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HUGHSON HAWLEY

SCENIC ARTIST AND ARCHITECTURAL PAINTER

THIS IS THE STORY of a self-taught painter, who ran away as a boy and married at the unusual age of sixteen years and nine days (his wife being one month younger than himself). Their joint capital consisted of one shilling. which occurred an important representation of Canterbury Cathedral by night, a very dark rendering of the building with highly illuminated windows (yellow silk lighted up behind with gas jets). This so enthralled the audience of that very nontheatrical city that Hughson, who was responsible for the scene,

Though Hughson Hawley had no experience in any

line of business, an old friend of the family knowing that he had a fondness for drawing (though he had never received a lesson) obtained for him an engagement as scene-painter in a little fourth-rate theatre in the old Cathedral City of Exeter at the munificent salary of eighteen shillings (or four dollars and a half) a week. There his troubles commenced, for being entirely ignorant of the methods employed in this work he was surprised that upon the drying of the colors they could be brushed off the canvas again in the form of powder. The stage carpenter of the theatre came to his rescue with the information that the paint should be mixed with

a thin solution of glue, in other words with "size." Again came another rebuff, for he made this medium far too strong and was horrified to find that his colors had turned nearly black. But experience teaches, and our aspiring would-be artist solved these and other difficulties one by one with continued practice.

Before the end of the theatrical season the manager produced the play of "Little Em'ly," an adaption of Charles Dickens' tale of "David Copperfield," in was called before the curtain to make his bow. The Manager thereupon raised his salary from eighteen to twenty-five shillings (\$6.25) a week. Looking back now to those far-off days he knows that the drawing and painting were too atrocious for words to express, but at the time he was very greatly encouraged by his success. In the following

season he obtained a slightly better engagement in another small theatre, and in the third year, being then eighteen years of age (and, incidentally, the father of two promising boys), he secured a position as assistant to one Edward Ryan, a rising and brilliant young painter, a pupil of Hawes Craven, who painted that beau-



HUGHSON HAWLEY

tiful scenery for all of Sir Henry Irving's productions. This was in Liverpool, where they were producing at the Adelphi Theatre a big play of that period. Since that theatre did not possess the conveniences for more than one artist in its painting room, Hughson was accommodated at the Theatre Royal (under the same management) to paint a simple scene from one of Ryan's sketches for the new play. The third morning he showed up at headquarters and

[761]



ELY CATHEDRAL—WATER COLOR PAINTING BY HUGHSON HAWLEY Size of original, 31" x 221/2" HUGHSON HAWLEY-SCENIC ARTIST AND ARCHITECTURAL PAINTER



THE FIRST OF ELEVEN THOUSAND RENDERINGS BY HUGHSON HAWLEY OLD MADISON SQUARE THEATRE, NEW YORK—KIMBALL AND WISEDELL, ARCHITECTS—DRAWN IN 1880

reported that the job was completed, and Mr. Ryan walked over to the Royal to inspect the result. On his return Hughson concluded from the head artist's manner that something was wrong-radically wrong as he shortly discovered when he heard the fatal words whispered to one of the paint-room underlings, instructing him to go over to the Royal where he would find a scene on the paint-frame and to "prime" it out (give it a coat of whitewash). After considerable hesitation, Mr. Ryan called him into the private room and informed him kindly and regretfully that his work wasn't up to the mark at all. In fact, were it allowed to be shown on the stage "it would damn the whole production" etc. He advised the young man to give up all ideas of ever becoming an artist, for, said he "you are a very

young man with the whole world before you—so go in for some other kind of business. You have not the faintest promise of an artistic temperament and it will be my kindest advice to you to give up all thoughts of ever becoming an artist."

Whether to throw himself in front of a train or swallow a pint of prussic acid was the question in the mind of the heartbroken young aspirant to an artistic future, until an uncle of his in Liverpool took him in hand. Behaving more like a Dutch than an English Uncle, the latter told him he must brace up, go in for hard study and make up his mind that he was going to win out in the end. So, battling against his great depression, he first sought out and obtained another very mild engagement in Liverpool and commenced the life of comparative sleeplessness that he



ERNEST FLAGG, ARCHITECT Size of original, 20" x 36"—Painted in 1911

WATER COLOR RENDERING BY HUGHSON HAWLEY-COMPETITION DESIGN FOR WASHINGTON STATE CAPITOL

[764]



WATER COLOR RENDERING BY HUGHSON HAWLEY-APARTMENT BUILDING AT SCARSDALE, NEW YORK

TOWNSEND, STEINLE, AND HASKELL, ARCHITECTS Size of original, $261/2^n \times 441/2^n$ —Painted in 1925



WATER COLOR RENDERING BY HUGHSON HAWLEY PALAIS DES BEAUX ARTS, NEW YORK-TROWBRIDGE AND LIVINGSTON, ARCHITECTS

[766]

HUGHSON HAWLEY-SCENIC ARTIST AND ARCHITECTURAL PAINTER



WATER COLOR RENDERING BY HUGHSON HAWLEY NUMBER ONE PARK AVENUE BUILDING, NEW YORK---YORK AND SAWYER, ARCHITECTS

[767]



NÔTRE DAME DE PARIS—WATER COLOR PAINTING BY HUGHSON HAWLEY Size of original, $20\frac{1}{2}'' \times 29\frac{1}{2}''$

[768]

maintained and has followed to the present day. His daily programme was to arise each morning about two o'clock or half past, take a jaunt into the country, and arrive at an interesting point in time to begin work by daylight. The work consisted in sketching interesting landscape subjects from nature—usually including old churches and ancient picturesque buildings. He would work till nearly nine o'clock, then home for breakfast, to the theatre to start his scene painting at ten, home again at six, dinner, a few hours work on the sketches he had been making out of doors, and, as our old friend Samuel Pepys would have said, "then to bed" to sleep the sleep of the just for an average of *three hours nightly*.

This period—the turning point in his career—was the commencement of much that he has become known for, not amongst architects only, but by many of the medical profession also. His ability to do without sleep for indefinite periods became known to many scientific men amongst whom were the eminent Professor Irving Fisher of Yale University, who wrote to him for particulars some years back, and a number of physicians who requested opportunity to make physical examinations.

Sixty or eighty hours of continued work are common with Hawley. He has spent many weeks together with an average of two hours sleep nightly, or even less. In the Spring of 1921, when with a rush of work from all over the country he remained for nine weeks in his studio, his sleep (on his well known drawing-board and the celebrated iron pillow -a fifty-six-pound counterweight), averaged each night one hour and fifty-five minutes. At the end of this "charrete" came a final dash of seventy-seven consecutive hours ending when he turned into his bunk on an express train at the Grand Central Station en route to Montreal, whither he journeyed to take the Canadian Pacific boat to Liverpool. In that city he arrived almost forty-two years after leaving it and journeyed to Brighton to visit his son-in-law and daughter, Mr. and Mrs. Jeffery Farnol. He had sworn not to work after six o'clock that last night before his departure, which would leave him two and one-half hours in which to dine (in the studio), change clothing and taxi to the railway station, and receive the farewells of crowds of friends waiting to see him off. The last drawing was for Messrs. Maynicke and Franke and he had it ready to deliver to their messenger seven minutes ahead of time. Hawley has rendered more than eleven thousand drawings for Architects, and despite all delays and disappointments he has never been one minute behind his promise in the completion of any of that great number.

But we are digressing and going too far ahead. We switched off from the account of his early struggles as a scenic-artist and his enthusiastic studies from nature, so let us return. In his early sketches from nature he made studies of all the best known English trees, sketching the skeleton forms in winter time on the principle followed by an artist or sculptor when he draws or models the nude figure before clothing it. He maintained that the ramifications of a tree were equally important.

After these skeleton sketches he would select certain prominent branches, a still life study of a cluster of leaves, and finally an interesting landscape view containing those trees in full growth. When it came to buildings he was more partial to old churches. Before he was twenty he commenced to send his pictures to water color exhibitions, disposing of most of his work at good prices, all this work being done at night, early mornings, and Sundays, for he was keeping up his theatrical work at the same time. Although his scenic work was progressing steadily his income from paintings was more than double.

This was in his early twenties and so time rolled on until his twenty-fourth year when he was engaged to produce, with several assistants, one of the big Christmas pantomimes at the Covent Garden Theatre in London-the chief annual event in those days. His salary was a big one and his reputation had risen higher than that of his old friend Edward Ryan, the same who a few years before had advised him to give up all idea of ever becoming an artist. Hughson chaffed him about this, making poor Ryan "Well," mumbled he, look somewhat sheepish. "everyone is liable to make mistakes and in those days you must acknowledge that your work was worse than damnable." Well, he kept up the good workimproving steadily until in 1879 he received a very flattering offer from James Steele Mackaye of New York to cross the water and paint the scenery for his building then going up, the little Madison Square Theatre situated behind the old Fifth Avenue Hotel. That theatre was much talked of on account of its celebrated double stage. After mature consideration Hughson decided to accept this for one year only, but his reception by Mr. Mackaye, his family, and his friends was so sincere and the future held out so much promise that he decided to remain on this side permanently.

