PENCIL POINTS
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Contemporary Design in Architecture

By Alfred Fellheimer

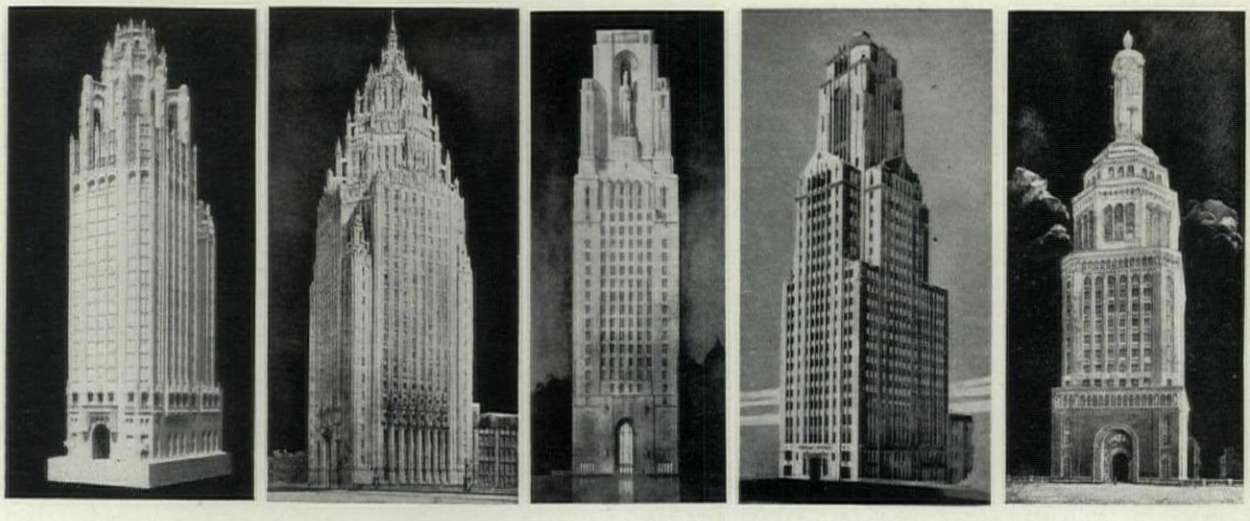
Editor's Note:—*This article by Mr. Fellheimer, of Fellheimer and Wagner, Architects and Engineers, New York, is the fourth of a series of articles in which leading architects will discuss the philosophy of contemporary design. With the exception of the designs below, the illustrations are the work of the office of the author and his associate. Next month's article will be by Irving K. Pond of Chicago. We recommend to all designers, young and old, that they read this entire series.*

I submit herewith my viewpoint as to a rational explanation of contemporary design in architecture, and the causes or reasons which have produced and sustained the movement.

In common with my professional colleagues and others interested in architecture, I have naturally been concerned about the changed and changing viewpoints in matters of current design and related features. It has therefore become necessary in these seemingly revolutionary times in architecture as well as in other vital matters, in which changes and upsets in traditions have been virtually thrust upon us, to determine and then keep in mind the causes which have brought it all about, so as to be better prepared to meet the issues involved and to use the movement with greater intelligence for the advancement of architecture.

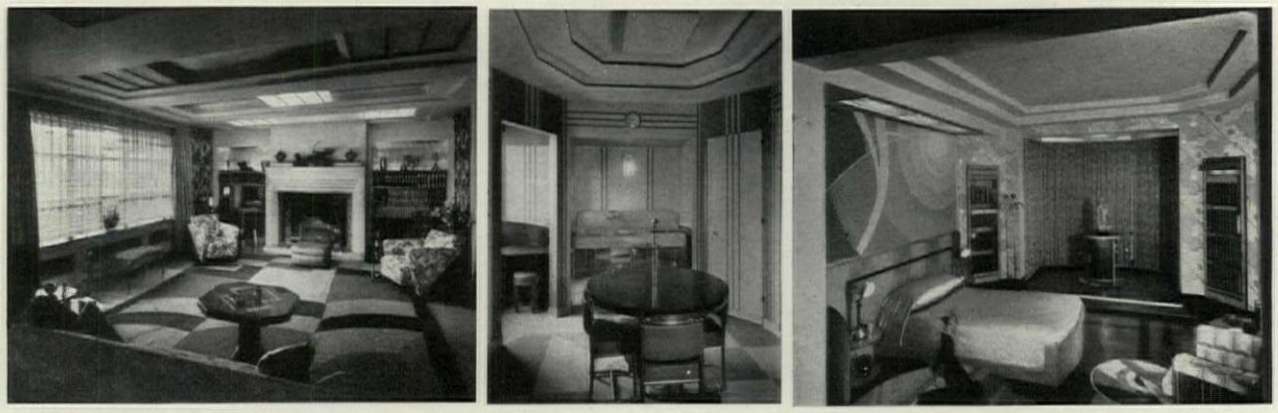
It seems quite obvious to me that the present movement has been due to very practical considerations, such as changes in social relations and requirements, progress in science, development in manufacturing methods and availability of new and distant building materials, and their consequent effects upon living conditions, and not, as some hold, to a passing fad or fashion, nor to attempt on the part of a few to be aimlessly different with the inevitable tendency toward the eccentric and fantastic.

Let us recall for the moment our general acceptance of the traditional styles as illustrated by the architecture of the World's Fair at Chicago in 1893. Except for the pioneer preachings of Louis Sullivan and Frank Lloyd Wright, all was then well enough with our world of architecture. These "voices in the wilderness" gathered around themselves a young and earnest group under the slogan "To hell with precedent." But no permanent result was attained by them due largely to the fact that these two unusually gifted leaders failed to make their objective effectively clear to those of their group much less gifted



DESIGNS SUBMITTED IN THE COMPETITION FOR THE CHICAGO TRIBUNE

Left to right: 1—First prize, John Mead Howells and Raymond M. Hood, Associate Architects, New York; 2—Helmle and Corbett, Architects, New York; 3—Holabird & Roche, Architects, Chicago; 4—Ralph Thomas Walker, and McKenzie, Voorhees & Gmelin, Associate Architects, New York; 5—Albert Randolph Ross and John Sloan, Associate Architects, New York



A PENTHOUSE APARTMENT IN NEW YORK

The wide window in the living room gives a sweeping view of the Hudson River. Flat surfaces, absence of ornament, and practical furniture. Fixtures concealed in the ceiling panels give full control of the distribution and intensity of the artificial lighting. The kitchen plan is octagonal, each side serving a distinct function. Flat sanitary surfaces, even illumination and color. The bedroom decoration is in color only. The curtains at the sides of the polygonal end bay conceal the closets.

than themselves. In addition, under the doubtful claim of being functional, great reliance was placed by them on decorative elements. While they themselves were in this particular unquestionably exquisite, their creations were nevertheless of such intricacy that those who were only modestly endowed could do little more than make a timid approach to such objectives as had been set. However, the older, accepted and easier way of classicism being open, the rest of us headed by a talented (and eloquent) eastern contingent, reverted to type and excepting an occasional recrudescence, followed the gods of old as best we could. They at least had commandments which we could, or thought we could, understand and obey.

As to present proponents of the new fashion in architecture, it is pertinent to state that they are almost without exception, recent converts. In confirmation of this, some of the designs submitted as late as 1922 in the Chicago Tribune Tower competition are illustrated on the preceding page.

If buildings which for sentimental or other reasons should follow the traditional styles without question, are excluded, it is axiomatic that the architect in solving the building problems of today must, if he is intellectually honest with his client and himself, plan (without reference to style designation) to meet frankly the practical requirements of his problem. In other words, no attempt should be made to drive a square peg in a round hole, no matter how strong the urge of tradition to do so may be.

And again the effective life of certainly a majority of our buildings is relatively short, and fixed not by physical breakdown but entirely by failure or inability to conform to changing (the term "modern" is purposely avoided) conditions. The short "effective" life of our hotels, office buildings, theatres, apartment houses, and public buildings, is ample proof of this. No amount of maintenance or care will make the period of usefulness any the less inevitable.

It is well to keep in mind that most buildings should not only return a reasonable profit to the owners either in money or satisfaction, but also amortize the capital

RAILWAY PASSENGER CITY TICKET OFFICE

View toward entrance—the combination of direct and indirect lighting is designed to attract passers-by; columns encased with mirrors; metal work in chromium. View toward counter—the principal feature, the railroad map, is linoleum, with silver background and lines in various colors. The tacks fastening the map to backing were utilized as markers for cities and towns. Counter front of formica; base and strips, chrome plated. All materials selected for ease in maintenance. Detail of corner—mirrors and open treatment of windows to secure spaciousness. Furniture designed for maximum comfort.

expenditure during their effective life. Success in these respects means rigid economy in first costs and maintenance.

Advances in science, developments in manufacturing methods and in building materials, and changes in the processes and conditions of living, working, education, and amusement, must of necessity be considered. And right here it is to be noted that if these factors are fairly met by the architect and the result is a satisfactory structure, there should be no quarrel with whatever style or styles, if any, have been used. Nor on the other hand, should the reasonable logical requirements be ignored in part or whole by forcing them into traditional or otherwise misfit forms.

UNION STATION, SOUTH BEND, INDIANA

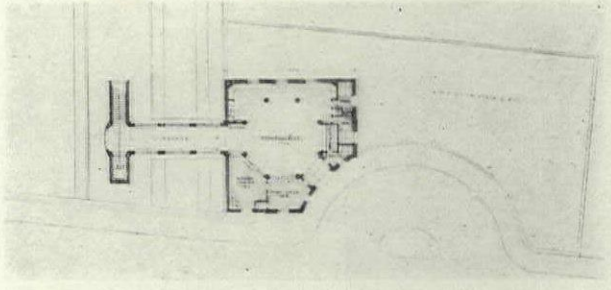
This is the outcome of a direct and compact station plan developed in connection with the elevation of railroad tracks. Economical use of materials—the façade being built entirely of brick.

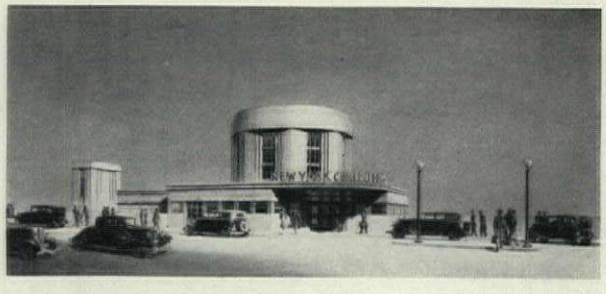
While perhaps not within the actual scope of this article, it is desirable and important to call attention here to some indirect obstacles in the way of the accomplishment of the most desirable results. The best efforts of the ablest designers will not be successful when applied to improperly conceived projects. Good architecture in its last analysis has its roots in studied city planning and in the social and police provisions made for the activities and relationships of the population, involving as they must, the establishment of wise regulation of individual rights and privileges for the common good. The lack or partial development only of this control is responsible for the uncouth and unorganized appearance of our cities, villages, and the countryside, even though buildings of architectural merit are much in evidence.

Under such unorganized conditions, the design of skyscrapers many times their reasonable economic height in quest of adequate net revenue on greatly exaggerated land values, will be demanded. And on completion, land values will again shoot upward to compel still higher structures. Taller buildings will be ordered constructed on an undeveloped small plot in the midst of tall buildings which were in part dependent upon the adjoining plots for light and air, and in retaliation the surrounding buildings will then be raised to still greater height. Some clients will insist upon a many-storied apartment house with ninety per cent plot occupancy which, except for its superior equipment, is little better in its essentials of light and air than the replaced slum construction. Others demand detached residences on absurdly narrow lots or monumental structures on minimum plots where commercial structures overshadow the result no matter how good.

In these and similar instances, the best solution attainable is still essentially inadequate and merely adds one more note to the general chaos of uncontrolled individualism.

As these handicaps are of an economic or political nature, they can only be removed by slow and arduous processes and are not, therefore, of immediate concern to the designer in particular cases. His current work, however, suffers under such limitations. In this he has first-hand information as to what is holding him back but which neither he, himself, nor his





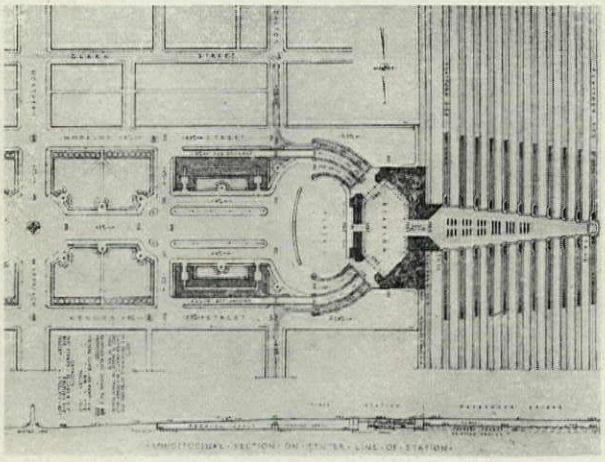
A SMALL CITY RAILROAD PASSENGER STATION

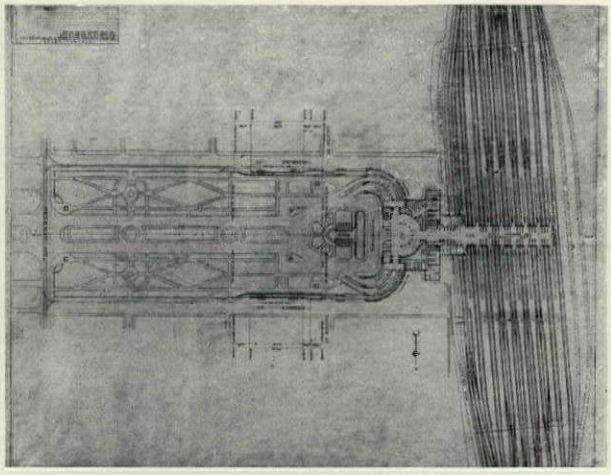
The objective of this station building was an adequate plan housed in an inexpensive and attractive structure. Access to the station is from an elevated street viaduct and access to train platforms is had by a passenger bridge extending across the tracks from the main station floor at viaduct level. The plan and perspective view above indicate the results attained. Plan at street and waiting room level—the compact form and arrangement desired was attained by the use of a low building square in plan with the corner adjacent to the driveway cut off to bring the entrance as near as possible to the center of the concourse. The entrance to the passenger bridge and all auxiliary facilities are grouped conveniently and compactly around the concourse. The distances between the entrance and the train platforms are thus at a minimum. View from the street—the concourse was increased in height and covered by a circular structure in the form of a low tower, the rest of the station facilities around the concourse being confined to a normal story height. The far end of the passenger bridge is marked by a small increase in height in the form of a low tower housing the elevator machinery. The result is sufficient to make the building noticeable without large expenditure.

client can remove in time to be of service. As he is conscious of all this, he can and should for the ultimate good of his profession do all that is within his capacity and opportunities to bring about constructive action on the part of the public for the removal of these almost insurmountable barriers to the best work. Once such impediments have been cleared away, architecture can come into its own and responsibility for failure to attain the best will then be squarely upon the shoulders of the designer.

So much as to the causes which have provoked the current movement in architectural design and as to some of the limiting or controlling conditions which surround the designer. It is now in order to set down the more important principles or guides which we have in our practice found helpful in approaching problems of design. They may be informally stated as follows:—

1. The practice of architecture is not considered primarily an art but rather a series of solutions of economic problems, the appropriateness of any solution



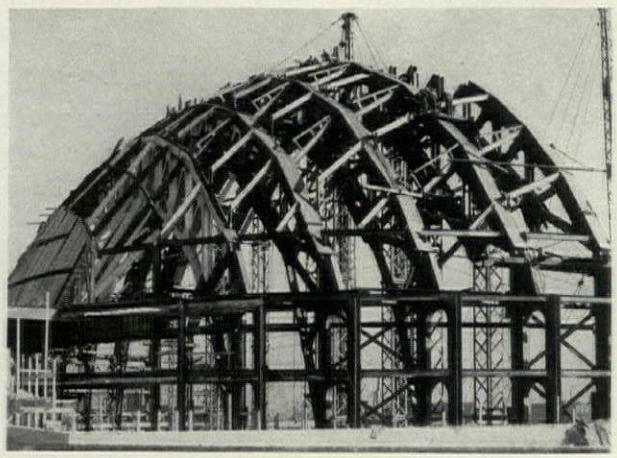


EARLY STUDY AND FINAL PLAN—CINCINNATI UNION TERMINAL

This work is now under construction. The two plans illustrated above are an early study and a final study. These indicate a development of the use-functions from an earlier study in the somewhat unusual plan in the final study. The changes observable in the plaza and parked approach arrangement of the later plan were caused by considerations too involved for statement here. In addition to the plans, the general appearance of the completed improvement is illustrated by a perspective view. Some idea of the magnitude of the structure is conveyed by the structural progress photograph.

The preliminary plan, at the left, is based on the tracks being placed at right angles with the axis of the plaza, station and passenger bridge. The plaza and main station floor are raised above the tracks and general street level, thereby making direct contact with the passenger bridge over the tracks.

Taxi, bus, and street car traffic descend from the plaza level and pass under the main concourse contacting therewith by means of stairs and ramps. Auxiliary buildings are shown on each side of the concourse. The passenger bridge concourse is arranged as a waiting room. Note the tapering shape to accord with the decreasing foot traffic at the far end of the passenger bridge. The plan arrangement is in general entirely symmetrical.

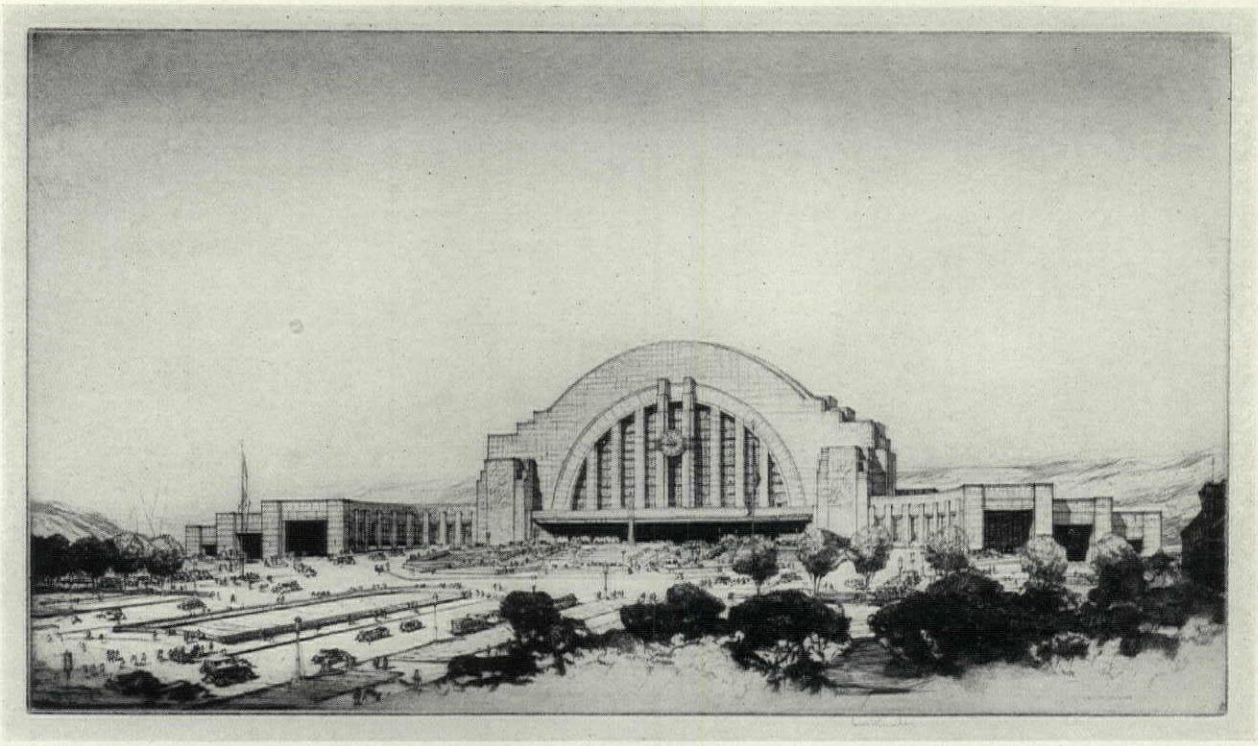


STRUCTURAL PROGRESS PHOTOGRAPH OF DOME

In the final study, the tracks are placed at an angle with the plaza, station building, and passenger bridge axis. Contacts from the passenger bridge to the track level are therefore not at right angles. The plan itself has become more compact. The vehicular entrances are more direct and the vehicular and foot traffic is directed toward the passenger bridge and waiting room by the arrangement and shape of the layout itself. Although the plan is symmetrical, conventional classical treatment would be difficult. The cooperation of the City in permitting the use of the existing park, with alterations, as the approach to the station plaza, has provided an exceptional setting for the project.

The concourse dome is semicircular in plan and in front elevation. Its great size is obvious, exterior diameter 200 feet. Note the series of massive trusses parallel with the façade.

Note the bulk of the main concourse structure flanked on each side by the low outstretched arms of the shelters for the vehicular traffic approaches. The general arrangement invites and guides the various kinds of vehicular traffic to the main concourse and the passenger bridge contacting with the railroad train platforms and tracks. In other words, the station has much the shape and effect of a funnel. The structure is faced in limestone with granite base. Ornament is reduced to a minimum.



CINCINNATI UNION TERMINAL—FROM A DRYPOINT BY LOUIS ROSENBERG

being determined not by its conformity with standards or schools of style, but by its utility, efficiency, and honesty of expression.

2. Satisfactory solutions are arrived at by the analysis of each problem on its own merits, starting with the fundamental requirements and limitations and then proceeding by similar analysis of each feature of the plan, elevations, and structural features, as the design is developed. Facts and their relation to each other are inquired into. Judgment in the determination of the appropriateness of each feature in the light of all available knowledge is essential.

3. The apparently satisfactory functional solution of any given problem in design is not at once accepted as the ultimate objective. In addition such solutions require some leavening with those intangible emotional elements which provide some of the niceties of social existence, thus avoiding the otherwise inevitable drift into purely mechanistic surroundings.

4. The works, including details, of noted architects, living or dead, merely because they are accepted as great, should not be imitated. The processes in the development of their plans through which they arrived at successful results, and not the results themselves, are, however, studied and imitated, because the application of the same analytical processes to the problem in hand may lead to a result entirely different from the example studied. No logical result is discarded for the entirely irrelevant reason that it has been "done before."

5. As to ART. It is obvious if one considers the amount of building in the country as a whole that there cannot be enough geniuses to make each building an outstanding architectural masterpiece. This condition is aggravated and not helped, if, when seeking the solution of any problem, the whole or part of some accepted masterpiece not essentially responsive to present practical requirements is copied. If, on the other hand, the solution responds to stipulated needs, and if it is efficient and honest in expression, the inborn or developed sense of beauty in the designer takes care of ART, and real progress has been made. Further than the limitations of the individual artistic sense, no man can go, but much of the way to the goal has been traversed if the desire to imitate another's work merely because it was great or successful has been overcome.

6. Large attainment is necessarily the result of co-operative effort. Only small accomplishments are entirely individual. The habit of full cooperation with and a helpful attitude toward the work of others, to the end that the whole may be a composite expression of the best that is in all who have had to do with the project, is assiduously cultivated.

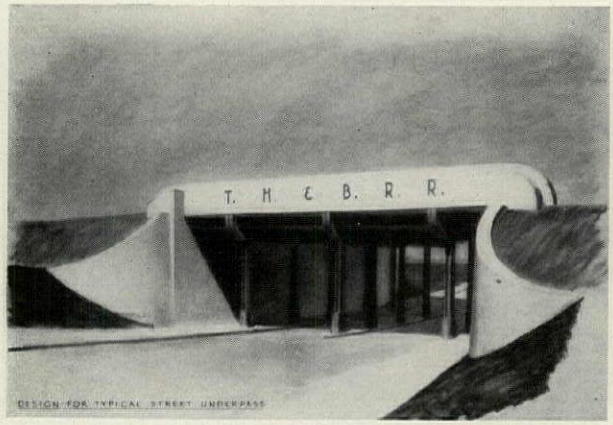
The principles just recited are general in their nature and can be, at least, nearly universal in application. Others might be stated, but they would be more or less corollaries of the above.

