about. Ye Gods . . . ""Hush . . . " said the Great Architect, placatingly. "Let's have no panic, please. I take it back. There is something to worry about. And that is the state of mind in which you, and a million like you, find yourselves. You have sunk into a self-deluding, tsk-tsking, wishy-washy wallow of hypocrisy such as the world has never seen before. Ughh!"

With this prehistoric sound the Great Architect summed up his disgust, and opened a fresh bottle to replace the two empty ones at his elbow. The red fluid gurgled invitingly into our glasses.

"What on earth are you talking about?" I asked, after we had made sure that the new tasted as well as the old. "What hypocrisy? What wishy-wally washow—er, wishy-washy wallow?"

"No more drinks for you today, young fellow, you evidently tan't cake it—that is, can't take it." He cleared his throat violently. "You know very well what I'm talking about. I mean all this sham shuddering at the war news from abroad—all this viewing with alarm, all this righteous horror at the thought of war. While all the time, inside you, you know that you welcome it. You know that you'd be delighted with a major war, should it break out!"

"Who, me? What nonsense! Why should a major war delight me?"

"For two perfectly good reasons." The Great Architect's voice had taken on its familiar oratorical tone. "First, because you are human; second, because you are an architect. As a human being, you cannot help feeling the thrill of war. For war contains all the most intense ingredients of drama: tragedy, glory, adventure, heroism, sacrifice, brutality, life and death. And most stimulating of all, personal danger. Besides, as pure sport, it has football beat all hollow. Consider the competitive spirit involved—the character of the scoring system, and above all, the scale! Any man who doesn't respond emotionally to war is fit to be buried!"

"That may be so," I agreed. "But think of how many millions of men war buries!"

"Don't quibble," said the Great Architect, bluntly. "You know I'm right. But to continue. As an architect, you can't be indifferent to the fact that wholesale bombings of cities will tremendously increase your opportunities for commissions, after the war is over. I assume, of course, that both you and civilization survive. Come now, admit that the profession would be enormously benefited by having the chance to rebuild whole nations. Indeed, the nations themselves would be the better for it."

"I refuse to admit anything," I replied. "You're trying to lead me through a series of logical admissions to a false conclusion. Besides, architects aren't the low, mercenary creatures you make them out to be. It is their strength as well as their weakness that they are more intrigued by new ideas, new architectural concepts, than by opportunities of making money."

"Quite true," said the Great Architect. "That's still another reason why architects should like a nice, juicy war. Every war, as you know, gives startling impetus to technical advances—chemistry, medicine, communications, mechanics—partly as a result of good old necessity, and partly as a manifestation of the stimulation of war to which I have already referred. Now, events of the present show that urban centers are highly vulnerable, from the point of view of defense. A few deftly dropped bombs not only eradicate large chunks of civilian population, but also paralyze power plants and transportation systems. The obvious lesson that the next war will teach, therefore, is that cities should not exist. And scientific achievement will make it possible to do without them. Radio and television for communication, swift planes and airships for the transport of passengers and freight, power distribution by wireless—or even individual power generation by some new means, say by breaking down the atom—will make concentrations of population unnecessary."

"Them is some swell soundin' words, podner," I interposed. "But I can't say that I see what you're getting at."

"I'm not so sure about it myself," said he, squinting through the neck of bottle number three to assure himself it was empty. "Let me keep talking awhile. Maybe things will clear up a little . . , Where was I . . . Oh, yes." He inhaled sharply and boomed along.

"Just think what this will mean to architecture. Why, warp my T-square if it won't mean a new architecture altogether! Structures will be miles and miles apart, on mountains, on deserts, in forests . . . each with its antennæ, landing field, hangar, and who knows what other special elements. Don't you see that under such completely different conditions, the art and science of architecture must become completely different? Wouldn't any architect with a drop of graphite in his veins jump at the chance to solve some of the new problems in design and construction that will arise? No, don't answer. You know a rhetorical question when you hear one. Besides, I haven't finished."

"I wasn't going to say anything," I protested.

"No?" The Great Architect's face was puzzled. "I had the distinct impression that you were leaping to your feet and getting ready to shout 'hoozah!'" He eyed the trio of empty bottles suspiciously.

"It's nothing," I reassured him. "Just a touch of the weather, or something. I was thinking, though, that in spite of your very convincing remarks, I still do not want a war . . . in fact, I definitely am opposed to war. And if, as you say, there are millions like me, then there will be no war!"

"Ha!" He barked, and turned to appeal to an imaginary audience. "Listen to him, will you? He sits there and says there will be no war! Ha! War is here already!" He picked the newspaper from the desk on which I had dropped it and waved it before my eyes.