Hughson had arrived in New York in the middle of September and by the beginning of the following February his family came over, to a home already prepared for them. In the meantime he had become great friends with the architects of the theatre, Messrs. Kimball & Wisedell, the men who within a year were to change the whole course of his career.

As Mr. Wisedell (Tom Wisedell) was looking over a portfolio of Hughson's sketches he remarked, "What you should do would be to give up your scenic business and adopt that of architectural rendering." Hughson explained that he was unaware there was such a line of work, that he had often seen pictures of buildings of various kinds in the English Academy



RHEIMS CATHEDRAL—WATER COLOR PAINTING BY HUGHSON HAWLEY Size of original, 21" x 32"

[770]



HUGHSON HAWLEY-SCENIC ARTIST AND ARCHITECTURAL PAINTER

VENICE—WATER COLOR PAINTING BY HUGHSON HAWLEY Size of original, $12\frac{1}{2}'' \times 18\frac{1}{2}''$



WATER COLOR RENDERING BY HUGHSON HAWLEY PLAZA HOTEL, NEW YORK-H. J. HARDENBERGH, ARCHITECT-SIZE OF ORIGINAL, 48" x 51" exhibitions but concluded they were chiefly imaginary, the architect's idea of what his building would look like when completed. Mr. Wisedell explained that these drawings had to be thrown up from the groundplans by a system of mathematical accuracy, and furthermore offered to show him how it was done. He said he would like to have a drawing of the interior of the new theatre, that he had had two made already by supposed perspective experts, but they were unsatisfactory. The subject, he confessed, was a most difficult one, principally a network of complicated curves. Shortly after this Hughson received his first lesson in this branch of work and after two or three failures succeeded in making a correct and very interesting drawing of the theatre interior. In fact it was successful enough for its manager to request him to make another drawing in color, though from a different point of view, the price being equivalent to the salary for three weeks that he was receiving for his scene painting. This drawing he made in the mornings and evenings of one week without interfering with his regular daily work.

Wherefore, he decided to accept his friend Tom's advice and, the theatrical season being almost at its end, he fitted up a room. Knowing a business man's dislike of circulars, he wrote something over three hundred cards by hand. The telephone was not then in existence (for this was in 1880), so he obtained the names and addresses of architects from the P. O. Directory. His campaign met with a most gratifying and encouraging result, for these cards being mailed on a Saturday he received personal calls from no less than eight architects on the following Monday morning. Some few of them were of high standing, men whose names and reputations are in all probability known to those of the present generation.

George B. Post with a drawing of the New York Cotton Exchange; Charles B. Atwood, afterwards famous for his Fine Arts Building in the Chicago World's Fair; R. H. Robertson, an architect of big standing at that time; these and five others the first day of his new business. What better start could Hughson have hoped for?

Well—his reputation extended bit by bit until it reached to other cities, his first surprise being the receipt of a letter from Virginia from an architect who had seen his work in New York. As a snowball increases in bulk when set rolling, so did his work and reputation increase each year until his record-book now shows names of clients from forty-two out of the forty-eight states and more than a thousand cities.

In one direction Hughson has changed his business methods, for whereas for his first two years he was willing to undertake the perspective outlines and draw them himself, bit by bit he wearied of this and now asserts that should John D. Rockefeller and Henry Ford come to him and on bended knees offer him all their billions to draw a perspective from the plans he would reject their offer with scorn.

Of course it frequently happens that architects, chiefly in the southern and western states, request him to have the outlines drawn also. In these cases he arranges to have this work done for them. His chief aide is his friend, Emil Lowenstein, who has drawn for him probably not far short of a hundred beautiful outlines, one of his best being his wonderful perspective of the Bowery Savings Bank interior, York and Sawyer, Architects. Incidentally Hawley asserts this to be the most elaborate piece of work he has ever turned out, for though the painting was only 36" x 51" it occupied a far longer time to render its endless delicate details than even the nine feet by twenty-seven feet oil painting of the National Cash Register plant in Detroit that he painted to go behind the Company's exhibit in the St. Louis World's Fair.

With all this apparently endless work it must not be imagined that Hughson has been neglectful of his physical health in these decades, for, taking advantage of comparatively slack times, it has been his habit to make use of the daylight for exercise and return to his studio to work far into the night or perhaps all night to make up for it. He kept always in excellent physical trim, and was a member of the New Rochelle Rowing Club for fourteen years, and of the New York Athletic Club also. By amusements and exercise he was thus able to combine pleasure with business. His favorite sports were rowing his twenty-sixpound shell, wrestling, long distance walking, bicycling, and swimming-chiefly the walking, but no racing, his belief being that these bodily strains were injurious to the heart and lungs. He was often urged to enter rowing contests and wrestling bouts and was urged by Professor Koch to go in for the N. Y. A. C. broadsword championship, the professor being the fencing master.

Apart from these forms of relaxation, he was one of the original ten to organize what was then known as the First New York Hussars, engaging the services of Sergeant Aber, a fine ex-cavalry soldier, as drillmaster. This regiment became so popular that such men as Mr. Iselin of the family of bankers shortly joined, together with Oliver B. Bridgeman (now the distinguished General Bridgeman), and many other influential and prominent men. Shortly after the regiment's inauguration a great reception and supper were given to them by General Butterfield at his home at 60 Fifth Avenue, at which were present General Sherman and others greatly renowned-a memorable affair. The uniforms of the regiment were made by the swell military tailor of the period in London, exact copies of those of the crack tenth Hussars, of which King Edward VII (at that time Prince of Wales) was honorary Colonel. Within two years, long before which the regiment had reached its full complement, it was enrolled by the government in the National Guard, and is now the celebrated Squadron A.

Hawley became a member of the famous New York Sketch Club in 1896 and has taken a prominent part in its activities ever since. It was his practice for some years to take the members out periodically to give them instruction in sketching from nature. He is president of this organization for the current year.

These relaxations have not interfered with his architectural rendering, which he has kept up with a gradual increase in the list of his clients. He has made many drawings for Canada, a few for England, two for architects in Japan, one for Hawaii, several for the West Indies, and one for an architect in faroff South Africa.

His record in turning out winning competitive drawings, sometimes with twelve or fifteen others against him, is about seventy-five per cent perfect. Though he at times has made them for several of the competing architects, and in competitions for the old Union Trust Company's building of Wall Street and the Mount Sinai Hospital he rendered for every entrant, all designs have been kept inviolate, and no competitor has ever seen the design of another.

But with all he is never satisfied with his own work. An architect will write from one of the states that he wishes for a fine coloring of his accompanying outline, and Hughson's general reply is —"I regret I can't guarantee you a good drawing, for the reason is that I never made but one in my life. All I can promise is to do it to the best of my humble abilities as I do with everything." This one drawing he speaks of is a sunset view of Ely Cathedral made from original sketches from a middle-distance view, and is the only one he is satisfied with of more than eleven thousand made since his start in 1880. With all the rest his usual modest remark is "I feel I would like to put my foot through it."



CARTOON OF HUGHSON HAWLEY BY REGINALD BIRCH Made on the occasion of his leaving for England in 1921, after nine weeks of continuous rendering.

KEEP THE PROFITS

By Lloyd M. Hendrick, Jr.

THE PROBLEM of practicing architecture at a profit disappears when income is greater than outgo, or outgo is less than income. This simple statement of obvious fact—so obvious that it seems silly to make it, is an economic axiom commonly allowed to slip too far into the background where its dominating significance is overlooked. If by daily resolution the attainment of this fundamental truth were insisted upon regardless of every obstacle, if it were daily repeated as a creed, and if everyone absolutely refused to do business on any other basis, the sheep would quickly be separated from the goats and the millennium would be close at hand for the chosen ones. Actual conditions, however, are otherwise.

There are some offices which can take all the time they wish on their millionaire projects, make an infinity of excellent drawings covering costly materials expensively installed and then charge their wealthy clients what they wish-and get away with it. There are other offices that do as few drawings as possible in no time at all, get the work executed by hook or by crook, mostly the latter, and then charge their clients a goodly sum-and also get away with it. The majority of offices not favored as in the first instance and possessing too much conscience to follow the methods of the second group, are in a vise between their conscience and the established schedule of charges which are generally followed. Until architects as a group can revise fees upward, the majority at least must state the basic truth of profit-making, as outgo must be less than income rather than the other way around.

The manner of achieving that goal is a matter of efficient management. Let us say at this point that it will be assumed to be the intention and ideal of the typical office, and indeed the majority, to do fine work, to design objects of utility and art that represent the highest artistic ability the designers are capable of, and to do this without any mental reservations in favor of the mighty dollar. How then may an office hold to these high architectural ideals and make a profit that really is adequate compensation for creative accomplishment and the requisite artistic and practical training? It is not sufficient merely to say efficient management, though that covers the whole ground. This paper will undertake to describe and analyze efficient management in practical terms and to give practical applications of it to many phases of office practice, in the hope that some suggestions will be found of practical value. Many of the things herein mentioned have been proposed, criticized, or condemned before, but the persistent indifference of some to reform warrants repetition; other practices referred to may seem obsolete but some offices appear reluctant

to give up the methods of our grandfathers, and it will do no harm to give them proper attention.