As to rules which might be followed, such as those of the classic orders, there are and can be none until after a period of time much greater than has yet elapsed since the modern movement in architecture began. In fact such definite rules may never apply again. The elements which determine style such as technical knowledge, social conditions, and human tastes and desires, are not now likely to be static long enough to encourage the evolution of any such enduring for-

mulas. The design of the future will rather be controlled only by common sense and good taste.

The accusation is sometimes made that rational contemporary architecture neglects emotional and spiritual values. One's inability to define clearly these intangible qualities makes the answer difficult. It will no doubt be agreed that what is known as good taste, beauty, and tradition do exist and that they are essential to human happiness. And one must admit that change is their persistent characteristic. They are never quite the same from one generation, racial group or climate to another.

My own conviction is that honesty and simplicity of architectural expression are practical and enduring principles and that only by adherence to them can the emotional and spiritual elements reach the highest



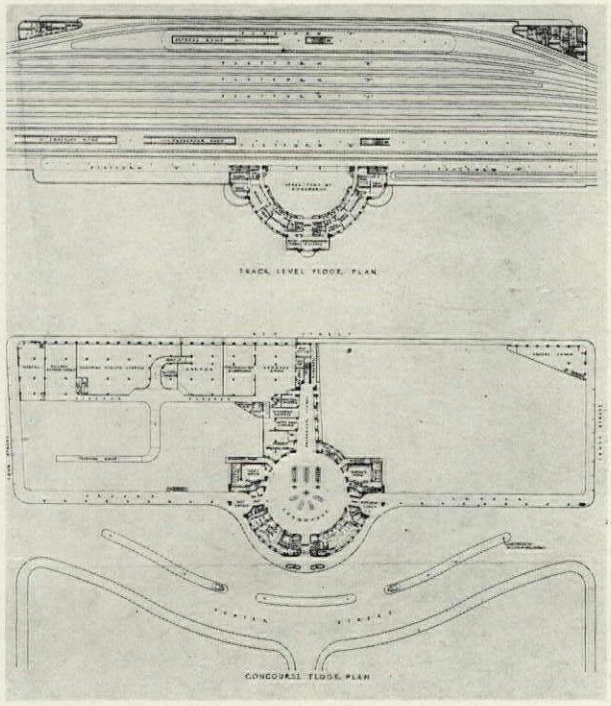
TYPICAL STREET UNDERPASS AND PASSENGER STATION—HAMILTON, ONTARIO

The construction of the overhead railway crossing was economical and the unity of all elements is secured by the use of concrete. There is no pretense and no useless bulk. The pylon effect was secured without encroachment upon the sidewalks. Railings consist of concrete-covered light structural truss members. General effect achieved by silhouette of railings and of the wing walls which unobtrusively curve away from the street.

The longitudinal street in front of the station is deflected to provide a plaza approach free of normal street traffic. Street underpass crossings are made on each side of the station. Covered arcade sidewalks extend from the underpasses to the station entrances. The station and office building is faced in stone with granite base. Arcades, parapets, bridge faces, and other masonry are all of concrete. The corner bays are cantilevered. The space under the tracks and adjacent to the station, in addition to being utilized for the subway to the train platforms and for a portion of the concourse and waiting room, provides space for some of the auxiliary facilities. The platforms are protected by butterfly canopies. Adjacent to the underpasses and on the far side of the tracks, small one-story yard service buildings are provided.

Compactness of arrangement was secured and much detail commonly associated with railway stations was omitted by cutting loose from the tradition in the design of the station and office building. Each side of the tower carries a large clock. Reflectors in the hour markers provide for illumination at night. The tower and clocks are visible throughout the city and proclaim the presence of the railway station. The arcades are supported on slender columns instead of on traditional bulky square piers.

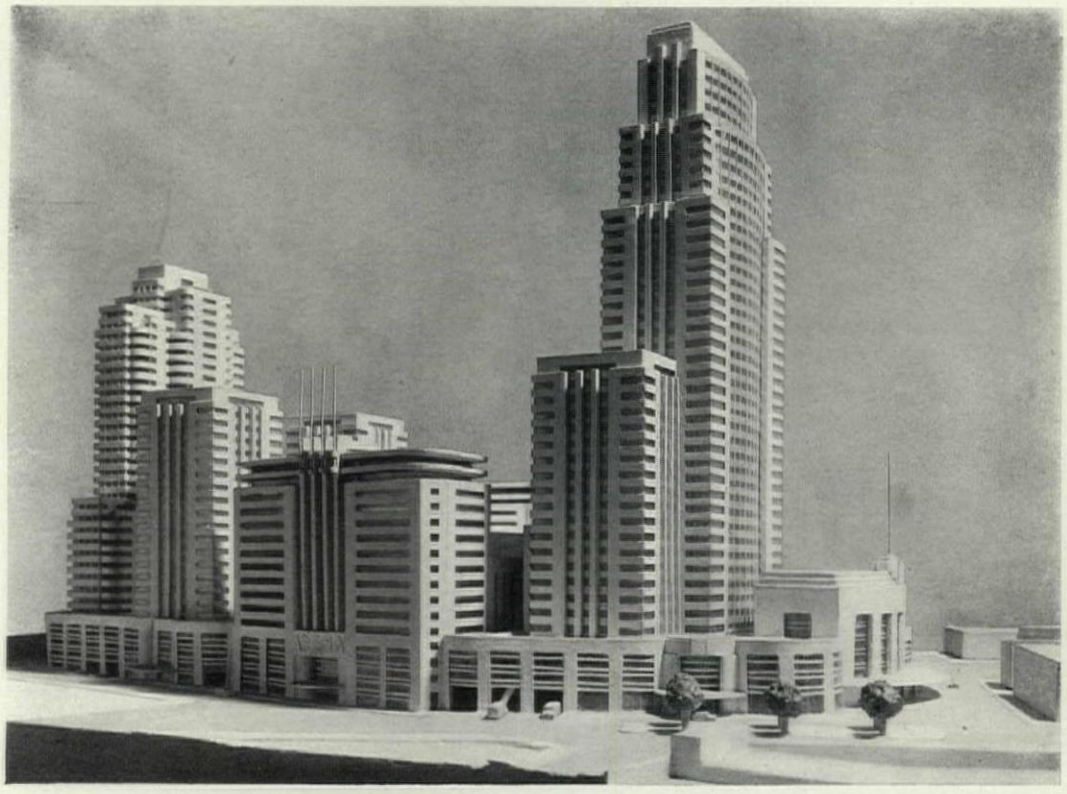
The circular concourse, partly under the tracks and platforms, and surrounded by the various entrances and facilities, provides a compact arrangement involving a minimum of travel for passengers. The tapered subway to the train platforms is flanked on one side by minor facilities, and contacts at the far end with the baggage and express space and the street arcade on the far side, all of which are below the track level. Rental space is provided in the upper right-hand corner of the station block. It is to be noted that over one-half of the space in the station block under the tracks is still available for future expansion if necessary, all in contact with street frontage. At track level, certain auxiliary facilities and offices are grouped around the semicircular upper portion of the main concourse. The station and office building are closely knitted together forming a compact unit.



STREET AND TRACK LEVEL PLANS
STATION AT HAMILTON, ONTARIO

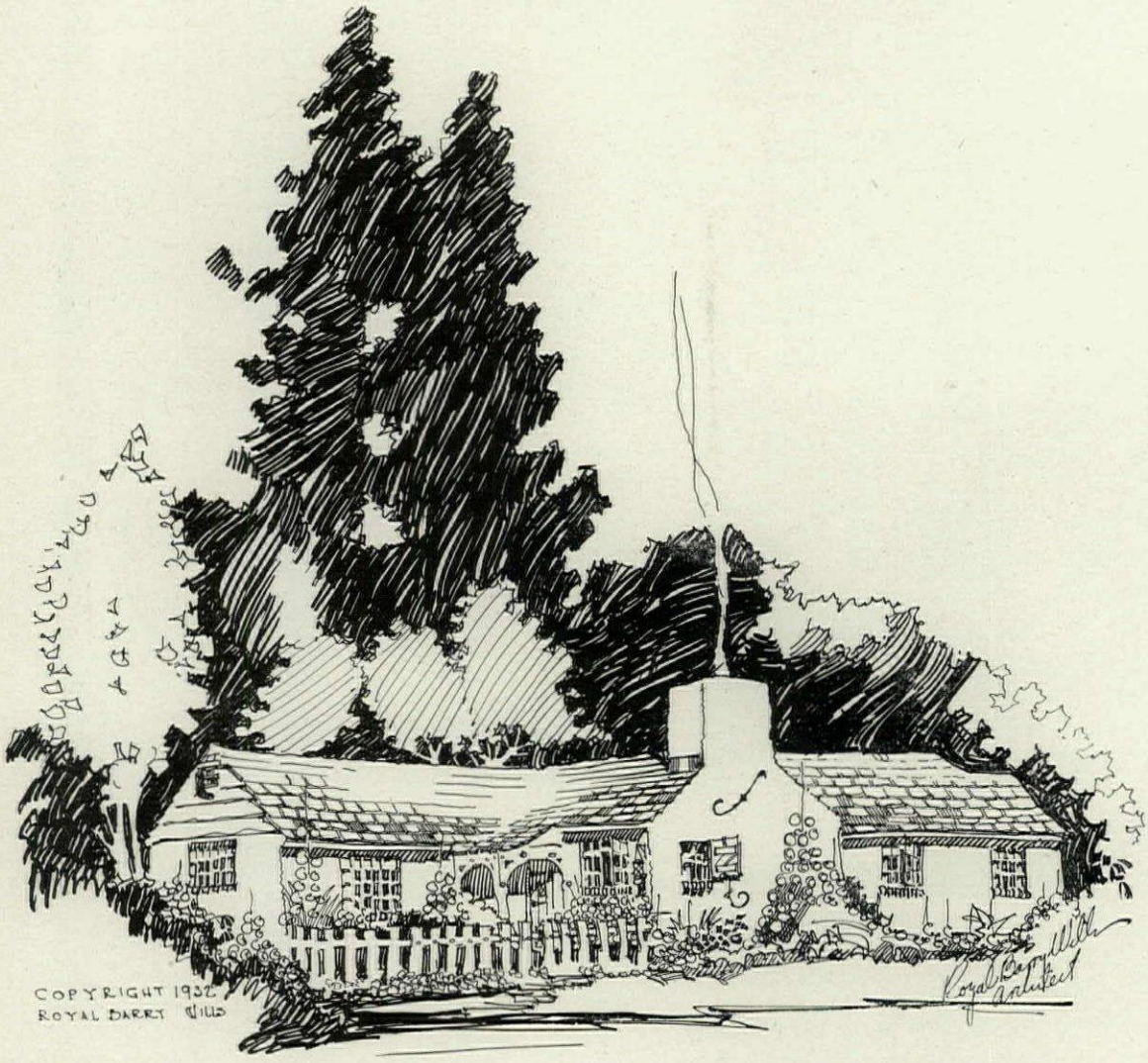
values. The work of the designer whose program either ignores or extends beyond such solid ground will certainly be subject to destructive criticism from those influenced by the standards of other climes and times.

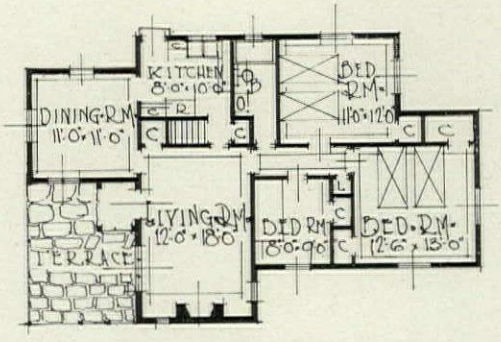
The illustrations and accompanying notes give some idea of our own readjustment in the solution of current problems, contemporaneously with the development of the general principles set forth above.



LARGE GROUPING OF PASSENGER STATION, OFFICES, AND COMMERCIAL BUILDINGS

To indicate the development of our thesis into buildings of major importance, we include this illustration showing a model resulting from a general development study for one of our railroad clients. The building plot is entirely surrounded by street frontages, practically all of which are shown to be developed for revenue producing purposes. The station building is the moderately low detached portion at the extreme right of the group. Next in order to the left is a high and commodious office building for the client's use. Adjoining to the left is a lower building containing offices and an amphitheater for sports. Next in order are twin buildings of moderate height for use as apartment hotels or professional offices. The higher structure to the extreme left is a hotel. All of these buildings are connected directly with the station by interior arcades. Bus and taxi facilities and garage space are internally provided for. The station platforms and tracks pass under the plot below street level. The buildings are in general set back from the street lines and are detached from each other to secure light, air, and outlook. This group was designed from start to finish by considering and providing for the functional uses to which the parts, large or small, are put.





FIRST FLOOR PLAN

PERSPECTIVE AND BLOCK PLAN OF LOW COST HOUSE

Designed by Royal Barry Wills, Architect—see article opposite

A Real Low Cost House

By Royal Barry Wills

The crying need today in the building construction industry, especially in home construction, is increased comfort and beauty of design for a lower price. Many low cost houses, so-called, have been built ranging in price from $6000 to $9000. A house at this price ceases to come under the head of a low cost house. For this reason we have found it necessary to supply the public with a house which is actually a low cost house, that is to say, under $5000. We think we have been successful in designing a house of six rooms to cost less than $5000 without sacrificing details necessary to comfort and architectural beauty.

Reducing the cost of construction is the first concern of the architect in designing such a house. To do this, it is necessary to eliminate all elements in the house which are unnecessary, that is which are ordinarily contained in the average house, but which a small house can easily get along without. In no way is the house altered to its detriment, but rather its individuality is increased.

In order to design a house for about $4000, or less, we must forget present ordinary methods of construction and get down to the fundamentals of the problem. The basic requirements of a house are that it be stormproof, verminproof, soundproof, and fireproof. It should be comfortable and artistic, with a certain degree of privacy for the members of the family. The rooms should be arranged for convenience, with provision for sufficient storage space.

There are several inexpensive materials which seem to meet the requirements. But it seemed that some sort of block or slab which was light and easily erected was required for the exterior and interior walls. The cheapest and best from many points of view seems to be cinder block which can be had almost anywhere and which, though extensively used for large buildings, has not been used much for small houses. Due to ease of erection, it is ideal for a one-story house.

After deciding on the material to be used, it was, of course, necessary to use it in the least expensive way. This particular house was designed with the interior partitions of 3″ block plastered with one coat of cement plaster on both sides, and the exterior walls of 6″ blocks plastered with one coat of plaster on the inside and three coats of waterproof stucco on the outside. To those who state that this house might be damp, the waterproof stucco might be replaced by a coat of waterproof paint and the building furred and plastered on the inside in the usual manner, although judging from preliminary tests, this seems to be unnecessary. If improperly constructed, this house would leak badly, but there is no danger with proper construction.

As for the planning of the house and arrangement of rooms, an attempt was made to have the least expensive arrangement possible. The bathroom is located next to the kitchen. The exterior walls are the height of the doors, and the windows are placed at the same level to eliminate masonry over them. Halls and other space not strictly essential for comfortable living are eliminated. A basement under the living room provides space for the heating plant and storage room. Where the slope of the land required it, however, the basement might be placed in another part of the house, but somewhere near the chimney.

Three ways of laying the ground floor were considered. If it was desired to keep the house as entirely fireproof as possible, a reinforced self-supporting concrete floor might be laid over a bed of cinders, covered with a layer of tar, and composition tile or linoleum used for the finished floor. This method is the most inexpensive. The second way would be to lay a bed of nailing concrete over cinders and to this nail a hardwood floor. A special hardwood floor intended for this purpose comes in blocks about 6″ square, lacquered and waterproofed, and provided with metal strips for nailing. The cost of this floor is slightly higher than linoleum. The third method would be to have a cellar 2′0″ deep under the unexcavated part of the house, and to frame the floor with I-beams and wood joists. When unfabricated, I-beams are relatively inexpensive. The space under the floor would contain the heating pipes and would be quite warm.

These three methods provide an answer to any owner who questions the suitability or unsuitability of a concrete floor, by providing a type of construction to suit his needs and eliminate his fears.

The ceilings of the living room and dining room are treated in the studio manner with exposed stained rafters plastered between. As it is possible to buy good insulating boards at low prices, this feature would not materially increase the heating cost, since the roof lines are made low, 6′8″ from the first floor to eaves and the ridge slightly over 10′0″. In all the other rooms there is a slight slope at the eaves and a flat section of insulated and plastered ceiling in the middle.

The roof area of this house is reduced to a minimum by making the slope the lowest that would readily shed rain and snow. Wood shingles are planned, and, though not fireproof, they are artistic and inexpensive.

Woodwork is reduced to a minimum. There is only one rough stair to the cellar. Door trim, baseboard, and mouldings are eliminated. For the door jambs, a 2″ x 3″ frame is nailed directly to the cinder block and plastered up against it. In the process of construction, this would become pretty well antiqued and look fine. Exposed rafters are 3″ x 4″, approximately 30″ on centers. All special outside door and window trim is eliminated. The porch is made of antique timbers and the fence of sticking slabs or rough boards which are very low in price and in some localities are sold for firewood. It is desirable to use

antique timbers, as this saves the expense of antiquing them after they are erected.

Another factor accounting in part for the low cost of this house is practically the entire elimination of hand painting. By leaving off the doors, finished floors, and all bathroom fixtures, except the tub, until after the walls are painted, the painting may be done entirely with a spray gun and a casein paint. It is unnecessary to wait for the plaster to dry before painting, as moisture can be expelled through this paint. After spraying the interior, the exposed woodwork is wiped off with excelsior. This makes a very artistic effect.

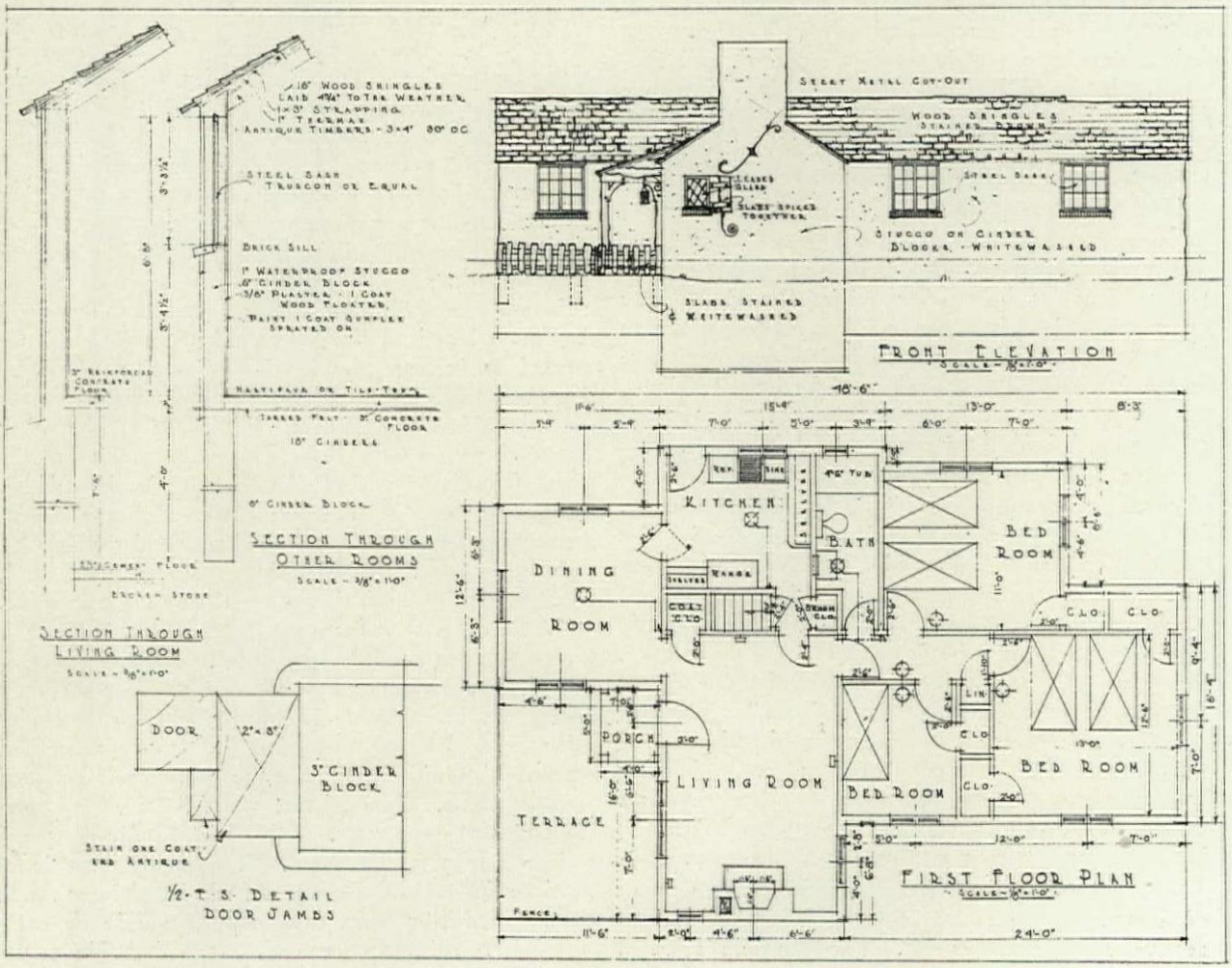
A new type of electric light fixture is planned, consisting of a recessed fixture set in the wall during construction, and a detachable piece of ground glass inserted over the opening almost flush with the wall. This type of fixture would give indirect lighting and would eliminate the cost of hanging fixtures.

The exterior of the house resembles a quaint Breton cottage. Its stucco walls are whitewashed, its roof stained dark brown, the porch timbers stained dark brown rubbed over with whitewash, and its decorative motif silhouetted in black against the white chimney. A modern touch of color strikes a gay note in the burnt orange window sash. The big end chimney breaks the even line of the low roof which ties the house down close to the ground and makes it fit the landscape.

Following is an estimate of the detailed parts of construction which are the minimum costs:

Excavation, foundation, cellar floor	$ 375
Lumber for frames, etc.	100
Insulation for roof	120
Insulating blocks for interior partitions	120
Insulating blocks for exterior walls	220
Steel windows, frames, glazing, erection	156
Stucco and plaster	240
Wiring and electric fixtures	120
Rough and finished hardware	60
Kitchen counters and cupboards	50
Painting	110
Screens	50
Plumbing and heating	575
Chimney and fireplace	90
Roofing	140
Doors	60
Concrete floor, composition tile, or Mastipave (comp. linoleum)	375
Tile	110
Gas range	40
Carpenter labor	300
	$3461
Profit and overhead	350
	$3761

This total has been carefully checked by various contractors who are ready to build houses like this at a cost of $3800. Electric refrigeration, humidification, and an oil heater would cost $460 additional.



Carl Westdahl Heilborn, Delineator

Another Star Rises in the West

By Ellis F. Lawrence

The teacher has much satisfaction in the success of his student, and the employer feels a certain pride of proprietorship when his employee distinguishes himself. A very human feeling this, although in truth the real secret of such success lies in the persistency, determination, and talent of the individual himself. The writer, having had Carl Heilborn both as a student and as an employee, must be pardoned for "gloating" a bit in the short story of this most promising young man, whose work in the field of delineation indicates clearly that a new star is rising in the zenith.

