ENCIL OINTS

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PENCIL POINTS
Volume XIV October, 1933 Number 10

The Draftsmen Organize!

By Henry Sasch

Editor's Note:—*This article describes the first effective effort of which we have heard whereby the draftsmen are taking advantage of the opportunity offered under the N.I.R.A. to organize and bargain collectively to improve their position. The Architects' Code, drawn up by the Code Committee of the A.I.A., came up for hearings at Washington on September 7th, and up to the time of going to press it has not yet been finally approved by the N.R.A. In that Code the maximum hours of work were stated as forty and the minimum wage "for an employee who has had at least two years' experience" fifty cents an hour. This provision puts the architectural draftsman of two years' experience on about the same wage basis as a hod carrier employed on any public works project. We believe that before the Code is finally adopted this figure should be revised upwards by about 50%. We also agree with the author of this article that there is no reason why the Architects' Code should confine itself to stating minimum wages for the least experienced group of employees and that it would be to the advantage of all concerned to set minimum wages for the more skilled draftsman in the well recognized classes of juniors and seniors. We will welcome discussion of this subject pro and con by both architects and draftsmen and will devote whatever space is necessary for this purpose in subsequent issues. It should be understood that the proposed Federation is not to be affiliated with the A. F. of L.*

The National Recovery Act, which charges all industries to unite in codes of fair practice, also makes it mandatory for those industries to allow full and unimpeded sway to all employees to organize for the purpose of collective bargaining. This has brought out very forcefully the fact that there is practically no organization among the great mass of employees in the architectural profession, or within the ranks of any of the other technical professions, which could confer with any group of employers on questions of compensation or other working conditions.

Unfortunately, the N.R.A. requires only minimum wages and maximum hours of work to be stated in these various codes. Now, while it is true enough that a great deal of good will be done by raising the income of the least paid group of workers in the various industries, several very important factors having enormous bearing on fair competition immediately become obvious to any intelligent person:

1. That the group encompassed by the provisions of minimum wages is relatively a small proportion of the total number of wage earners of the nation, which number is variously estimated as between 40,000,000 and 48,000,000.
2. That in practically all industries and occupations the major element upon which competition is based, insofar as labor is concerned, is that group which is known as skilled and highly skilled labor in the industries, and the properly trained and long experienced men in the professions.
3. The obvious conclusion is, that as long as employers are only bound to observe the minimum wage scale of the least important element in their business, it will be impossible to create fair competition, if they are allowed to exploit the KEY element of employees at will, by taking advantage of the reduced and desperate circumstances of these skilled men and women, both in the labor as well as in the professional fields. Most of the professional people who have been cruelly buffeted about by this terrible depression, for from two to three years, would be forced by desperation and destitution to accept anything handed out to them, no matter how unfair it might be.

This lack of provision in the N.R.A. to demand that the compensation scale of ALL classes and levels of employees be definitely specified, to our way of thinking, nullifies and defeats the highly desirable and laudable purpose of this great advance step in human welfare, intelligent co-ordination and justice and fair dealing.

The technical men have been flatly left out of consideration in all codes. In some codes they have been classed as executives earning more than $35 per week, and thereby shunted out of any further consideration. Along with this, alarming reports have come out that some firms openly intend to take full advantage of this lack of provision in the codes.

Our organization was formed in the city of New York, composed entirely from the architectural, engineering, chemistry, and allied fields, for the purpose of protesting to the N.R.A. against this lack of consideration in the various codes, and to propose amendments to the various codes which will make it possible for technical employees to obtain a semblance of justice. With the first announcement of the formation of this organization and its scope, letters began pouring in from all parts of the country, indicating conclusively that this alarm and chagrin is deeply felt among all technical men throughout the country. Already, only a few short weeks after its inception, the organization numbers well over 3,000 members, and nearly 100 provisional secretaries have been appointed in various cities as far west as California, for the purpose of organizing regional groups.

On the basis of such widespread desire for recognition, this organization took immediate initiative, and has sent, to date, three separate delegations to Washington. These delegations have appeared on August 28th, September 6th, and September 14th at the public hearings before the Deputy Administrator of the N.R.A., and have made formal protest, and submitted briefs of amendments to the Master Code for the Building Industry; the fourteen supplemental codes thereto, which include the Architects' Code; the Chemical Industry Code; the Pulp Paper Code; and several others, all of which involve technical men in greater or lesser number.

At the hearing on the Architects' Code which was presented by the A.I.A., the following address was delivered by the writer, as a member of the delegation representing this organization, and more especially as representing the architectural men.

Address by Henry Sasch Representing The Federation of Architects, Engineers, Chemists, and Technicians at the Hearing of the Architects' Code, September 7, 1933.

Mr. Administrator and Ladies and Gentlemen:

The Federation of Architects, Engineers, Chemists and Technicians is an economic organization of technical men, who are employed in all of the phases of the building industry as well as all the other industries of the nation.

The Federation is necessarily a new organization, brought into existence as a direct result of the National Industrial Recovery Act. Although there are numerous organizations of professional men throughout the country, these organizations are generally scientific in scope and seldom, if ever, concerned with economic questions.

However, due to the fact that all consideration of the technical men has been omitted in all the Codes so far presented or adopted, a spontaneous desire has sprung up among the technicians in all the professions throughout the country, to organize for the purpose of bringing to the attention of the administration, and to that of all the professions and industries, the importance of this great body of highly skilled men and women, and to request urgently that their problems and needs be very definitely and adequately covered in all Codes already presented and to be presented, and amendments made to those Codes which have already been signed by President Roosevelt.

At the present time we directly represent over three thousand (3000) technical employees organized in professional units. The amendments which we propose and which we request to have incorporated in the various Codes, have been compiled and debated by delegates from these various organizations and meet with their unanimous approval. In addition to this, voluntary applications for membership in this federation are reaching us from all parts of the country every day. To date we have established seventy (70) provisional secretaries throughout the country. Consequently, this organization feels that it is justified to claim national representation of technical men.

Gathered from reliable statistical sources, we find that there are, in round numbers, approximately one million men and women employed in technical capacities in the various professions and industries in this country. No one questions the great importance of the services of this vast army of highly trained and skilled technicians, yet comparatively few people realize that, if such a calamity were possible whereby all technicians were suddenly removed from the face of the earth, *all industry would stop almost instantly*. We hear many claims from various occupations and industries to being the backbone of the country, but we defy any and all to prove that they are more important vertebræ than we are in our multiple spined national backbone.

We find ourselves as technicians, economically speaking, hemmed in between organized labor and employer, without the articulateness of organized labor to demand recognition and economic needs satisfied, due to lack of organization along economic lines. We further find alarming instances wherein technicians are harshly imposed upon and brutally exploited, especially in some of the engineering professions, and particularly in the case of engineers in the employ of large public utility concerns.

It requires a long, gruelling stretch of training and work before the technical man acquires the necessary proficiency and ability he is called upon to give in the performance of his duties. Yet his compensation in the majority of cases has been and is ridiculously low as compared with his investment of time and energy in acquiring the necessary proficiency.

Speaking now specifically in connection with the A.I.A. Code and in the interests of the employee: We wish to go on record as acknowledging the fine amicable and pleasant professional relations that have prevailed in the past between the majority of the members of the American Institute of Architects and the rank and file of employees. We do not fear exploitation at the hands of the prominent architects, such as represented by the foremost architectural firms in the Metropolitan Zone of New York. These men have treated us fairly, and we have no reason to believe that they will not do so in the future. However, there are certain definite facts which must be taken into consideration.

1. The majority of the practicing architects, or that is to say those who employ technicians, *do not belong to the A.I.A.*
2. The greater majority of these non A.I.A. architects do not and will not abide by the high standards of ethics advocated by and practiced by the members of the A.I.A.
3. These non A.I.A. members of the Architectural profession employ between sixty and seventy per cent of the architectural men and engineers in the building industry.

We have specific information in our hands to the effect that there is a concerted movement afoot among the non A.I.A. architects to take full advantage of the shortage of work and thereby brutally to exploit the employees, offering such degradingly low compensation as would be sniffed at by domestic servants.

We recognize the fact that the A.I.A. in drawing up the Code of fair practice has taken the text of the National Industrial Recovery Act literally as regards minimum wages and maximum hours. We find no reference in the National Industrial Recovery Act, however, preventing consideration of the higher level of compensation.

We, therefore, protest the submitted A.I.A. Code and request the A.I.A. Code Committee to revise their Code of fair practice in such a way as to prevent such degrading

(Continued on page 468)

A Timely Problem

The Sports Building as a Public Works Possibility

By Eugene Clute

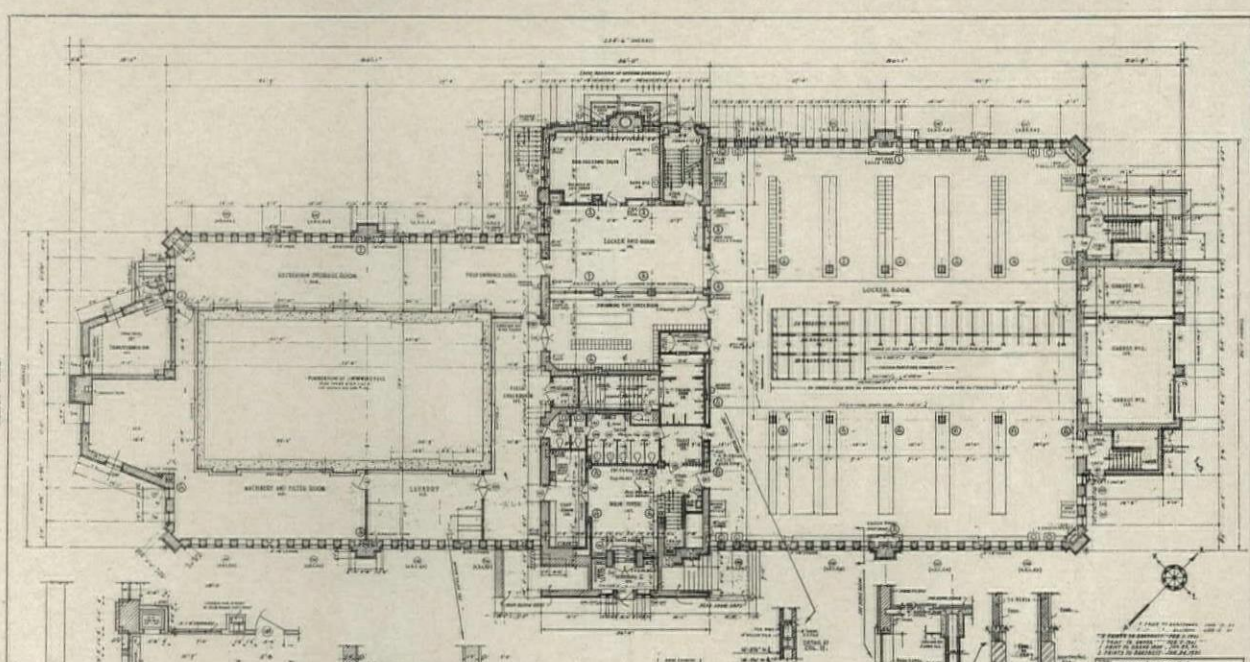
The public works program, together with the existing need for community buildings in all parts of the country, should bring about an unprecedented amount of such construction in the very near future, and the coming decentralization of industry, with the consequent building of new towns and the revitalization of many older communities, may be expected to add to this activity.

Among the various sorts of buildings that are most "needful and in the public interest" are those which will provide facilities for healthful recreation and social gatherings. Comparatively few towns now have these centers of community life, which can do so much toward promoting good citizenship, industrial efficiency, and the happiness of the people. With the shorter working week and the improved economic condition of the people generally, which the present regulation of industry and other measures are designed to bring about, the recreation center, or sports building, will be a community necessity. It will pay for itself in the same way that the public schools do—indirectly but many times over.

In seeking the best models for such buildings, we must turn to the club houses built for those whose means and leisure have permitted them to enjoy these privileges and to the buildings of societies and educational institutions. It is here that we find the most advanced planning, construction, and equipment.