Efficient management of an architectural office is that kind of direction and supervision that eliminates waste and unnecessary expense on one hand; and on the other, produces in a complete and satisfactory form the information when and as required for the smooth and successful construction of a project, and does this within a predetermined cost. The accomplishment of this would begin by observing that on its business side the practice of architecture may be divided into three parts: first, the formulation of general policies; second, organization and methods; and the third, the execution of drawings, specifications, etc. Let us examine the first of these divisions, the foundations of efficient and profitable operation.

It is necessary to have a well chosen and adequate office force to do the work. It goes without saying of course that there should not be a larger personnel than there is work for, but on the other hand it can very clearly be demonstrated that loss can be sustained through an undermanned office. The latter condition frequently makes overtime work necessary. This is often at a higher wage rate and is generally accompanied by a diminution in the amount of work done on account of mental let-up and fatigue, a condition likely to be reflected in the work of the following day, the net result often being loss rather than gain. A common alternative is hiring additional men temporarily. The time required for new draftsmen to learn the ropes and begin to function efficiently is considerable and by that time the emergency may have passed, yet they have been paid wages which the employer did not fully capitalize. This also is an unprofitable proceeding and is to be avoided. Incidentally, an office can acquire a questionable name if it appears to be the regular practice to hire and fire. An adequate force of draftsmen retained just as long as business conditions allow, develops an esprit-decorps and a loyalty which are valuable assets to the employer. From these qualities there flows an increment to his profits which while it cannot be measured is nevertheless definite and sure. Men steadily employed are more interested with the perfectly tangible result of better work.

It should be the general policy to choose men especially qualified for the more important and responsible operations, and then to turn over each branch of the work to the man fitted for it. In other words, organize the men and organize the work. An intelligent draftsman, a job captain, a man with leanings toward engineering work, and others with adequate background who are trained, encouraged, and given the right work to do, soon become specialists. This means more work from them in a given time and work done more efficiently. This will result in savings to the office. Further gains come from having experts available in one's own office, and from having them at hand when needed to meet the questions that pop up constantly during the progress of a job.

An adequate office force saves the employer's time for more valuable things. Criticizing, making studies and sketches, and following the work of others are forms of drafting beyond reproach for the practicing architect, but for him to spend his time tracing or making ordinary details shows that he does not value his time above that of a draftsman. There should be men enough in the office to allow him to spend that time for constructive planning, for making new outside contacts, for meeting people in other than a business atmosphere. The time of the one who runs the office is more valuable than that of any other and should not be wasted. Waste is loss and is also culpable negligence.

The relations with clients should be such that no extra office expenses will be incurred. The first step to make certain of this is to have a clear and definite contract which provides not only for normal matters but also such special contingencies as (1) extra compensation for work arising from an enlargement of the job after the signing of the contract; (2) extra compensation for revising the plans to effect economies; (3) extra compensation for changing the plans when the client alters his ideas; (4) extra compensation for getting separate estimates on different portions of the project and managing it on that basis; and (5) extra compensation for special supervision and selection of furniture, etc. In other words, it is laid down as a tenet of good business and sound policy that an architect cannot give his time and money to a client; he cannot afford gratuitous service any more than other business men if he expects to stay in business. It is further desirable that payments on account of the fee be made with sufficient frequency that the architect will not be forced to borrow money to carry forward his work. Borrowed money means interest to pay; this expense should be avoided by operating on the client's money, a perfectly reasonable procedure and a worthwhile saving.

It should further be a matter of general policy to give client clear and comprehensive information on the following matters: (1) what the architect will undertake to do, not in the legalistic terms of the contract, but in such words that will create a picture in the client's mind of every step necessary for the execution of the project; and (2) by means of sketches, perspectives, etc., the client should be made to understand exactly what will build from the plans. Observance of this procedure will save an infinite amount of bickering which is loss of time to say nothing of tempers, and will obviate many telephone calls, conferences, and letters, which eat up much time and money. No job should be carried forward until the client has furnished all information properly due from him and necessary for the correct planning of the work. This is again to save time, for it should be constantly kept in mind that time is money. Drawings made on the basis of assumptions or the lack of information usually have to be done over again, and this cuts out needlessly just so much from the profits.

Often the most prodigal of his time, the architect himself needs to plan for his greater personal efficiency. This is a matter of almost religious adherence to self-imposed rules and requires adamantine resolutions. He should realize that his time is real money and should be spent only when and where it will bring a proper return. He can best accomplish this by a budget of his time, an arrangement that has been excellently described by Mr. Edwin Bergstrom, reported in the Architectural Forum of July 1928, and in the Proceedings of the Sixty-first Convention of the A.I.A. Time should be regularly allotted to the study of the financial and business condition of the office, particularly that mounting costs may be checked sufficiently early; a regular period should be set aside for constructive planning, looking ahead, and anticipating unfavorable situations, all to avoid costly fluctuations in volume of business and actual losses from other sources. He must give a regular period to the drafting room so that work there will not stall while awaiting his decisions, and will not proceed in a wrong direction to be corrected later at the expense of profits and morale. He should steel himself against the visits of salesmen, allowing them a regular hour and refusing to see them otherwise.

Another matter of general policy which reveals a course of far-reaching benefits is the practice of making the drawings and specifications complete. By this is meant the inclusion in these documents of all information necessary for construction and to carry out the designer's intent. When the plans and specifications are incomplete, lack clearness or complete correspondence with each other, the cost to the architect of executing the work is usually increased by reason of the following additions: (1) it is time-consuming to make the corrections generally necessary when the neglected odds and ends of the plans are taken up for settlement; (2) corrections such as just mentioned mean the loss of the original time put into the work found to be incorrect; (3) a steady stream of questions by phone and mail from the contractors and the architect's superintendent requesting how this or that is to be done consumes hours of office time and interrupts other work. These extra costs can be avoided by having the plans in the proper shape before they go out on the job. If the plans and specifications can be made complete and clear before they go out for estimates, so much the better. There will be fewer questions, which take time to answer, during the estimating period; a better set of estimates will be received making a quicker decision possible;

and there will be fewer arguments afterwards concerning "what I figured on and what your plans showed." Much might be written on the higher professional standards reflected by good plans and specifications but here it is desired to emphasize the ultimate economy of them.

Likewise it is good economic policy to limit the number of contractors estimating on the work and to select only men who are thoroughly competent and in whom you have complete confidence. Naturally a builder chosen from such a group will erect a satisfactory building but it is not sufficiently recognized that from the architect's point of view he is the cheapest man to deal with. He will bother the office with fewer questions and arguments, he will require much less of the superintendent's attention, and he will enable the architect to keep his peace of mind and maintain better relations with the client. All this results in a saving of time, the most costly element in producing work.

In the direction of better organization and methods, an accurate accounting and cost keeping system assumes first importance from being the stepping stone to intelligent planning of all other operations. An accurate cost record is the chart whereon are shown the channels of safe sailing, the rocks and shoals, and the buoys that mark the path of danger. The reader is referred to the recent articles in PENCIL POINTS on "Cost Accounting for Architects" for a discussion of this in detail, and it is of further interest to observe that this has become a live subject for study among several influential architectural groups. Possessing the picture of the financial background of one's practice, it becomes logical to take the next step and budget the costs of incoming jobs. With a system giving the cost of doing work and with a fairly certain knowledge of the size of fee to be expected from a particular commission, the architect has a choice of executing that commission blindly, or utilizing his cost information so that some of the fee may stick to him as his profit. It would seem as if the latter course would be universally followed but as a matter of fact, while it is unanimously preferred, the first course is the one most people usually stumble into. Cost records tell the story of what work has cost, while a budget of costs indicates what it should cost, and if plenty of resolution, firmness, and efficiency are put behind it one might alter the definition to say that it is what it shall cost. A certain amount may be allowed for sketches and studies, another amount for working drawings and specifications, something for details, supervision, and overhead, and rigorous insistence be made that the figures on the cost records substantially coincide with the budget allowances. This procedure might be called a manner of holding on to something you have got, i.e. the client puts a fee in your hand and the budget system provides the only sure means of retaining some of it.

does nothing but eat into the profits. Further economies through correct organization and methods can be made by keeping a job in the hands of a properly selected group of men. If, by contrast, the drawings of a particular project float all around the drafting room with this man working a few days on one detail and then somebody else working on it, and then after everybody has done something on the job a drawing that man number one had done

ing on it, and then after everybody has done something on the job a drawing that man number one had done nothing on is brought to him to finish, while much the same thing is happening to others, it can easily be seen that confusion triumphant will reign. This situation frequently prevails in large offices when an attempt is being made to get a job out quickly and where there is the mistaken notion that draftsmen are like soldiers to be shifted constantly from one point to another as the ever-varying fortunes of battle require. A little reflection will demonstrate that while everyone working under such a system may know something about the job, nobody knows enough to be an authority on it; and out of this come elevations, plans, and sections that do not agree and a justi-

Frequently a commission is awarded on the basis of

sketches showing only the principal elevations, plans, and a few or none of the interiors. If the working drawings are started immediately the draftsmen are

sure to draw much that will have to be done over

again when more precise information is available re-

specting design and construction, or they will make but very halting progress. This is a stage where

money is wasted on a large scale, for it will be re-

membered that every hour of work for no purpose

carries with the loss thus sustained a further financial

wastage in disorganization of the drafting room,

lowered morale, overhead costs that march on, and the

possibility of overtime charges at the end of the job.