Carl Westdahl Heilborn

Salaman, the English critic, once called Louis Rosenberg an outstanding "speculative" etcher, meaning that his etchings would have a great relative increase in value. It may be too early to make such a prediction in regard to the etchings of Heilborn, for he has but just begun to etch; but his work in other media —such as conté crayon, lithographic pencil, and the pen — shows such force and character that one would be justified in investing in them, not only for the pleasure they bring the possessor, but for their intrinsic present and future value. His success in these media and the qualities already showing in his etching, promise great things for his future endeavors with the copper and acid and the needle. Already he has atmosphere and charm in the plates he has done and his last drypoint is challenging in its simplicity and force.

The writer once had a client!—a realtor, who made quite as much by buying the paintings of little known artists who appeared to him to be knocking at the door of fame, as he did in buying and selling real estate. Strange to say, in the process, he learned to love those pictures so much that it became hard for him to sell them. Speculators in the graphic arts would do well to watch this young man, Heilborn.

Carl Westdahl Heilborn, born in 1906 at Astoria, Oregon, is but twenty-five years of age. Quiet, reserved, retiring, and modest, there is about him a force, a driving power that sends him straight to his goal. If the problem at hand is quality of line, let us say, he patiently and persistently plods away until he has mastered *HIS* line, and this means mastery—for nothing else satisfies him. Then—on to the next problem—pattern—composition—texture—whatever it may be.

As a student at the University of Oregon, he refused to surrender to grades, honors, or degrees. He was there primarily to learn his job. He had no time to dilute his training with the hodge-podge curricula usually taken by college students. He wanted content, not superficial information. He demonstrated the cultural value in mastering his subject and there are few subjects that, if mastered, will not give real education which, if the writer is correct in his thinking, means the full use and development of one's brain power and one's emotional life. Such education, once it is really started, never stops until nature closes her doors, if she ever does! The winning of mastery in one field opens new vistas along the way —new obstacles to conquer, and the horizon ever widens. Such, it appears, is the education of Carl Heilborn.

Recently, at the request of his old school, Heilborn sent a collection of his work for exhibition. The pleasure gained from this exhibition alone, justifies this attempt to bring his story to the architectural world; but it has been motivated by much more than pleasure, for there is something of duty involved—duty to recognize successful endeavor—duty to inspire other students who, like Heilborn, have been questioning, searching, seeking, and sometimes succeeding where they little expect it.

"HOUSES ON THE HILL"—PENCIL SKETCH BY C. WESTDAHL HEILBORN
Made as a study for an etching—Size, 10¼" x 12¾"

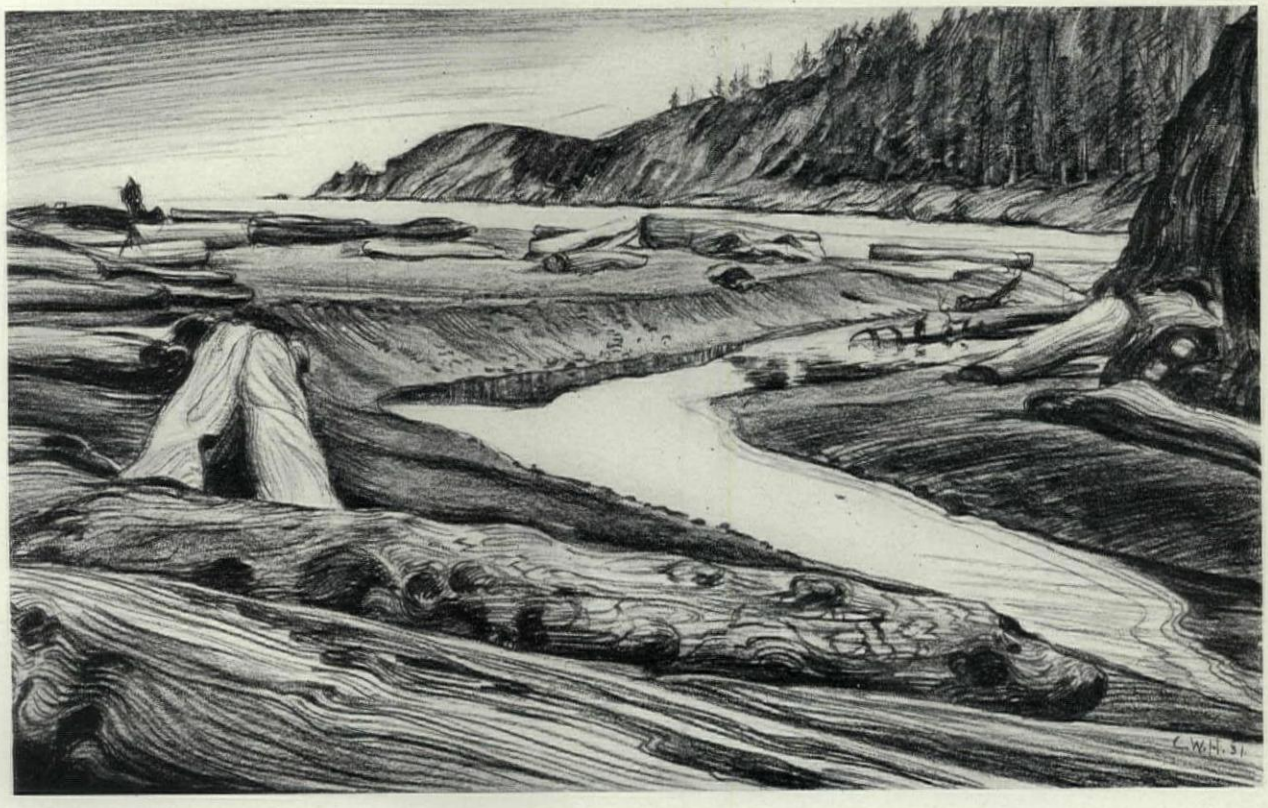
This exhibition, a few illustrations from which are shown herewith, shows a sweeping power that catches inner meanings along the way. Not only is composition good, pattern charming, line subtle as the web of the spider or firm as steel, and texture velvety or solid, but the sun of the southland shimmers and blazes, the shadows are cool and enticing, the breeze plays in whimsical ways and the people are real bone and muscle — alive. Architecture lives by itself for what it is, but its lure as seen by Heilborn is tied closely to the men and women it serves, the men and women who built it by toil and sacrifice, answering the age-old urge to express themselves in sticks and stones, steel and concrete, bricks and terra cotta. This quality he may have won more by instinct than by conscious thought, but certainly few of Heilborn's interpretations are without it. Architectural education is justified when the Heilborns learn from it such an ardent love of architecture that they spend their lives in bringing its beauty to the world.

ETCHING—HOUSES ON THE HILL

See pencil study on opposite page

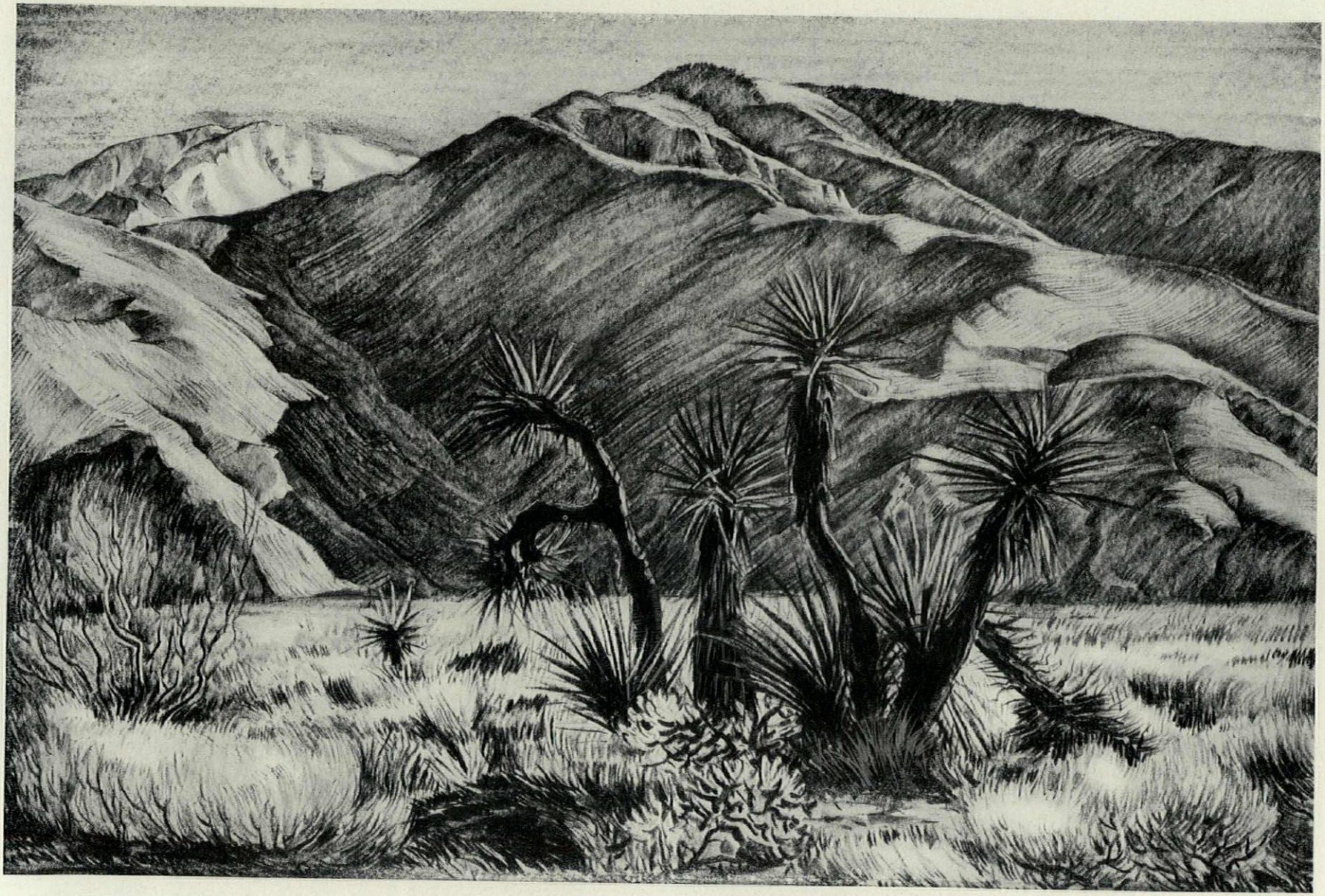
Heilborn's art does not stop, however, with architectural subjects. His fine decorative sense is even more clearly shown when he handles the cactus, black against the receding planes of desert hills, or the great logs stranded on the shores of the river, from the drive or the freshet.

How seldom one finds such strength, harnessed with such decorative finesse! Force, directness, realism, follow the one, as delicacy and subtlety follow the other.



CONTÉ CRAYON DRAWING—"DRIFTWOOD"

A fantasy based on a sketch of a bit of Oregon seacoast—original size, 10½" x 7"



"CALIFORNIA DESERT"—LITHOGRAPH CRAYON DRAWING BY CARL WESTDAHL HEILBORN

Size of original, 16¼" x 11"

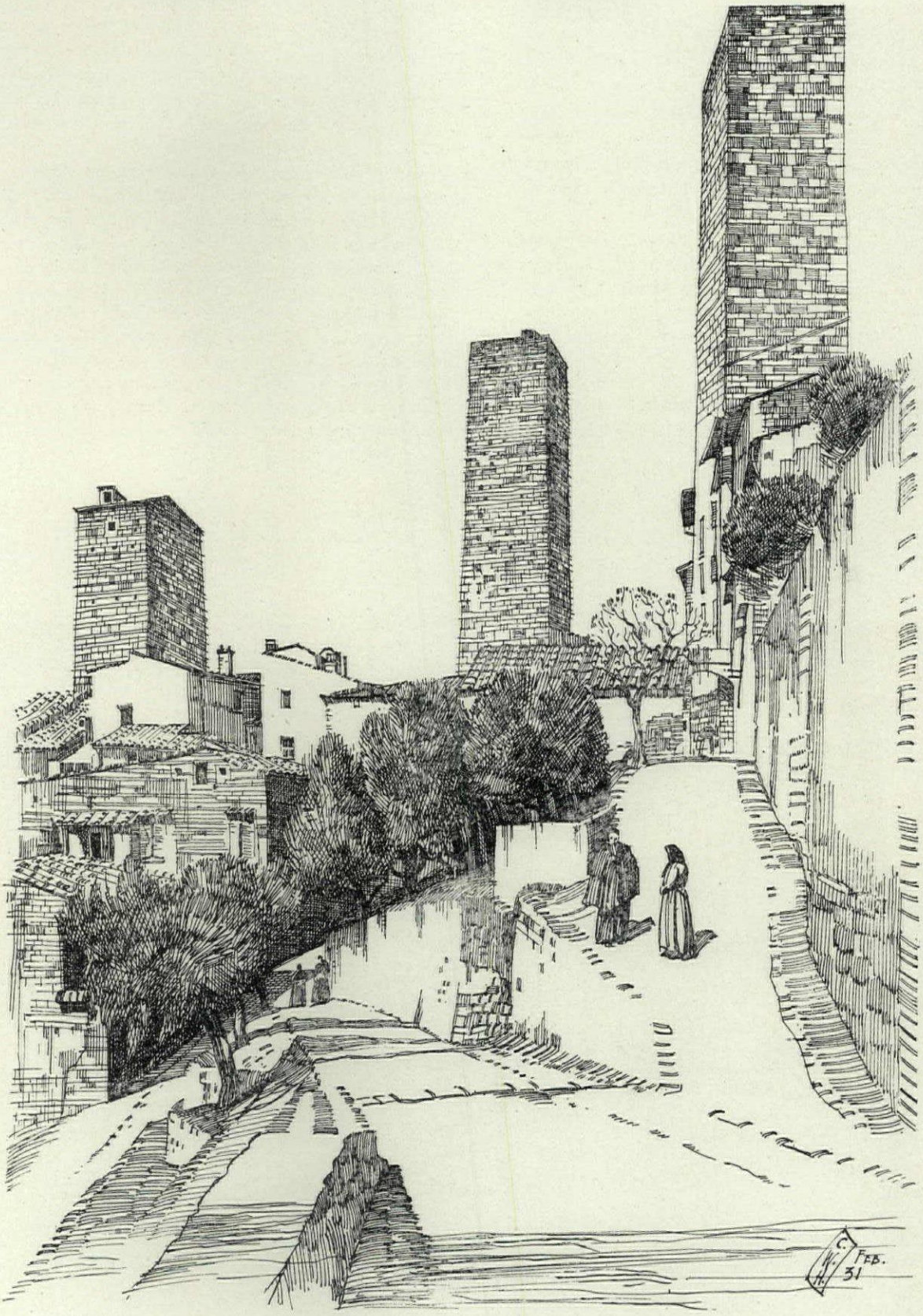
"BEVERLY HILLS ESTATE"—LITHOGRAPH MADE DIRECTLY FROM NATURE
Size of original, 14½" x 10¼"

"ST. VINCENT'S CHURCH, LOS ANGELES"—LITHOGRAPH BY C. WESTDAHL HEILBORN
Drawn on the spot and retouched later—Size, 16" x 21"

"SACRA VIA, ROME"—FROM A CHARCOAL DRAWING BY C. WESTDAHL HEILBORN
Size of original, 16" x 21"

"THE TALL EUCALYPTUS"—LITHOGRAPH PENCIL DRAWING BY C. WESTDAHL HEILBORN

Drawn direct from nature—Size, 11" x 15"



"SAN GIMIGNANO"—FROM A PEN-AND-INK DRAWING BY C. WESTDAHL HEILBORN
Shown at about two-thirds original size

When these meet, blend, and strike the nice balance, like the breeding of the Ionic and Doric strains in a Greek civilization, something unusual may be expected and the art world has a right to anticipate much.

In technique, Heilborn is versatile and direct, suiting it to the subject and media. He shows no fumbling—no uncertainty, and is swayed by a rare sense of values from which comes a dramatic but simple expression of the theme.

High school gave no contacts which stimulated what was to become Heilborn's metier. He writes that "College was the beginning of a new life for me." He entered the School of Architecture and Allied Arts at the University of Oregon in 1926, only five short years ago. He attributes to the courses there, his appreciation of architecture and his acceptance of "Design, the backbone of the whole business."

In 1930 he won a scholarship at the Chouinard Art School in Los Angeles, and while there, was fortunate in finding a wise counsellor—Stanley Reckless—who evidently is fully alive to the sacredness of each "individuality" in his group of students. However that may be, Heilborn's personality is still uncontaminated by any "master's" interference. The writer knows no one in this field of endeavor who has so serenely and consistently developed his own powers, which does not mean that he is blind to what others have done or are doing. However, he has always refused to cultivate another artist's methods, although he testifies to the early inspiration gained from the work of Louis Rosenberg, and shows enthusiasm for Whistler, Bone, Rushbury, Brangwyn, East, Bauer, Walcot, and Cameron, Rembrandt and Meryon. He writes, also, that he is indebted to Arthur Millier, etcher and art critic of the Los Angeles Times, for his start in etching, and to Millard Sheets and Lawrence Murphy for their generous encouragement.

Editor's Note:—*We have a number of other drawings and prints by Heilborn for which there was no room this month. They will be shown in a later issue.*

BROADWAY BRIDGE, LOS ANGELES—ZINC PLATE ETCHING MADE DIRECT FROM NATURE
Size of original, 12" x 9½"

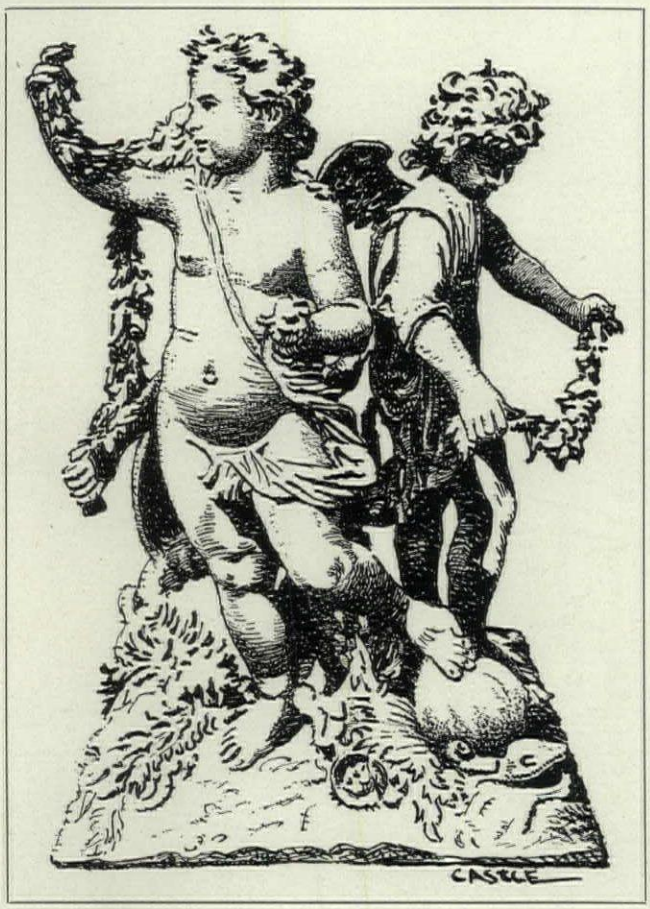
An Architect's Notes on Pen Drawing, 7

By Sydney E. Castle, F.R.I.B.A.

Pen drawing fascinated me almost as early as music—certainly many years before I slid a tee-square.

In point of fact, my earliest impressions came out of a book of fairy tales, the illustrations of which, if my memory serves me rightly, were intended to entice children into the messy and riotous adventures of a penny or twopenny box of paints. But though I laid claim to just such a box of paints, together with a brush which accommodatingly took and remained at any angle I bent it, my fairy-tale book remained free of color.

Those outline drawings of gossamer-winged elfins, broom-mounted witches, queer little thatched cottages with fat chimneys and tiny latticed windows, and animals of the friendly and amiable order, sufficiently gripped my affections in themselves. There they all were—not a shadow, not one conceit of line—almost patterns for a craftsman's skill in plain leads and glass. But there remained in them something that hoisted me far beyond the everyday life I saw about me. To be sure, a weedy uncertain line, but one that remained curiously effective.



CHERUBS, VERSAILLES

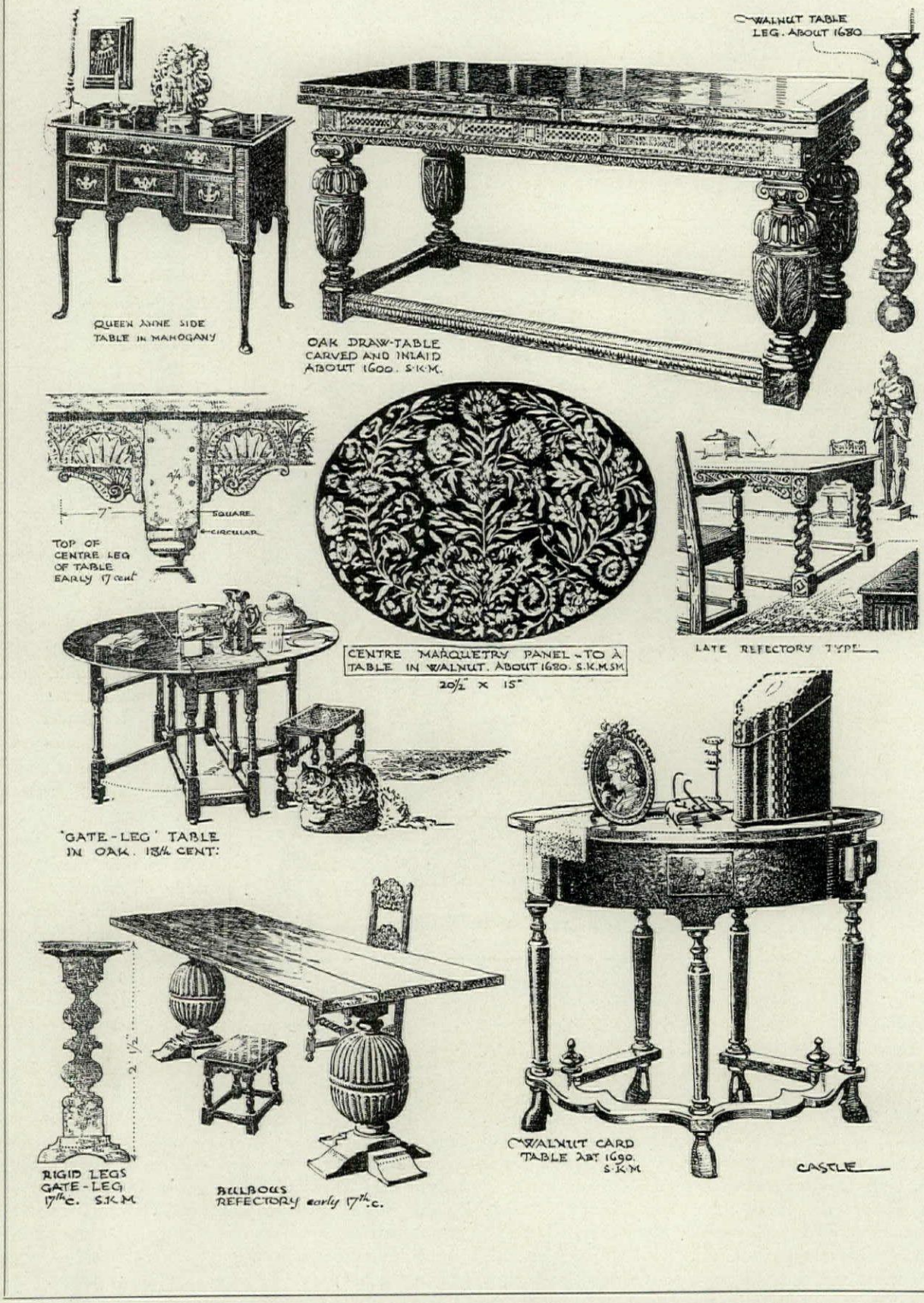
They hardly claimed technique, these drawings. Their economy bordered on that of the wood or linocut. Yet they began my journey, and queerly enough look like having something to say at the end of it. I look back on those simple illustrations with deep reverence. Confucius, or one of his disciples, had it that many words mean many defeats. And it is true enough of many lines. It is a thought. So many journeys end where those journeys began.