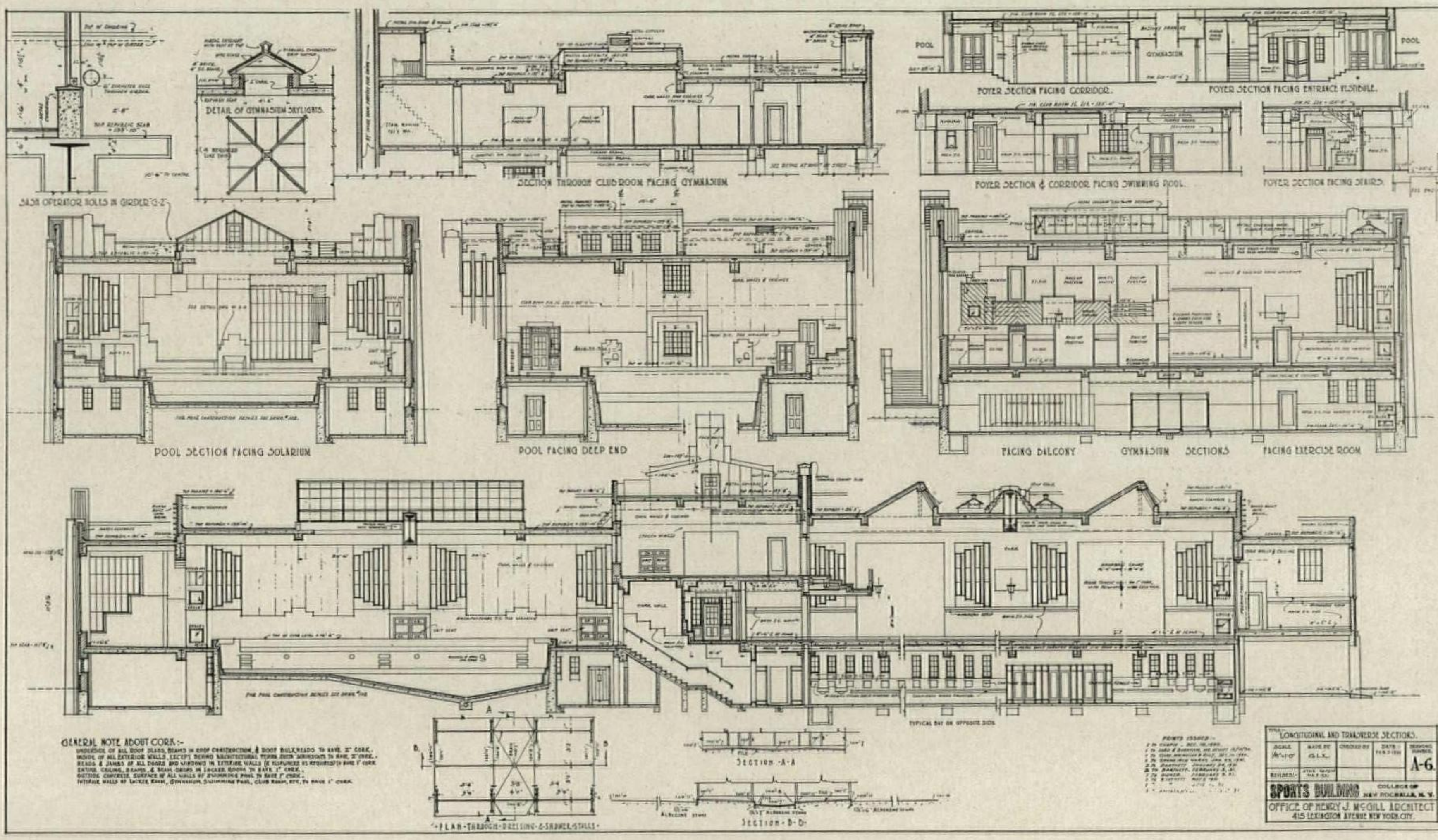
There has been completed, recently, a building that affords a wealth of suggestions adaptable to the solution of this problem, the Sports Building of the College of New Rochelle, at New Rochelle, N. Y., of which the Office of Henry J. McGill was the architect. It has been designed for economy of construction, of operation, and of maintenance—as well as to meet the practical requirements, which closely approximate those for a community building—and it has a fresh and very pleasing architectural character.

As will be seen by reference to the working drawings reproduced herewith, it consists mainly of a swimming pool and a gymnasium which is equipped for basketball and handball, as well as for exercises, and that can be used as an auditorium, since it has a stage and a balcony; also for dances or other social gatherings. There are also the necessary offices, locker room, etc., and there is a room readily accessible from the outside for checking the equipment used in field



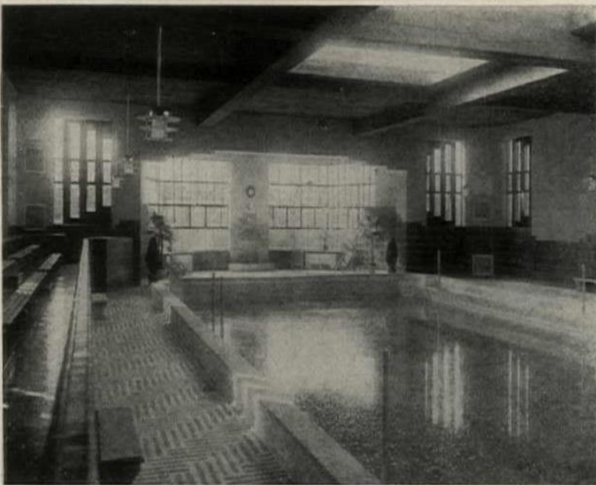
PLAN OF SPORTS BUILDING, COLLEGE OF NEW ROCHELLE, N. Y.

OFFICE OF HENRY J. MC GILL, ARCHITECT



SECTIONS, SPORTS BUILDING, COLLEGE OF NEW ROCHELLE, N. Y.

OFFICE OF HENRY J. MC GILL, ARCHITECT



INTERIOR OF SWIMMING POOL

SPORTS BUILDING, COLLEGE OF NEW ROCHELLE

Office of Henry J. McGill, Architect

sports. All of this is arranged very conveniently and compactly.

The longitudinal section shows how the showers, dressing booths, lockers, etc., serving both the swimming pool and the gymnasium, have been accommodated under the latter room in a high basement story that is almost entirely above grade. A broad stairway leads up to the natatorium. The pool itself, the necessary machinery and the laundry have been placed at the same basement level as the locker room. This brings the floor of the gymnasium and the natatorium on a level, one story above the ground, with the entrance hall and the director's office between them. The latter commands a view of both the swimming pool and the gymnasium, through glass partitions. Beneath the hall are a lower level entrance, the general shower room, toilet room and other utilities, together with a hairdressing salon which was intended to be rented out to a local hair-dressing expert (since this building is at a college for girls), though facilities for hair drying are provided in the locker room.

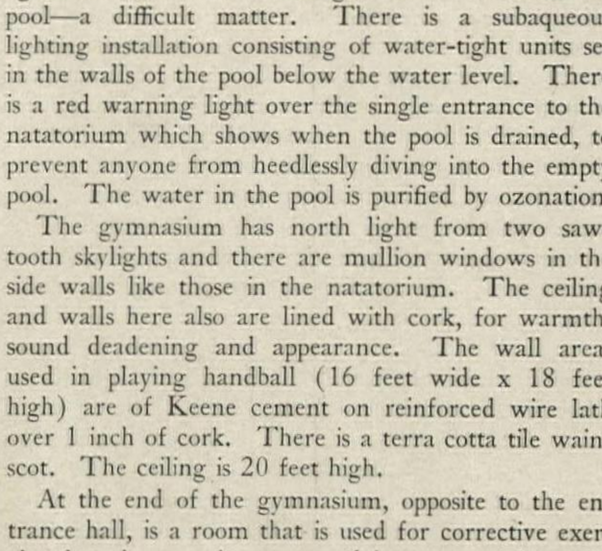
At the end of the natatorium, opposite to the entrance, is a solarium in the form of a large bay window facing the south. It has a fireplace. In the center of the ceiling over the pool is a large rectangular opening into a glass enclosure above the roof. For economy, a greenhouse of stock design was used for this feature. The flood of light from this source makes the natatorium bright and cheerful, and it overcomes any glare from the solarium which might otherwise produce unequal lighting effects upon the surface of the water, which would be dangerously deceptive to divers. In order to admit additional light and at the same time to avoid the production of dark-and-light areas upon the water, windows have been placed in the side walls in the form of narrow vertical slits, which prevent the direct sunlight from entering. These slits have been arranged in a decorative design that serves to ornament both the interior and the exterior, while the brick mullions between them tie the windows into the exterior wall.

The ceiling and interior walls of the natatorium are covered with cork above an architectural terra cotta tile wainscot. This cork is in sheets 2 inches thick, with beveled edges that produce a decorative effect, while they obviate the necessity for a perfectly true wall that would exist if a plain surface were attempted. Cork has been used here to prevent any annoying drip of condensation from the ceiling and condensation on the walls, also because it deadens the sounds which tend to make a swimming pool so noisy and as an aid in maintaining the relatively high temperature needed in a natatorium. Then, too, this material in its natural condition has an agreeably warm and very pleasant appearance.

All lighting fixtures have been kept along the sides; there are none over the pool, so that in case of breakage there will not be broken glass to remove from the pool—a difficult matter. There is a subaqueous lighting installation consisting of water-tight units set in the walls of the pool below the water level. There is a red warning light over the single entrance to the natatorium which shows when the pool is drained, to prevent anyone from heedlessly diving into the empty pool. The water in the pool is purified by ozonation.

The gymnasium has north light from two saw-tooth skylights and there are mullion windows in the side walls like those in the natatorium. The ceiling and walls here also are lined with cork, for warmth, sound deadening and appearance. The wall areas used in playing handball (16 feet wide x 18 feet high) are of Keene cement on reinforced wire lath over 1 inch of cork. There is a terra cotta tile wainscot. The ceiling is 20 feet high.

At the end of the gymnasium, opposite to the entrance hall, is a room that is used for corrective exercises but that can be converted into a stage by pushing back the folding partition when it is desired to use the gymnasium as an auditorium. Across the rear of the gymnasium is a balcony, 8 feet above the floor in the clear. By means of a folding partition, a room



A VIEW OF THE EXTERIOR

SPORTS BUILDING, COLLEGE OF NEW ROCHELLE

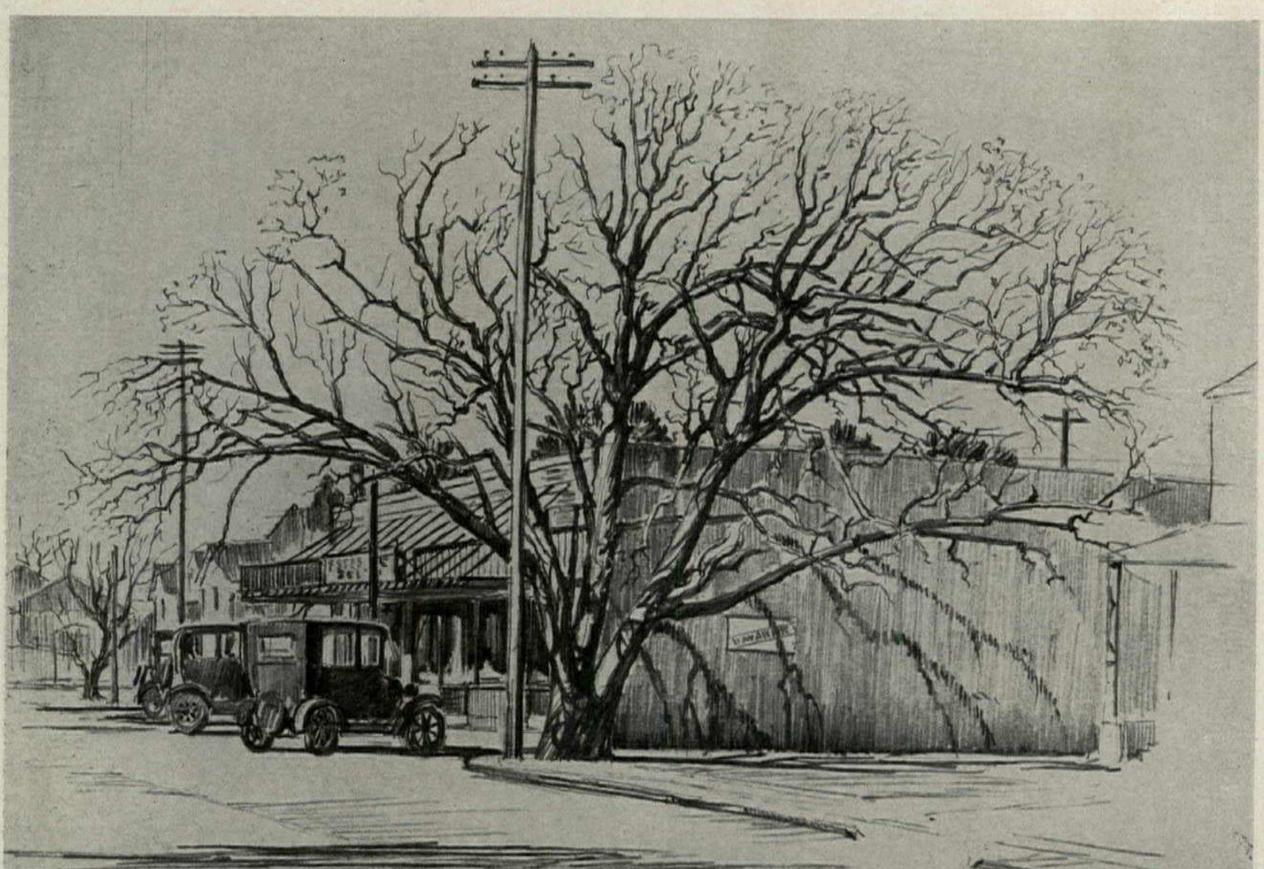
Office of Henry J. McGill, Architect

directly back of the balcony can be added to its capacity. Ordinarily this room, which is over the entrance hall and director's office, is used by the alumnæ for meetings and social gatherings.

Space has been saved and unusual convenience secured by the simplification and thorough study of the arrangement of the showers and dressing space under the gymnasium. There is a row of shower stalls down the center of the room, with a row of dressing rooms or booths adjoining at either side. The lockers extend at right angles to these, between the dressing booths and the side walls. Along each of these walls is a continuous linoleum-surfaced dressing table with mirrors back of it on the wall, one under each of the windows. Hair drying equipment is spaced at intervals, two machines on each side of the room. Everyone entering the pool must pass through a curtain of water spray before reaching the stairway, and there is only this one entrance, to insure discipline and control. A different arrangement of these facilities will be required, of course, in a community building, which will be used by men, women and children.

Several unusual structural features have been made to contribute to the interest of the design besides being of practical value. There is a truss across the center of the natatorium and a similar truss across the gymnasium. Both have been allowed to project above the roof, in suitable housings, intead of below, with a consequent saving of masonry and the production of practically flat ceilings. These trusses, the saw-tooth skylights over the gymnasium and the glass structure over the pool are all concealed by a high parapet. The structural steel columns that carry the load of these trusses are prevented from encroaching upon the interior space and from breaking the interior wall surfaces by being permitted to project beyond the exterior surface of the walls, where they are enclosed in buttresses that express their function. There has been practically no excavation excepting what was necessary to carry the footings below frost, an economy anywhere, but especially at this site which is upon rock.