How much more sensible it is to work out the project

well in study form and to assemble all needed infor-

mation at the beginning rather than at the end, and

by orderly progress get the job done at less cost,

probably in less time, and certainly with more enthu-

allocate at once the various special phases of it to

qualified men. The problems of construction, heat-

ing and ventilation, electrical work, plumbing, and

mechanical services of all kinds should be investigated

and studied in a general way by those fitted to handle

them at the same time that the drafting room force

is determining partitions, stairs, openings, and heights.

By such methods there will be attained a correlation

of parts that not only produces more satisfactory

working drawings but does it cheaper. Everyone

knows the sad story of being forced to restudy an

elevation because a steel column ruined a scheme of

fenestration, or of being under the necessity of rede-

signing the vaulted ceiling of a lobby because a huge

duct had flattened it out. Correcting such situations

It is also desirable at the beginning of a job to

siasm among the workers.

fied feeling on the part of the draftsmen that they are considered only as cogs of a machine. Both of these results cost the office real money one way or another, again a nick out of profits. If the same squad of men sees a job through from start to finish they will do it more thoroughly, more accurately, more enthusiastically and probably quicker than a greater number of men working the other way, and this not only eliminates loss but effects positive economies.

A drafting room schedule follows naturally the budget system of costs and is one means of making it effective. Where half a dozen jobs or more are under way at once it is necessary that there be some orderly arrangement of time and men in order to make progress and foresee the time of completion. This can be accomplished by a survey at the start of the anticipated amount of work, and the assignment of men to it to complete it within the allotted time. By doing this for each job a schedule will be built up which will expose any conflict of time and men and permit a rearrangement if necessary early enough so that no interruption to orderly progress will occur. When such a schedule has reached an approved form it should be held inviolate save in extreme emergency. Much positive good flows from such a system but here it will only be pointed out that the losses it avoids are certainly worth while. A draftsman pulled off a job after he has become interested in it is a disheartened man and his work suffers in consequence. A schedule makes this a more unlikely occurrence. If an incomplete job is put aside to get out some other set of drawings a considerable momentum is lost, and when work is resumed on the first job it takes time to pick up the threads and find the loose ends-another loss. Here again a drafting room schedule rigidly adhered to would have saved profits another jolt.

In the actual execution of the work, that is, the preparation of drawings, specifications, superintendence and attention to the multitude of contracts, estimates, letters, questions and arguments of all sorts, many of the advantages of general policy and organization herein advocated will appear most conspicuously, and will percolate from the top to the bottom of the office to lighten and simplify routine operations. In addition it is possible to lay one's finger directly on many of the minor details of office practice and suggest short cuts, more efficient methods, and better ways of doing familiar things. There is a certain inertia to change encountered at this point because the habits of a lifetime are hard to change and because there is a very common inclination to scoff at making small savings. If the question lies between having a drawing done in a way that one is used to doing it, or in another way that accomplishes the same result in less time, even the most set individual would choose the latter method if he had to put his hand in his pocket at that precise time to pay

for the work because the difference between ten dollars, for example, and nine dollars would be visible and very real. It is no less real because the payment is postponed to the end of the week and is included in the payment for other work. Also if the efficiency of a draftsman can be increased by one dollar per working day through better methods, that will equal about \$300 per year, which for only ten men amounts to a sum which everybody would consider as well worth having. It may be thought small business to urge scrutiny of petty cash, telephone calls, postage, and travelling expense and there is no intention to suggest false economies, but it is sensible to eliminate the waste. The accumulated amount of this is frequently amazing. A fortune was recently bequeathed to a large university that had been gained a fraction of a cent at a time from pennies dropped in slot machines. Saving small sums is not small business but on the contrary is one of the characteristics of big business. In brief form some of these short cuts or time and money savers will be described.

Make details as often as possible at $1\frac{1}{2}$ " or 3" to the foot rather than full size. This saves time, paper, and blueprint costs.

Almost never draw ornament at full size. A capable modeller needs only dimensions and a scale drawing that clearly expresses your intentions. Any-thing beyond this is usually a gross waste of time, materials, and blueprinting.

Save time by using the standard A.I.A. documents. These are the product of cumulative experience, tried and tested, and are much cheaper than any office-made product for the average job.

Save time and avoid errors by writing specifications from a check list and a dummy, instead of using an old specification interlined, crossed out and rewritten until it looks like a medieval manuscript and is hardly more understandable.

Except in unusual cases all drawings that will be blueprinted but a few times should be made with pencil on paper. This saves the cost of tracing cloth, no small item, and saves a great deal of time, and the pencil drawing serves the purpose just as well.

Save time and avoid omissions and errors by scheduling finishes and materials for various rooms. A score of specification pages can be compressed into a schedule, and tell the story better.

Save time by avoiding duplication of information on plans and specifications.

If the office follows the policy of dealing only with honest and competent contractors the specifications can be much abridged by the omission of directions how to mix plaster, the size of nails to be used, the ingredients of putty, and similar things to which no one pays any attention. This course saves not only the specification writer's time but also that of everyone who handles them.

Within a reasonable radius save time by travelling

by automobile. The hours spent in waiting for trains, busses, etc. are entirely non-productive.

Save money by fitting the job to the man. This works two ways: a complicated detail will be an expensive one if given to an inexperienced man to do, and a simple drawing will be a waste of an expensive man's time. There is a place in every office for both, but the careless man is a burden wherever he is.

Save time and cut out waste by discouraging draftsmen's conferences. It is a rare problem that requires the presence of four or five men around one drawing.

Write letters rather than make a habit of long distance telephone calls, but telephone rather than write in the local area.

Good lettering is an art which for its successful practice requires skill, painstaking labor, and much time. All this is fully justified for typography, inscriptions, and the like, but by no stretch of the imagination can carefully lettered titles on working drawings find any justification, economic, architectural, or otherwise. The lettering of long titles giving the name of the building, its location, the architect, and other information repeated through a set of drawings is a monumental waste of time, and equivalent to throwing so much money out the window. A rubber stamp made for each job, some heavy black ink, and the office boy can title more drawings in fifteen minutes than the best draftsman can do in a day, and it will be done in a more businesslike fashion. Minor titles and miscellaneous notes must of course be done by hand and should be done neatly, but Roman, shaded, or any other kind of lettering that takes time to do adds not one whit to the success of the design and only diminishes the profits. The architect who wants to "prettify" his plans would do better to spend

the money, if he really can afford it, on studying the building further or giving his draftsmen a raise.

Perhaps one of the most potent means of gaining efficiency in the drafting room is through having a loyal force of men. In no business or profession are employees of a higher intellectual standard than in architecture, and there is no group of men more responsive to a square deal and to sympathetic understanding than architectural draftsmen. They and we are draftsmen and students today, but are the architects of tomorrow. When a draftsman throws his creative instinct into a piece of work his personality has entered into it. This should be recognized and he should be given credit for it. If a man is pulled off a drawing before he has had a reasonable opportunity his interest is shattered, and the office is the loser. On the contrary if it is explained in the right way that time is money, and if the man's interest is stimulated and he is encouraged, if he is approached and talked to as an equal-a future practitioner, the response will be immediate and most agreeable. When possible an opportunity should be given for the men to see the building for which they made the Many a relatively obscure man has a drawings. secret pride in some piece of detail which he worked out, and this should be gratified. The head of the office and the responsible ones under him should lend their support and give every encouragement to the creation of a congenial atmosphere in the office and to social activities that the men may favor. These are some of the things which will develop and build up that sense of loyalty that makes men glad to work hard and to take a personal interest in their work. Let the employer pay such men well and he will find that profits will be increased rather than diminished.



SOME EXAMPLES OF ANCIENT STONEWORK-SEE TEXT OPPOSITE

OLD LORE IN THE NEW ART

By Paul W. Copeland

IN THIS GLORIOUS age of freedom when the stifling traditions of former generations are relegated to the limbo of useless shibboleths and our artistic souls find fuller and finer mediums of expression in "new" lines, forms, and surfaces, the glorious results are frequently startling and often painful.

We are prone to pride ourselves on our new and snappy methods of treating our stone or brick wall surface; we honor a dozen quarries with the privilege of contributing as many blatant colors to our slate roof; we frantically mix the test tubes for more

luscious shades to tint our stucco and mortar and the brilliant kaleidoscope that results is a true expression of our *new* freedom.