Let me attempt to explain. I took a peep at matters when pen and ink drawing widened as an art. Phil May's easy genius swept me. It brought me vigorous enthusiasm. Aubrey Beardsley's labored genius sickened me. It brought me the acids of criticism and intense dislike. Just then, Fred Pegram was in process of developing his exquisite line: H. M. Brock had leapt into a spirit and sparkle the like of which I have never seen surpassed: Claude Shepperson, all too unhappily cut off in the height of development, gave weekly lessons in oneness of tone and smooth harmony: and, across the water, Charles Dana Gibson, Penrhyn Stanlaws and that clown of all delightful clowns, Gus Dirks, were adding to the pleasures of living. These big fellows, and many such, were friends close to my heart.

Then matters grew grave. I faced the job of earning my crumbs. Then came Joseph Pennell, Mallows, Raffles Davidson, and the beginnings of that peerless draftsman of all, F. L. Griggs. And with these new friends came helping hands in the early trials of technique.

But throughout this hero-worship one fascinating thought gripped me. It was the medium in itself. Very soon, fifty men or more could make drawings without signatures but without deceiving me. I could almost *feel* them. Thus I saw in the medium the tongue of individuality—the power and opportunity of easy personal and individual expression.

This is a captious and critical age—and perhaps rightly so. But my belief is that it is also a very crowded and bewildering age. Early enthusiasms, on which, in the student, so much depends, are apt to be confused. There are drawings in Arthur Guptill's recent important and highly instructive work, for instance, whose sheer brilliance leave any words I can muster merely hobbling on crutches. But they teach me no more than a fruit-glutted orchard teaches a less successful grower. Best of all in this book are Mr. Guptill's own little pen exercises. They invite the student to inquire into *himself*—to discover what *his* pen has to say for itself.



FROM PEN-AND-INK SKETCHES BY SYDNEY E. CASTLE

Size of original sheet, 8½" x 11½"

FROM PEN-AND-INK SKETCHES BY SYDNEY E. CASTLE

Size of original sheet, 8¾" x 11½"

No—these big fellows are solely and entirely enthusiasms—examples. They bring home values, of course. The student notes with interest the feathery tapering away against dark and sharp definition to accentuate distance; he notes clean, placid technique to promote stillness, or a flash of line to instill a sense of movement; he sees the darks come forward and the pales retreat. But these are no more than notes given to him wherewith to sound his own harmonies and conceptions rather than arrest them in awe, or make an imitative slave of him.

Technique, or mere pen tricksiness, is solely the servant of larger sense—the sense of composition and values. And these notes claim that such a sense is within the reach of the humblest penman.

I will try and explain without becoming tedious and dry.

Take, for examples, the two inset illustrations—one of a group of stone figures, and the other of a fragment from life.

My object in the first was to find the flash of vigorous movement I found in the heroic pose of the foremost cherub, and to find the shyer grace of the companion figure. I wanted a blaze of sun—I wanted to snatch a peep at perfect anatomy and modeling—I wanted stone, yet *live* stone. I felt my line should be cheeky and sure—in a phrase, I felt my pen would fall short of my enthusiasm if it faltered once.

But in the second example my impressions were altogether different. I wanted the blaze of sun still, but I wanted the grave, reflective calm of a beautiful Cingalese girl. I wanted her smooth, dark cheeks and chest in a scorching sun. I wanted a hasty, slick pen in the distant suggestion of leaf animation, but wanted a slow, sensitive pen in the dull polish of restful, mahogany-hued flesh—a serene dark against light shot with scorching sun. Something fascinated. I sought to enjoy this little fragment and tell the story of a mellow, charming humility.

Thus in the first my emotions were radically opposed to those of the second, and my pen became guided accordingly. So with the furniture illustrations. Here is walnut, polished and stately: there is oak, showing a coarser grain and a less marble-like surface: here is latticed cane, a fine tease for pen wits: there is a plush seat to a chair, accepting light in a more curious way than usual and thus distinguishing the plush: here is one pen fun, and there is another. But all ruled by strict discipline. The drawing is always less than its object.

I come back to the spirit of my early fairy-tale book. I have mixed with the world, stood breathless at its cleverness, watched my own right hand develop cunning until I have become suspicious of it and make drawings with my left, in case this far less facile pen-gripper may lead me where new adventures await. "I should know your work anywhere," I have heard too often. It begins to bore—to impeach.

The Parthenon or Gloucester Cathedral at my hands is no longer the Parthenon or Gloucester Cathedral, but *me:* and that wants a good deal of thought. The fairy book illustrations were more than a mere "me" of some kind—*they were a little world.*

So I advocate love of object before love of draftsmanship. Youth isn't years, saith ancient wisdom, it is open mind. Perhaps more markedly than in most art mediums, pen drawing is subject to artificial tricks and mannerisms which, in extended practice, all too often finds the subject drenched with the artist instead of the artist drenched with the subject. As far as I am concerned, for instance, Herbert Railton's renderings of Westminster Abbey and a row of tenements amount to one and the same thing. Both to me are Herbert Railton. And that is the halt I strongly deprecate. The true fun of nearly everything largely lies in the unexpected. When your pen becomes merely self-opinionated it is doomed. Sooner or later it will breed as many yawns as stark egotism.

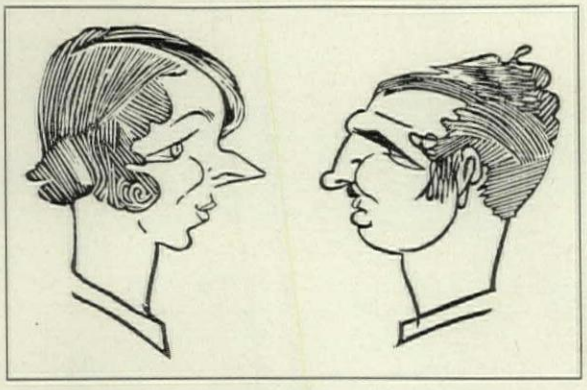
"CINGALESE GIRL"

Traveling Double

By Sylvia Starr Wertz

Editor's Note:—*The author of this article is the wife of Joseph B. Wertz, winner of the 1930 Le Brun Traveling Scholarship. The story is based on their trip abroad and is offered in the belief that other draftsmen and young architects may be thereby encouraged to take their wives along when they set out for European studies.*

Young architects bound for Europe with wives who want to go along have a problem to solve unless their travel allowance is an ample one. Usually the idea of taking a wife along on scant funds for an architectural tour seems too difficult. Bachelor friends throw up their hands in horror at the mere idea; and yet, if the wife is left behind, small wonder that she resents missing a fund of experiences which forms such a bond of joyous memory, drawing the husband and wife who have shared them just that much closer together. Contrary to those who advise not to take your wife, but rather to find another boy willing to share expenses and rough it as a woman could not be expected to do, I want to point out some of the advantageous aspects of traveling double which are not generally appreciated.



THE TEAM OF WERTZ AND WERTZ

As seen by a Swedish caricaturist at the Stockholm exposition.

When two men decide to combine forces for such a trip, seldom do they complete it together. Practically every combination that we have known to start off as boon companions decided to separate about half-way through the trip, and too often the friendship had been strained beyond the breaking point. Yet so many of the lone men hanging about the Paris cafés hopefully watching for a familiar face, announced in no uncertain tones that they were not coming over again without a wife. One gets very lonely in a strange land where one does not speak the language well—yes, even in Paris—unless, of course, one has means for more amusement than sitting at the sidewalk cafés.

Traveling in Europe is not as delightfully inexpensive as it was six years ago. In Spain and in Czecho-Slovakia one can still live comfortably for very little. But in France and England, particularly in their respective capitals, most costs are fully as high, and some much higher than in the United States, notably the automobile. One must be fairly wealthy to maintain a Model-A Ford in Paris, and most architects going over on scholarships, eager to see as much as possible, want a car, unless they put their wives behind them and do their sight-seeing from the back of a motorcycle. Very delicate wives would probably have to abandon such a trip if they did embark on it, and then there are the ones who are too fastidious. For those traveling on a modest allowance, hotels with all the modern conveniences in the way of elevators and plumbing are out of the question. There may be a washstand with hot and cold running water in the room, and many of the more enterprising of the modest establishments boast a sort of glorified species of foot tub or sitz bath, also equipped with drain and running water, in which one can bathe bit by bit, but usually there is only one bathroom with tub for the whole hotel (all baths average about 25c extra) and, because of the disturbance to other guests, tubs may not be drawn after ten P.M. We could never remember to order baths before we wanted them, and then it was usually too late. But it is surprising how far one can stretch the quart or so of hot water left by the door in the morning in the English hotels; and, too, I knew one quite fastidious young lady at the Ecole des Beaux Arts and Fontainebleau, who remarked after a trip through Italy: "Bath? Why I haven't had one in three months, and I wouldn't break my record now, if somebody offered me one on a silver platter."

There are also the wives not deeply interested in the architectural phase of art, but who simply can't bear to be left behind; so, wisely, they go as far as Paris or London and stay there studying music, French, history, or perhaps rooming with a friend and sight-seeing, while the husband goes on with his sketching tour, possibly arranging a rendezvous for a week in Venice or Rome together. This is a happy compromise, and staying in one place is much less expensive than moving continually as more reasonable rates are charged for stays of several weeks than for a few days, and good instruction in most subjects is very reasonable abroad.

But for the wife who is artistic enough not to get sadly bored while her husband sits for hours sketching some hoary monument, there is no question of staying behind, only that of achieving the most comfort for the least outlay. Two can, in some cases, travel as inexpensively as one, especially by car, though this is not true in the countries where one is charged so much per person instead of so much per room. Two boys we knew who toured Italy together actually found it a little less expensive, in some hotels, to take two single rooms instead of one double room. But in France one pays by the room regardless of how many people are sandwiched into it. Or, if they have nothing but a twin bedroom left (and these are always highest) Madame will tell you that if you prefer not to use both beds, you will be charged for only one. The French are extremely practical, you pay for just exactly what you get and nothing is "thrown in" unless Madame has informed you beforehand that the wine is *compris* in the price of dinner, or the garage with the price

The Renault's hood opened upwards like a monster's mouth. In solving the mysteries of its obscure engine more than one mechanic suffered severe skullular contusions.

of the night's lodging. When one pays per person, all the little extras like the city tax per day and the service tax of ten per cent of the bill, etc., mount double too, so that you will probably find French hotel rates the lowest per couple.

We wanted to have a car over there and after inquiring into transportation costs we decided against taking our new Ford roadster since the very cheapest return fare for the car required a deposit of three hundred dollars, very little of which would be refunded. Then there was the difficulty of the heavy gas consumption of the Ford in comparison with that of the small European cars which are especially built to get at least thirty miles to the gallon, because the average cost of a gallon of gas abroad is fifty cents.

We knew several boys who had bought small, second-hand cars in France, toured all over the Continent in them and sold them at the end of their trip, usually fairly advantageously, as second-hand cars have a surprisingly high value abroad. Just how high we had not realized until we began the search for our car in earnest. Old Model-T Fords were almost impossible to resell except for trucks, we were told, and the new Fords were prohibitively high; so, as planned, we concentrated on French makes, finding that the Citroen, Renault, Mathis, and Peugeot are the more popular of the smaller, less expensive ones. The Citroen and Renault might be roughly compared with our Chevrolet and Pontiac and the other two with our Ford. Only, the Ford is of 24 horsepower while most of these are of only six to ten horsepower because of the exorbitant tax per unit power on all cars in Europe. They have been likened more to one-cylinder Fords and it is a surprise to find that they will climb, albeit laboriously and with much involuntary action on the part of the driver. Neither of us could resist leaning forward and straining every nerve to help climb, especially over the Simplon Pass when we puffed for 20 miles in low gear.

It was not easy to get all the information we needed before making our selection of a car, though I am fairly at home in the French language and most of the larger Paris establishments have interpreters, so I would suggest that if you haven't much time to "shop around" and neither of you speak French it might be easier for you to get your car in England where you can understand what it is all about. This, however, is by no means necessary since one architect and wife (friends of ours) were well satisfied with a little Citroen, bought at the same garage where we finally got our Renault, and neither of them understood one word of French. Believing it may be helpful I give the address of this garage—(Garage Bosquet, 83 Ave. Bosquet, Paris VII). We personally know of four pairs of compatriots who were satisfied with cars bought there and, though we had no written agreement (which of course is always wisest to have), they made good their promise to buy back the car at the end of six months, barring accidents or undue damage, for a little under half what we paid them for it. They did this without any embarrassing delay to us which was worth a great deal at the end of our trip. Also they will help you with all the complex details of getting your *carnet de passage* or *triptiques*, as you prefer, and the necessary international *permis de conduir*.

Even in the garage there are advantages in having your wife with you. It often becomes evident that two women traveling alone meet with more courteous attention than do two men or even a man and a woman, so, as my husband spoke no French—and French is spoken in Belgium, most of Holland, Switzerland, nearly all through Italy, and much in Spain—I was elected to make all inquiries. If we needed help I would go into the garage alone, since we found that the mechanics seemed more interested in aiding a lady whose motor was *en peine* (literally "in pain") than they were in assisting another mere male. In any case though, rush work in foreign garages proceeds about as rapidly as one of our leisure arts.

If the architect's wife is not busy sketching too, he may appreciate having someone to sit beside him and regale him with chapters from a guide book or an atmospheric novel. Romola read again in Florence makes the place so much more vivid and significant, even the wordiest chapters of Don Quixote are packed with new meaning when read in Spain, and Dumas has any number of thrilling tales to bring back the romance of old Paris. Naturally, the more widely you read the richer will be your appreciation of the things you have come so far to see.

Another excellent reason for having your wife beside you will be appreciated when the question of the lunch basket comes up. It was always an adventure in local color for me to get the day's provisions in the village market square while my husband was piling in our luggage or filling the car with gas and water. We not only saved time and money this way but usually managed to happen upon grand picnic sites conveniently near noon.

Then, one of you must be pretty proficient with a mending kit and few are the men who have stooped to this simple art. A small wardrobe gets so much hard wear on a vagabond trip and needs so much extra attention. Some wives are devoted enough to carry miniature clothespins, lines, and flatirons to take care of the family laundry which becomes such a trying problem when you make only short stops for weeks on end and cannot carry dozens of shirts. Laundry is one of the items which averages about as much as at home and takes twice as long to get back from the laundress who usually does it in the river—even in Paris you will see the lines of houseboats for the laundresses on the Seine. We simply had to pay the extra charges on special rush work as I have never been able to iron shirts,

and then one must take valuable daylight hours to iron in because of a trick lighting system whereby the instant you switch on a light at one end of the room the light at the other end goes out. Try as you will you cannot burn more than one light at a time. Often there is a notice to the effect that no linen is to be washed in the rooms. Well, we not only washed no linen but were careful never to leave anything drying when we sallied forth from a room we expected to return to. I found that rayon union suits and pajamas and very nice polo shirts can be had quite inexpensively, for men as well as women. They save a great deal of space, can be washed out easily, dry quickly and need no ironing. In short, neither of us would ever travel without this equipment again. I had hard work at first persuading my husband to wear anything he considered so effeminate as rayon, but now he sighs at going back to mere muslin. Unfortunately these men's rayon pajamas develop runs when sent to the laundry and so are only practical when done by hand. But if your wife wants to iron she must get a little plug called a "voleur" (literally a "thief") in the hardware department of any big Paris dry goods store. With this she may succeed in tapping the purposely mysterious electric system of the hotel.

The baggage problem, while nearly solved by the automobile, still remains a nuisance in proportion to its bulk. Insist that your wife cut down her traveling wardrobe to a minimum of necessities, and she may still find she has lugged over a lot more things than she will wear. Tell her she can fill it out with things from Paris just before returning to the States and you'll be pretty safe, for the chances are that you'll be too broke for her to spend an awful lot then. Besides, the ready-made clothes in Paris are not desirable, as they do not fit the American figure any more than the French shoes built for wear over sidewalks that are often nothing but cobblestone lanes, can be said to fit the American foot. You will want to take all the shoes you expect to wear, except perhaps a fancy pair of evening slippers, which are worth getting in Paris. The ordinary French silk hose are not good and the fine ones are much more expensive than good American hose are. French perfumes of course reign supreme but are now not allowed into this country without the charge of a new and very high duty, even though the bottle has been opened and your allowance of dutiable things comes way under the permitted one hundred dollars worth. So beware. We went over in May with two suitcases apiece and came home in January with eleven assorted pieces of baggage, among them a cheap French trunk, a two-gallon can of olive oil entrusted to us the last minute for delivery to a relative's family here, a group of Quimper faience too delicate to be sent in the trunk and too big to go in any of our bags, innumerable portfolios of sketches, rolls of canvases, etc. In contrast to the lenience we had met with at European borders, our own customs officer insisted that we open every single one of those eleven pieces except the olive oil which looked most suspicious of all, and had caused us several qualms of anticipation.

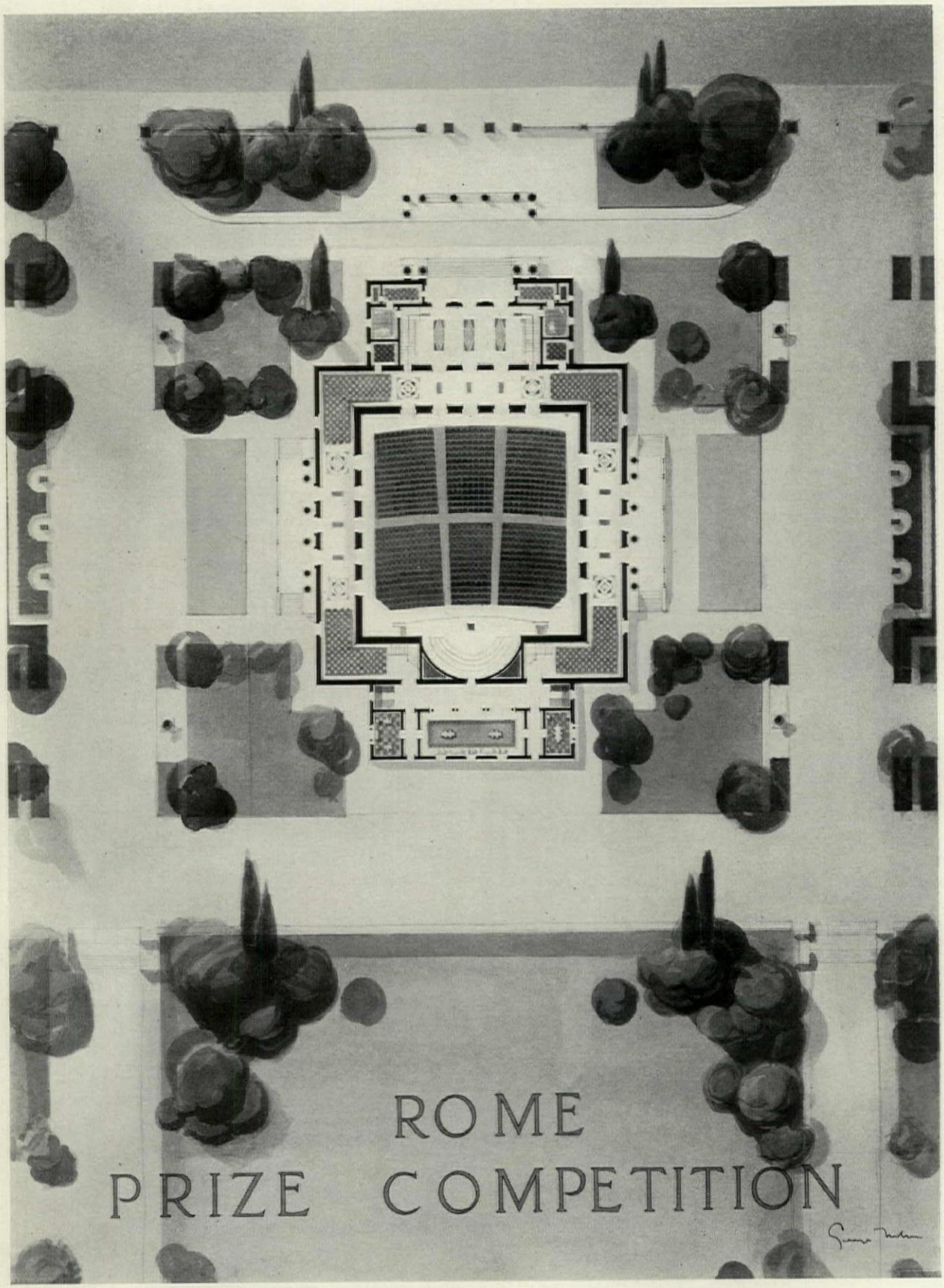
But to get back to the luggage you will actually need while traveling, you will find that small overnight cases with compact arrangements for toilet articles so that they can always be found quickly, and room for a complete change of underthings as well as a dress or a couple of shirts, will save you much trouble. You then do not have to unpack all the big cases for only one-night stops, and they can be left undisturbed in the car. Even better than leaving them in the car is the purchase of a good unassailable automobile trunk, with hinged side instead of lid and compartments for, say, four good-sized suitcases (it is often well to devote one entire case to nothing but shoes). These trunks are not cheap but you will find them worth every penny you put into them because you can use them for the overflow of things collected on the trip and stow them in the hold for the return voyage and they are still good for use on the car at home. We did not realize this at the outset of our trip so our bags and upholstery suffered much from the rubbing that the necessary close packing occasioned. My new umbrella was worn with a dozen tiny holes before the trip was half over even though I got a case for it, and we would undo rolls of drawing paper only to find them completely moth-eaten from the constant gentle friction.

Painting kits with easels, stools, and so forth take up a lot of space and canvases need special racks built in, preferably between car and automobile trunk if possible, especially if you expect to include friends for short tours with you, who will occupy the back seat with their luggage and themselves. These racks are necessary to keep the canvases from being pressed together before the paint is absolutely dry. In the seven months we were abroad, I did only some twenty oils against my husband's hundred-odd water colors. I attribute this mainly to the fact that we did not have proper space for holding canvases until the week or two had passed when they could be taken off their stretchers and rolled up. Often my husband's water colors were just as large as my canvases but they dried in an hour and could be stowed close together immediately, so that he often did several in a day.

There have been so many good articles lately on the technical side of traveling through Europe by various means of conveyance that it seems unnecessary to enumerate much on that side of ours, and in stressing the traveling double side, the little hints I have to offer may perhaps seem rather too simple and obvious. If someone had suggested, however, at the outset of our trip, that we carry a Sterno outfit and some good canned coffee, fluid or otherwise, it would have added immeasurably to our comfort. I imagine that most wives will be less disturbed by the Continental breakfast than are their husbands. Personally, I got along very well on the chickory that passes for coffee or the really excellent chocolate with accompanying crescent rolls and delicious sweet butter with an occasional extra dab of jam (extra on the bill too, you may be sure) but my ravenous husband demands the conventional English breakfast in all its profusion of bacon and eggs. Chocolate he found too sweet for breakfast and the coffee he could not stomach; so for him it was just too bad.

The Sterno affairs are called by a different name which I cannot remember but they look the same and the fuel comes in dry cakes like magnesia, on sale in the big department stores. How many times, coming in late at night with the neighboring cafés all closed, we have gone to bed almost too hungry to sleep when a cup of hot tea would have been a blessing if we had only known about these little Sterno-like contraptions! And then there were the chilly suppers smuggled furtively into our rooms when the hotel menu was too high. Of course two boys could do this, but how many will take the trouble for each other?

(To be continued next month)



PLAN OF PRIZE WINNING DESIGN FOR "AN AUDITORIUM BUILDING," BY GEORGE NELSON
COMPETITION FOR THE ROME PRIZE IN ARCHITECTURE, 1932

THE ROME PRIZE IN ARCHITECTURE

The Rome Prize in Architecture has been awarded to George Nelson of Hartford, Connecticut. There were no mentions. The award in architecture is the William Rutherford Mead Fellowship. The winner will receive $1550 a year for the term of two years, beginning October 1st, and $500 for transportation to and from Rome, as well as residence and studios at the Academy.