The general mass of the building is effective because one of its dimensions is dominant, its length, and the proportions are well studied. The entrance is emphasized by the central feature, and the whole treatment is sufficiently monumental to have the requisite dignity. The walls are faced with brick of a warm brownish buff color, grading lighter towards the top of the building, and the cut stone trim tones in with this color. Attractiveness, practical usefulness and economy have been secured to an unusual degree through directness, simplicity and architectural sense.



TREE STUDY—PENCIL SKETCH BY DAVID DAVIS

Architectural Heresies

By Talbot Faulkner Hamlin, A. I. A.

Form and Function

It is current orthodoxy that in architecture form follows function. But equally—no, even more—if the form be great enough, function will follow and mold itself to the form. So it was with the Greek theatre, so it is in the modern theatre, so in the development of religious ritual, so in the Roman thermæ; so it is in any well designed house where life is lived richly.

* * * *

Architecture and Good Building

To claim that an architect's first duty is to build well is like saying that a poet's first duty is to form the alphabet well. The architect's first duty is to create for the enrichment of the æsthetic life of generations. The architect can hire others to build well, as the poet may hire an amanuensis.

* * * *

Richness Today

Richness of effect and architectural beauty are not incompatible, even today in a machine age.

* * * *

Architecture and Economics

Usefulness in a building is good, economy in a building may be necessary; yet how many cheap and useful buildings would not mankind exchange for a Parthenon?

* * * *

Beauty and Use

It has been said that beauty in building is merely a rationalization of usefulness and economy. I say, on the contrary, that claims for usefulness and economy in a building are merely sops to our Puritan industrialism in order that beauty may be created.

* * * *

Architecture and the Styles, I

The use of, or failure to use, forms from past styles has nothing to do with æsthetic content. Novelty and beauty can no more be equated than antiquity and beauty. The first man who learned to whistle through his teeth may have felt he was enriching the art of music.

* * * *

Architecture and the Styles, II

On the other hand, merely to copy can no more produce a living art of architecture than the same method can produce a great literature.

* * * *

Architecture and Adequacy

To have created a competent and useful building is to have enriched a landlord; to have created a beautiful one is to have enriched mankind.

Cheapness in Building

No great architecture has ever been founded on cheapness—not even when cheapness has been exalted by calling it economy.

* * * *

Efficiency in Building

No great architecture has ever been founded on mere usefulness. Men have always built buildings as serviceable as possible, but only occasionally have they achieved a noble building art. The late Victorian brown stone house may be more comfortable to live in, more serviceable, than the Colonial farm house. Is it for that reason greater architecture?

* * * *

Architecture and the Ideal of the Minimum

The ideal of using the minimum of material and labor in a modern building has nothing to do with the art of architecture. As if Debussy or Ravel should be condemned for using all the tonal richness of a full orchestra.

* * * *

Buildings and People

Buildings, like people, live a double life. One life is the economic life—in people, earning a living, buying and selling, and contributing to the economic well-being of the world; in buildings, their costs, earnings, and economic usefulness. The other life, in people, is the life of the imagination and the emotions, of love and friendship, of social contracts, of religious ideals, of dreams. In buildings the same life is determined by their æsthetic effect upon those who live in them or observe them. And just as we say that only those people who have a highly developed life of the latter type "have personality," so we may equally claim that only those buildings which are rich in æsthetic content are "works of architecture." In other words, a building's æsthetic quality constitutes its personality.

* * * *

Nets to Catch the Wind

Much of the dialectic surrounding the criticism of modern architecture is merely a smoke screen to hide the real facts of the case. Thus, to discuss "economy," "honesty," "truth to the present" as though they were infallible rules for the discovery (or the creation) of beauty is like discussing happiness or the lack of it in algebraic terms. There is but one criterion of architectural greatness—do we, and will our children's children, receive the same æsthetic excitement out of the buildings we build that we do from Parthenon, Pantheon, or Chartres? If so, we have built great architecture.

* * * *

Architecture and Machines

Let us make no mistake: machines of themselves will not make architecture. We can use as many elevators, as many miles of pipe or wire as we please and surround them with acres of plate glass and sheet metal and plastics. We may be fashionable as the Rue de la Paix, and efficient as a turbine. Yet, unless the building develops a life in and by itself—a life as a thing of beauty, entirely distinct from, though not contradicting, its economic use—it is an insult to architecture to assert it is a work of that severe art. Every work of architecture must, then, be a "monument," first and foremost, whatever its obvious or economic use.

* * * *

Architecture and Necessity

It is not the necessary which creates art in a building; it is the surplus—the more-than-enough—if only of brains.

* * * *

Architecture and Fame

The Parthenon does not live because it was a good temple, nor the Thermæ of Caracalla because they formed an efficient bathing establishment, nor Chartres because it was an economical church, nor Monticello because it was a pleasant house. Any life they have today is merely because they are not machines but works of art. *Verbum sap.*

* * * *

Architecture and Time

A machine lives in time, but architecture is timeless.

* * * *

Great Architecture and a Sense of Volume

It is often considered a mark of great modern architecture to have expressed, by means of steel, concrete, and glass, a sense of volume rather than of mass. But there are ugly volumes and beautiful volumes, just as there are ugly masses and beautiful masses, ugly Gothic and beautiful Gothic. The mere fact of expressing volume no more creates great architecture than great literature can be produced by the mere use of such words as "contacted," "dyne," and "erg." To create a new language is not to write great poems.

* * * *

Art and Ornament

Remove the ornament—the verse and the rhetoric—from Shakespeare, and what is left? A series of more or less melodramatic stories—the banalities of "Lamb's Tales." And it is the same with most great architecture.

UNITED STATES POST OFFICE AT MILTON, PENNSYLVANIA

HARRY STERNFELD, ARCHITECT—J. ROY CARROLL, JR., ASSOCIATE

From a rendering by John Stewart Detlie

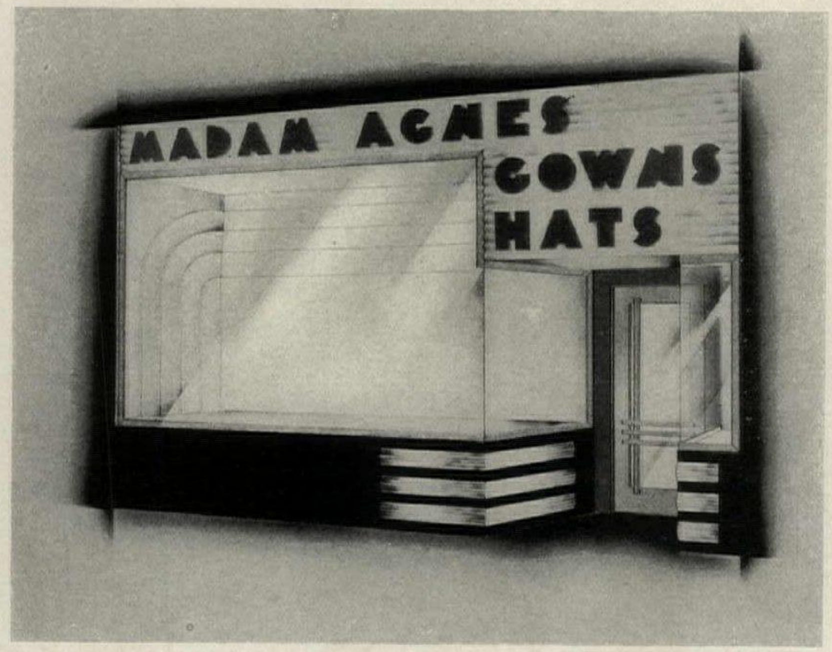
Four Modern Shop Fronts

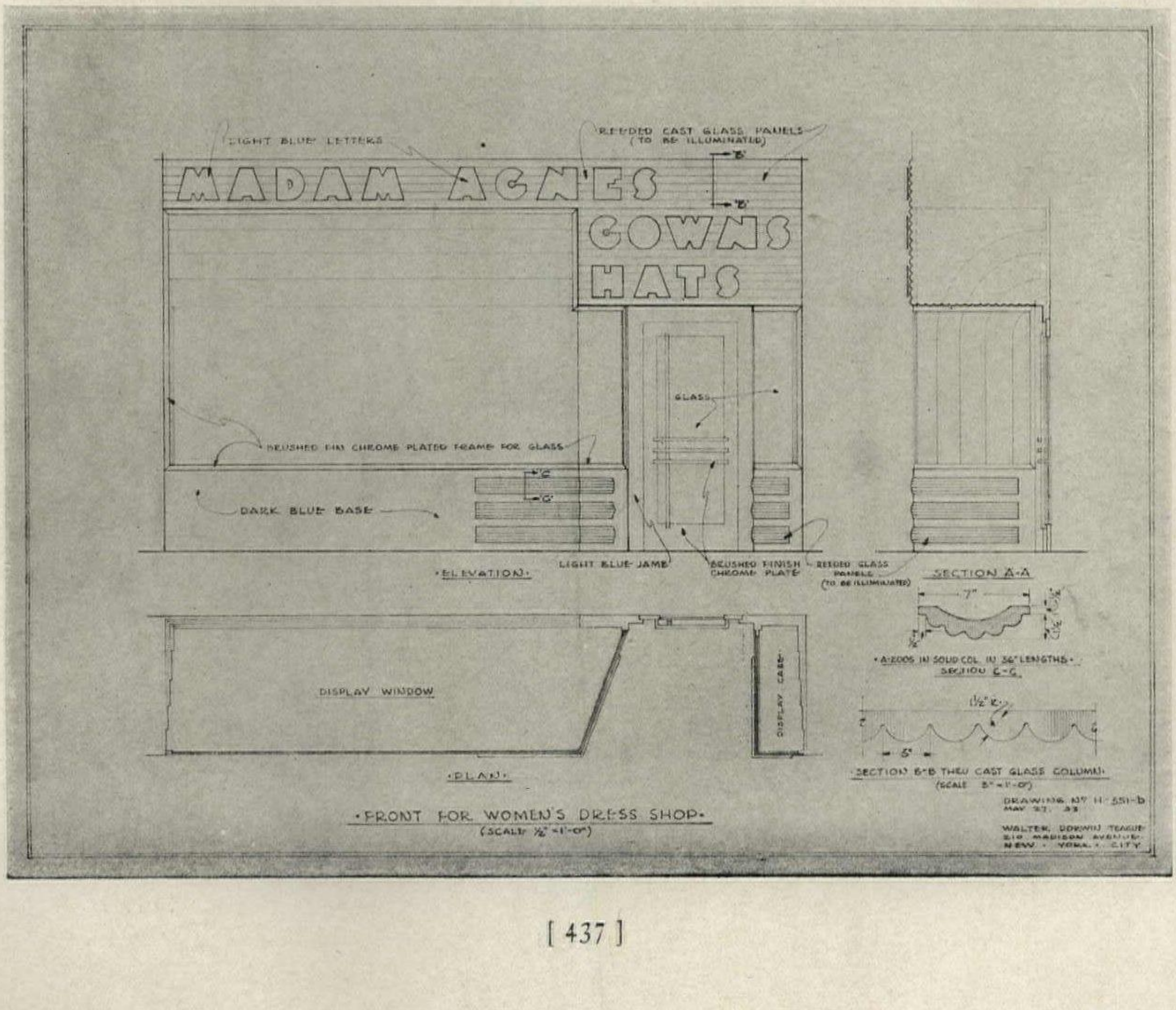
Designed by Walter Dorwin Teague

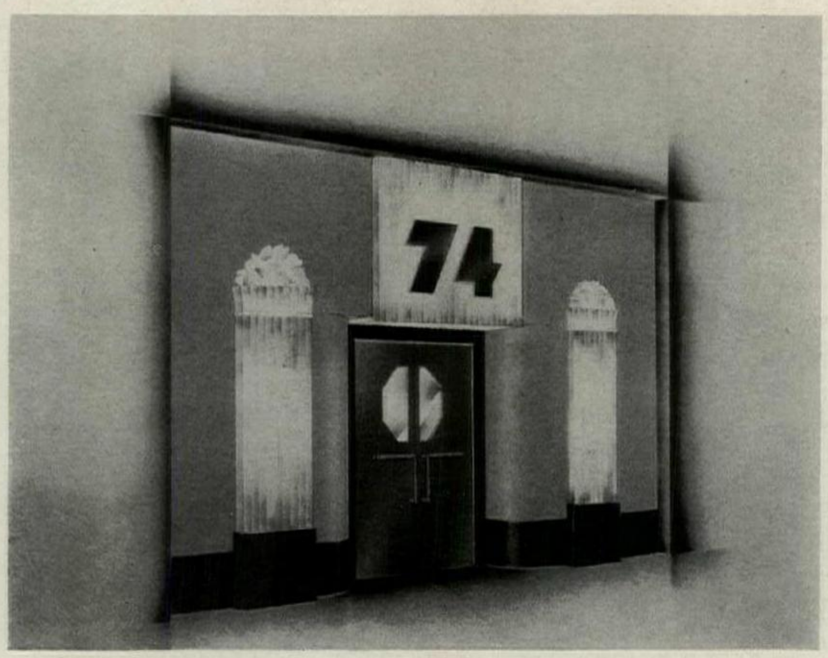
Editor's Note:—*Mr. Teague has, in these shop front designs, demonstrated his interest in modern design as the outgrowth of the use of modern materials. The designs may be suggestive to architects who have similar problems.*

A MODISTE'S SHOP

The modiste's shop shown on this page has a color scheme of blue. The base is dark blue and the inscription is in light blue letters against reeded cast glass panels, which are illuminated from behind. There are also some reeded cast glass panels inserted in the base near the entrance. The doors and the frame for the plate glass window are of brushed finish chrome plate, and the entrance door has a light blue jamb.