"Why, man . . . " he roared. "Don't you know what's going on? War in Spain, war in China, thousands being killed, the powers arming—Heaven only knows how soon we may all be involved! And you sit there and say there will be no war. Ye Gods . . . "

SOME PICTORIAL NOTES

on mural painter

ERNST HALBERSTADT

On this and the following five pages are a group of mural panels and studies for these panels executed by Ernst Halberstadt under the auspices of the Federal Art Project and installed in Fortress Monroe at Virginia last September. They go into a conference room and are background material designed to be seen with soldiers in front of them rather than as pictures in themselves. Of the finished panel below, the young Boston artist writes:— "This mural shows the semi-human grotesque appearance which the big guns along the U. S. Seacoast actually have. It is a sort of grim reminder and the members of the Coast Artillery like it as they see in it a symbol of their work—minus the gore."





A rough sketch made loosely on the back of one of the large mural panels. It measured about 8' x 10' and was executed in about one and a half bours in full color by Halberstadt as a relaxation from the tedious work painting the mechanized details of one of the big guns actually in the mural. A coat of aluminum paint soon covered it but, luckily, not before it was photographed



A finished mural by Ernst Halberstadt measuring $7\frac{1}{2}$ ' x $8\frac{1}{2}$ ' of a large mortar at Fortress Monroe. It demonstrates well the paradoxical nature of a big gun—its seemingly clumsy mass as a whole yet the fine precision of its various parts. Like all the other finished murals herein, it was painted on wallboard because military technicalities forbid the usual methods of placing them





The finished panel, above, is of a 12" disappearing gun and was undertaken at the request of Maj. Gen. Sunderland, Chief of the Coast Artillery. At left is Ernst Halberstadt's version of what might happen to a theoretical, invading boat if hit by a shell from the gun above. He made this 4' x 4' sketch after watching target practice but it was not approved for a mural on the following grounds:-A. "What is it?" B. "We know it bappens but who wants to think about it all day long?" These being reasonable arguments Ernst Halberstadt did not press the point At right is one of Halberstadt's completed mural panels for Fortress Monroe showing a 12" mortar and below is another containing a 16" gun, which is about as large as they come, with a scene of men in the plotting room wearing gas masks as a background. The wallboard on which all these murals were painted was first treated with shellac then the front was given a single, heavy coat of white oil paint while the back was covered with aluminum paint as a protective measure







The drawing above was made by Halberstadt as part of the underpainting for one of the two murals near the entrance door of the conference room at Fortress Monroe. At right is Ernst Halberstadt, bimself, working on the same panel which departs somewhat from the drab green color schemes of his other murals in this group and goes into a more brown and warmer color effect



THE SMALLER A I R P O R T

BY ELISABETH COIT, A. I. A.

THERE ARE over 14,000 air pilots in the United States. New York State alone has over fourscore landing fields, Florida about 125, and even little Rhode Island five. Nearly 1500 new craft were licensed or identified in 1936 and the use of the small private plane for business and pleasure is rapidly increasing. There is much fun in flying a private plane and the cost of operation for the light models is small. Recently I travelled 3,000 miles in a Taylor Cub on \$20 worth of gas and oil. Over fiftyone million dollars were spent or "obligated" up to the end of 1936 by the PWA for improvements and extension of airports and auxiliary fields, and the work continues.



This small airport at Charleston, S. C., is a good landing field. It is easily seen, well marked, and has fine runways

Existing fields vary from the fully equipped port, lighted, hangared, served by radio beacon, day and night weather reports, paved runways, aviation gas, and hotels, to the emergency landing field like that at Marathon in the Florida Keys, where a flier can land, refill his tank from his emergency cans and fly on past the upturned faces (seven) of the entire island.

Ports range in serviceableness and beauty from excellent to deplorable. Some of the best examples have been well set forth in the architectural journals; and the airport has been for some time a fashionable problem to set for the student of architecture. But a great number of existing fields have been designed without benefit of architect and without regard to good city planning. To secure for the medium and the smaller field those essentials lacking today in many of the airports officially listed would bring to the architect professional satisfaction, and to him and his community material gain.

These essentials, not difficult of achievement, would make many rather useless fields serviceable for the thousands of small ships carrying no radio, few or no blind-flying instruments, often as little as nine gallons of gas, and having, moreover, the right to use military or certain commercial fields only in emergency.

The main points are directions and distinctive marks to guide the pilot to the field, site and layout, hangar, and enclosing fence.

To direct the still distant pilot, arrows on convenient roofs (railroad stations, schoolhouses, gas tanks, etc.) are useful, especially when placed along a natural landmark, such as a river course or railroad. These simple items are of tremendous moment to the many small planes carrying no radio, no bank and turn indicator—planes which in case of sudden fog or thunderstorm must sit down in the nearest field unless they are sure they can make an airport without hunting for it.

Vertical pylons at or near the airports are a much neglected form of marker; and since a factory chimney has a natural affinity for an airfield, its hazard may be diminished and it may become a valuable landmark if suitably painted. For, first on the list of essentials for an airport is its visibility. The characteristic



Airport Directory Co.