But is it new, or merely a warped atavism that has crept into our architectural life and, like a bright, multicolored lichen, gives a false surface color to an old stone? Are we not using old forms so long forgotten that they now seem the glorious children of an untrammeled brain? In our seeking after the new and bizarre are we not merely misusing the accumulated store of age-old impressions and in our ingenuousness calling ourselves creators when we are merely questionably



Cyclopic blocks of the prehistoric foundation of temple area—Baalbek. Note figure of man.

clever adaptors with so many mediums readily at hand as to tempt us to regrettable excesses?

About us are the latest expressions of our freedom; a school whose brick walls glare forth the bold pattern and faithful coloring of a cheap Navajo rug; a church whose stonework is cleverly enriched with courses of bright brick, tile, and slate, while another, with the joyous freedom born of veneering, discards all those archaic principles of bonding and sports a promiscuous jointing than which there is no than whicher. An office building affords the untrammeled spirit a wonderful opportunity for displaying, story upon story, all the new cunning of the stone dresser's art and even the meanest "taxpayer" blooms more brilliantly than any our new methods are really not so new and that our boasted innovations and adaptations are so poorly handled as to offend more often than please.

If, as is said, there are sermons in stones, perhaps some of those in the accompanying photographs will sustain my text without my feeble commentary. But it may be of interest to consider a few of them such as the megolithic blocks of Baalbek, which, on the score of size alone, deserve their individuality.

It must have been giants who quarried those huge stones and built the first altar at the sacred spring of Ras-el-Ain. Groping for a fuller expression of their numenistic worship, the primitive plainsmen quarried these huge stones, some of them 13 by 14 by 70 feet,

exotic orchid under its lavish coats of dyed stucco, appliquéd tile and tinted concrete.

Have the smoke-dimmed skies of our great industrial age so robbed the sun of its life-giving rays that a simple brick or stucco wall seems to the beholder a thing of death, devoid of beauty? Can there be no charm in large surfaces unadorned by the cosmetics of today? Again, are our new methods of design and our combinations of materials so exclusively a product of our own self-important age?

Asking myself these questions on returning from

many months residence in the Near East, I found it interesting to compare my impressions of the new age with the now quiet achievements of the old. Is it all so new? Are we of the architectural and building profession giving to a long expectant world the bigger and better things of revolutionary progress? Memory pictures, gleaned from rambles through the Syrian hills, cause me to doubt much of our vaunted progress and look wistfully for some indication of that restraint and ageless sense of the eternal congruities of the East in whose name we commit our gorgeous crimes. It is my humble opinion that



Mosaic-rubble paving in Beirut.

and raised them into place 20 feet above the plain as a huge testimonial to the power of Baal. And among those dim giants were mighty masons for they cut and bedded those stones with nice precision. The scale is far too big for us of today, but we might well consider the evident skill and obvious pride in fine craftsmanship. War and earthquake have banded together to raze the superstructures but the foundation stones stand firm and true, a vivid contrast to the heterogeneous wall above, product of time's exigencies, that might well inspire some of our modern builders to do their best at "something different."

Roman masons of the second century of our era had lost much of their chaste skill in carving, but evidently they took an honest delight in the beauty of a well-laid wall of simple utility. The *cella* wall of the temple of Bacchus, now lacking the play of light and shadow once offered by the peristyle, still boasts an ornate dignity of line, joint, and surface beauty of delicate natural tints that is a pleasure to behold. Surprising as it may seem, you do not miss the lack of inserts and appliqués too often deemed necessary.

But poor workmanship and lack of imagination are

not peculiar to our own age, for a Roman aqueduct near Beirut, built of roughly squared ashlar poorly bonded, has paid for the shoddy construction with its life and stands a broken but eloquent memorial to the cheapskate builder. We can, however, be thankful that the masons didn't think it necessary to jazz up the uninteresting field with a snappy selection of colored marble inserts and a few atrocious medallions.

The exigencies of war often gave a very literal interpretation to the prevailing creed, "Use the materials at hand." The Crusaders, particularly, followed this precept in enlarging and repairing their fortifications and we find the adjacent Roman villas considered a handy quarry for the necessary construction. The sea castle at Sidon affords an interesting study of just what can be done with a few marble columns set into a wall of quarry-faced, drafted blocks. The result is more bizarre than charming. But think of the possibilities.

However, all Crusader work was not so crude and hasty. Indeed, it was a continual source of surprise that those mediæval builders exercised such care and skill as are evident in many of their castles. It is the more surprising when you stop to remember that they were merely armies of conquest ever on the march. Perhaps the optimism of religious fervor made them believe they were building a permanent kingdom of God—dreams that a few years of guerilla warfare shattered forever.

The well-preserved fortress of Husu-el-Ekrad shows some interesting varieties of random ashlar quoined with dressed blocks and a wall curiously relieved by superimposed arches. Try that on the client. It's interesting if not actually new.

The native limestone of the Syrian hills is easily worked and has the surface texture of travertine. In color it is basically ochre, but shades from light yellow



Roman aqueduct near Beirut.

[782]

to russet and old rose. Add to that a patina hard won from the caressing hands of Time, and I have yet to see a native wall displeasing to the eye in spite of the fact that much of it is cut and bonded in the manner now considered disgustingly orthodox. War and earthquake are adequate excuse for the vagaries of work centuries old. Today we all too frequently lack both the excuse of necessity and the skill of adaption sufficient to achieve the inherent dignity of genuine scars, though we all too often try.

And while speaking of stonework one might regard the lowly paving, a simple field of small bedded cobbles bound and banded by dressed blocks. A simple paving yet colorful as a rug when presenting a newly washed face to the shining sun. And in the courtyard of the house it takes on added delights, sporting intricate arabesques worked out in darker stones. A distinguished contemporary recently "invented" this age-old mosaic rubble.

Today we are blessed with the opportunity of a full line of oriental stucco colors. Shades of Harunal-Rashid, what have we here! The magic pots of modern chemistry put to shame the simple whitewash with blue or rose-pink tints, that forms a pleasing bit of contrast to the vast mass of ochre stone and sundried brick. Like the brown moth made beautiful by a few dots of vivid color, so the white and ochre mass of an oriental city quickens and becomes more interesting for the occasional splash of soft blue or rose. But where in the far flung canvas of nature is the precedent for the hideous, harsh palettes that paint our village streets? Too frequently they present a line of houses that aside from the incongruities of design, dazzle the eyes with every color and shade, each screaming discord with its neighbor; each one trying to outbid the other in notoriety; and together



Sea castle of Sidon-eccentric but expedient.



Wall of the Temple of Bacchus, Baalbek.

effectively killing all attempts at harmony and collective charm. Again our exuberance has dulled all sense of proportion, all delicacy of taste. Perhaps we might take a hint or two from the fettered soulless Past.

"We are undoubtedly privileged to be living in this glorious period of progress, standing as we do in the midst of glorious achievement and gazing resolutely before us to a future of tremendous possibilities, offering those among us brave enough to strike off the shackles of outworn traditions, the opportunity of creating monuments that shall stand through the ages mute testimony to our fearless souls and awe the gaze of countless millions." Cribbed verbatim from the speech of the Honorable Flint Stoneage delivered at the charter banquet of the Neolithic Architectural League, this much I quote because it still rings true to the times.

Let us by all means strive for improvement and progress, but as we stride along the new path of greater achievement let us give a passing thought to the modest stones beneath our feet; let us choose our way with fine discrimination; and to our banner flaunting "Excelsior" let us add the admonition "festina lente."

Note:—The photographs used to illustrate this article were taken by Dean. The author of the article is a Longview, Washington, architect.

[783]

PENCIL POINTS



FROM FULL-SIZE AND SCALE DETAILS OF A STAIRWAY—DWIGHT JAMES BAUM, ARCHITECT (See text opposite)

[784]

SMALL HOUSE PROBLEMS

By Eugene Clute

DRAFTING ROOM PROBLEMS that are widely varied are presented by the planning, equipment and detailing of small houses,-problems that vary more, probably, than those met with in making the drawings for buildings of any other kind. This is due to the fact that in addition to the variations which affect the designing of all buildings - arising from the progressive changes that are always taking place in the practical requirements and from the constant introduction of improved equipment and of new manufactured materials-the small house is strongly influenced by the fashion of the moment and reflects the manner of life and the personal traits and tastes of the people for whom it is designed. This personal element is the biggest factor in small house design. It plays an important part, of course, in the designing of the larger residences, but the small house is more intimate and, consequently, should be more personal in character. For this reason it is the kind of building in which variety is more highly desirable, but it is the kind of building in which due uniformity has been practiced most often, through the efforts of speculative builders. The prevalence of houses that are alike or that differ but little in the less densely populated sections of any city and in almost any suburban community is ample evidence of this. People accept these houses because they believe that they cannot afford houses that have individuality, not because they are

satisfied with this uniformity and with the rough approximation of their ideals which these buildings represent. This is regrettable, for as a matter of fact a house that is not like the next one or the third one down the street need cost the householder but little if any more. The more intelligent speculative builders of any but the lowest priced houses have recognized the value of individuality in small house design and have capitalized it. The small house deserves the best design that the architect can give it.