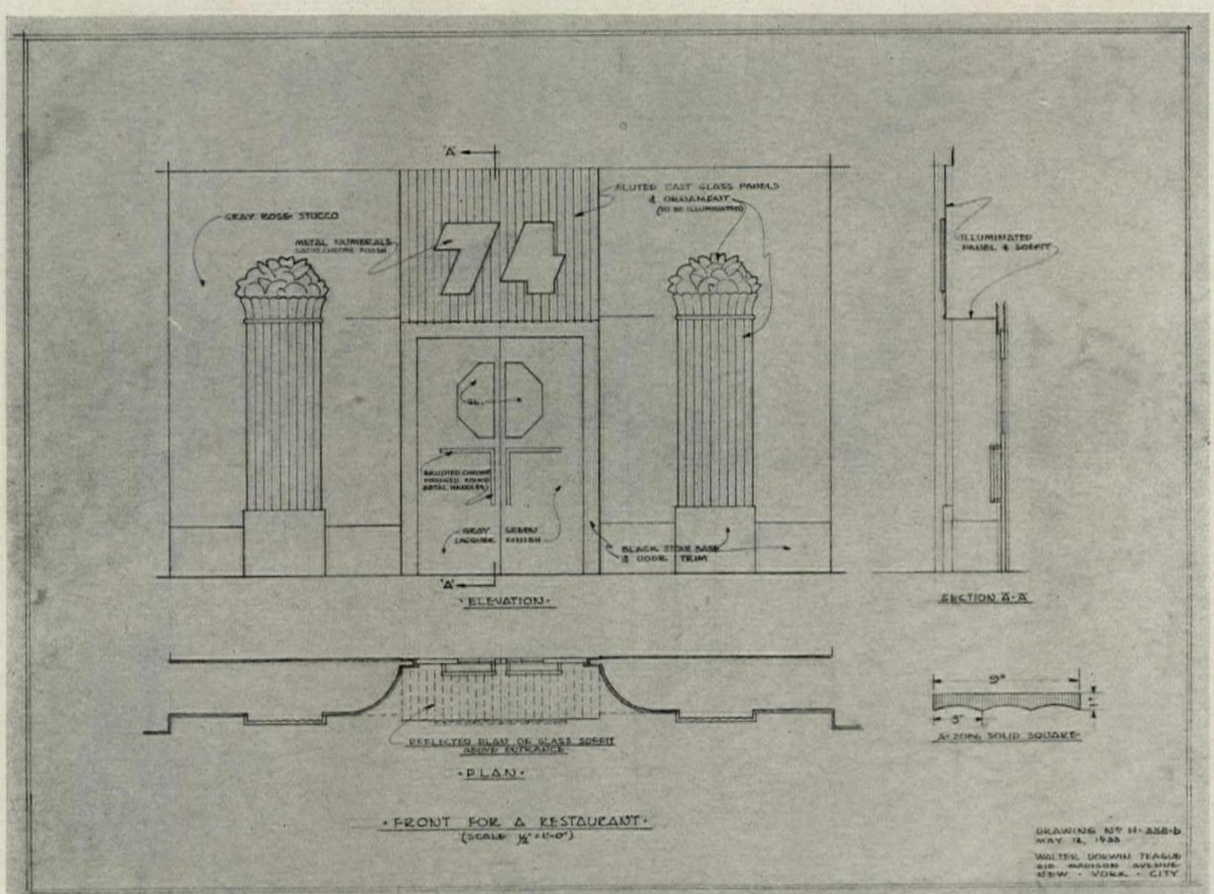






A SMALL RESTAURANT

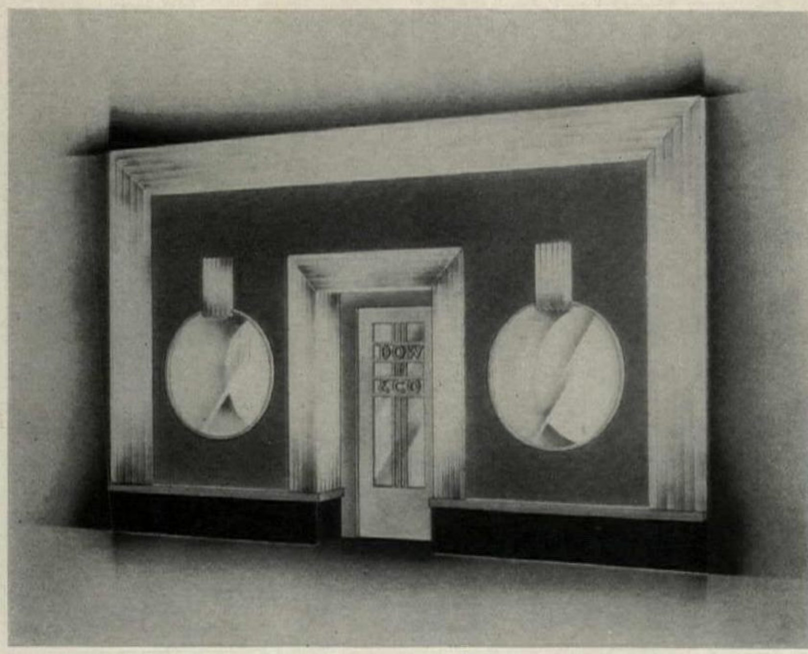
The façade of this attractive shop is of gray and rose stucco, set off with a black stone base and door trim. The pilaster-like ornaments on either side of the door and the panel above are of fluted cast glass. As in the other shops shown, the cast glass is to be illuminated from behind, preferably with neon lights. The door is finished in gray-green lacquer with brushed chrome plated bar handles of simple design.

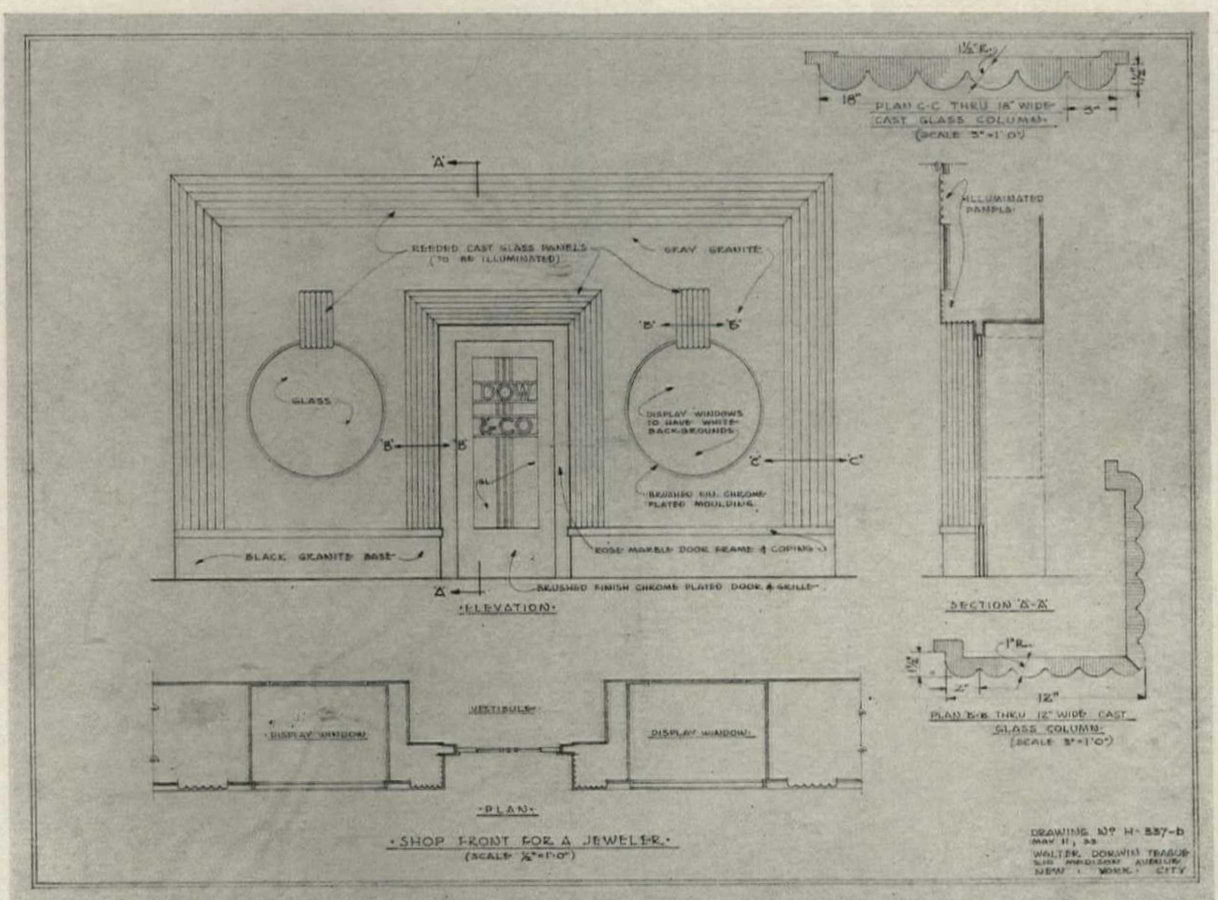


DESIGN BY WALTER DORWIN TEAGUE FOR THE FRONT OF A SMALL RESTAURANT

A JEWELER'S SHOP

This unusual shop front has a façade of gray granite surrounded with a band of reeded cast glass built up of stock units and a black granite base. The door with its grille and the moulding around the display windows are of brushed finish chrome plated metal. The door frame and the coping which tops the base are of rose marble. Illumination from behind the cast glass bands enlivens the design at night in a dignified way.