A white circle and a pylon topped with a windsock add to the serviceability of the airport at Red Bank, N. J.



These two airports, Douglas, Ga., left, and Newport, N. H., right, are both set in meadow country yet a little forethought has made the latter easily seen from the air while just the reverse is true of the Douglas field

white circle on the field should be at least 100 feet in diameter and freshly painted. Boundary markers showing the field limits are far more visible from a distance if continuous than if spotted along the borders. When surfaced runways exist their pattern is easy to see miles away in clear weather, especially when edged with white; whereas if runways are not surfaced and the airport is set in meadow country the pilot must depend on other distinctive marks.

Hangar roofs, for example, which unless marked look remarkably like barn roofs from the air. These become readily visible under varying weather conditions when painted or otherwise surfaced in large black and yellow checks, say chrome yellow and dead black, as recommended by the Department of Commerce. A nation-wide standardization of this feature would be an advantage, especially as the windsock, usually mounted on the roof, would become more visible.

The windsock itself deserves attention. Circling over a strange airfield, looking for a grey windsock often hidden against the dull grey hangar roof, or possibly placed almost anywhere about the field is not one of the world's best outdoor sports. Smoke may be coming in gusts from half a dozen chimneys scattered about the neighboring hills; and the windsock is the only protection against the very real danger of a down wind landing. Standardization of size, color and position of this rag, the descendant of the Chinese banner, is very much needed. There are of course several types of cunningly balanced wind indicators on the market which, placed on the field borders, are very easy to read from the air and valuable even though subject to a slight lag in shifting winds.

In all cases possible the substitution of permanent hazard markers, visible day and night, for easily faded flags is desirable for marking sand holes, ditches, etc. This would seem axiomatic. But I have seen a careful pilot taxi up before the weather bureau shack on a pretty pink grass field and nose the propeller into a so-called "warning flag" faded to the same color as the grasses. The broken propeller costs in replacement as much as the fuel required by the same ship for a trip of several thousand miles. A day or so later we found a large soft spot staked off with tightly rolled flags, practically invisible, and one prudent field had uncovered ditches without any flags "because the town boys would pinch them."

A well drained level site is essential, at sufficient elevation to ensure that an emergency landing field does not prove to be merely a hangar roof and beacon tower poking sullenly out of a swollen river course. A swampy field is little better.

The hospitable field avoids the neighborhood of industrial and railway smoke, hills, high trees, chimneys, and wires, particularly along the projection of its runways, so that a ship can glide down at a ten to one angle free from hazards beyond the field boundaries, and land near the far edge of the field. Since ships have a minimum landing speed of about thirty miles an hour and many of them land at a very much higher speed, this is highly important, especially as another plane may be about to make an emergency landing.

A good hangar is of course the focus of the airport, and few of the smaller fields have adequate housing facilities for visiting planes. If, however, extra hangar space is not practicable, mooring posts with iron rings will protect the plane from wind and an effective fence will prevent the public from writing its name all over the ship and collecting trophies.

For the hangar, doors back and front are desirable. A concrete splash apron along the hangar entrance is a necessity. Then follow needs important in the order named: attendants' shack, adequate toilet facilities, weather report shack, pilots' and passengers' sleeping cabins, and perhaps food service, these needs depending, of course, somewhat upon the po-



The airport at Caribou, Me., is a classic example of a field that is hard for a strange pilot to find from the air

sition of the field with respect to town, etc. In a northern climate heating of the hangar is a good economy. Transportation from field to town is oftentime consuming and costly. With increase in this type of traveller will come the fliers' cabin colony. Perhaps the architectural profession could do something to prevent a repetition of the dullness of the average automobile roadside camp found in the country. The U. S. Department of Commerce Airport Rating Regulations (Aeronautics Bulletin No. 16) gives detailed information as to the basic requirements, equipment, and facilities upon which U. S. airports are rated. An excellent illustrated directory service published at Hackensack, N. J., lists ports and their ratings, keeping the information up to date with semi-monthly bulletins, so notification of improvements to a field come quickly to the hands of a pilot.

Naturally the well-equipped field will attract more airmen; but the flier is grateful for the mere essentials: an accessible field adequately marked and so designed that it can be properly maintained and not open to visitors whether loafers or those taking short cuts, and shelter and fuel for man and ship. With attention to these simple requirements the dangers and discouragements of cross country flying would be greatly reduced, and also local airport, local community, and local architect would gain kudos and income.

A rendering by John MacGilcbrist showing the Central Mall Building of the Jacob Riis Park in Queens, New York, which was designed by the New York City Department of Parks. The rendering is in sepia





Pencil drawing by W. Ralph Merrill of a detail of the Christian Science Church at Dallas, Texas