The members of the Jury of Award were William Mitchell Kendall, Chester H. Aldrich, Louis Ayres, Charles A. Platt, James Monroe Hewlett, the new director of the American Academy in Rome, and John Russell Pope.

In the three-day preliminary competition there were one hundred and ten entrants from schools of architecture throughout the country. The preliminary program called for the design of an art center consisting of the following buildings: an auditorium, an art gallery, a library, a sculpture museum, and an historical museum. The final problem was to develop further and restudy the auditorium building.

The Problem

It is proposed in this the final competition that each competitor consider that his preliminary scheme has been approved in general, that he has been appointed the architect of the project and that his client wishes to proceed immediately with the erection of the Auditorium Building.

The preparation of studied preliminary drawings for this particular building are therefore in order and at the same time a studied presentation of the whole scheme.

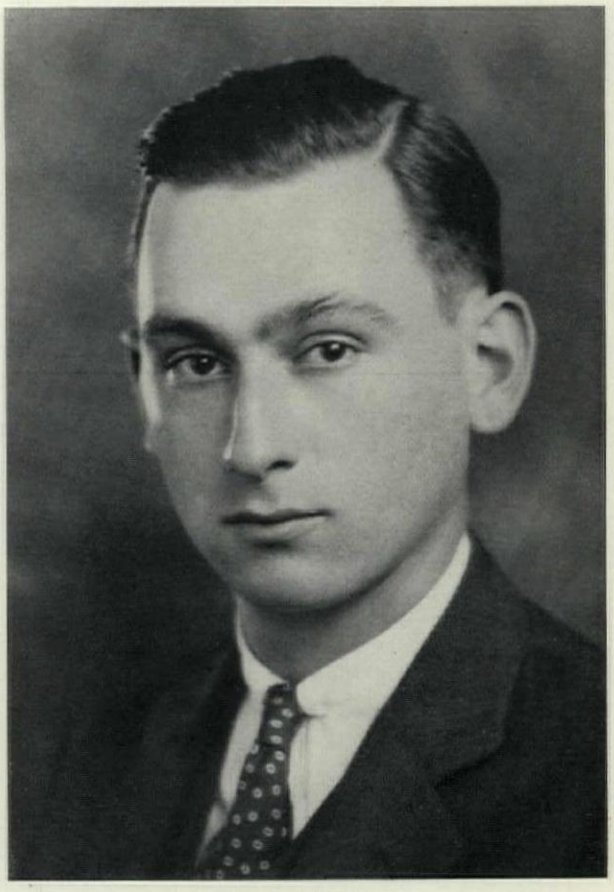
Each competitor must follow his own general scheme as presented in the Preliminary Competition as a basis for development, but a certain latitude is allowable in the position, shape, proportion, additional landscape features, etc., of the various parts, which the further study and larger scale necessitate for its betterment. He may have full latitude in restudying the Auditorium Building.

Careful study of the landscape layout and accessories is urged as the client (represented by the jury) would necessarily wish to be sure that the placing and surroundings of the whole group are right before proceeding with the auditorium. It is necessary that the general plan be so developed that the main entrance of the Auditorium be reached directly from a driveway.

Requirements: 1. Auditorium to seat 2,000. Not more than one-third of this capacity may be placed in a gallery. 2. Stage shall be of sufficient size to accommodate an orchestra of not more than 100 pieces. Adjoining the stage shall be a large orchestra room as a lounge for musicians, also several offices for use of conductor. 3. Ample lobbies, circulation, stairs, and exits for handling crowds. 4. Adequate coat rooms and toilets. 5. Box offices and administrative offices adjoining the entrance lobby. 6. Music School: It should contain (a) A small auditorium seating not over 250 which can be used for chamber music and lectures; (b) Two or three classrooms seating about 36 each; (c) A library; (d) At least twelve small practice rooms, approximately 175 square feet each; (e) Two or three rooms for general office purposes and the director; (f) Toilets, coat rooms, etc.

The drawings and rendering in the competition must be entirely the personal work of the competitor, and no advice, criticism, or assistance of any kind from another person is permitted. Books, plates, documents, etc., may be consulted, but none of these nor any drawings or tracing may be taken into the workrooms. These rules are to be unequivocally observed in spirit as well as letter.

Mr. Nelson's winning drawings are illustrated.



GEORGE NELSON

George Nelson, the winner of the Rome Prize in Architecture for 1932, was born in 1908 at Hartford, Conn. He prepared for Yale at the Hartford High School and entered Yale in 1924, graduating with a B.A. degree in 1928. In the fall of 1928 Mr. Nelson entered the Yale School of Fine Arts where he began his training in architecture. Mr. Nelson wishes particularly to express his appreciation of the criticism and constant encouragement of Professor Otto Faelton throughout his course.

During the year 1930-31 Mr. Nelson worked in New York for Adams and Prentice, Architects, and taught architectural design at Yale, receiving his B.F.A. degree in June of last year.

At the present time Mr. Nelson is a graduate student at the Catholic University of America in Washington, D. C. He wishes to express his thanks to Professor Murphy and to Messrs. Locraft, Weppner, and Pairo.

Mr. Nelson feels that one of the most inspiring influences in his architectural training has been Lloyd Morgan.

ROME PRIZE IN LANDSCAPE ARCHITECTURE

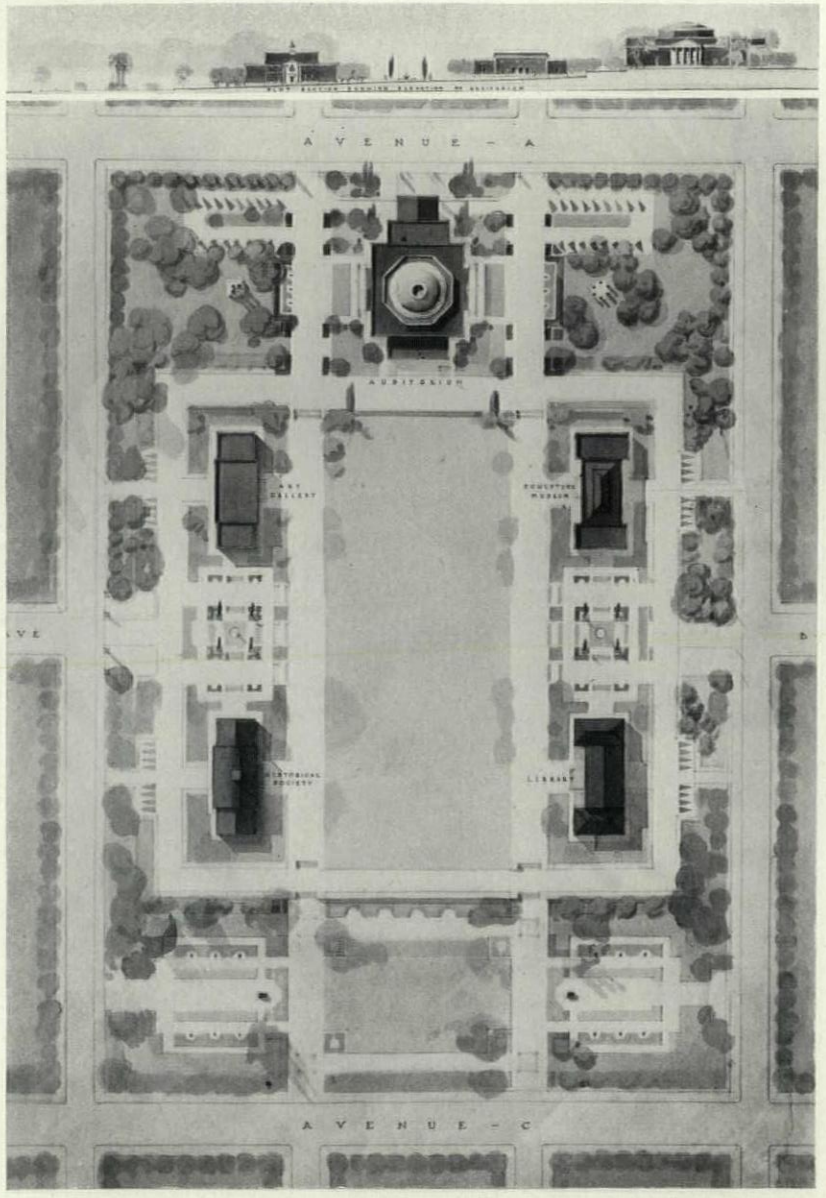
The Rome Prize in Landscape Architecture has been awarded to Henri E. Chabanne of Tompkins Corners, New York. Mr. Chabanne is a graduate of the Department of Landscape Architecture in the School of Fine Arts at the University of Pennsylvania. The landscape architecture award given this year is known as the William Rutherford Mead Fellowship and is endowed by the Garden Club of America.

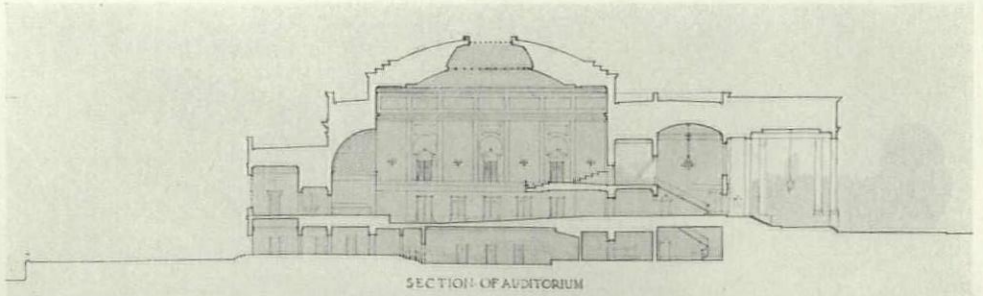
The problem was *The Landscape Development of a Private Estate near Newport, Rhode Island.*

The members of the Jury of Award were Gilmore D. Clarke, Clarence Fowler, Percival Gallagher, Alfred Geiffert, and Ralph Griswold.

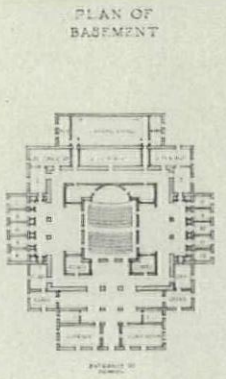
ELEVATION OF PRIZE WINNING DESIGN FOR "AN AUDITORIUM BUILDING," BY GEORGE NELSON

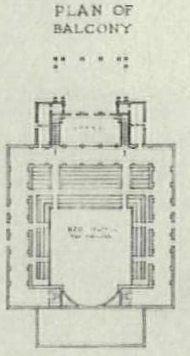
COMPETITION FOR THE ROME PRIZE IN ARCHITECTURE, 1932



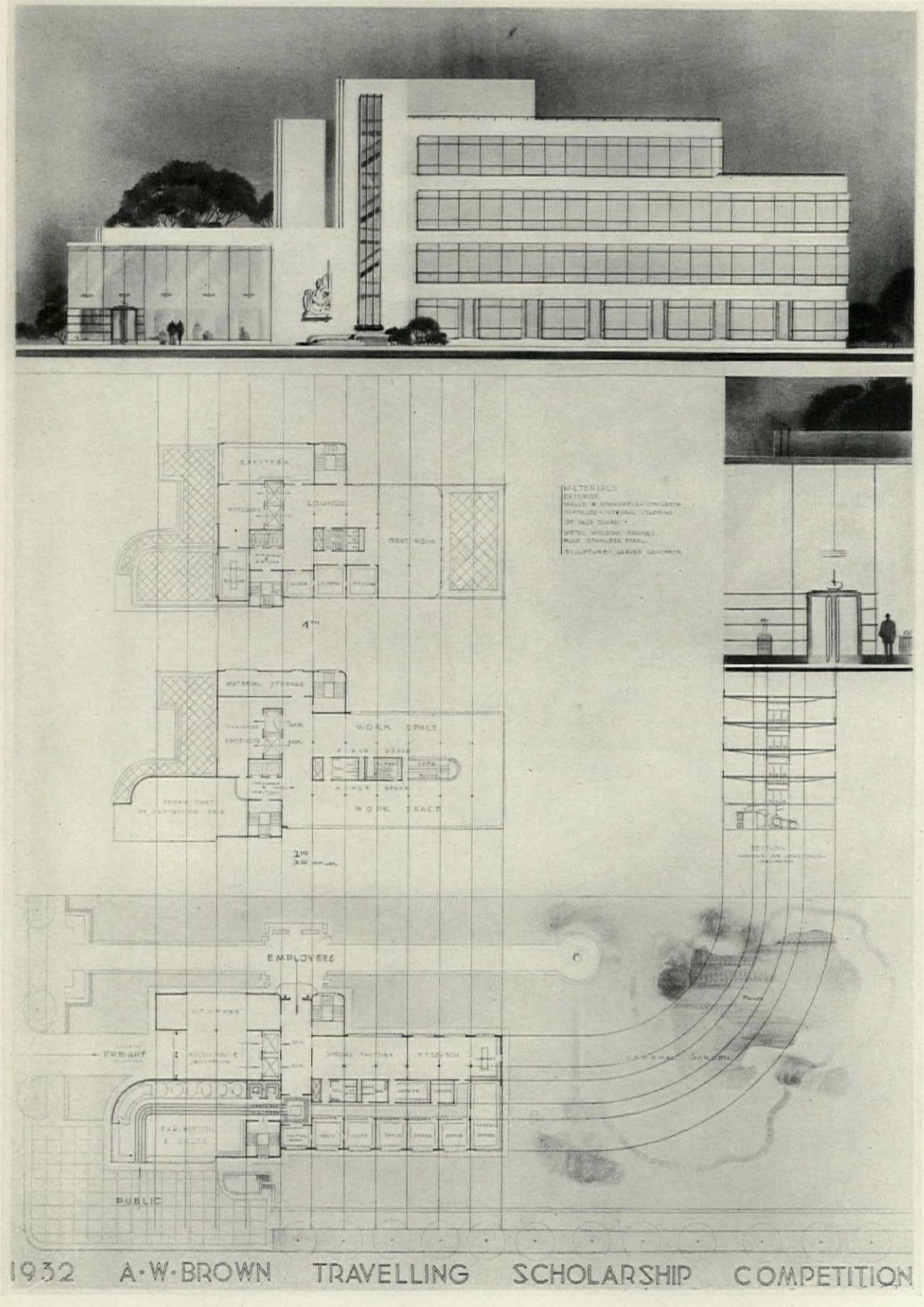


COMPETITION FOR THE ROME PRIZE





PLOT PLAN, SECTION, AND PLANS—PRIZE WINNING DESIGN FOR "AN AUDITORIUM BUILDING," BY GEORGE NELSON
COMPETITION FOR THE ROME PRIZE IN ARCHITECTURE, 1932



PRIZE WINNING DESIGN FOR "A SMALL FACTORY," BY BENJAMIN LANE SMITH

COMPETITION FOR THE A. W. BROWN TRAVELING SCHOLARSHIP FOR 1932

A. W. Brown Traveling Scholarship Competition

Report of the Jury of Award and the Problem

The jury has very carefully considered all of the 236 designs submitted in the competition and through various eliminations and study of the program has come to certain general conclusions which are presented herewith, together with certain comments on the awards as finally decided.

The jury was impressed by the predominant adherence of the competitors to the so-called international style and found that of the very few designs that conformed to an older tradition none had been sufficiently studied to achieve a merit demanding very serious consideration. On the other hand it was very evident that the restrictions imposed by the use of a "newer tradition" are not well understood with the result that in the jury's opinion there was an over emphasis of the use of the ribbon window, to the detriment of most of the designs.

While the program called for a practical solution in which actual utility must have an important place, the jury agreed that the very nature of the problem, involving as it did the restoration of men to normal life, called for an external appearance much more pleasant than possessed by the average factory. In regard to the plans, the jury considered the prime importance to be in the plan of the factory floors, that it should permit certain flexibility in arrangement of machinery, the construction not acting as an obstruction to the free use of the floor space. Next in importance was the first floor plan with special consideration of the disposition of the exhibit and sales space and its ready accessibility from the parkway both as to actual entrance and to display.

In the design by Benjamin Lane Smith, which was placed first and received the scholarship, the plan as a whole is excellent. In the opinion of the jury the placing of the exhibition space and its expression both in plan and elevation is the best solution offered in the competition. It was considered to be a distinct advantage that in this plan all visitors to the building would be forced to enter through the salesroom. The plan of the fourth floor could have been improved in several respects. The jury also questioned the construction of the roof over the exhibition space but realized that the brilliant quality of the design would not be impaired were the interior supports more adequate. The use of the cantilever construction as employed in this design is especially commended. The elevation is easily the most distinguished of all those submitted and is well arranged to express the different elements of the plan.

Both the first and second placed drawings are excellent examples of well-studied plan arrangement, clearly and simply presented and with circulation well considered. This is especially true of the second prize design by Samuel E. Homsey. A commendable feature in this is the arrangement for parking of cars by visitors with direct access to the Exhibition Room; while not required by exact wording of the program, this shows intelligent consideration and study of the surroundings with relation to the building. In this second design as in the first, the construction does not in any way interfere with the flexible use of the plan. The disposition of the vertical circulation is particularly fine. However, the jury greatly regretted that the quality of the elevation is not at all comparable to the excellence of the plans, that it lacks distinction and that its virtues are largely of a negative quality.

Both the third (by William S. Morris) and the fourth (by William P. Kramer) prize designs were considered as admirable in plan and elevation. Both express well the several functions of the building. The third design was especially liked for the disposition of the exhibition space and the fourth for the interesting use of the roof spaces.

The fifth place or Special Mention was given to the design submitted by Urban A. Bowman (not shown) and was highly commended for the treatment of the Exhibition Space with the "Special Workers" located along one side, making a display of this feature.

The design by Morrison J. Brounn, while not receiving a prize or a mention, was "especially commended for parti" and the jury has requested it be published. It was greatly regretted that such an excellent solution was marred by disregard of the realistic requirements of the problem. More careful study would surely have placed this design in definite competition for the prize.

The following men have received mention for their designs: William W. Benn, Chicago, Illinois; Maximilian Bradford Bohm, New York; Esther Born, New York; William H. Conrad, Elyria, Ohio; Will W. Griffin, New York (design H.C.); William B. G. Kirk, New York; Hugh McDonald Martin, Springfield, Mass.; Henry D. Whitney, White Plains, New York.

Submitted by the Jury,

ROBERT O. DERRICK, Detroit
CHAS. D. MAGINNIS, Boston
BRANDON SMITH, Pittsburgh
W. R. TALBOTT, Washington
RALPH T. WALKER, New York

The Scholarship Committee has investigated the qualifications of the competitor whose design was placed first, as required by the conditions of the competition, and has awarded the scholarship to Benjamin Lane Smith of Chicago.

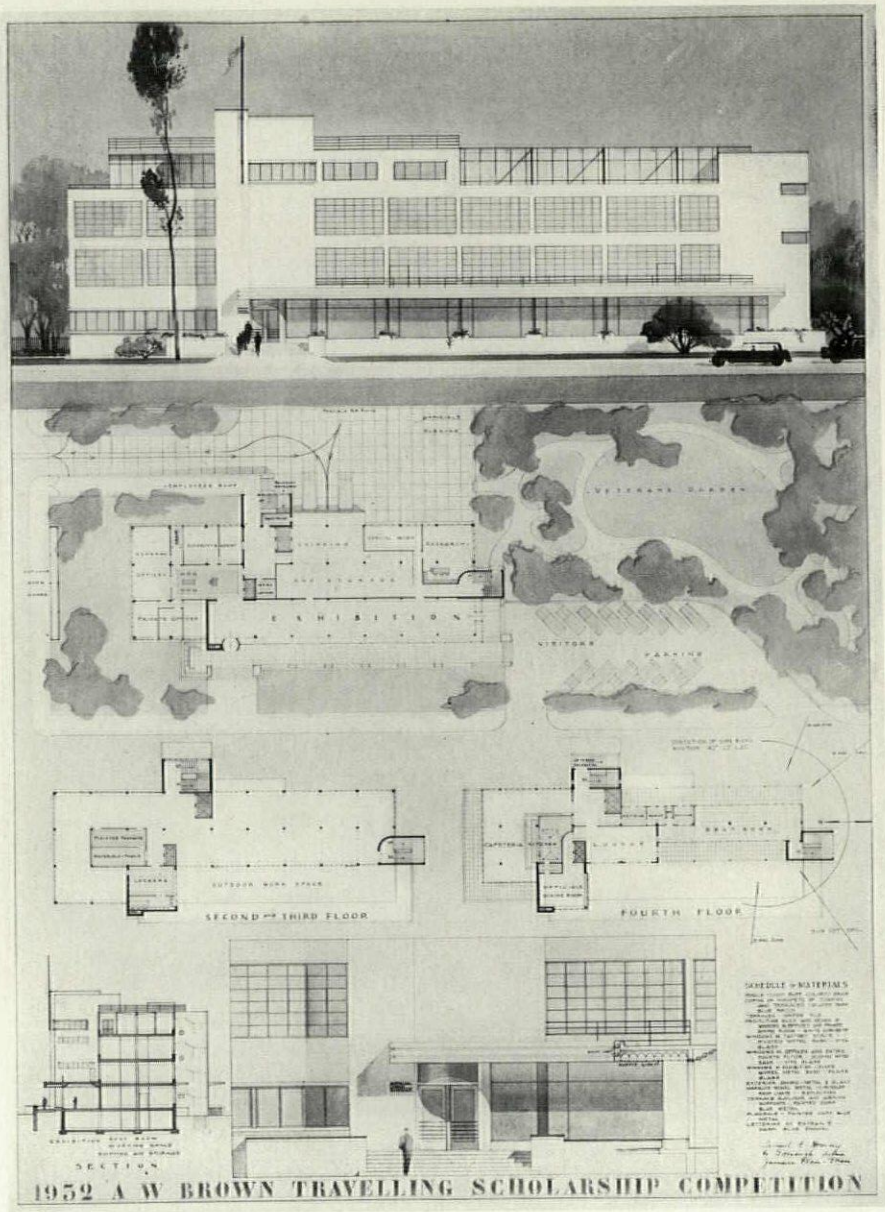
The Problem

The problem is the design of "A Small Factory." It is assumed that as part of the Veterans' rehabilitation work of the American Legion a small factory is to be erected near a large Veterans' Hospital center. This factory will be maintained in order to occupy the time and attention of men who are partially disabled or in the latter periods of convalescence and who, though able to leave the hospitals, must continue to be under medical supervision during working hours. Furthermore, the conditions under which they work should provide the maximum of light and air and also open air spaces for rest and relaxation.