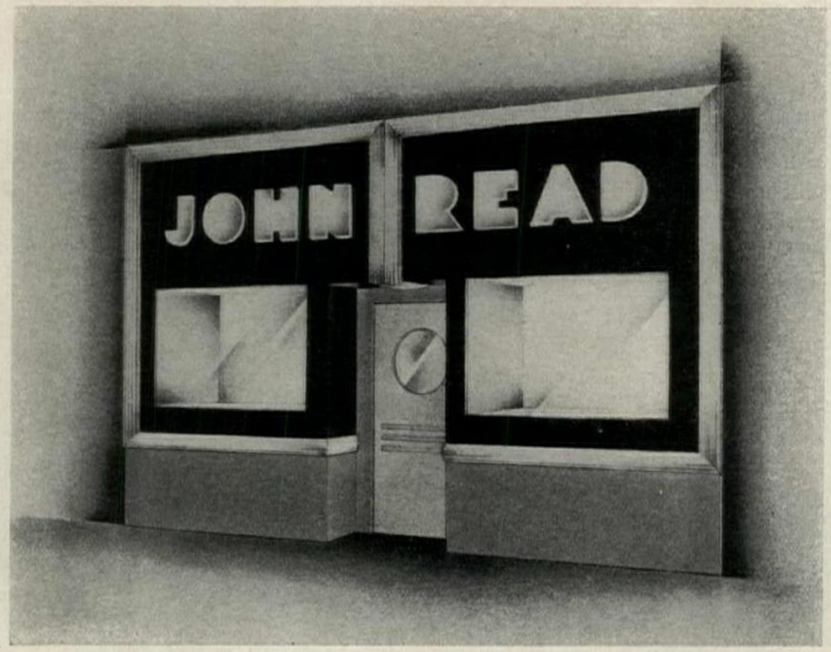


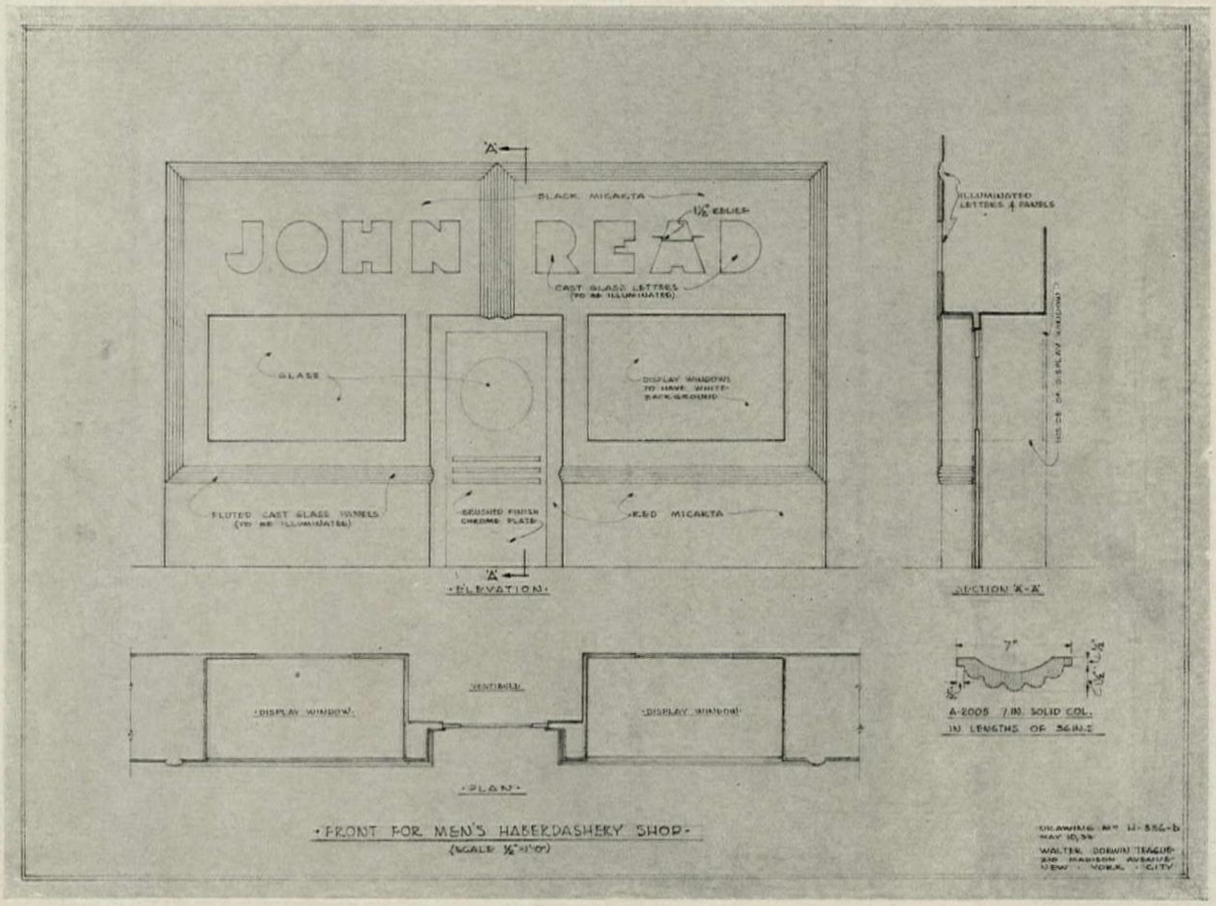


DESIGN BY WALTER DORWIN TEAGUE FOR THE FRONT OF A JEWELER'S SHOP

A SMALL HABERDASHERY

A distinctive type of front of a small haberdasher's shop has here been treated with a strong color scheme of red, white, and black. The base, which is surfaced with a laminated phenolic resin material, is red, with the same material in black above. The show windows have a white background and the name of the establishment is in cast glass letters, which are illuminated from behind, as is the enframing band of fluted cast glass of stock pattern. The door, as in the other examples, is of brushed finish chrome plate, and the jamb is red.





DESIGN BY WALTER DORWIN TEAGUE FOR THE FRONT OF A HABERDASHER'S SHOP

Ripley's Recipes

By Hubert G. Ripley, F. A. I. A.

No need of Moorish archer's craft
To guard the pure and stainless liver;
He wants not, Fascus, poison'd shaft
To store his quiver—
Hor. Car. 1, XXII, Conington.

V—The Bring-You-To

One of the hardest struggles the architect has to face (and it is doubtless equally true in other crafts and professions) is the constant fight to maintain his standards. We all know what those standards are, though self-interest at times obscures our vision. It is the same Sisyphean labor in Gastronomy. The vast majority of the American people arise in the morning, take their setting-up exercises, perform their ablutions and clothe themselves with meticulous care—then, feeling they have done their noble duty, gobble hastily a varied assortment of strange foods and dash madly for the 7:52 or the 8:26. Or, maybe, they climb into their car and "step on it" in order to arrive at the office, or wherever they are bound, as early as possible. This punctuality is supposed to set a good example to others, and we would be the last to decry the admirable traits of the stern and rockbound Puritanical tradition, but even a good thing can be, and often is, overdone. Let us not mistake premises for conclusions. When the noon-hour arrives, most of us are prone to dash out with the crowd, sit on a stool (eighteen inches C. to C.), and swallow feverishly some nondescript dish that's been kept hot on one of Duparquet Huot et Moneuse Cie's steam tables. (I often wonder what dear old Papa Duparquet would say if he knew to what uses his *bains marie* were put. He must have been a sweet old old gentleman with white mutton-chop whiskers, well-rounded abdomen, and a kindly word and pat on the head for rosy-cheeked little boys and girls.)

This feverish pursuit of the shadow for the substance is all very upsetting. Even the humble wheelwrights, cordwainers, and paviors that worked on the Parthenon led no such hectic existence as this. Due to the exigencies of the climate, they arose very early, often before dawn, and ate their simple meal of cheese and butter and bread and a honey cake, washed down with a flagon of wine under the grape arbor in the courtyard while Phœbus was still harnessing his chariot. After a stimulating morning spent in marble cutting, erecting gin poles, and cording a few root triangles and whorling squares, there came the long rest hour at noontime. While dozing in the shade of the plane tree listening to the lazy droning of the bees, Kallicrates and Ictinos and Metagenes, of the ward of Xypete, and Xenocles of Cholargus inspected the morning's work, drawing up their daily report to Pheidias. Plutarch, in his life of Pericles (translated from the original Greek with notes critical and historical by John Langhorne, D.D., and William Langhorne, A.M., new edition with corrections and additions, by the Rev. Francis Wrangham, M.A.F.R.S., New York: published by Samuel Campbell and Son; Evert Duyckinck; George Long; Collins and Co.; W. B. S. Gould; and R. and W. E. Bartow: 1822), paints a charming picture of the rebuilding of the Acropolis. He says: "We have the more reason to wonder, that the structures raised by Pericles should be built so quickly, and yet built for ages: for as each of them, when finished, had the venerable air of antiquity; so, even now, they retain the strength and freshness of a modern building. [Note that when this was written, the buildings on the Acropolis were already some 500 years old.] A bloom is diffused over them, which preserves their aspect untarnished by time, as if they were animated with a spirit of unfading youth and perpetual elegance." Furtwrangler (I think it was Furtwrangler) says this "bloom" was obtained by washing the Parian marble with saffron and milk!

The Parthenon was but nine years in building, and the sum of 1000 talents was expended on the work—an enormous amount for that time, the temple of the Olympian Jove costing but 350 talents. As a talent was the equivalent of £193:15:0, in the year 1822, you may figure it out easily on a slide rule, multiplying by the coefficient of 1822 is to 1933 to obtain the equivalent at present-day prices.

The Propylæa, or great Entrance Hall to the Acropolis, which Professor Dorpfeld ranks as among the chief glories of Athens, took but five years to build. Mnesicles was the architect and his salary, according to Dr. F. B. Jevons, was not over two drachmas a day. As a drachma equals 19½ cents, it seems that the quantity of precious metals in circulation at that time must have been considerably less than it is at the present day, and the purchasing power corresponding greater. Yet on this modest stipend certain architects managed to amass large fortunes; Leonidas of Naxos, for example, who wrote a book on Proportion, was a famous and wealthy man (M. S. Briggs). Other authorities assert that the architect received ten times as much as the skilled workman, so that in all probability the pay of 1½ to 2 drachmas to the architect in the various inscriptions mentioned by Dr. Jevons was the amount received for the actual superintendence during building operations. Doubtless the government paid the usual 4.8% for the plans, specifications and models, and then, in its wisdom, employed the designer to supervise the erection of the child of his brain for an additional fee, at least equal to the pay of the skilled laborer, which in a socialist (or facist) community seems fair enough, but in a glorious republic like ours, an economic waste. On any other hypothesis, the large sums mentioned by the elder Pliny as having been received by the artists of those days could hardly be accounted for. Some of the best of the skilled workmen received as much as 2½ drachmas a day.

Plutarch tells of a "wonderful event" which happened during the progress of the work on the Propylæa. One of the best and most active of the workmen fell from the high staging and was severely injured. Pericles, who was very fond of this man who had endeared himself to all by his merry quips and deeds of fearless daring on the derricks, was deeply concerned and grieved at the misfortune that had befallen his favorite stone cutter. The goddess appeared to the great ruler in a dream and recommended a remedy, the plant Parthenium or common feverfew, of the genus Matricaria. This being administered the patient was speedily relieved, to the amazement of the physician who had despaired of his recovery. In commemoration of the event, Pericles ordered a statue to Athena Hygeia set up on the famous passage leading from the Propylæa along the north side of the Parthenon. (Ency. Brit. II 837.d.)

While jotting down these random notes, a visitor was announced. It proved to be none other than Dr. Fellows the Antiquary, tired and thirsty after a fatiguing ride over dusty roads in the hot sun of an Indian Summer. Emerging from behind a great pile of reference books, we made the Doctor comfortable in a porch chair in the shade, tabouret at his elbow. "Will you accept a glass of home-made beer, Doctor?" "Willingly, willingly," the genial old gentleman replied, his eye resting on a pot of Sansevieria, that weird looking modernistic plant, spotted like a *cobra di cappello,* that the chatelaine had recently picked up for a mere pittance at Woolworth's. "Curious what a vogue the Sansevieria is having," the learned man mused while waiting for the beer to be drawn. "Must be the violent contrast of color and form that appeals to the modern spirit. I suppose the plant grew in profusion in the villa gardens and temple close of Lencothea in ancient Pyrgi. The famous 'thratta,' esteemed so highly by the Romans, was gathered by the drag-nets of the fish-mongers of what is now San Severia, you know—Ah, here comes the beer!" The antiquary's excogitations ceased as he caught the welcomed sight of a tray bearing glasses and a large pitcher, its top crowned with foam. "That's not such a bad brew," observed the Doctor. "Reminds me somewhat of the ale at the old 'Bell in Hand.' Hope I live to taste their Bass', Stout, and Union again. My! but that Union ale was potent. I recollect one Saturday afternoon, years ago, when an old friend—he was best man at my wedding, hadn't been a Benedict long himself—dropped 'round for lunch. I suggested the 'Bell,' he'd never been there, and we each had two mugs of Union, it being a hot dry kind of a day, something like this. After that we went down to Bixby's for a Continental Punch. You remember Bixby's don't you? Of course you do, and their famous Continental Punch? Well, we had two or three and munched pilot bread and their marvellous cheese. Remember the cheese? It was Young America that had been kept in the cellar until it had aged just right. Bixby wouldn't allow a cheese to be brought up until he'd personally inspected it. One of them always stood on the end of the bar with a fresh napkin wrapped around its sides and a cheese scoop stuck in its top. You helped yourself. In fact you helped yourself to everything. The 'bar' was a narrow little place, just wide enough for two people to pass, with a counter on each side, shelves above filled with bottles and a bowl of ice near the sink. Charley was there to do things if you wanted him to, and, of course, he always made the Continental Punch. That was a rite in itself. Tell you how it was made, presently, if you don't know. Well, after visiting the wine caves with Bixby and sampling his old sherry, we drifted out around dusk and wandered up towards the Custom House. Dropped in to Madame Petitpas' *Café de la Bourse* for some lobster and a *filet Mignon.* Thought maybe a bottle of Burgandy and some of her Napoleon brandy would set us up a bit. It did. The rest of the evening was a little foggy, but we got home all right. George's wife was at the house and the next morning when we all gathered in the Dining Room, the breakfast table, somehow, didn't seem very appealing. George took one look at the fish balls and the great plate of toast, turned pale and hastily left the room. A while later he returned, somewhat haggard, and lowered himself gingerly into a chair.

" 'Why George Whittlesey!' said Alice, 'you've never lied to me before. You told me last night you only had two drinks! Surely two couldn't possibly have made you like this?'

" 'My dear!' said George, 'I cannot tell a lie. We went to a quiet little ale house and I drank two drinks, only, out of a tin cup. After that, I remember no more!'

" 'You shouldn't have got drunk in the first place,' replied Alice severely.

" 'I didn't,' answered George. 'I think it must have occurred in the tenth place!' "