It is true that adopting the most economical plan may produce a simple square house, but even a house of this shape need not be box like. There are thousands of houses of this shape in this country that have individuality and charm and that were designed by various architects. One such house is shown in the drawing on this page. Its only architectural adornment is a well detailed entrance. Most of its character is produced by the consistent and tasteful handling of the necessary parts of the building. The pitch of the roof, the treatment of the eaves, and the spacing of the windows have much to do with this. The plain boarding provides an excellent foil for the porch detail and helps to give the building bigness of scale. The ample size of the windows helps in this respect. The principal story is given the greater scale by the simple expedient of making its windows three panes wide by five panes high while the windows in the more intimate



ELEVATION OF A RESIDENCE IN WOOD BY DWIGHT JAMES BAUM, ARCHITECT

[785]

PENCIL POINTS



FROM FULL-SIZE AND SCALE DETAILS OF A BAY WINDOW-DWIGHT JAMES BAUM, ARCHITECT

SMALL HOUSE PROBLEMS

rooms above are the length of one pane of glass shorter. Glass of the same size throughout makes for consistency of appearance and provides a measure of scale.

There are many excellent doorways of the type shown on page 789, and there are many ugly misinterpretations. Such a doorway is enough to enrich a small house and together with good general design, to place it in the class of admirable homes, and that without regard for cost.

Bay windows are a good feature and a high percentage of small houses have at least one bay window. But there are bay windows and bay windows. A good one that is simple is shown on page 786.

Indoors the same thing holds true, while there are hundreds of inexpensive stairs that are well designed, there are thousands that are clumsily and stupidly designed. That cost need have nothing to do with this is demonstrated by the design on page 784. can be expected to please everyone. People usually have very definite likes and dislikes in the matter of house design. They choose the one they like best from the several modes that happen to be in favor at the time. It may be a house of Colonial, Spanish, Italian or early English type, but the man or woman who wants the one cannot be satisfied with any of the others. For this reason the architect needs to work freely in a variety of styles and to put aside his own personal preferences in style in deference to his client's taste.

Then, too, there is a constant desire for something new in house design on the part of a large section of the public interested in the home building problem, meaning something old that has not been in favor in recent years interpreted in a new way. Just now there are signs of interest in the style of the smaller French houses of rough stone. This picturesque and simple type of house lends itself well to adaptation



PLANS OF A RESIDENCE BY DWIGHT JAMES BAUM, ARCHITECT

One might go on almost indefinitely showing examples of excellent simple detail, but most builders of small houses seem to be unaware of its existence.

Every one connected with architectural work can render a service by popularizing good details, leading more home builders to appreciate their beauty and to concentrate upon one feature that is admirably detailed—to have little, if need be, but to have that little, good.

Since standardized detail of excellent character prepared from special designs by some of the ablest architects is now available for use wherever minimum cost is an important consideration, there is no need for bad or uninteresting detail. Many architects are securing admirable results by the proper use of this detail, which is manufactured at a less cost, naturally, than special detail. It effects a saving also through relieving the architect of the detailing of these many cases.

Since people differ in their tastes just as they differ in personality, no one style of architectural design

in the treatments of small houses in this country. An interesting example is the design shown by the elevation on page 793. It is being built at Fieldston, in the upper part of New York City, where the ground is rocky and very irregular. It shows an ingenious use of stucco on frame construction in combination with a stone chimney. The stucco is worked to produce the effect of stonework about the windows and at the corners of the wing and it is blended with the stone of the chimney in a way that ties the whole surface treatment together in a quaint rustic effect. The roof is of slates laid irregularly, like the old roofs in Normandy, and it has a lead ridge. The ridges and eaves have quaint curves that relieve the design of any sense of bareness. Details of the eaves are shown in the drawing on page 788.

The blending of materials in a clever way is shown in the detail of a portion of another house at Fieldston reproduced on page 792. Here the stonework of the arches is varied by the introduction of tile slabs laid



FROM FULL-SIZE AND SCALE DETAILS OF CORNICE FOR A RESIDENCE BY DWIGHT JAMES BAUM, ARCHITECT







PLANS OF TWO SMALL HOUSES BY DWIGHT JAMES BAUM, ARCHITECT

[790]



PLANS OF A RESIDENCE BY DWIGHT JAMES BAUM, ARCHITECT.

together with cement mortar between them in place of stones at irregular intervals. This carries the color and material of the roof into the lower part of the building, adding to the sense of unity of the whole building. It will be noted that at the junction between the stonework and the stucco on frame construction that is above it the stucco is indented in such a way as to prevent any sharp line of demarcation.

Whatever historic style character a small house may have is most often due largely if not entirely to its line in elevation, its surface treatment and its detail; the plan is usually one that might be treated in almost any of the prevailing modes. This is natural enough, for the plan has to accommodate present day methods of life and to be studied for economy and convenience.

At the top of this page are plans of the house to which the doorway illustrated on page 789 belongs.

It is a compact little house. The fact that the hall extends all the way through gives a sense of greater space which is increased by the planning of the wide doorways to the living room and dining room opposite to each other. There is an inside stairway to the basement placed conveniently close to the rear entrance. The inclusion of the solarium within the body of the house tends to keep up the dignity and scale that are often reduced by appendages on a small house. Even in so small a house a pantry with sink for dish-washing is highly desirable because it confines the odors of cooking to the kitchen and the special sink saves enough money through reducing the breakage of china to amount to considerable item. There seems to be nothing so satisfactory for this purpose as a sink of metal that has a certain amount of give. There must be cupboards somewhere and it seems better to concentrate them and form such a pantry. The ample size



PLANS OF A RESIDENCE BY DWIGHT JAMES BAUM, ARCHITECT







[793]

of the coat closet opening from the hall is another good minor point.

Plans of another little house that is of the square type are shown on page 787. It has a cozy breakfast room. Little features like this appeal to very many home builders and home buyers.

A house with the garage built in is shown in the plans at the foot of page 797. The extension of one of the bedrooms over the garage and the introduction of a porch in the second story at this point effectively fits this feature into the scheme.

A house that, for so small a building, is notable for the size of its living room, and for the admirable way in which the tendency of a sleeping porch to become an excrescence upon the house has been avoided, is shown on page 790 at the left. If the general public were better acquainted with the ability of the architects to solve their special problems in such ways as this there would be many more homes of individuality.

One of the elements of small house design that requires special attention in the drafting room is the equipment of the small house. The comfort of the owner depends upon this for almost as much as upon the plan and the plan is to a considerable extent in-

fluenced by the equipment. No matter how charming a house may be in design and how good it may be in plan, the owner is sure to be disappointed in his house and his architect if the house is not as up-to-date and convenient in equipment as the houses of any of his neighbors or friends. Improvements in equipment are made so rapidly that it is only by systematically giving attention to the announcements of manufacturers and familiarizing himself with the improvements that the architect or draftsman can keep himself abreast of There is always the necessity for the the times. exercise of good judgment in this matter in order that one may neither lag behind nor recommend devices that may promise more than they are able to perform. The best way seems to be to study the claims made for each new form of equipment and its record of performance, then to consider its suitability to each special case. Conveniences in plan and equipment and interestingly fresh design features, even though the prototypes of the latter may be centuries old, appeal to most home builders more surely than the excellence of design which the architect should always strive to secure for his own satisfaction and for the benefit of the more discriminating members of the public.



"SIRACUSA"-WATER COLOR DRAWING BY ROLAND A. WANK OF NEW YORK

[794]

PENCIL POINTS SERIES of COLOR PLATES

Hughson Hawley, whose work is the subject of the leading article of this issue, may perhaps with justice be called the Dean of architectural renderers in America. His work has been familiar to architects of several generations for he has made over eleven thousand renderings during the last fortyeight years. This plate shows a drawing of a familiar scene which has been gazed upon by thousands of American architectural students in Paris. The original measured 24" x 19" and was painted in the studio from notes taken directly from the subject.



CHURCH OF SAINT GERMAIN DES PRES, PARIS WATER COLOR PAINTING BY HUGHSON HAWLEY


GHENT CATHEDRAL AND BELFRY, GHENT, BELGIUM WATER COLOR PAINTING BY HUGHSON HAWLEY

PENCIL POINTS SERIES of COLOR PLATES

This water color painting by Hughson Hawley, like its companion in this issue, was done in the studio from notes made on the scene direct from nature. It is quite large, the original measuring 24" x 36". In his painting Mr. Hawley employs transparent water colors for the most part but uses gouache where special effects or highlights are required, as on the façade of the church of St. Germain des Prés. The skies are invariably put in wet and finished in one wash. Note in this drawing how the numerous pointed features against the sky are softened to keep them from being too prominent.