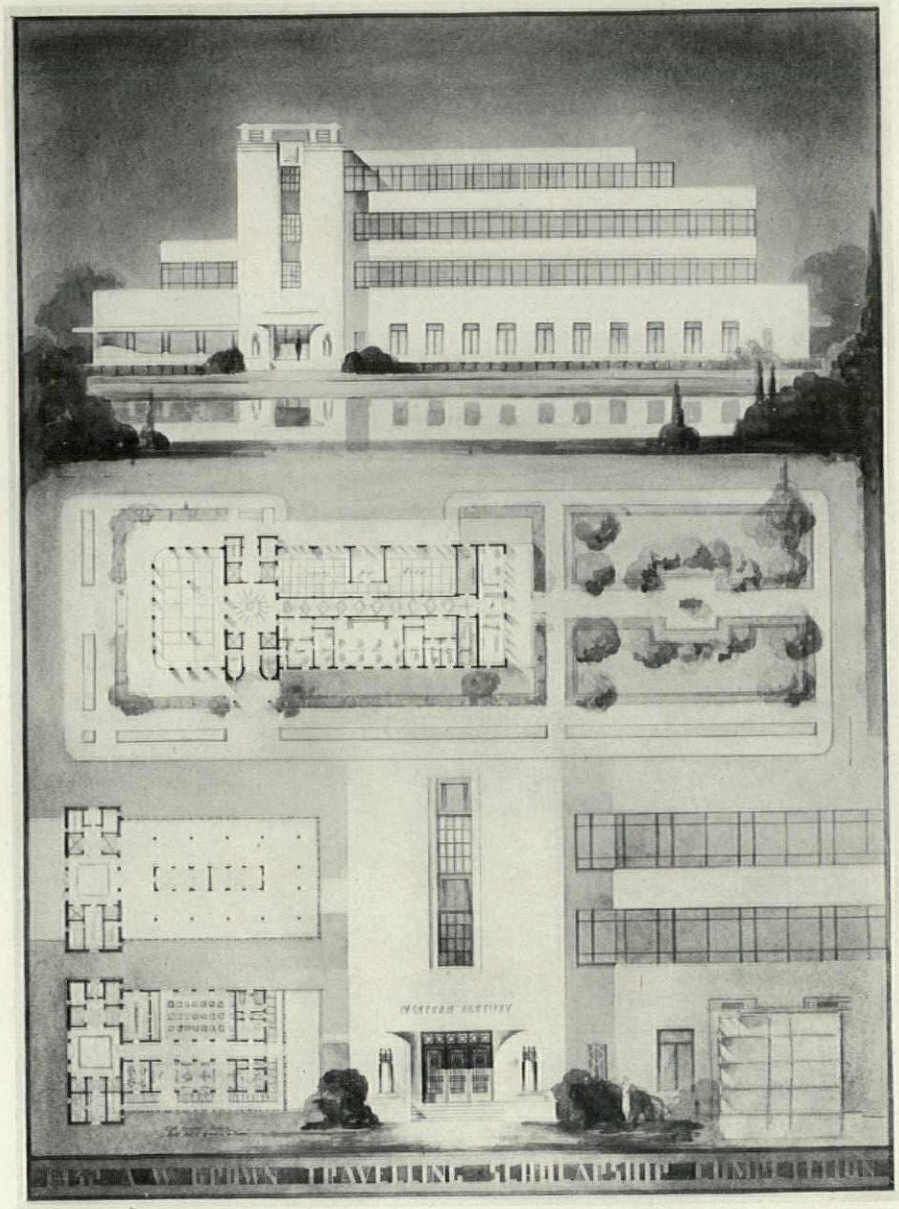
The work which such patients will be able to do must not be too arduous and therefore they will be occupied principally with weaving, woodworking, and the making of small objects of a decorative character. The articles which are made will be sold to the public, both through shops to which shipments will be made and also at the building where space for exhibition and sale will be provided.

It is presumed that an ample tract of level land has been acquired on which the building will be erected. The land lies between a

(Continued on page 438)

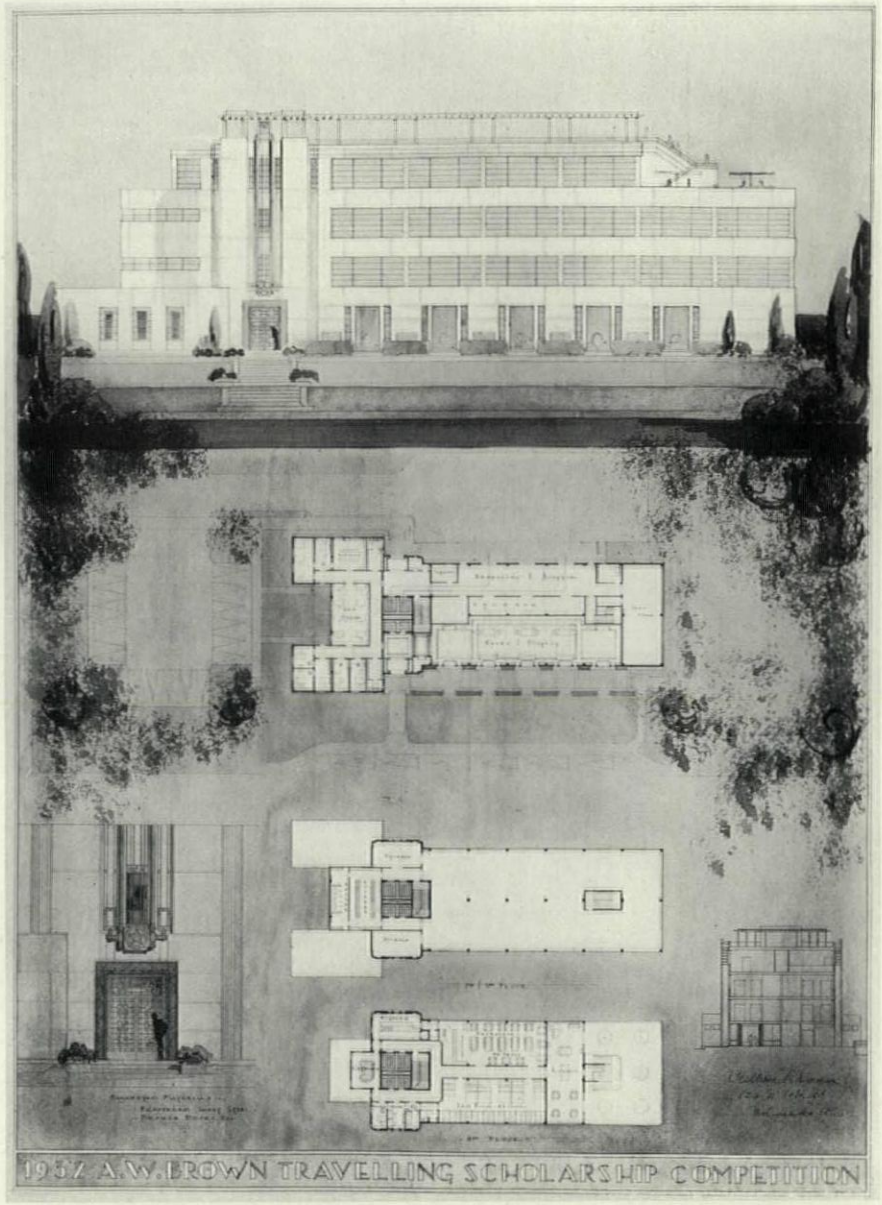


SECOND PRIZE BY SAMUEL E. HOMSEY

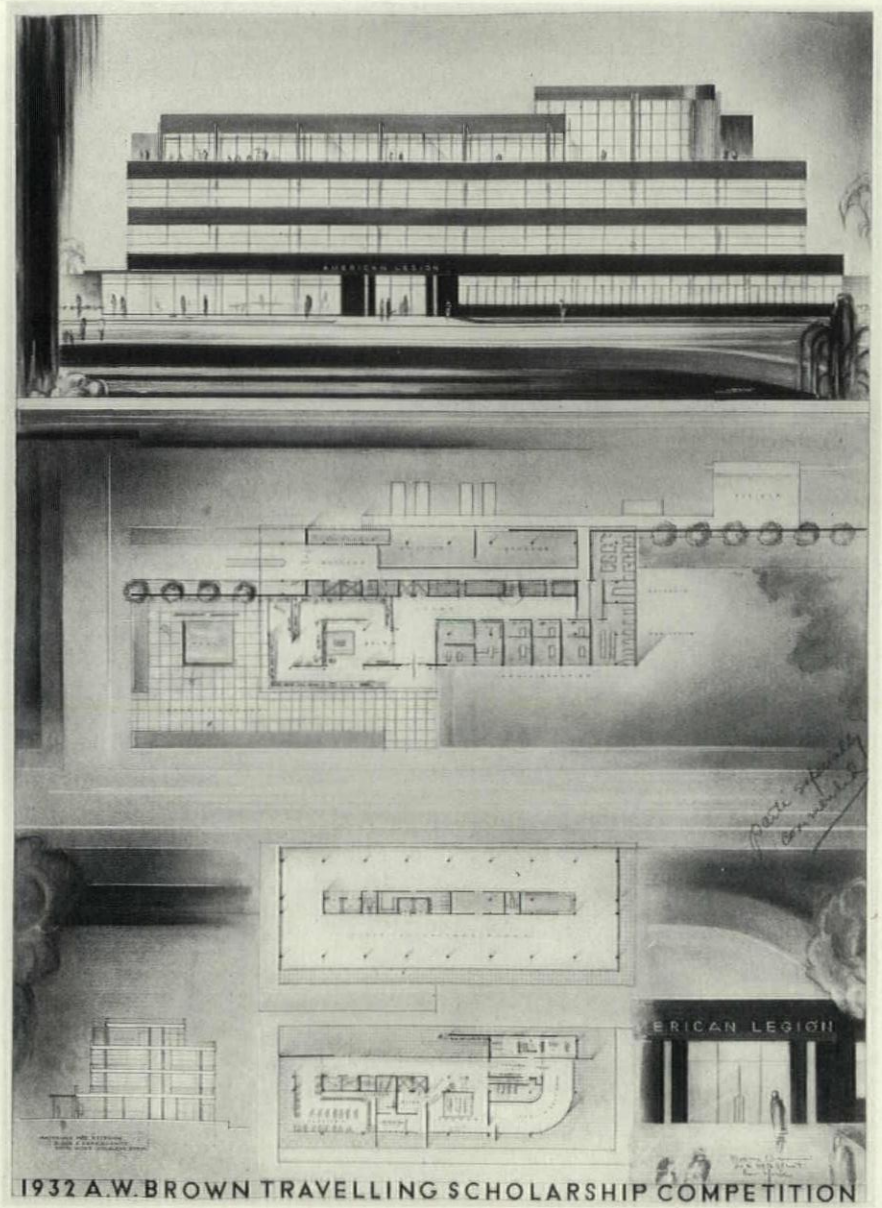


THIRD PRIZE BY WILLIAM S. MORRIS

DESIGNS FOR "A SMALL FACTORY"—COMPETITION FOR THE A. W. BROWN TRAVELING SCHOLARSHIP FOR 1932

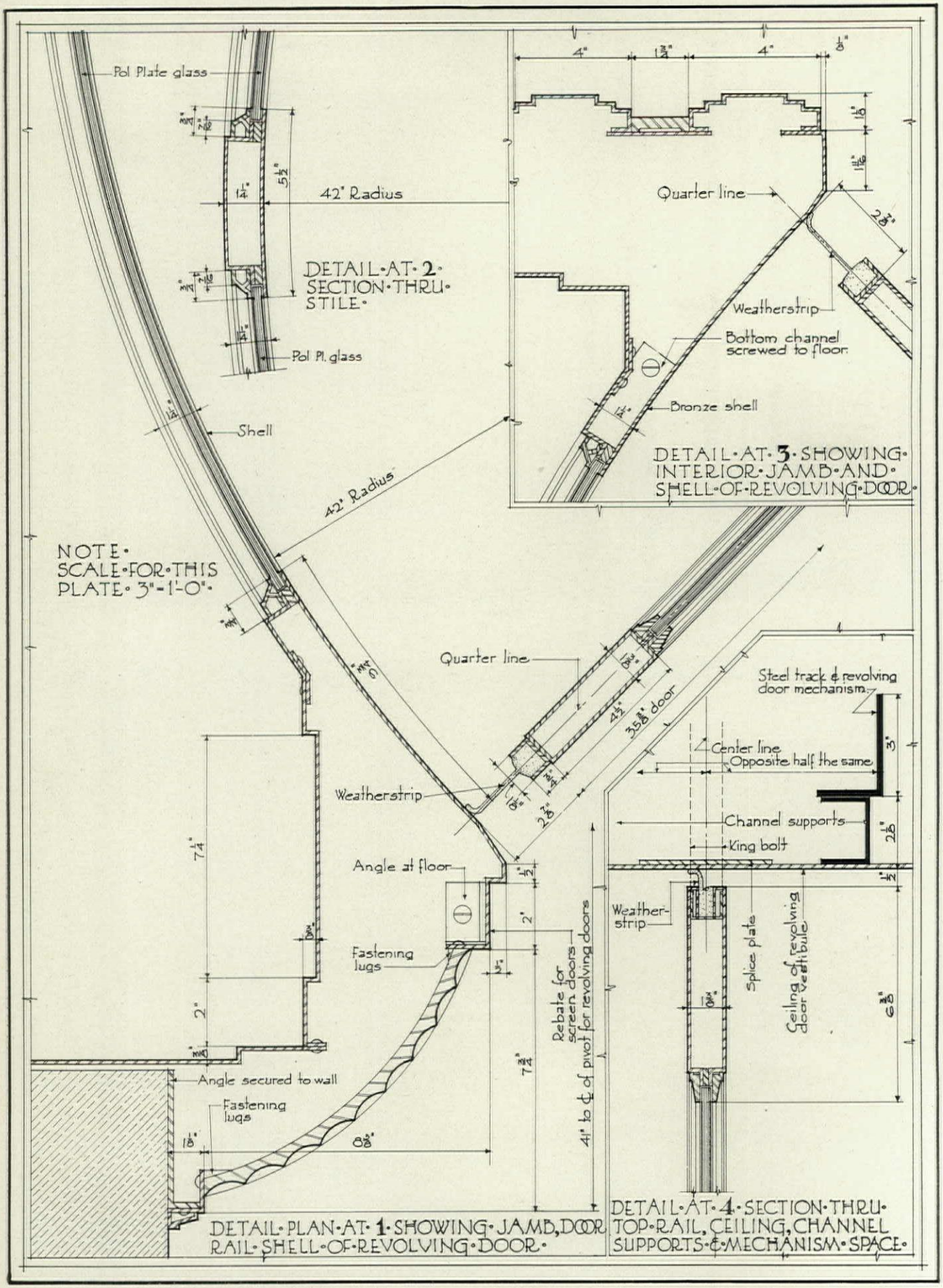


FOURTH PRIZE BY WILLIAM P. KRAMER

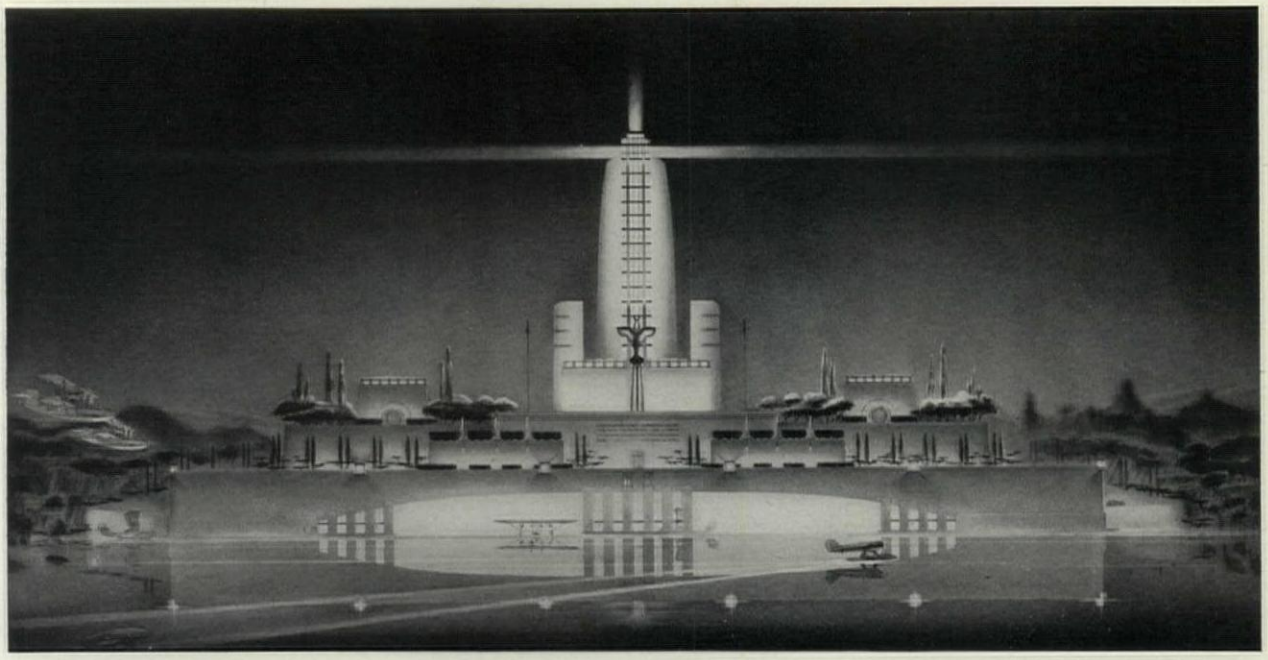


DESIGN BY MORRISON J. BROUNN

DESIGNS FOR "A SMALL FACTORY"—COMPETITION FOR THE A. W. BROWN TRAVELING SCHOLARSHIP FOR 1932



BRONZE ENTRANCE DOORS WITH REVOLVING UNIT, II—SEE PAGE 366, MAY ISSUE—DRAWN BY PHILIP G. KNOBLOCH



Elevation and Plan

of

Prize Winning Design

for

"A Monument to Aviation,"

by

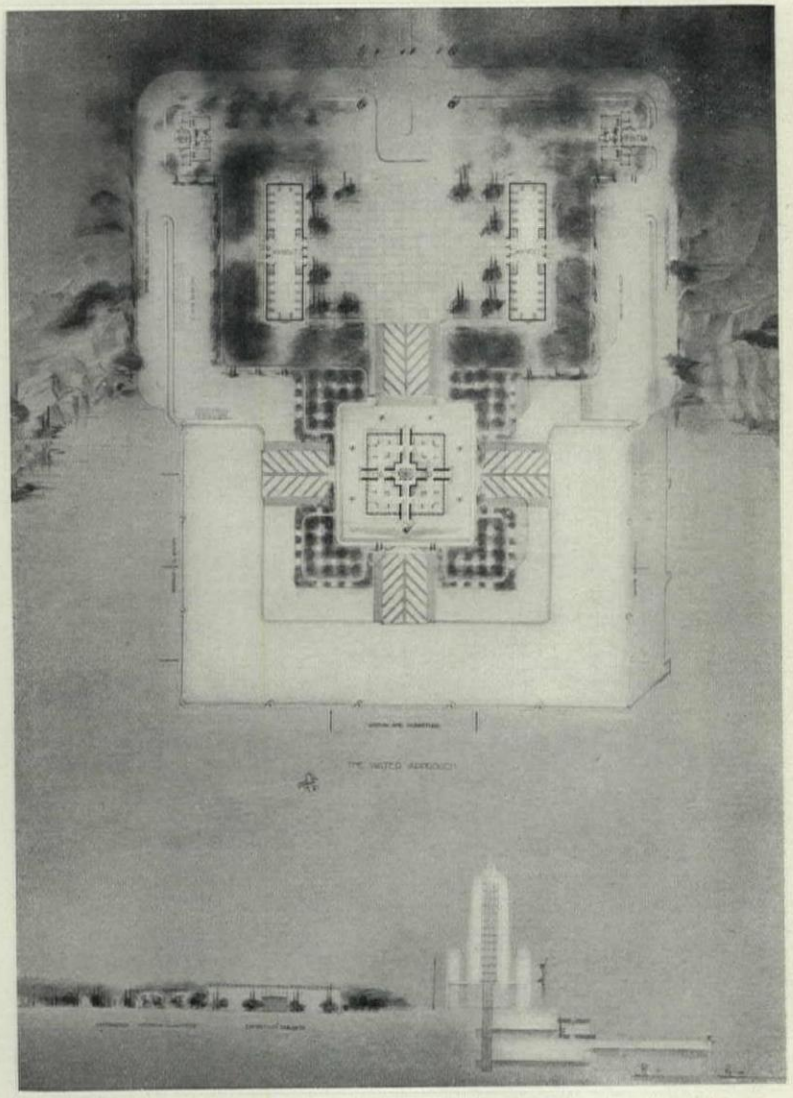
Charles Thomas Masterson

COMPETITION FOR THE

FRANCIS J. PLYM FELLOWSHIP

IN ARCHITECTURE

FOR 1932



Contemporary Design

Discussed in Letters from Readers

From John Thomas Grisdale, of Philadelphia, Pa.:

You say that discussion of Mr. George Howe's article [April issue] is invited. Nevertheless this letter may be taxing your good humor a bit.

Mr. Howe says, "Economics inevitably form the basis of functional design only because our social ideal is economics. In communistic Russia and the capitalistic United States alike the declared aim of civilization is to bring better material living conditions to the masses, and by so doing to liberate their higher faculties. Whether either of the two is going the right way about attaining his ideal, or whether it is better or worse than that of other periods, is beside the point. The architect's only hope as an artist lies in grasping the ideal of his time as he finds it and in purifying it of accidental denaturants."

Now, to say that it is "beside the point" is not so. Architecture is, as are all other things, an expression of the period which creates it. If all periods were of equal value, the architectures expressing them would be of equal value. But to say that all periods have been of equal value is an absurdly unjustifiable standardization. Architecture which expresses the best periods is obviously superior to that which expresses less than the best. The architect's only hope as an artist lies in grasping the fact that the ideals of his time are considerably less than the best, and that as a consequence the architecture of his time is considerably less than the best, *and that it cannot become better*. Today the life of a sailor would be less compromising and more significant than the life of an architect.

Then, too, the ideal of bringing better living conditions to the masses is a myth. Better living conditions, like education, breed unhappiness by arousing in the masses knowledge of, and desire for those things which our economic system makes it impossible for them to possess. The Chinese peasantry is happier, because of their unknowingness, than the peasantry of our cities. It is not possible to long for something the existence of which is unknown. And the masses do not show evidences of "higher faculties." Anything accessible to the masses is going to be handled by so many that it becomes desirable to none.

Without exception the finest architecture of all periods, Indian, Persian, Byzantine, Egyptian, Chinese, American, Hellenic, Christian (or Gothic)—all—has been the religious architecture. Our religious architecture lies in the past, in the Gothic. Is there any argument other than conceit which can deduce excellence in commercial, industrial, utility, and Shylockian architecture? And are there possibilities of our doing any other than this architecture?

Of course, all this is not aimed at the functionalists alone; it is aimed at architecture. Functionalism cannot —nor can anything other than functionalism—turn out good architecture on cheap subjects.

Could a functionalist design a brothel with all conveniences for secret adultery and fornication, design it so that it functioned perfectly according to his creed, and call it good architecture? Could an eclecticist? Could a traditionalist? Could anyone? This example precisely illustrates the predicament of architecture today.

Mr. Howe says—"structure is, and always has been, the real foundation of æsthetic composition." There is no foundation for this belief. Surely the brothel could be perfectly designed as to structure and still have *no* foundation of æsthetic composition.

Architecture is not comprehended by the eye—if it were it would be a triumph of sensuality through appealing to the eye alone. Hence, appearance is not the important element in architecture, so persons who criticise architecture by saying it looks bleak, it looks like a jail, it looks cold, or it looks too flat, are ignorant of the qualities architecture expresses.

You publish reproductions of photographs and plans of the Tugendhat House in Brno, Czechoslovakia, designed by Miës van der Rohe. Its style is unimportant. The study, with its Conservatory, partially obstructing its window, would be very badly lit unless artificial light is considered as desirable today as daylight—then, of course, the windows could be practically eliminated. The opening up of all the living rooms into one room has been only half done—it is neither one room nor three, a private conversation in it would not be possible, to be quiet would be impossible—unless everyone promised not to make a sound. Small columns are no more desirable in a room than large ones unless criticism consists merely in a process of mathematics. The polished marble partitions, the sleek columns, the large flat glass areas, the reflecting floor, the metal furniture, and the flat exterior character are all perfectly consistent. There is nothing out of key. Psychoanalysis shows that polished surfaces, flatness, metallic finishes, reflections, and transparency are indications of emasculated, unsexed, and homosexual trends. Surely emasculation, unsexedness, and homosexuality are indications of age not of youth, creativeness, and a future. Age is followed by death.

From G. Evans Mitchell, of Cleveland, Ohio:

No more do I believe that all present tendencies toward a new architecture are good than do I feel that all effort based on eclecticism is bad, for there is merit and lack thereof in many efforts in both directions. But the vulgarity displayed by certain interests in making possible some of our present new trend monstrosities seems to be their modest contributions to an attendant architectural bewilderment or perchance a spree for intellectualism, as it were.