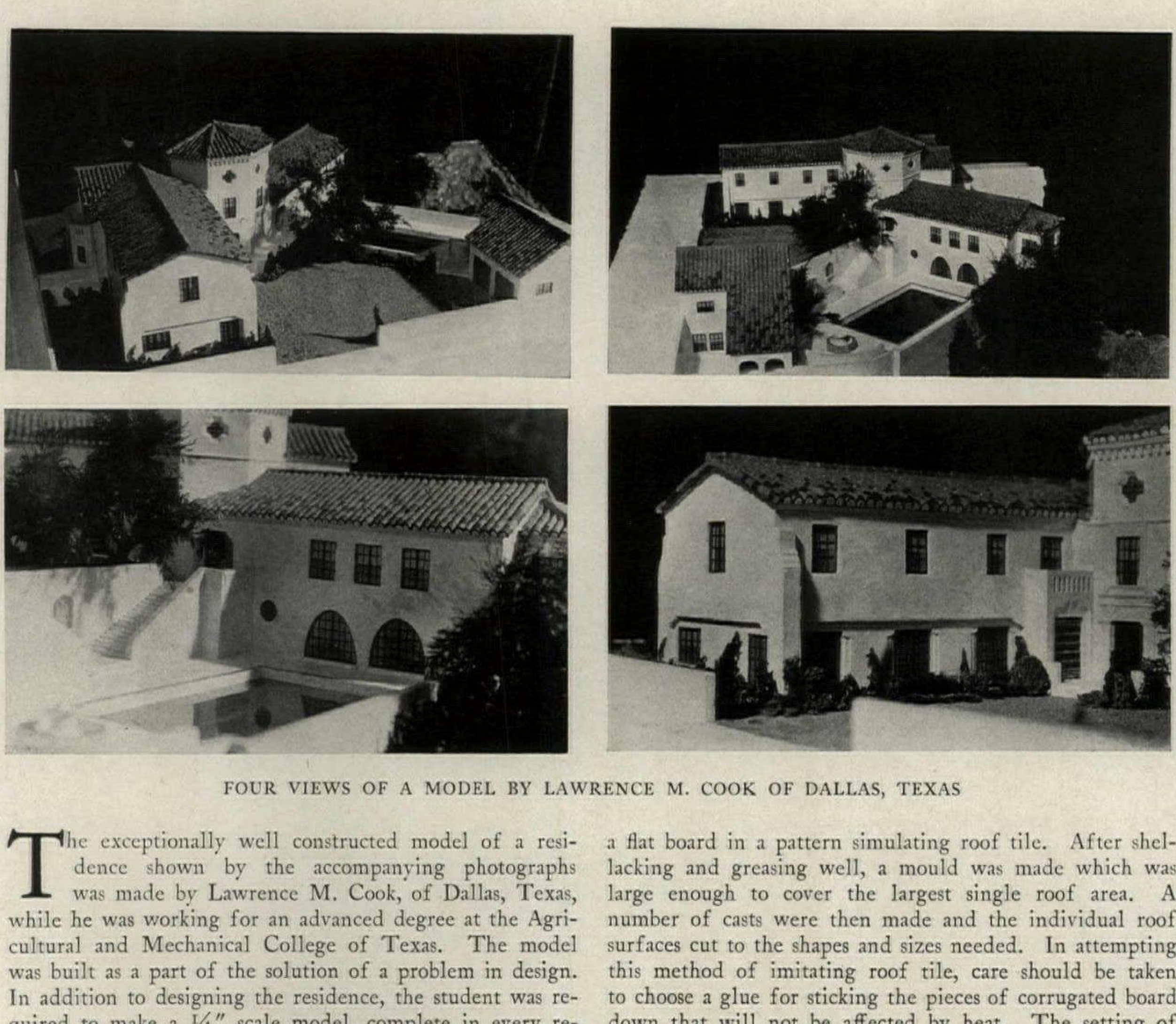
The good Doctor took a long pull, emptied his goblet, filled it again from the pitcher on the table, sighed deeply, gazed reflectively across the meadow where a skylark was teetering on a mullin stalk, hummed softly a few bars from McDowell's "To a Boll Weevil," and said, "Did I give you the receipt for the Continental Punch? No? As I remember it, there were three kinds of rum, New England, Medford, and Santa Cruz, say one-third part of each, then one part French Brandy, just the right amount of Grenadine, a few squirts of seltzer and stir well with ice in a large bar glass. It's all in the proportions. One flavor should not predominate above the other. Charley used to exercise rare judgment when it came to the seltzer. If the patient had had several and still wanted another, he, the patient, got one with more seltzer, that's all."

"Did I ever tell you about my 'Bring-You-To'?"

we asked. "There's a drink for the stout-hearted. Makes you want to laugh and play. Fills you full of noble Thoughts, High Ideals, Ethos, and all that sort of thing, you know." "Yes?" said the Doctor. "Tell us about it."

THE BRING-YOU-TO. Use a large bar glass. In it place three or four goodly pieces of ice. On this squeeze a largish slice of lemon peel, a dash or so of Angostura, not more than three or four drops, one-third French Vermouth, one-third Italian Vermouth, one-third Santa Cruz rum (if you use another rum, a little more may be added)—this makes one part. Then to this amount add five parts of gin and stir circumspectly until the whole is reduced somewhat and thoroughly chilled. If there are ladies in the party, place a maraschino cherry in the cocktail glasses, together with a little of the juice; for males, a pitted manzanillo olive would doubtless be preferable.

"That sounds good," said the Doctor. "Suppose we try one?" "What, on top of ale?" "Oh, well, *one* won't do any harm. If George had had one before coming down to breakfast that Sunday morning, he might have been a different man today!"



FOUR VIEWS OF A MODEL BY LAWRENCE M. COOK OF DALLAS, TEXAS

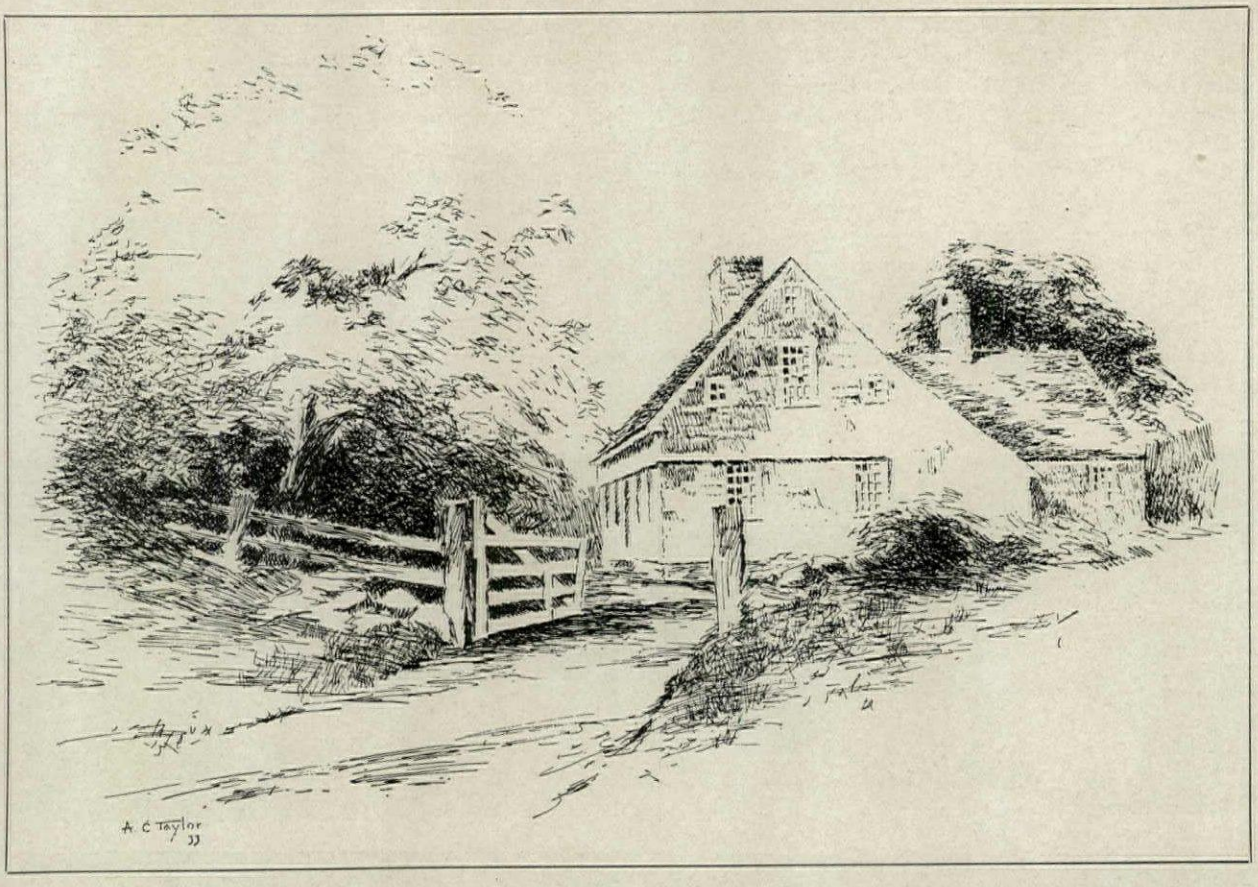
The exceptionally well constructed model of a residence shown by the accompanying photographs was made by Lawrence M. Cook, of Dallas, Texas, while he was working for an advanced degree at the Agricultural and Mechanical College of Texas. The model was built as a part of the solution of a problem in design. In addition to designing the residence, the student was required to make a ¼" scale model, complete in every respect, including color, texture, landscaping, etc.

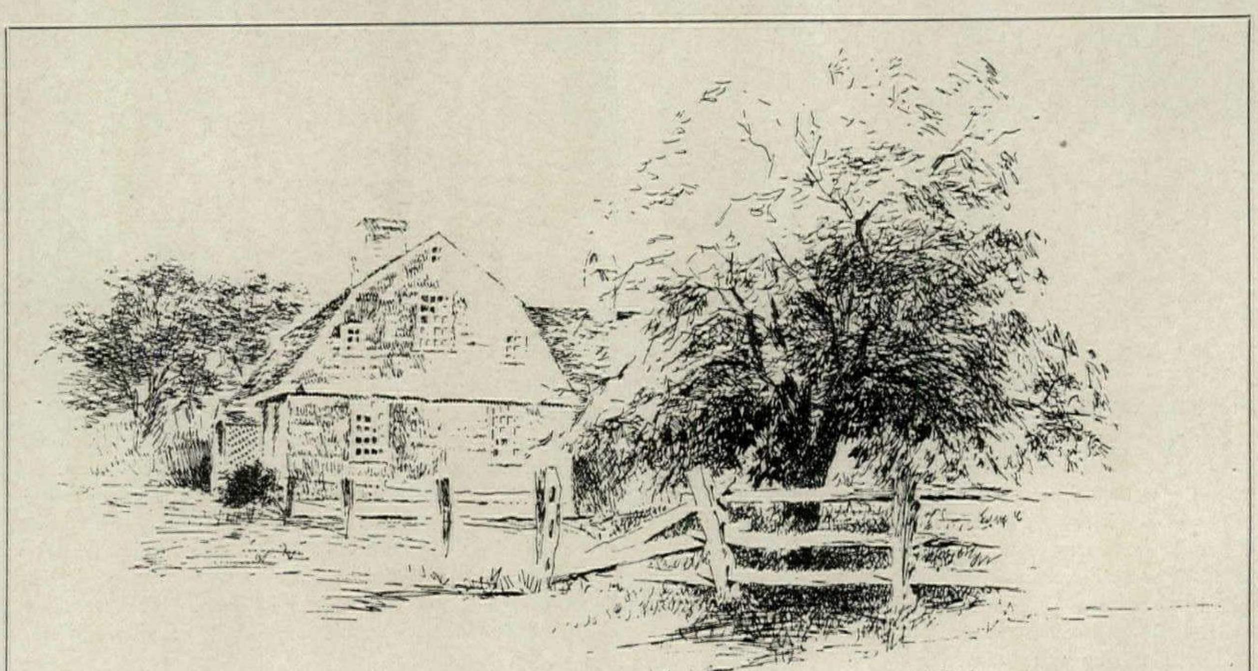
The first step was to model each wall and roof surface in clay, using the ¼" scale drawings as a guide. When all of the clay models were made and approved, each separate piece was mitered at the corners, set together with plaster, and the joints pointed up.

Intricate ornament was carved in the plaster, since the detail was too fine to work in the clay and cast. Mouldings were run in plaster from tin templates.

The roof was made with the assistance of corrugated cardboard, which was cut up into strips the width of a single corrugation and from ½ to ¾ of an inch in length. These small pieces were then glued down to a flat board in a pattern simulating roof tile. After shellacking and greasing well, a mould was made which was large enough to cover the largest single roof area. A number of casts were then made and the individual roof surfaces cut to the shapes and sizes needed. In attempting this method of imitating roof tile, care should be taken to choose a glue for sticking the pieces of corrugated board down that will not be affected by heat. The setting of the plaster mould will melt some kinds of glue and spoil the model.

The program called for metal casements, so for the muntins and division bars Mr. Cook used a stout grade of twine soaked in paint of the desired color, cut in short lengths as required, and glued in place after the curtains and draperies had been painted on the plaster. For some of the shrubbery the familiar painted sponge was used and the trees were made of a seaweed formation attached to a wire framework. The entire model was built on a wood frame covered with hardware cloth, the frame being originally made to fit the contours so far as practicable. All of the coloring was done with sign painter's colors.





TWO EARLY AMERICAN HOUSES DESIGNED BY ARTHUR C. TAYLOR, ARCHITECT

These houses, one of which is now under construction in Scarsdale, New York, represent a successful attempt on the part of their designer to apply, more logically than has been done in most cases to date, the knowledge that has been accumulated from a careful study of Early American architecture. They are faithful to their prototypes in every respect, including the most important factor of "scale" and have, as a result, recaptured and held the charm of simplicity so often sought but so infrequently attained.