FROM A RENDERING BY BERTRAM GROSVENOR GOODHUE STUDY FOR THE CATHEDRAL OF MARYLAND AT BALTIMORE PENCIL POINTS

PLATE XLV

VOLUME IX

NUMBER 12

We show here a hitherto unpublished drawing by that master, Bertram Grosvenor Goodhue. The original was done in pencil on gray paper. A little white water color was used in the sky and for highlights.



RENAISSANCE ARCHITECTURE AND ORNAMENT IN SPAIN

A PLATE FROM THE WORK BY ANDREW N. PRENTICE

PENCIL POINTS

PLATE XLVI

VOLUME IX

NUMBER 12

"These details are taken from the half ruined 'Casa Solar,' once the magnificent country residence of the Zunigas family. The entrance portal is very grand, and, together with the large patio and staircase, dates from about 1500. The 'artesonado' roofs to the apartments on the principal floor although much ruined are superb, and among the finest in Spain. The reception hall, from which the details on these two plates are taken, measures seventy-two feet by twenty-three feet, and has a fireplace and minstrels' gallery at one end. The deeply moulded shutters and doors are very effective.

"This is one of the few country palaces to be found in Spain, and its patio, staircase, and reception halls are well worth the architect's special attention. Penaranda may be reached from Silos by a six hours' ride."

A. N. PRENTICE



STUDY FOR FIGURES FOR SANCTUARY WALL, BY FRANK H. SCHWARZ SACRED HEART CONVENT, NEWTON CENTER, MASS.—MAGINNIS AND WALSH, ARCHITECTS

PENCIL POINTS

PLATE XLVII

VOLUME IX

NUMBER 12

This drawing was made to study the figures of two angels which were to be part of a composition for the sanctuary wall of the Sacred Heart Convent at Newton Center, Mass. The figures were to be placed on either side of a central motive in the composition, not close together as they appear here. In the original study, drawn on thin paper in bistre and sanguine with touches of Chinese white, the figures were about three and a half feet high or half the size finally intended. The sanguine was used for the heads, hands, arms and feet.



PLATE XLVIII

VOLUME IX

NUMBER 12

This plate shows another of the sensitively drawn small lithographs for which the artist is becoming increasingly well known. The original was only very slightly larger than our reproduction so that the technique is very clearly shown.

WHITTLINGS

HOWARD H. HAHN,

Chicago architect, suggests that the skyscraper is not altogether a friend of society:

"In the latter part of the last century a stock adjective used by the press in describing a new building of importance was 'imposing.' After the skyscraper arrived less towering structures were 'interesting,' 'expressive,' or like terms borrowed from house design salesmanship patter.

"An architect of the nineties, just finishing a public building in a small town, when told by a prominent citizen that it was an 'imposing structure' replied: 'I did not intend it to be so.'

"To characterize the bristling and out-scaled commercial buildings of today the word might be revived in its derivative sense. Still, human progress has a way of negating the effects of its impositious ecstasies and, lately, man has learned to fly. Maybe the sky can be reclaimed."

ALBERT STERNER,

Noted artist, in a letter to the New York World in reply to a statement by another correspondent that the advertising pages of our periodicals are the art galleries of the nation and a great educational and cultural force, makes a distinction:

".... While the intelligent use of pictorial matter in advertising is perfectly legitimate and purposeful and offers, we know, large remuneration to those occupied in producing it, I am positive that the mass of stupid, distorted clothes manikins or the pseudo-decorative trash made to announce automobiles, meat sauces or ladies' brassières and suspenders is neither culture nor education....

"There is no such thing as modern art. There is artand there is advertising."

VERNON BLAKE,

English artist, in his book, "The Art and Craft of Drawing," gives some advice to the freehand draftsman:

"Have the courage to produce many bad drawings in order that you may all the more quickly produce good ones. Do not hesitate, do not spend hours over one drawing; work freely and gladly, not cast down by repeated failure; you will find your work slowly improves, as the accuracy of your vision improves by repeated exercise. It is the state of this accuracy that should be your only care, not the appearance of the drawing, except in so far as its first lines afford a measure of that accuracy that should become increasingly and rapidly attained. Learning to draw is largely learning to intensify one's powers of observation, learning to condense into the space of one brief glance an understanding of a multiple series of correlated facts."

JOHN COTTON DANA,

Director of the Newark Museum and champion of the application of art to industry, in a recent statement says:

"Go to the bathroom and the kitchen, young man! Study the beautiful lines of American bathtubs, plumbing fixtures, and the modern electrical refrigerators, if you want to see beauty wedded to utility."

NEAL O'HARA,

Prominent humorist and conductor of a syndicated newspaper column entitled "Telling the World," gives an architectural slant to one phase of the recent political disturbance:

"Tammany Hall is a fifty-two-story skyscraper right in the heart of the New York slum district. On the fourth floor is a pet tiger that is always licking its chops. The east side butchers, who fear Tammany, supply these chops free. If Smith is elected he is going to have this atrocious skyscraper sawed up in sections and then put together again on the White House roof. This will make the Capitol and Lincoln's Memorial and all the other pretty buildings look like a sucker, and if you want to preserve the architectural beauty of Washington you have got to vote for Hoover."

FREDERIC C. HIRONS,

Eminent New York architect, in a statement given to the New York American for its special architectural page, strikes a blow for the profession:

"Briefly summarized, the function of the architect combines that of counsellor, artist and agent. The spectacle of a builder proceeding with an operation of any importance without professional advice and supervision is very like that of a man going into court without a lawyer. Indeed there is the same measure of feasibility in a man devoid of artistic talent attempting to paint his own portrait as there is in a man acting as his own architect. Instances of a client being saved many thousands of dollars through a single act of discernment on the part of an architect are too well known to need mention here."

DR. J. HORACE MCFARLAND,

Chairman of the Art Commission of Pennsylvania, in a recent speech on "Beauty in Bridges" before the convention of the American Institute of Steel Construction, protests against the destruction of national beauty:

"If the author of our national hymn had lived in these days, he would hardly have written about the swelling of rapture in the hearts of those who love the 'rocks and rills,' the 'woods and templed hills' of America, because some of these rocks have Coca Cola signs painted on them, too many of these rills have been used as dumps by the towns through which they pass, much of the woods have been cut down, the templed hills are templed in a fashion not in the line of beauty."

MARCIA MEAD,

Well known feminine member of the A.I.A, in "An Outline of Careers for Women," a new book published by Doubleday, Doran and Co., writes of woman's influence on architecture:

"Without the influence of woman, architecture will lack the warmth, breathing beauty and comfortable proportions that she has it in her nature to contribute. . . . I have faith to believe that history will eventually reveal, by the new and human quality in architectural development, woman's advent into the field."

AN EXPERIMENT IN ARCHITECTURAL TEACHING

By Seward Hume Rathbun

EDITOR'S NOTE:—Seward Hume Rathbun was graduated from Harvard, having specialized in Architecture, in 1908. He took his M.A. degree, also from Harvard, in 1909, after which he spent a year and a half in Europe, travelling, studying and painting. On his return to this country he entered the office of Peabody and Stearns of Boston, Mass., with whom he spent several years, both as a draftsman and as supervising architect. Since that time he has devoted himself to writing and to teaching. The illustrations are from drawings made by his students.

SOME OF OUR critics tell us, hopefully, that in regard to art, the emphasis now has shifted to the individual artist reacting on his environment. This is indubitably true, except for the word "shifted." Iktinus, likely, made some similar remark to Perikles when they discussed the project for the Parthenon. Of course, everybody reacts on everyone, and everything, he meets,—and always has. Sometimes a gleam of stronger personality flickers over a group, or even over a generation, and so reacts on its environment to greater purpose. There is nothing new in the theory of individuality.

But there seems to be a difference between the past, as we can read it, and ourselves. This appears in the increasing variety of interest which we, as individuals, extract from life, and put back into art. It seems to be almost the substitution of variety of interest for ideal. In the past, man thought as his brother thought -or went to perdition. He produced great architecture because he and his brothers reacted on their environment in appreciably the same direction, and so built up endeavor to a climax. We are free; we think as we please; we produce as we please; and we proclaim a virtue in the individuality of our results. Granted the virtue be there. The things we have to face today are that the architect has become self-conscious of the variety of his individuality and attaches considerable importance to it; that personality is dominating style, even in the building up of style; that the surface of architectural growth depends on the development of personality; that the problem for the architectural school is to create an



DORIC CAPITAL FROM THE PARTHENON-DRAWN BY JAMES L. BATES-1928

[804]

AN EXPERIMENT IN ARCHITECTURAL TEACHING

adequate foundation on which personality can grow.

It is a curiously contradictory fact in the modern welter of individuality, that much of our architectural training clings to the traditions of the past, founds its precepts on the perpetuation of historic style, and operates to reduce personality to a common level. It teaches the student how to draw, and what to draw. Drawing, too often, is the emphasis, where thinking is the need. The accomplished fact, pictured in books, too often is the suggested inspiration. Teach a man what to think from within himself,

before he draws at all, and the architect is made. The rest could be left to hirelings.