The abolition of emotionalism in many recent so-called "modern creations" is unfortunate, if not deplorable, for emotion nourishes and stimulates sincerity, the key to simplicity, and that produces genuine interest. Sensationalism may create "eye-appeal," but the eye too shockingly arrested is by the same agent quickly fatigued and passes on to something else.

To evoke one; any artistic creation, be it architecture, sculpture, painting, or what you will, must have as its foundation sincerity. This quality seems to be strangely absent in contemporary work, where it has regrettably given way to a striving for the unusual, the sensational and the clever. Flippancy would appear to be the order of the times, little seems to emerge from the chrysalis, immaturity prevails maintaining its status tenaciously, and that which bursts forth is ephemeral.

As a movement (and modernism is a misnomer) some

FREESE'S CORNER

Editor's Note:—*Ernest Irving Freese here answers inquiries on problems involving geometry or mathematics that have practical value to the draftsman or that, in one way or another, find application in drafting room work. Address your problem to Freese's Corner,* PENCIL POINTS, *419 Fourth Avenue, New York.*

TURNING ANOTHER "TRICK" WITH PERSPECTIVE PROJECTION

Here is a thoroughly modern problem in pictorial delineation that "puts on the shelf" all available systems of perspective drafting except the one fundamental and universally-applicable method of *Perspective Projection*. However, judging from the inquiries I have received from enthusiastic students and draftsmen, there still seems to be some doubt of the undoubtable fact that any perspective problem whatsoever, and howsoever extraordinary, and inclusive of any possible or probable problem involving *plane* perspective, *cylindrical* perspective, or *spherical* perspective, will readily yield to the one invariable and exact system set forth in the book referred to (PENCIL POINTS PRESS). And you don't have to worry about "vanishing points" . . . there ain't none! . . . nor distance points, nor horizons, nor cardboard trammels, nor patented T-squares and charts . . . they're *passé* . . . you don't have to worry about anything: just slide your old reliable T-square up and down and a triangle or two sidewise. Now I can talk normal again:—

The most clearly-stated practical and pertinent problem in plane perspective (picture plane not *curved*), which is the only kind directly dealt with in *Perspective Projection*, comes from A. J. L., of Trenton, New Jersey. I could not possibly state this extraordinary problem any more clearly myself. So here it is, quoted verbatim from A. J. L.'s appreciative letter:

> "It is desired to make a perspective drawing of a portion of the earth's surface, in area 4000 feet by 2000 feet; and to show thereon a proposed network of intersecting highways with bridges, buildings, and other features. To view this area for a normal perspective, the station point must necessarily be a considerable distance away, which in turn dictates a scale so small as to preclude a finished drawing of reasonable size. Your 'Turning the Trick' in December, 1931, PENCIL POINTS will not apply due to the minute scale required for the initial plan. The usual methods of perspective, including your method in *Perspective Projection*, seem inapplicable due to space requirements."

Figure 10, page 448, presents the complete solution, by my method of *Perspective Projection*, of the above-stated problem. The solution is typical of any such problem which, of necessity, requires the point of view high in the air and a mile or so away from the assumed vertical plane of projection. But simple as the actual working out of this problem is . . . as you shall see . . . yet there is still a simpler way that, in some cases, "knocks 'em dead." It's this:

Method No. 1 (By photography and photostats):— Don't project a perspective at all. Draw the regular orthographic plan at any scale that's convenient. Get a commercial photographer to "take a shot at it," placing the camera in the exact elevated position, in respect to the plan, that would correspond to the actual or assumed position of the observer. *That photograph will then be in true perspective.* The camera has done the "projecting," that's all! Take the film to the blueprinter. Have a photostat enlargement made to any desired size. So, there you are: from the network of perspective plan-lines you can fabricate the entire picture. This "short-cut" is entirely practical for pen-and-ink work: the photostat paper takes the ink in fine shape, and the print can subsequently be bleached out to remove all traces of the original 'stat. But . . . for any other medium aside from waterproof India ink, maybe you'd better take a *little* more time and "project" that plan into perspective instead of pulling a "fast one" as I've elucidated. Wherefore:

Method No. 2 (By *Perspective Projection* and some applied "Geometry"). Figure 10 illustrates the entire simple method; the problem involving huge magnitudes submitted by A. J. L., and first stated above, being used as is. The solution answers several inquiries of a similar nature received to date. By the author's method here utilized, a finished perspective *about six feet long* can be made in its entirety on a board *about six feet long*. In other words, the size of the picture is limited only by the size of the board . . . no, I'm wrong: you can make a *six-foot* picture on a *three-foot* board! Sure! The part you're not working on can overhang, or be rolled up; and you can work on any portion 'til you get tired and then switch to another revivifying portion that looks more interesting. Well, here's how:—

Figure 10. First, at *any* convenient scale, say at $1'' = 400'\text{-}0''$, determine, as at Diagrams 1, 2, 3, the *perspective coordinates*, only, of the enclosing rectangle of the plan and of any two crossed interior lines of this plan that will serve to establish some unit of subsequent direct perspective resubdivision. The entire straight projective process is here shown, and will be thoroughly familiar to all of you who have read *Perspective Projection*; though the method of fixing the elevated station point, under the particular conditions here obtaining, will possibly require some slight elucidation. In a sky view, such as this, in order to produce a *natural* perspective image and, at the same time, to maintain the axis of vision horizontal (picture plane vertical), the *height* of the station point is directly and solely dependent upon its rectangular distance from the picture plane: for, since the maximum extent of normal human vision is about sixty degrees in angular magnitude, it follows that the station point, in projected side elevation, should, to result in a maximum-size natural-appearing perspective, lie on a line making an angle of *thirty* degrees with the horizontal, said thirty-degree line emanating from the lowermost point of the "circle of vision." Such a line is the line *T'S''* at Diagram 3. Whence, the required station point, in *elevation*, is then exactly fixed on this line by a perpendicular from its *plan* location directly below it. Wherefore, under the conditions here adhered to, the height of the station point is yielded by the invariable rule that it is equivalent to its horizontal distance from the picture plane multiplied by the tangent of thirty degrees, which latter, though it sounds trigonometrical, is merely the decimal .557. So you can *calculate* this height, or you can do it *graphically* as shown in the Figure. Unless the station point is fixed exactly as I have said and shown, then one of two things is bound to happen: a picture of the maximum possible size will not be produced; or else the lowermost portion of same will be "out of focus" . . . will fall outside the normal "circle of vision" into the *fog* . . . and, therefore, unless the axis of vision be shifted from the horizontal to the oblique, and the picture plane accordingly inclined into perpendicularity with the shifted axis, an *unnatural* picture will be the result. Finally, or more properly in the first place, the *plan*-position of the station point should be so

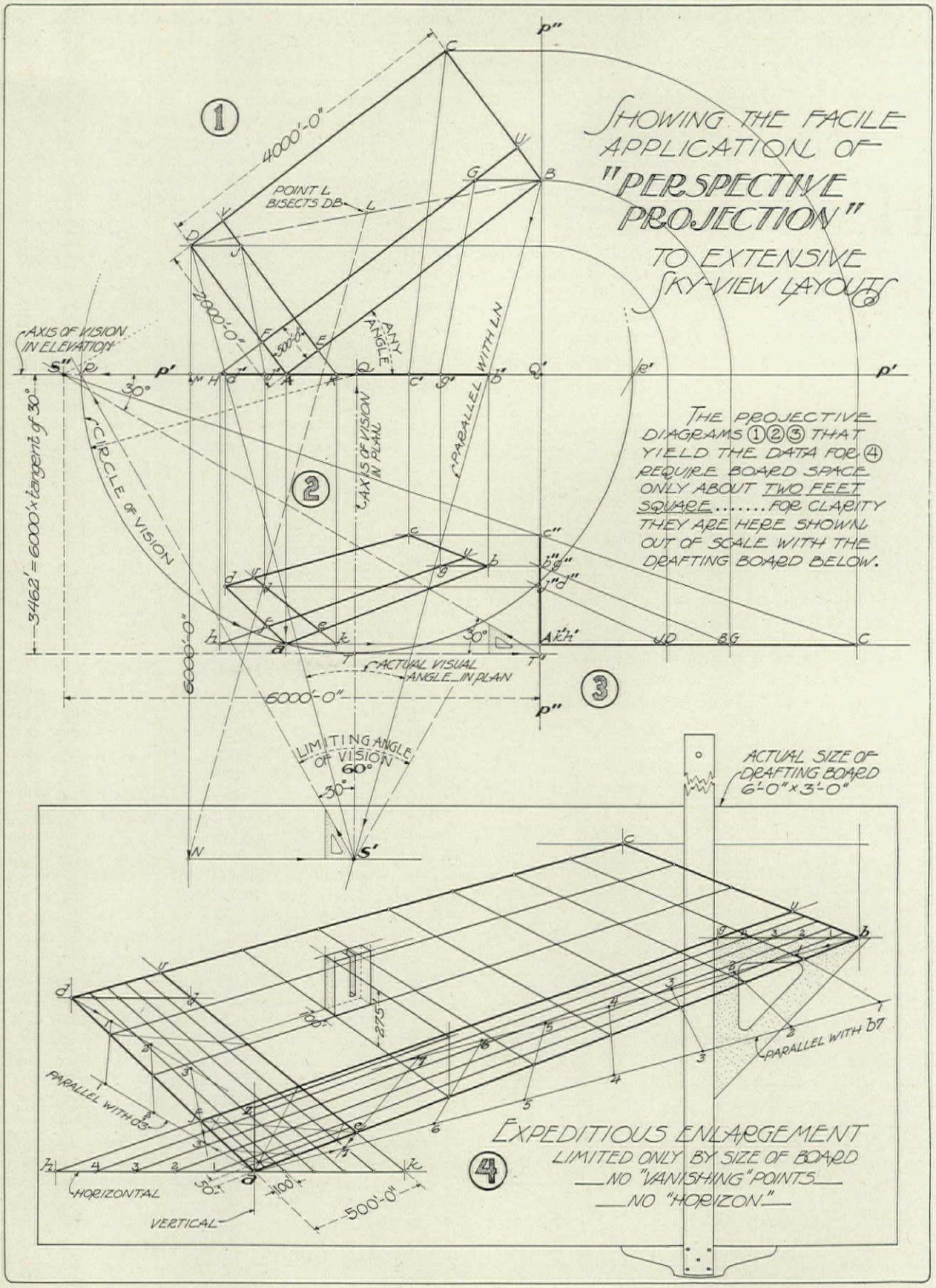

SHOWING THE FACILE APPLICATION OF "PERSPECTIVE PROJECTION" TO EXTENSIVE SKY-VIEW LAYOUTS
1
2
3
4
4000'-0"
POINT L BISECTS DB
2000'-0"
500'-0"
ANY ANGLE
PARALLEL WITH LN
AXIS OF VISION IN ELEVATION
AXIS OF VISION IN PLAN
CIRCLE OF VISION
3462' = 6000' x tangent of 30°
6000'-0"
ACTUAL VISUAL ANGLE IN PLAN
6000'-0"
LIMITING ANGLE OF VISION 60°
30°
THE PROJECTIVE DIAGRAMS 1 2 3 THAT YIELD THE DATA FOR 4 REQUIRE BOARD SPACE ONLY ABOUT TWO FEET SQUARE..... FOR CLARITY THEY ARE HERE SHOWN OUT OF SCALE WITH THE DRAFTING BOARD BELOW.
ACTUAL SIZE OF DRAFTING BOARD 6'-0" x 3'-0"
PARALLEL WITH 67
PARALLEL WITH 05
HORIZONTAL
VERTICAL
50'
100'
500'-0"
EXPEDITIOUS ENLARGEMENT
LIMITED ONLY BY SIZE OF BOARD
NO "VANISHING" POINTS
NO "HORIZON"

FIGURE 10

fixed that the *actual* visual angle subtended therefrom by the lateral limiting points of the plan . . .-the angle *DS'B* at Diagram 1 . . . should be co-axial with that of the limiting 60-degree angle *RS'R'*, in plan. The above important considerations pertaining to "sky view" perspectives have never before been formulated into understandability, and no graphic method of accomplishing the mandatory fiat above set forth has heretofore been shown. Well, let's do it:—

As at Diagram 1, draw *DMN* square with *P'P'*, making *MN* equal the scale distance from picture plane to station point, which distance is here *assumed* as 6000 feet which is about right for this particular case. Through *N*, paralleling *P'P'*, draw the locus of *S'*, which latter point is then precisely located as follows: On the plan at Diagram 1, bisect *DB* at *L*; then a line from *B*, projected parallel with *LN* fixes the station point *S'* exactly. It will now be found that the bisector, or "axis," of the actual visual angle *DS'B*, is square with the picture plane and, hence, coincides with the "theoretical" axis of vision *S'Q*. In other words, point *Q*, on *P'P'*, is the exact center of the horizontal extent of the picture. Which is as it should be. Now, from *S'*, and at 30 degrees to *S'Q*, project the limiting "line of sight" to the picture plane at *R*. Whence, *QR* is the radius of the "*circle of vision*" which, geometrically, is the line of intersection of the horizontal visual cone with the vertical plane of projection, in perspective. This circle is the "spot light" beyond which no portion of the "picture" must go. Hence, since the near corner *A*, of the plan, touches the picture plane, project this initial point *A* directly into perspective at Diagram 2 onto the "circle of vision" at *a*. Now, as a great convenience, and at little risk of clarity, let *P'P'*, which is a plan-view of the picture plane, also represent, in the projected side view at Diagram 3, the horizontal axis of vision, or its "elevation." Next, from the perspective-point *a*, at Diagram 2, project a horizontal to intersect the side view of the picture plane, *P"P"* at Diagram 3, in the point *A*; and continue the thus-established so-called "ground line" back of the picture plane, and mark on this ground line the projected, or revolved, plan points as shown. Then make *Q'S"*, at Diagram 3, equal the station-point distance *QS'* of Diagram 2, which distance is 6000 feet. So now, you have exactly fixed *S"*, the elevation-position of the station point. And, if you are curious, you will now find that a line from *T'*, making an angle of 30 degrees with *TT'*, will also cut the axis of vision at *S"* in elevation, thus proving not only the correctness of the method, but assuring that the station point, *S"*, in elevation, is properly fixed so as to produce the largest size picture conforming to the natural limitations of *horizontal vision* (Picture Plane vertical). With the station point now in position, both in plan at *S'*, and in elevation at *S"*, the rest is easy.

You can see now that it is not at all necessary to materialize the perspective projection at Diagram 2: all that is required are its horizontal and vertical projections . . . its rectangular coordinates . . . along *P'P'* in plan, and along *P"P"* in elevation, respectively, for the present purpose of coordinating and projecting the ultimate proportionately-enlarged perspective at Diagram 4. However, it is the work of only a couple of minutes to outline the projection at Diagram 2, and it makes for clarity in constructing the one at Diagram 4. Hence, both are here shown.

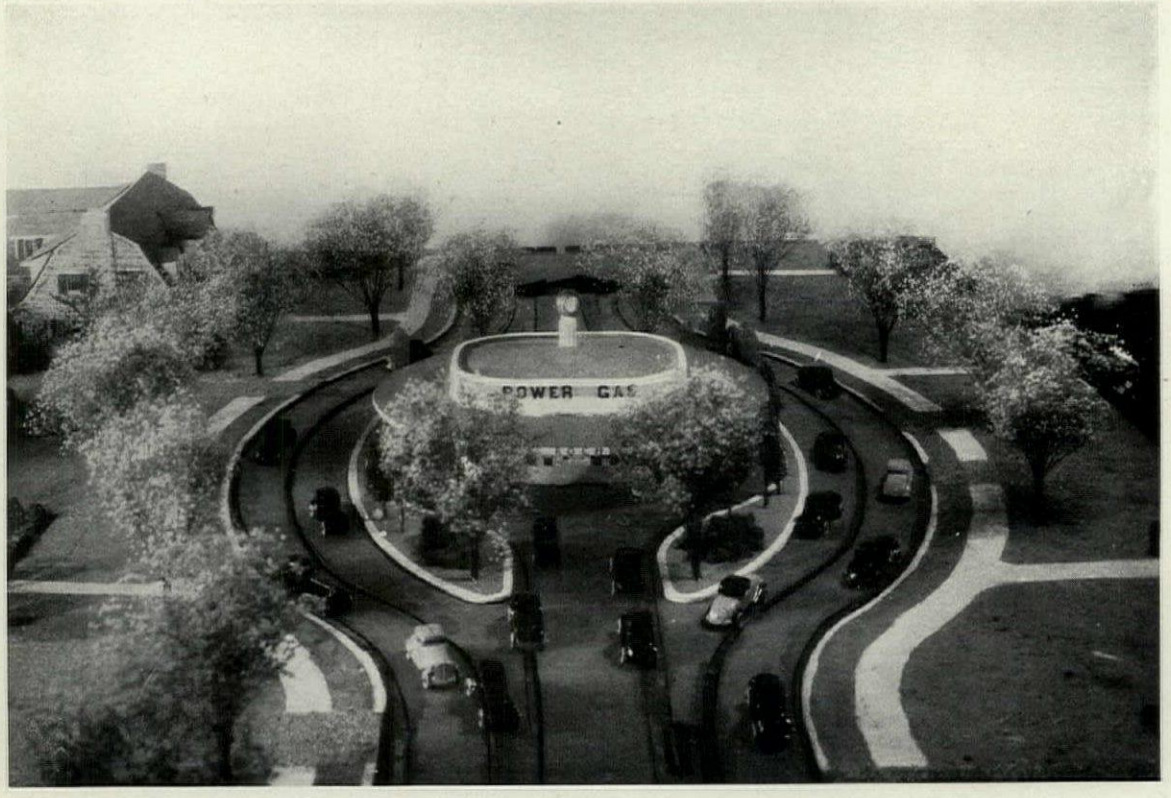
If, as has been suggested, the final perspective at Diagram 4 were made at a scale of 1" = 50'-0", then the coordinates accurately established at Diagrams 1 and 3 would, to produce the perspective at Diagram 4, be multiplied by *eight* . . . either graphically, or by measuring at the smaller scale and laying off at the larger scale. In either case, the heavily-outlined perspective plan-lines at Diagram 4 are quickly and accurately materialized. Now for direct subdivision of the final perspective down to whatever units are required . . . the "projected" lines *fu* and *ev* furnishing the "key" to the whole situation and making possible a direct system of relative measurement that is nothing short of marvelous once it is thoroughly understood.

The distance *ae* is exactly one eighth of *ab*, which makes *ae* one seventh of *eb*, naturally. Hence, it is only necessary to divide both *eb* and *vc* into seven perspectively equal parts, the rate of perspective foreshortening being already established by the projected initial unit distances *ae* and *dv*, respectively. Similarly, since *af* and *bu*, obtained by projection, are each one fourth of *ad* and *bc*, respectively, it is only necessary to divide *fd* and *uc*, individually, into the three perspectively-equal parts established by the projected units *af* and *bu*. For, with all bounding lines of the perspective rectangle, at Diagram 4, thus individually divided, said rectangle can then be directly crossed with the network of perspectively-exact lines dividing same into major blocks each 500 feet square, as shown. The original method here shown of perspectively dividing a given line . . . *any* line, regardless of its place in the picture . . . first appeared in the *Geometry*, Part 11, Figure 99, published in PENCIL POINTS, July, 1930. It is speedy and exact. I shall use only the line *ab* in explanation, but bear in mind that *all* enclosing lines must each be individually and in like manner divided, including *ad* and *bc*, in order that the guiding perspective network be accurately laid down. It's like this: From *a* and *b* draw lines paralleling each other in *any* direction, as shown. From *b*, mark off any seven equal spaces, which is the number required in the undivided distance *eb*. From 7, on *b7*, project a line through *e* to 7 on the line from *a*; then, using *a7* as a spacing distance, mark off in reverse gear the points down to *1* on *a1*. Connect the points bearing similar numbers. The given line is thus divided at the crossings in true perspective intervals, every one of which will be perspectively equal to the given initial interval *ae*. This method is of universal application. It has no "ifs"; no exceptions.

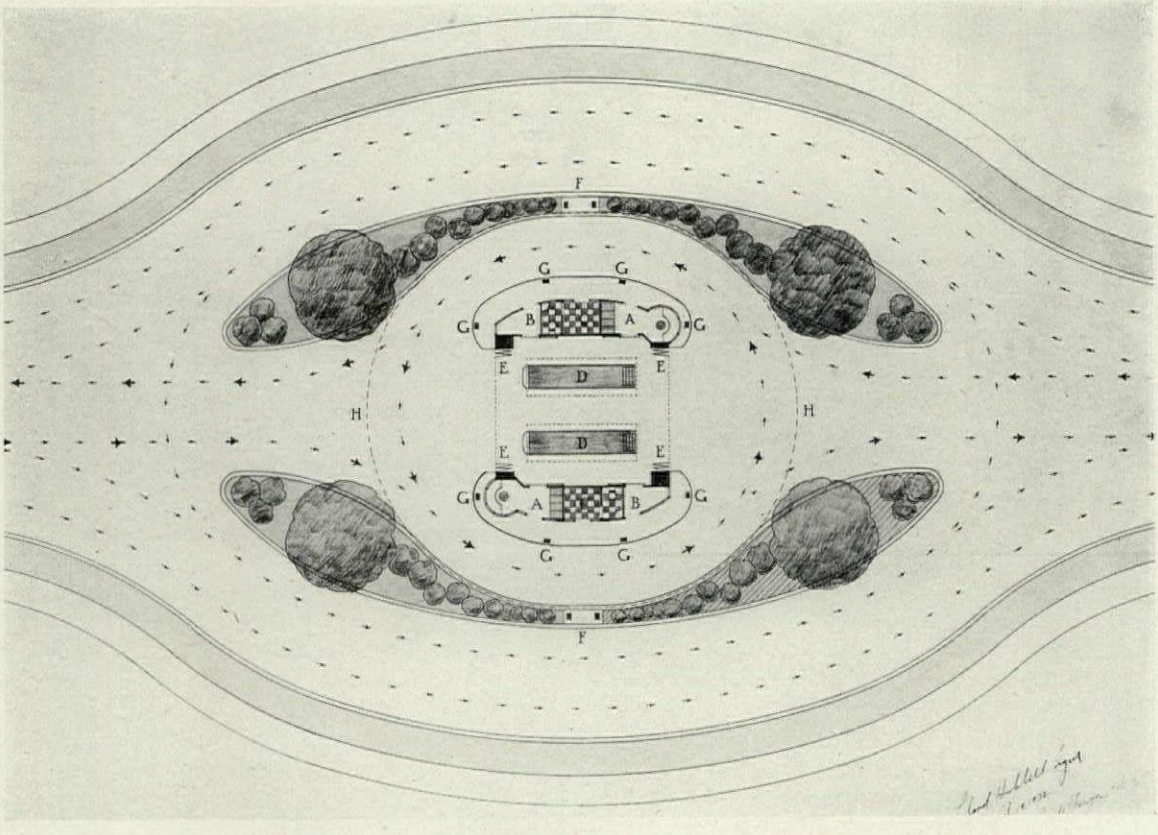
Now, by utilizing the directly-dividable property of the geometrically-*horizontal* line . . . as fully explained under *Expedients* in *Perspective Projection*, and as here indicated in a sufficient manner . . . the major subdivisions are speedily "stepped down" to the minor units required for the complete layout. Finally, a vertical from point *a* . . . which point, remember, *touches the picture plane*, will become a "height line" upon which any required height can be marked off directly with the *scale* and then, by the guidance of the prior-drawn network of perspective coordinates, zig-zagged to its appointed place in the picture, as is here suggested. If the height *az* scales 275'-0", then this will be the height of the indicated building, which edifice, even in this barely outlined perspective, conveys an idea of the enormous magnitudes that yield to the methods of *Projection* and applied *Geometry* here utilized.