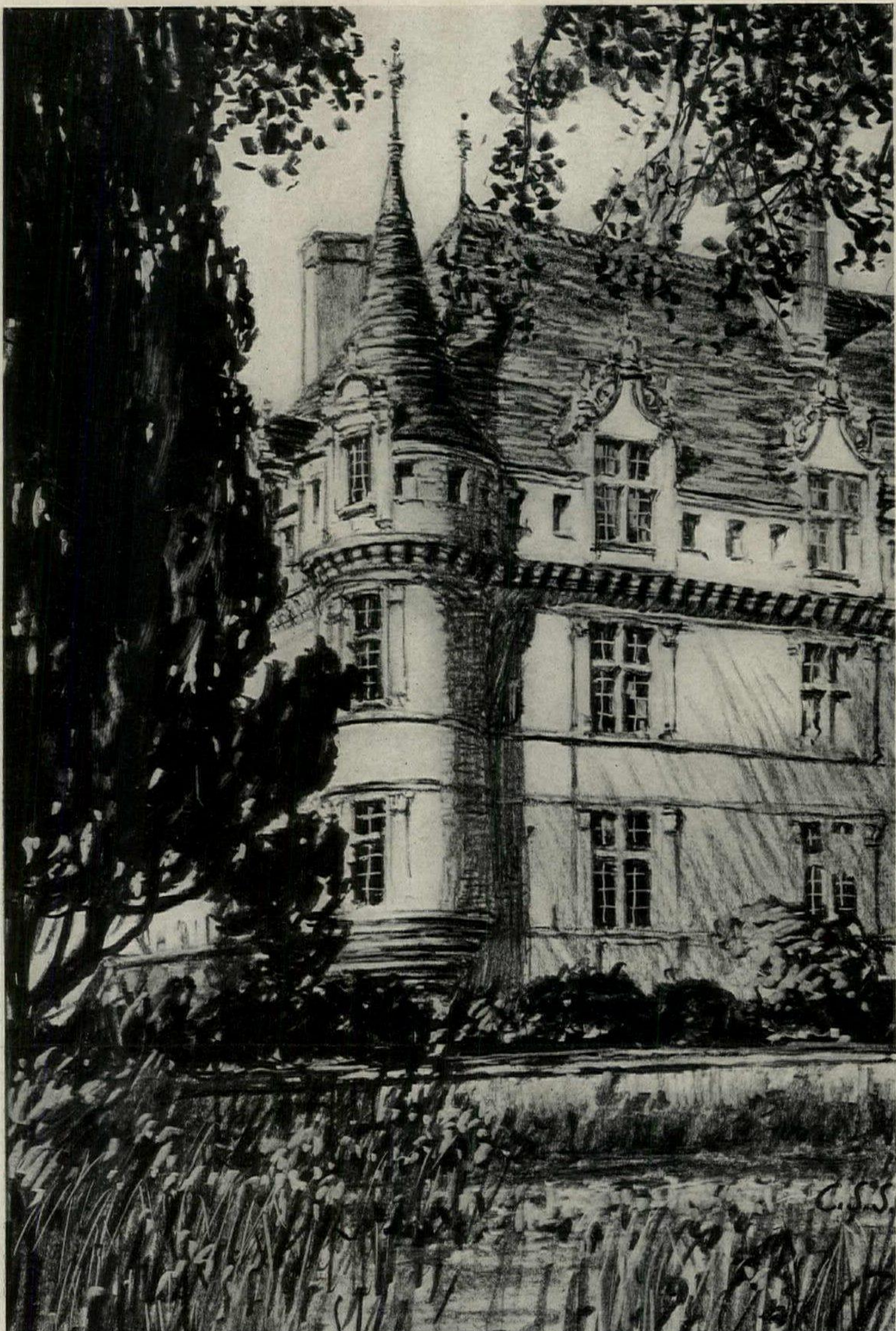
A Group of Sketches By the Late Charles S. Schneider, F. A. I. A.

Charles S. Schneider, who died on March 11, 1932, was one of the leaders of the profession in Cleveland and the Great Lakes District. In all his architectural works which include many public and private buildings, he demonstrated an innate feeling for the fundamentals of good design, fine proportions, discriminating taste for detail, and a general effect of refinement, coupled always with a sound conception of the practical purposes of each structure. In a word, he was the type of well-rounded architect that is the ideal of the profession. It is interesting to note that such a man found pleasure and stimulation from the practice of sketching from nature and from the fine works of architecture of the past. A few examples of his art, selected from among many that were shown some time ago at a Memorial Exhibition in Cleveland, are presented here for the benefit of the younger men of the profession and for the pleasure of his contemporaries who admired his skill.

THE NORTH PORTAL OF CHARTRES

LITHOGRAPH CRAYON SKETCH ON GRAY ROSS BOARD BY CHARLES S. SCHNEIDER

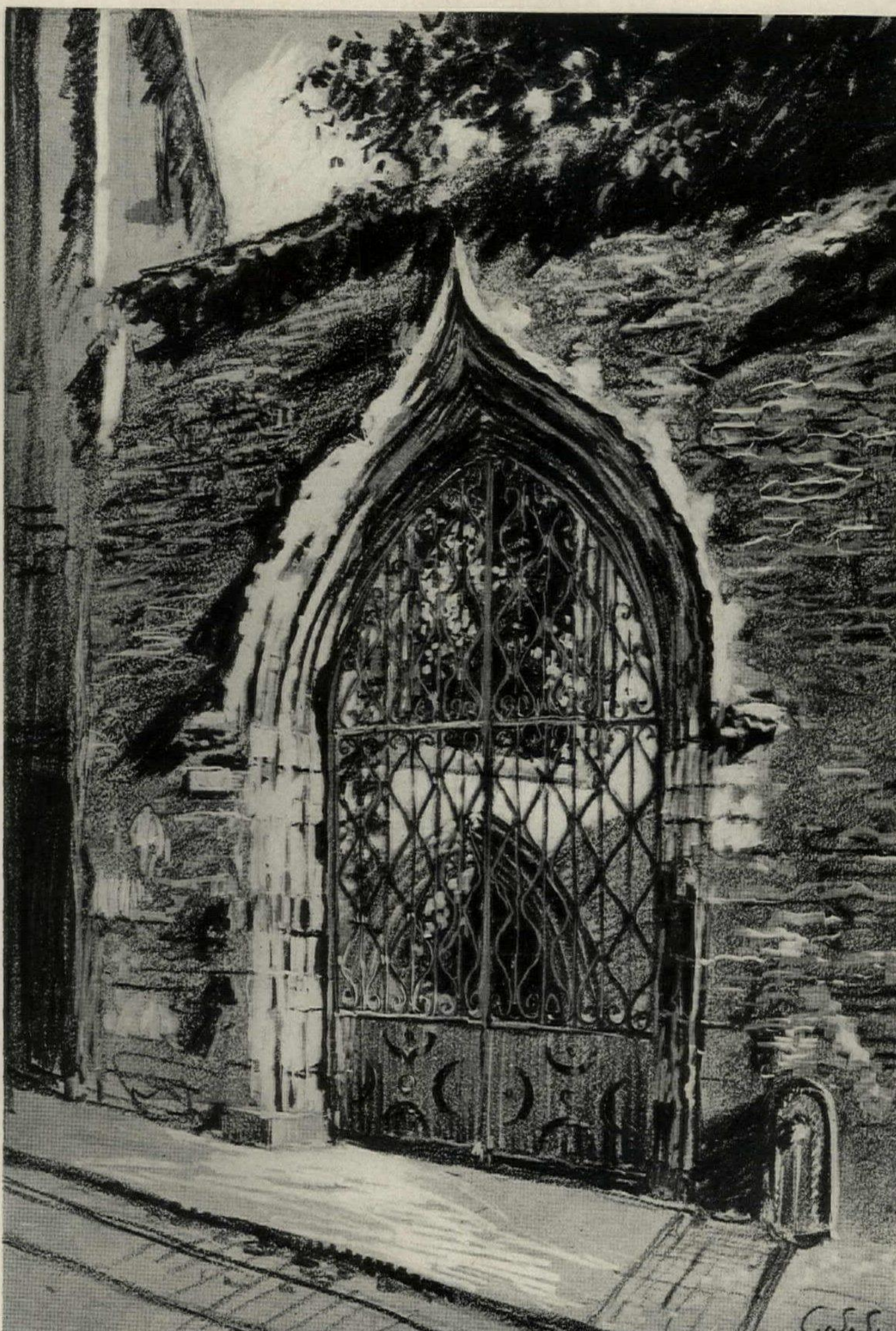
Size of original, 11" x 8½"



THE CHATEAU, AZAY-LE-RIDEAU

LITHOGRAPH CRAYON DRAWING BY CHARLES S. SCHNEIDER

Size of original, 8½" x 12½"



DOORWAY OF THE TOUSSAINT RUINS, ANGERS, FRANCE

LITHOGRAPH CRAYON DRAWING ON GRAY ROSS BOARD, BY CHARLES S. SCHNEIDER

Size of original, 8" x 11¾"

DOMREMY, BIRTHPLACE OF JEANNE D'ARC

LITHOGRAPH CRAYON SKETCH BY CHARLES S. SCHNEIDER

Size of original, 13" x 9½"

Why Not a Little Stair Standardization?

By M. Markle Steen, R. A.

Since each new step toward standardization has been greeted by anguished outcries from a sizable portion of the architectural profession, I presume that I am running a grave risk in even discussing the possibility of any extension of the idea. My fellows, who—well within the memory of the oldest inhabitant—were wont to give their design instincts and preferences free rein in proportioning and dimensioning everything about the building from the cellar window opening to the weather vane, and who now find their activities confined to a joining and blending of an immense variety of die-cut building materials, may possibly regard me as an arrant traitor.

Let me hasten, then, to say that I make no attempt to reduce all stair design to a dreary formula. In many cases, the design of the stair and the nature of the material used are such that the architect may give free rein to his impulses, and design the stair exactly as he pleases. There are many other cases, however, where the predominant factor is utility. And here the adoption of standardized dimensions would still permit the architect all needed latitude, while eliminating a maze of needless complications which attend present practice.

Some time ago, some very interesting articles by Mr. Eichenlaub appeared in this magazine. He analyzed a large number of different stair designs and reported his findings in detail.

These findings showed such a wide range of designs, such a multitude of varied dimensions, as to be almost unbelievable. Unbelievable, that is, when it is remembered that stairs in general are supposed to have a slope that lies between 27 and 36 degrees, and that the sum of riser and tread should be somewhere around eighteen inches—the normal stair stride.

The multitude of combinations harks back directly to the old days of what might be called plastic building materials—that is, materials that could be speedily brought on the job to any desired size and shape. The carpenter, working with wood, could easily and quickly meet, to the smallest fraction of an inch, any demand made by the architect for any tread and riser height. The architect had no need to conform to any standards except those imposed by general good design practice.

Other materials replaced wood. They were generally fabricated as specials, however, and so could be made in any desired size and shape. Thus the architect had no reason to work to any standard dimensions whatever. If the job happened to work out to 10-15/16 inches, there was no need to extend the run 1 or 1½ inches merely to bring the tread to an even dimension. Sometimes, in order to avoid complicated fractions in riser heights, a slightly different height would be used in the flight up to a landing than in the flight from landing to next floor, but this was generally the only concession. In short, the individual riser and tread dimensions were established by working backward from the total rise and run, and were allowed to vary within small limits to an infinite extent, not because the job was improved thereby, but merely because there was no particular reason for conforming to any specific dimension. The stairs looked no better, and served no better, because the tread happened to be 10-15/16 inches instead of 11 inches. It was just that there was no reason for making the treads anything else.

These practices which were permitted by special fabrication of materials were not extensively discouraged by code requirements. For apparently stair codes, like prohibition, are distinguished by being honored in the breach rather than the observance. I cannot lay claim to any intensive analysis; but I venture to say that a large percentage of stairs constructed violate codes in one way or another. In thus, figuratively, thumbing his nose at legal specifications, I do not believe that the architect is actuated by malice or any willful desire to evade the law. Rather it seems that he, like the horse that ran into a tree and raised the suspicion in the mind of the prospective purchaser that he was blind, "can see all right, but just doesn't give a damn."

There can be no strong condemnation of this attitude, once code requirements are analyzed. Take, for example, the Pennsylvania State code covering Class III (Public and Assembly) Buildings. It states that the slope of the stairs shall be between 33 and 36 degrees, and that the sum of riser and tread shall be 17½ inches. A few moments' work with a table of tangents will show that, under this code, the tread width must be somewhere between 10-1/10 inches and 10-6/10 inches, approximately.

The city code covering Public and Assembly Buildings specifies that no riser shall be greater in height than 7½ inches, and no tread shall be less than 10½ inches. The architect who set out to be strictly law-abiding so far as both codes are concerned would find that the width of tread permitted him ranges between 10-5/10 inches and 10-6/10 inches. This means, of course, that the height of riser can be anything between 7 inches and 6-9/10 inches. Imagine the enthusiasm of the designer who found the variation allowed him reduced to a mere tolerance. Examples of this sort could be multiplied, but this seems quite enough to indicate conditions.

As a consequence of all these things, stair design has continued to be, in many cases, a matter of trial and error. Knowing the rise, and the approximate run, the draftsman lays off a slope somewhere within the required limits, assigns an arbitrary riser height, computes the number of treads required and graphically determines the tread width. If it is such as to conform to good design, the job is over. Should it be too narrow or too wide, the draftsman assigns some other values, and tries again.

Now while this method is extravagant of time and effort, it is accepted procedure. Sheer inertia tends to preserve established customs; and had the waste in the drafting room been the only drawback, man's natural tendency to follow charted courses would have been a barrier to change. No manufacturing problems were introduced by existing practice, for all materials were fabricated to spe-

DESIGN TABLES FOR STANDARD STAIR TREAD

11½″ STAIR TREAD (EXCLUSIVE OF NOSING) — TABLE NO. 1

NO. OF TREADS	TOTAL RUN	NO. OF RISERS	HEIGHT OF STANDARD RISER UNIT 5¼″ MORTAR JOINTS ¼″ to ¾″ TOTAL RISE	HEIGHT OF STANDARD RISER UNIT 5¾″ MORTAR JOINTS ¼″ to ¾″ TOTAL RISE	HEIGHT OF STANDARD RISER UNIT 6¼″ MORTAR JOINTS ¼″ to ¾″ TOTAL RISE
—	—	1	0′5½″ to 0′6″	0′6″ to 0′6½″	0′6½″ to 0′7″
1	0′11½″	2	0′11″ to 1′0″	1′0″ to 1′1″	1′1″ to 1′2″
2	1′11″	3	1′4½″ to 1′6″	1′6″ to 1′7½″	1′7½″ to 1′9″
3	2′10½″	4	1′10″ to 2′0″	2′0″ to 2′2″	2′2″ to 2′4″
4	3′10″	5	2′3½″ to 2′6″	2′6″ to 2′8½″	2′8½″ to 2′11″
5	4′9½″	6	2′9″ to 3′0″	3′0″ to 3′3″	3′3″ to 3′6″
6	5′9″	7	3′2½″ to 3′6″	3′6″ to 3′9½″	3′9½″ to 4′1″
7	6′8½″	8	3′8″ to 4′0″	4′0″ to 4′4″	4′4″ to 4′8″
8	7′8″	9	4′1½″ to 4′6″	4′6″ to 4′10½″	4′10½″ to 5′3″
9	8′7½″	10	4′7″ to 5′0″	5′0″ to 5′5″	5′5″ to 5′10″
10	9′7″	11	5′0½″ to 5′6″	5′6″ to 5′11½″	5′11½″ to 6′5″
11	10′6½″	12	5′6″ to 6′0″	6′0″ to 6′6″	6′6″ to 7′0″
12	11′6″	13	5′11½″ to 6′6″	6′6″ to 7′0½″	7′0½″ to 7′7″
13	12′5½″	14	6′5″ to 7′0″	7′0″ to 7′7″	7′7″ to 8′2″
14	13′5″	15	6′10½″ to 7′6″	7′6″ to 8′1½″	8′1½″ to 8′9″
15	14′4½″	16	7′4″ to 8′0″	8′0″ to 8′8″	8′8″ to 9′4″
16	15′4″	17	7′9½″ to 8′6″	8′6″ to 9′2½″	9′2½″ to 9′11″
17	16′3½″	18	8′3″ to 9′0″	9′0″ to 9′9″	9′9″ to 10′6″
18	17′3″	19	8′8½″ to 9′6″	9′6″ to 10′3½″	10′3½″ to 11′1″
19	18′2½″	20	9′2″ to 10′0″	10′0″ to 10′10″	10′10″ to 11′8″
20	19′2″	21	9′7½″ to 10′6″	10′6″ to 11′4½″	
21	20′1½″	22	0′1″ to 11′0″		
ANGLE OF SLOPE			25°34′ to 27°33′	27°33′ to 29°29′	29°29′ to 31°20′
SUM OF RISE AND TREAD			17″ to 17½″	17½″ to 18″	18″ to 18½″

10½″ STAIR TREAD (EXCLUSIVE OF NOSING) — TABLE NO. 2

NO. OF TREADS	TOTAL RUN	NO. OF RISERS	HEIGHT OF STANDARD RISER UNIT 5¼″ MORTAR JOINTS ¼″ to ¾″ TOTAL RISE	HEIGHT OF STANDARD RISER UNIT 6¾″ MORTAR JOINTS ¼″ to ¾″ TOTAL RISE	HEIGHT OF STANDARD RISER UNIT 7¼″ MORTAR JOINTS ¼″ to ¾″ TOTAL RISE
—	—	1	0′6½″ to 0′7″	0′7″ to 0′7½″	0′7½″ to 0′8″
1	0′10½″	2	1′1″ to 1′2″	1′2″ to 1′3″	1′3″ to 1′4″
2	1′9″	3	1′7½″ to 1′9″	1′9″ to 1′10½″	1′10½″ to 2′0″
3	2′7½″	4	2′2″ to 2′4″	2′4″ to 2′6″	2′6″ to 2′8″
4	3′6″	5	2′8½″ to 2′11″	2′11″ to 3′1½″	3′1½″ to 3′4″
5	4′4½″	6	3′3″ to 3′6″	3′6″ to 3′9″	3′9″ to 4′0″
6	5′3″	7	3′9½″ to 4′1″	4′1″ to 4′4½″	4′4½″ to 4′8″
7	6′1½″	8	4′4″ to 4′8″	4′8″ to 5′0″	5′0″ to 5′4″
8	7′0″	9	4′10½″ to 5′3″	5′3″ to 5′7½″	5′7½″ to 6′0″
9	7′10½″	10	5′5″ to 5′10″	5′10″ to 6′3″	6′3″ to 6′8″
10	8′9″	11	5′11½″ to 6′5″	6′5″ to 6′10½″	6′10½″ to 7′4″
11	9′7½″	12	6′6″ to 7′0″	7′0″ to 7′6″	7′6″ to 8′0″
12	10′6″	13	7′0½″ to 7′7″	7′7″ to 8′1½″	8′1½″ to 8′8″
13	11′4½″	14	7′7″ to 8′2″	8′2″ to 8′9″	8′9″ to 9′4″
14	12′3″	15	8′1½″ to 8′9″	8′9″ to 9′4½″	9′4½″ to 10′0″
15	13′1½″	16	8′8″ to 9′4″	9′4″ to 10′0″	10′0″ to 10′8″
16	14′0″	17	9′2½″ to 9′11″	9′11″ to 10′7½″	10′7½″ to 11′4″
17	14′10½″	18	9′9″ to 10′6″	10′6″ to 11′3″	
18	15′9″	19	10′3½″ to 11′1″		
ANGLE OF SLOPE			31°46′ to 33°41′	33°41′ to 35°32′	35°32′ to 37°18′
SUM OF RISE AND TREAD			17″ to 17½″	17½″ to 18″	18″ to 18½″

cial order—and so there was no motive for change in this quarter.

But on the job came complications. There might be half a dozen or more different sizes of stair material on the ground, varying in size only by small fractions of an inch, impossible to separate by eye alone. Workmen, through ignorance, carelessness, or willful negligence, often selected the wrong sizes for given flights. Small differences could usually be taken care of by varying the mortar joints in setting. Frequently, however, the last flight to be constructed found the only tread material left so far off from requirements that it could not be used.

I imagine there is hardly an architect who has not had an experience of this sort. The resultant cost and trouble is all the more regrettable because it is entirely unnecessary. For a large proportion of ordinary stairs, built of stone, slate, structural clay, marble, brick, alberine, or similar materials which are set with mortar, could be constructed of standard units, without affecting the latitude of design to any extent.

At first glance, this statement seems extreme. A glance at the accompanying tables, however, will furnish ample evidence of the truth. The first table deals with an 11½″ standard tread (exclusive of nosing), in three standard heights—5¼″, 5¾″, and 6¾″. A ¼″ mortar joint is assumed to be the minimum practical, while the maximum is set at ¾″. Thus any riser height from 5½″ to 7″, in the smallest fractional variations, can be obtained.

It seems odd that a stair with a fixed tread, and with the only variation possible a change in riser height of 1½ inches, could offer much latitude to the designer. Yet the table shows that with this single width of tread and three standard heights, a stair can be constructed with any slope between 25°30′ and 31°20′. This possible variation in slope may be utilized to meet some specified slope condition; or it may be utilized in obtaining any of a variety of total runs, that will best meet given needs.

Suppose, for example, that you were constructing a flight with a total rise of 10 feet. The fourth column shows that this can be obtained with a standard riser unit 5¼″ high by using a 9/16 inch (approximate) mortar joint. This—as columns 1, 2, and 3 show—will give a stair with 20 treads, a total run of 19′2″ and 21 risers. Or this same riser with a ¾ inch mortar joint will build a stair with 19 treads, a run of 18′2½″ and 20 risers. Or the same 19 tread stair can be built with the 5¾ inch riser using a ¼ inch mortar joint.

If less run is required, the 5¾ inch riser with a 9/16 inch (approximate) mortar joint will build a stair with 18 treads, a total run of 17′3″ and 19 risers.

The standard 6¼ inch riser with a ⅜ inch (approximate) mortar joint will build a stair with 17 treads, a total run of 16′3½″ and 18 risers.

Thus with this single tread width, a variation of from 17 to 20 treads; a variation of from 16′3½″ to 19′2″ in the total run; a variation of 18 to 21 risers; is possible. This, it seems, should provide all the latitude required. All, in fact, of the latitude possible. For no matter what variations the architect wishes to introduce, there are limits in the angle of slope and in the sum of riser and tread beyond which he cannot properly go.

In proving the practicability of standard dimensions in stair material, the table also demonstrates its value in the initial design of a stair. It eliminates completely the necessity for any hit-or-miss, trial and error methods. By taking off from the drawing the total rise, and the preferred run, the draftsman can—without touching pencil or paper—determine the exact dimensions required.

If the angle of slope can be anywhere between 25°30′ and 31°20′, the draftsman can find, in columns 4, 5, or 6, the total rises which meet the specific condition he is interested in, locate in table 2 the corresponding runs, and select the specific run which will work in best with his problem. If there are any limitations on slope, he can select his total rise only from the column from which the required slope is yielded. If there is a restriction on the sum of rise and tread, here, again, he will work only with the column in which the required sum appears.

Even when stairs are being made up from fabricated materials which are not set in mortar, the table still presents an easy way of doing the preliminary design work. The dimensions of the riser heights to be ordered will, of course, equal the height of unit given, plus the height of mortar joint required.

The second table shown gives data on a standard 10½ inch tread (exclusive of nosing). This tread will of course build a steeper stair, ranging up to 37°18′ slope, and so its application is not as broad. There are many cases, however, where the use to which the stairs will be put does not impose such strict requirements, and where the 10½ inch tread will be satisfactory in use and a life-saver so far as working in the available space is concerned.

Please understand that I hold no brief for complete standardization of stair design. There will always be countless jobs where any attempt to confine the artistic expression of the designer within the limits imposed by a standard stair unit would be unforgivable. But there are also many cases where economic considerations prevent the stairs from being anything than strictly utilitarian. And in applications of this kind, I believe that standardization along the lines mentioned will save time, eliminate errors, and cut expense.

THE DRAFTSMEN ORGANIZE!

(Continued from page 430)

exploitation by making proper and necessary provisions for the higher bracket of men and women, who constitute over ninety per cent of the employees in the Architectural and Engineering fields, above the grade covered by the minimum wages provision of the Act.

It is readily to be seen that it will be futile for a minority of the practicing architects to attempt to carry out a Code of fair practice, no matter how conscientiously applied, if the majority of the architects are not compelled to observe payroll stipulations which automatically force them to observe at least a degree of fair competition.

You gentlemen of the A.I.A. know that whereas you consider six per cent as the minimum fee, most of the unprincipled competitor architects will *steal* the job for as low as one per cent or less. This they can only do mainly at the expense of the technical men who actually carry out this work for them. In the Architectural profession these architects are comparable to the well known "chiselers" in the building industry and the two actually work hand in glove. As this type of architect, unfortunately, exists in quite large numbers, it behooves the members of the A.I.A. to step a point in advance of the literal requirements of the National Recovery Act and develop a workable scale of compensation for employees, which will come somewhere near to assuring fair practice among architects.

The Federation of Architects, Engineers, Chemists and Technicians has drawn up a Code of fair practice as regards compensation and hours of work, and has presented this in the required form of brief to the N.R.A. administrator. A summary of same is as follows:

Maximum hours of work, thirty hours per week.
Minimum pay for seniors, sixty-five dollars per week.
Minimum pay for juniors, forty-five dollars per week.
Minimum pay for technical assistants, thirty-five dollars per week.
Minimum pay for apprentices, thirty dollars per week.

These classifications and other details are defined in our brief in detail.

As regards hours of work, taking the Metropolitan Zone of New York as standard, inasmuch as it is recognized as the Architectural center of our country, we consider this a fair reduction of the hours of work, as urged by the N.R.A. from the customary work week of 35 to 38 hours generally observed in this section in the past.

As regards scale of compensation, the rates we recommend are from 25% to 35% below the prevailing rates of 1930.

We feel that the technical men and women are entitled to a return somewhere nearly commensurate with the importance and value of their highly skilled service to society, which will enable them to live, and support their families in a manner permitting them to hold their heads erect among men, rather than bowed in shame and degradation due to cruel exploitation.

Inasmuch as a great many technical men are employed in the building industry and practically every other industry, we are pressing our demands equally upon all of these industries.

We appreciate our former fine relations with the A.I.A. and sincerely hope that they will continue in the future. We, therefore, call upon the A.I.A. to work out this problem with us just as though it was a problem handed to us in our professional capacity, and, with the result obtained, bring about the fair competition so much desired by us both.

In addition we ask for the moral support of the A.I.A. in bringing about similar desirable conditions in the interests of the Engineers, Chemists and Technicians in the allied professions and industries, for it may well be said that we are brothers in profession.

The A.I.A. may or may not realize it, but its decision in this matter will have enormous and far-reaching effect, as we know from information in our hands that it is being watched very closely by the allied professions, who will use the A.I.A.'s action as a precedent.

The fidelity and loyalty of the technical men to our country, profession and employer has never been questioned, and in return we ask for no more than common justice and the application of that square deal which our great President promised and recommends.

We thank you Mr. Administrator and gentlemen of the A.I.A. for your kindness in giving us your attention, and earnestly hope and trust that you will adopt our requests.

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The aim of this organization is to build a strong national federation of all technical organizations for the present and future safeguarding of the members' economic rights and interests. The Federation will consist of various units in the various professions. Thus, Architectural men will join the Architectural Unit, Engineering men will join the various Engineering Units, Chemists will join the Chemical Unit, etc.

Each unit will have its own Constitution and By-Laws, and the unit will be the member in the Federation. In this way, specific problems peculiar to any one particular unit will not be confused or entangled by misunderstanding. The governing body of the Federation will be made up of representatives from the various units.

At the present time, various committees are intensely active on drafting the constitution, organization, etc. For the time being, as we are still in the formative period, individuals are members directly in the Federation. As the various units are formed and organized, the individual's membership will be transferred to his particular professional unit, in the particular region where the member resides.

We invite and urge all technical men throughout the country to join our organization direct, and help to organize the regional units. In all cases we desire opinions and suggestions. The writer will be very glad to receive all correspondence, which should be addressed as follows: Henry Sasch, c/o Architects Samples Corporation, 101 Park Avenue, New York.

We endeavor to answer all individual letters as promptly as possible. As we are a very new organization, and mostly unemployed, our finances are slim, and expenses high, but detailed information when requested will be sent as soon as physically possible.

For the information of those wishing to join immediately, the dues are as follows: Unemployed, 10 cents per month; Earning under $30 per week, 25 cents per month; Earning over $30 per week, 50 cents per month. There is no initiation fee at present.