Well, Freese's Corner has this month "cornered" a few

(Continued on page 40, Advertising Section)



FROM A MODEL BY HARMON H. RANDOLPH



A—Control office; B—Storage supplies; C—Wash rooms; D—Oil pits; E—Doors operated by compressed air; G—Hydrants; H—Outside of Marquise.

"A CENTER ROAD FILLING STATION," DESIGNED BY LELAND HUBBELL LYON, ARCHITECT, IN COLLABORATION WITH PAUL A. BANKSON, CITY PLAN ENGINEER

Here and There and This and That

Conducted by E.L.C.

This department conducts four competitions each month. A prize of $10.00 is awarded in each class as follows: Class 1, sketches or drawings in any medium; Class 2, poetry; Class 3, cartoons; Class 4, miscellaneous items not coming under the above headings. Everyone is eligible to enter material in any of these four divisions. Good Wrinkle Section: a prize of $10.00 is awarded for any suggestion as to how work in the drafting room may be facilitated. No matter how simple the scheme, if you have found it of help in making your work easier, send it in. Competitions close the fifteenth of each month so that contributions for a forthcoming issue must be received by the twelfth of the month preceding the publication date in order to be eligible for that month's competitions. Material received after the closing date is entered in the following month's competition.
The publishers reserve the right to publish any of the material, other than the prize winners, at any time, unless specifically requested not to do so by the contributor.

THE PRIZES THIS MONTH have been awarded as follows:

Class I—H. F. Bruehler, Cleveland, Ohio.
Class II—Sherman G. Coates, Philadelphia, Pa.
Class III—Frank Train, Long Beach, Calif.
Class IV—Max Sandfield, San Antonio, Texas.
Good Wrinkle—Roger B. Morrow, Columbus, Ohio.

Mr. Hughson Hawley telephoned the other day to say "good-bye"; he's left New York for an extended stay in England with his daughter, Mrs. Jeffrey Farnol. Mr. Hawley's many friends will miss him—and particularly will we miss the pleasant visits to his studio on Union Square where we were always made so graciously welcome.

ON SELLING INSURANCE

By Sherman G. Coates

(PRIZE—*Class Two—May Competition*)

Oh an architect has a happy life
That's free from worry and care and strife!
When times are bad, he takes his ease,
And makes nice sketches of houses and trees.
He doesn't care if they sell, or not—
All money matters are tommy-rot!
He fires his draftsmen, and locks his doors,
And golfs around in his old plus fours.
His rent piles up and his bills increase,
But nothing disturbs his carefree peace.
His family suffers, but what does he care?
His 6B pencil is always there
To keep him happy (and worry his wife!).
Oh an architect lives a joyous life!

OH YEAH?

PLUS ULTRA

(With rhyme and meter but no sense)

By Lindsey M. Gudger, of Durham, N. C.

I'm the one who spills the ink
On tracings nearly done.
I'm the one for whom a pen
Will clog but never run.

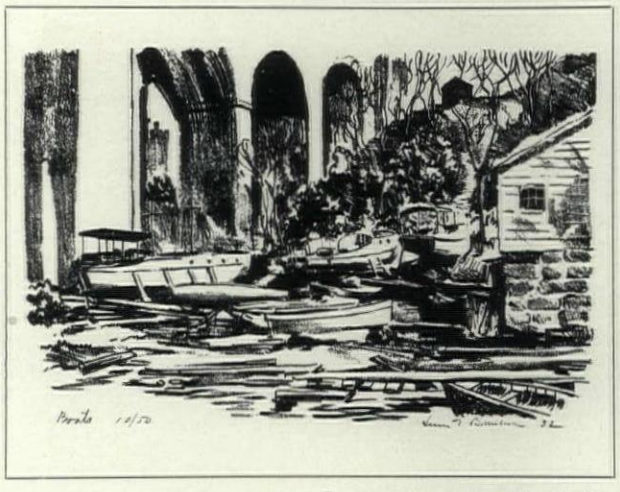
I'm the one who gets the blame
For blue prints trimmed askew.
I'm the one who catches hell
When plans are long past due.

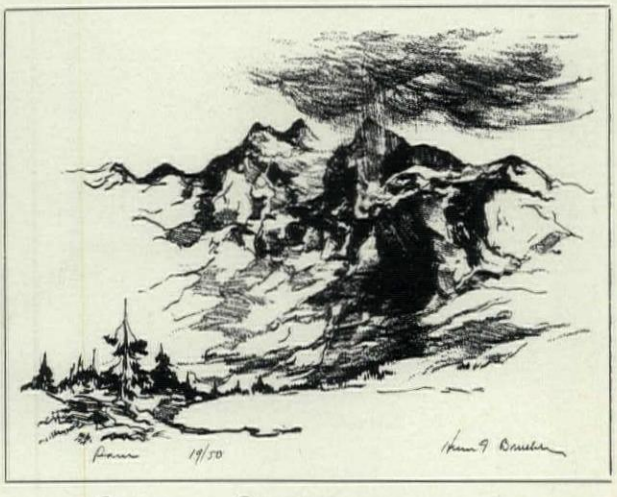
I'm the one who cannot add
The simplest of dimensions.
I'm the one who's ignorant
Of stresses, strains and tensions.

I'm the one who drops the Sweet's,
The scissors and the T-square;
And when the fellows say, "Oh, hell!"
I'm sure they're wishing me there.

I'm the one who files the prints
In places never thought of.
I'm the one who never put
A tracing where I ought of.

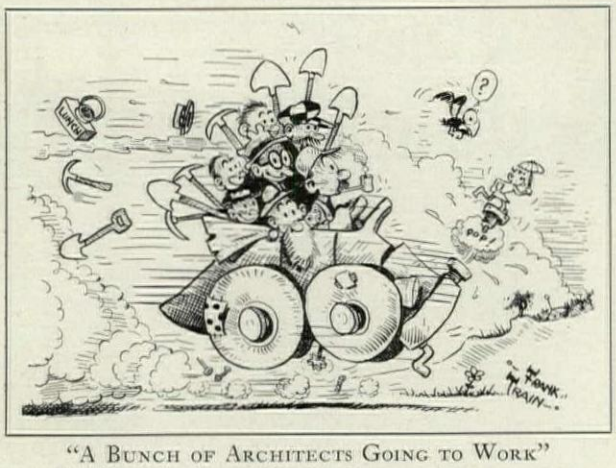
I'm the one of whom it's said,
"That man's a perfect loss,"
By all the fellows—but, you see,
I'm no one but THE BOSS.





LITHOGRAPHS BY H. F. BRUEHLER OF CLEVELAND, OHIO

(PRIZE—*Class One—May Competition*)

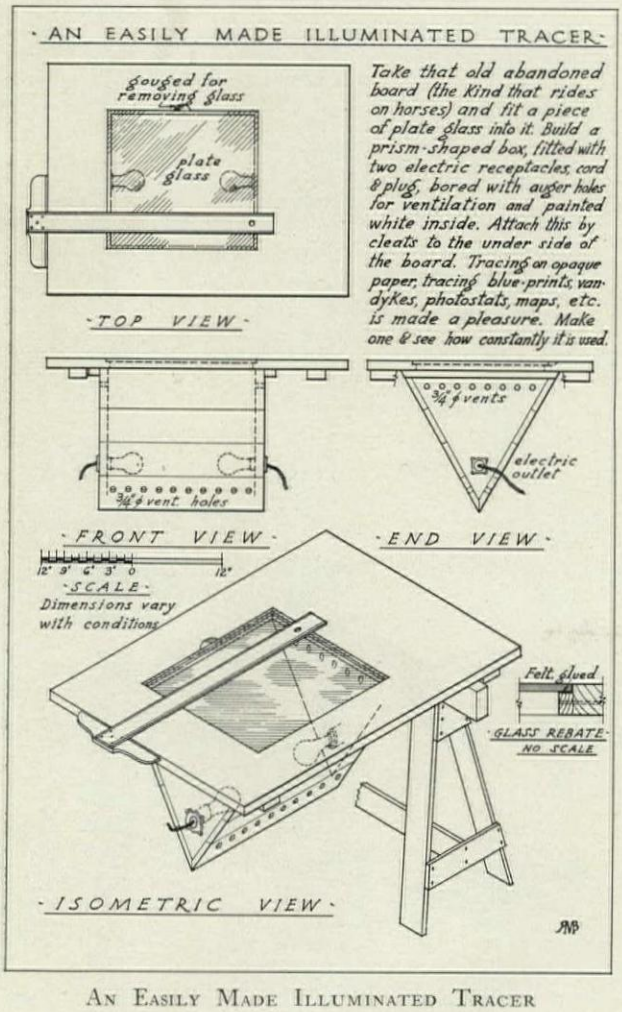


"A Bunch of Architects Going to Work"
By Frank Train, Long Beach, California

(Prize—*Class Three—May Competition*)

Here is a good wrinkle submitted by Roger B. Morrow of Columbus, Ohio, that can be easily made by that draftsman or office boy who is handy with the ordinary tools. "Every office has one or more old drawing boards that have been abandoned and stood in the corner because of excess of thumbtack holes or other ailments of old age. My drawing explains how to turn one of them into a useful, electrically lighted tracing board. This board takes the fight out of the toughest blue-print, brown-print, or other work that so often is impossible to trace, and without the use of benzine, as told in your last number.

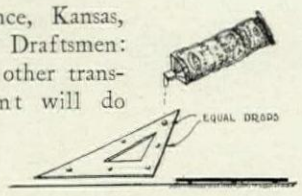
"We made a board like this in Howard Crane's office in Detroit (in the good old days) and everyone was astonished at the heavy use it received. Someone was always working on it. Its only drawback that I know about is the restricted knee room of the draftsman perched on a stool in front of it, but then he can always stand up."



An Easily Made Illuminated Tracer

(Prize—*Good Wrinkle—May Competition*)

Milton Grawe of Lawrence, Kansas, gives A Hint for Careful Draftsmen: A few drops of "Duco" or other transparent, waterproof cement will do wonders to preserve that "youthful complexion" on your drawings, when applied to triangles as indicated. Eliminates smudges, blurs, and ink-runs.



Max Sandfield, Architect, of San Antonio, Texas, gets the prize in Class IV. He writes: "It has come to my attention that the lowly Potato Sack does not receive its just deserts after it has served its primary use. Therefore, I am going to suggest a place for it that will give it the honor it deserves and at the same time provide recreation for the draftsman.

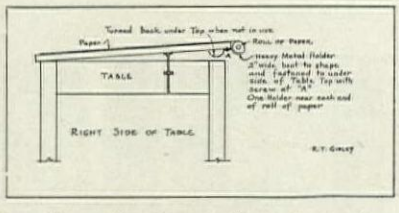
"Take one of your favorite color plates published in Pencil Points and soak it in water (plain) for an hour or more until it is thoroughly pliable. Next, remove from water and cover the back of it with an even coat of diluted vegetable glue. Then place it upon a piece of the Potato Sack cut slightly larger than the plate and press down evenly so that plate and sack become as one. With the back of a spoon or, better still, with the thumbs press hard on the plate until the texture of the Potato Sack shows through all over. After it has been dried under a heavy weight to keep it flat, give the surface a coat of shellac. Then it will be ready for framing. The resultant picture will look like an original painting.

"N. B. To ambitious but unemployed draftsmen:—There may be a market for such pictures!"

THAT ROLL OF TRACING PAPER

By Robert T. Gidley, Architect, Melrose, Mass.

In making long sheets of full size details a roll of tracing paper is often placed at the top of the drafting table, an eraser propped under it to prevent rolling and the paper used as needed until the drawing is completed and ready to cut off. However, the roll of paper on the table is in the way and every now and then it falls off on the floor and unwinds about three yards of paper as it goes or perhaps tears.



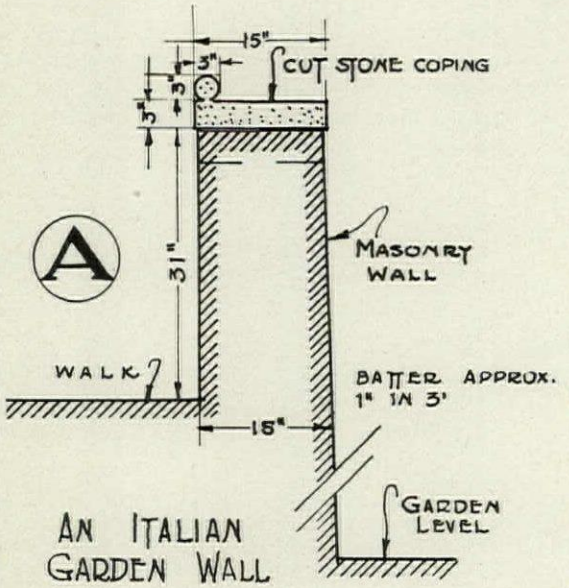
Here is a new way that certainly is a help. The sketch is self-explanatory. The roll of tracing paper rests on the metal holders and is always below the surface of the drawing table so that triangles can be used at the extreme top—impossible with the old method. Pulling forward unrolls the paper as needed—and the supply stays securely in place. The holders are held with a single screw and quickly turn back under the top of the table when not needed. In case the table top does not tilt the holders may simply be turned back parallel with the edge.

From the *Weekly Bulletin of the Michigan Society of Architects* for May 10, 1932: "Mr. Kahn's article, 'The Approach to Design,' in the current PENCIL POINTS is most interesting in bringing out the author's sound philosophy on that subject. Incidentally, for the first time, to our knowledge, Mr. Kahn, in signing the article, reveals that he has a middle initial. It is H. *Bulletin:* A late news dispatch states that Mr. Kahn has no middle name."

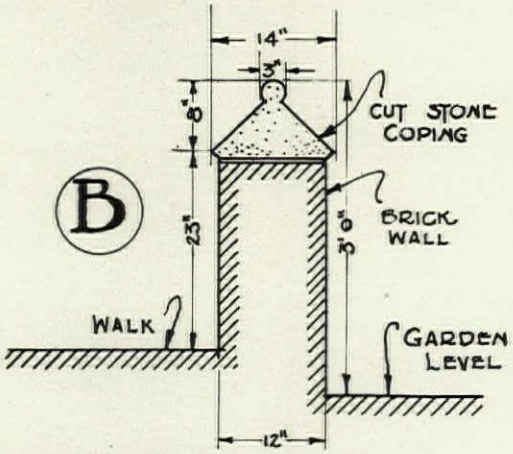
Our apologies to Mr. Kahn. We became confused with Otto.

Every once in a while, just as we are thinking that there is nothing new under the sun, something bobs up to surprise us. The latest is a drafting board that may be rolled up when not in use and stored away in a small space or carried about under the arm. It is an invention of Anthony F. Pessolano, Architect, of Irvington, New Jersey. It is built of 5/16" x 1⅛" white pine strips, held together with tapes and provided with removable edge cleats that give rigidity when the board is in use. It should be convenient for sketching and also for any case where a board has to be carried along.

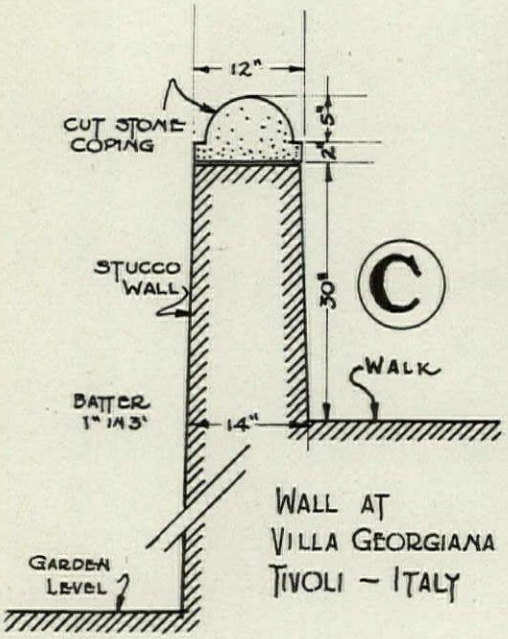
In a Modern Skyscraper Elevator: "Floors Please"—Drawn by L. W. Watrous, New York



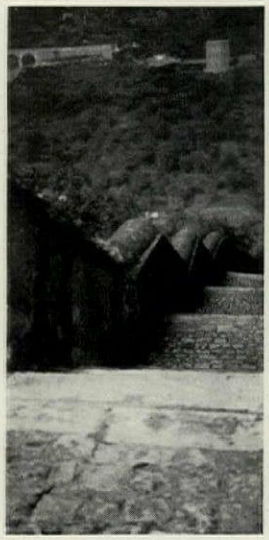
AN ITALIAN GARDEN WALL



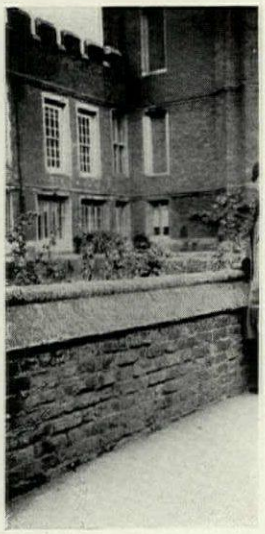
GARDEN WALL AT HAMPTON COURT • ENGLAND •



WALL AT VILLA GEORGIANA TIVOLI – ITALY



DETAIL OF WALL "C"



DETAIL OF WALL "B"

PHOTOGRAPHS TAKEN BY HANNAH I. CHAMPLIN.

SECTIONS OF GARDEN WALLS—MEASURED AND DRAWN BY CAROL H. LAWRENCE

ELDORADO

The Master Drawing Pencil

Berkshire Trees No. 6

MAPLE - Dense foliage, well defined masses, pronounced light and shadow. All rendered with bold, broad strokes. Branch structure almost leaf-hidden. -glimpses of it here and there are very important. Variety of leads were used HB for light tones - B + 2B for medium - and 4B for darks "Carnation" eraser will suit you.

Next month: . . . . . Weeping Willow tree illustrated

Send for samples of ELDORADO *to the* JOSEPH DIXON CRUCIBLE COMPANY, *Dept.* 167-J, Jersey City, N. J.

SERVICE DEPARTMENTS

THE MART. In this department we will print, free of charge, notices from readers (dealers excepted) having for sale, or desiring to purchase books, drawing instruments, and other property pertaining directly to the profession or business in which most of us are engaged. Such notices will be inserted in one issue only, but there is no limit to the number of different notices pertaining to different things which any subscriber may insert.

PERSONAL NOTICES. Announcements concerning the opening of new offices for the practice of architecture, changes in architectural firms, changes of address and items of personal interest will be printed free of charge.

FREE EMPLOYMENT SERVICE. In this department we shall continue to print, free of charge, notices from architects or others requiring designers, draftsmen, specification writers, or superintendents, as well as from those seeking similar positions. Such notices will also be posted on the job bulletin board at our main office, which is accessible to all.

SPECIAL NOTICE TO ARCHITECTS LOCATED OUTSIDE OF THE UNITED STATES: Should you be interested in any building material or equipment manufactured in America, we will gladly procure and send, without charge, any information you may desire concerning it.

Notices submitted for publication in these Service Departments must reach us before the fifth of each month if they are to be inserted in the next issue. Address all communications to 419 Fourth Avenue, New York, N. Y.

THE MART

Charles T. Aubin, P. O. Box 1005, San Antonio, Texas, would like to purchase the following architectural books: Mack & Gibson's *Architectural Details of Southern Spain*; Mack & Gibson's *Architectural Details of Central and Northern Spain*; Byrne's *Majorcan Houses and Gardens*; Byrne's *Provincial Houses in Spain*; Sexton & Betts' *American Theatres of Today*; *The Work of Charles A. Platt*; *The Work of Dwight J. Baum*; *The Work of Mellor, Meigs and Howe*; Boyd A. Gill's *Perspective Delineation*; Donavan's *School Architecture*; Lockhart's *Public Schools*; Prentice's *Spanish Architecture*; Byrne & Stapley's *Decorative Wood Ceilings in Spain*; Rosenberg's *Davanzati Palace*. State prices individually and collectively.

E. F. C., care of PENCIL POINTS MART, has for sale buckram bound volumes of PENCIL POINTS from Vol. 1, 1920, to Vol. 10, 1929, inclusive. Slightly used but in very good condition. Not sold separately—no reasonable offer refused.

Franklin W. Richards, 882—25th Street, Ogden, Utah, would like to secure the August, September, October, November, and December, 1929, issues of PENCIL POINTS.

T. J. Rowland, 542 Fifth Ave., New York, c/o John Russell Pope, is desirous of obtaining *White Pine Series of Architectural Monographs*, Vol. 2, Nos. 1, 3, 4, and 6; Vol. 3, Nos. 1 and 3.

Bernice R. Goedde, 2040 Illinois Ave., East St. Louis, Ill., would like to secure the January, 1924, and February, 1928, issues of PENCIL POINTS; also January, 1924; July and August, 1927; and August and September, 1928, of *Architecture*.

G. B. P., c/o PENCIL POINTS, has for sale all copies of *The Architect* from the beginning to August, 1928. Price, 50c each.

Harry A. LaPointe, 615 Campbell St., Williamsport, Pa., has for sale the following issues of PENCIL POINTS: from July, 1929, to June, 1931, inclusive; perfect condition, price $5.00.

Architectural and engineering students desire to purchase used standard books on engineering and architecture. Please write stating title, author, date of publication and price. William H. Leyh, 1616 Norman St., Brooklyn, New York.

E. Herron, architectural student, 123 E. 34th St., New York, would appreciate donations of old architectural magazines, etc., for a plate file. Will collect in New York or pay postage from elsewhere.

PERSONALS

JAMES A. BRITTON, ARCHITECT, has moved his office from Chestnut Hill to 174 Great Road, Maynard, Mass., and he would like to receive manufacturers' catalogs.

S. WALTER KATZ, ARCHITECT, has moved his office from 49 West 45th Street to 527 Fifth Avenue, New York.

CHRIS J. KING, HARRY E. TURK, and ALBERT CRIZ announce the opening of an office for the practice of Architecture and Interior Decoration at 25 East Jackson Blvd., Chicago, Ill. They would like to receive manufacturers' catalogs and other data of technical interest.

E. A. VON GERICHTEN, student, 21 Jackson Road, Gibson, L. I., N. Y., would like to receive manufacturers' literature for an A.I.A. file.

LOUIS LIEBERMAN, student, 1726—59th Street, Brooklyn, N. Y., would like to receive manufacturers' literature for an A.I.A. file.

ANTONIO DEMMO, student, 1065 Myrtle Avenue, Brooklyn, N. Y., would like manufacturers' literature.

DOAN HOUCK, 1751 Wildwood Road, Toledo, Ohio, would like to receive manufacturers' catalogs.

CHARLES T. AUBIN, ARCHITECT, formerly with Atlee B. and Robert M. Ayres, has opened his own office for the practice of architecture at P. O. Box 1005, San Antonio, Texas, and would like to receive manufacturers' catalogs and samples.

JOHN H. SAVOLAINE, ARCHITECT, 708 Oak Street, New Castle, Pa., would like to receive manufacturers' literature and samples.

GEORGE FREDERICKS, architectural designer, 2133 Warner Avenue, Chicago, Ill., would like to receive manufacturers' catalogs and samples.

F. HESSDORFER, student, 1553 St. Lawrence Avenue, Bronx, New York, would like to receive manufacturers' catalogs.

ADDRESS WANTED: Mr. Vernon H. Houghton, Architect, formerly employed in the State Architect's Office, Albany, New York.

WALTER SCOTT ROBERTS, ARCHITECT, has moved from Jenkintown, Pa., and opened an office for the practice of architecture at 241 Second St., Henderson, Ky. He would like to receive manufacturers' samples and catalogs.

HUSE TEMPLETON BLANCHARD, ARCHITECT, has moved from New York to Barnstable, Mass.

THE WILLIAM MOOSER CO., ARCHITECTS, have changed their suite number from 979 to 233 Monadnock Bldg., San Francisco, Calif.

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EMPLOYMENT SERVICE ITEMS WILL BE FOUND ON PAGE 38, ADVERTISING SECTION