This is a large exordium for a small subject, but any attempt at education, any experiment in tampering with inexperienced minds, has no excuse except in the most thoughtful premise.

The school under discussion is an isolated experiment, dealing with largely immature minds, making no pretence at influence; but it has produced results, and is capable of producing greater ones. It is merely the architectural department of a public high school, the Central High School, at Washing-ton, D. C. It has developed, for ten years, the ideas of a single teacher, who is convinced that much can be accomplished in a preliminary school, and that all the funda-



DESIGNED AND DRAWN BY ROBERT M. CHAPIN, JR.-1928

mentals of architectural design lie in the adaptation of form to structural purpose. In spite of the inevitable echoes of environment in the results, no problem in this school has ever been undertaken from the point of view of style. There has been no premise that this, or that, solution should be English, or French, or Spanish, should be Gothic, or Classic; no pupil has been sent to a book with the idea that there he could find an answer ready-made to fit his purpose. Beyond that, there has been nothing revolutionary in the work. The bizarre is never tolerated.

Of course there is continual compromise that would not have excuse in the education of older men.

The student, as he develops in a preparatory school, is admittedly better fitted to perfect his craftsmanship than his philosophy; to realize principles rather than to create under their inspiration. Although there is much latitude in the amount of work attempted, a typical student begins, in his freshman year, with the usual mechanical drawing course. It is possible, then, for him to acquire some skill of hand, while it is rare that at fourteen a boy is mature enough to grasp even the beginnings of the philosophy of an art, and be taught to think. This is compromise, but it is also

common sense. It is compromise, not conflict, so long as the training of the hand does not induce the idea of copy. The early plates teach some necessary facts and the power to use instruments. That is all.

And yet, no matter how strongly it is stressed that the power to think creatively and logically-some of us would say individually -is the essential goal of the architect, as distinguished from the draftsman, it would be absurd even to suggest that the power of the architect is not increased as he achieves freedom of expression The upon paper. drawing is the intermediary between his mind and the final result in brick and stone; it is more truly his from his own hand than from another's. In the second year, two things are sought

for; an increased freedom of statement, and the beginning of ideas. The student is grounded in perspective and in shadows, he is encouraged to think in pictures, he is given the beginnings of wash and color. All these things continue, while the stressing of ideas emerges and is made predominant. It begins with an analysis of simple mouldings and with problems in their functional composition. The fact of style is not presented; any shape which meets the requirements of structure is combined with any other, so long as form and proportion remain harmonious. Such paper analysis is followed by the measurement and full-size drawing of actual examples of mould-



FREE HAND SKETCH IN PEN AND WASH BY ROBERT M. CHAPIN DOOR OF THE SCHOOL—1927

ings, with-most important of all-their criticism and correction to meet the principles which have been stated.

This is the method which is followed, but there is no attempt to isolate the student from historical knowledge. Books are freely open to him and, although the traditional orders, as such, have been degraded from their divinity, the last preliminary plate is a careful and rendered presentation of the Greek Doric. This is analyzed to bring out the perfect adaptation of form to use, the true relationship between thought and stone. It is never employed as part of the student's vocabulary in the solution of his problems.

But it is necessary that there be a vocabulary. An attempt, even in mature practice, to throw aside all knowledge of past forms would result in poverty of form, if it did not bring absurdity. A high school student under such conditions, even in the more simple problems given him, would be confronted by a wall that would block all his progress. Here again is compromise, if it be so when we consider that all architectural growth has been gradual

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adaptation from one form to another. If a student desires to express support, or any other function, in one of his solutions, he is free to use any of the recognized combinations he may choose, so long as it meets the needs, or he is free to attempt a conception of his own. The latter is encouraged and criticized as constructively as possible. Crudity of result is condoned in the face of thought and logic, particularly when the emphasis of thought is directed toward the present phases of accomplishment which seem to indicate the future. Where the factors of design are inherent in the constructive mass itself, historic form ceases to be important, compromise is less, the individual personality more free. This is particularly emphasized.

If there has been success, it has grown from this point of view, but there have been added factors which have produced community of feeling and enthusiasm among the students. All who take this work, do so from their own election. They are allowed, so far as possible, the freedom of an office drafting force, they are encouraged to interchange ideas. They have been taken on frequent trips, both to study and to sketch in water color. They have a club, The Arc, now almost ten years old, admission to which results upon attainment and which has been an active factor in bettering the environment of the school. Its members designed and detailed the elaborate paneling in the library of the building, and they not only designed. but executed, the decorations for the lunch room and the armory. Thus the academic problem has received tangibility and the picture in the student's mind has become reality. Graduates of this organization have been scattered among the architectural schools in the larger colleges, and have always held their own. They have been very fortunate in attaining drafting positions when it has not been possible for them to go on to college. So far as they report, year after year-and the majority of them do sothey have retained the convictions of their early training because, as they say quite frankly, it helps them "to hold their jobs."

There is no need to detail the particulars of instruction; outwardly, these do not differ from any others. The attempt has always been to raise the high school level toward the college, to exert pressure in those directions toward which the individual student was ready to advance. From the teacher's point of view, the chief problem, and one of the greatest interests, has been to keep the layout of the course so flexible that, beyond the fundamentals, each personality has had scope to develop its independence, to learn to express itself, to discover within itself, at least, if there were anything it wanted to express.

There has been no attempt to develop architects from all these students, and no desire to create mere draftsmen from any of them. Where the potential architect was present, he has been encouraged, but where ability or interest did not reach so far as that, it has been enough to send an increasing group to their other tasks with some inklings of the power of environment, and of their own power to make it better for themselves; with some understanding that architecture is fact as well as beauty—or beauty as well as fact. The emphasis depends upon the student. If a little architectural knowledge has been spread and given an appeal, then something has been gained.

[806]



VICTOR LALOUX—MEMBRE DE L'INSTITUT THE GREAT FRENCH MASTER UNDER WHOSE GUIDANCE MANY OF OUR PROMINENT ARCHITECTS HAVE STUDIED AT THE ÉCOLE DES BEAUX ARTS

PENCIL POINTS

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Elevation



WINNING DESIGN FOR "A CAMPO SANTO" BY TURPIN C. BANNISTER PERKINS-BORING FELLOWSHIP IN ARCHITECTURE, 1928-1929

808]



TURPIN C. BANNISTER

TURPIN CHAMBERS BANNISTER WINS PERKINS-BORING FELLOWSHIP

TURPIN CHAMBERS BANNISTER, Perkins-Boring Fellow at Columbia University for 1928-29, was awarded the Fellowship in competition with twenty-four members of the graduating class. The Perkins-Boring Fellowship alternates triennially with the Schermerhorn and McKim Fellowships and provides for a year's travel and study in Europe.

The subject of the competition was a Campo Santo, a monumental treatment for the cemetery of a large city in which all creeds and methods of interment were to be provided for. The members of the Jury of Award were Charles A. Platt, William M. Kendall, Egerton Swartwout, Dean Everett V. Meeks, and William F. Lamb, all members of the A. I. A. The winning drawings are shown on the opposite page.

Mr. Bannister was born in 1904 in Lima, Ohio, and gained his first architectural experience in the office of Andrew DeCurtins of that city. Mr. Bannister holds the degree of Bachelor of Science from Denison University, Granville, Ohio, and the degree of Bachelor of Architecture from Columbia University. He has worked in the offices of Gehron, Ross and Alley, formerly the Arnold W. Brunner Associates, and Delano and Aldrich.

Mr. Bannister feels particularly indebted to William A. Boring, Wallace K. Harrison, Edgar I. Williams, Paul F. Simpson, and George A. Licht for the advice and assistance while studying at Columbia.

SKETCH CLUB ATELIER OF NEW YORK

THE SKETCH CLUB ATELIER opened its third season with classes on Tuesday night, October 2nd, and Thursday, October 4th. The attendance on the register was higher than ever before, sixty students being enrolled.

Arthur L. Guptill, who recently issued his volume on *Drawing with Pen and Ink*, is the instructor for the first half of the year. He began immediately with the subject of composition and the class has progressed rapidly in the use of a pencil. The course consists of twenty-four lessons, the first half season ending on January 8th.

The second half of the course will be conducted by A. Thornton Bishop, who will continue the study of composition and will also lecture on rapid studies in color, the rendering of trees, street accessories in perspectives, and the use of pen and ink. For further information address A. Thornton Bishop, 105 W. 40th St., New York.

The exhibit of the class work will be held at the end of the year as formerly.

ARCHITECTURAL AND ALLIED ARTS EXPOSITION TO BE HELD IN APRIL

UNDER THE auspices of The Architectural League of New York, with the endorsement of The Society of Beaux-Arts Architects, and The New York Building Congress, the Third Architectural and Allied Arts Exposition will be held at the Grand Central Palace, New York, from April 15th to April 27th.

The forthcoming Exposition will be along the same lines as in 1925 and 1927. The original plans have been enlarged and embrace more of the arts and crafts, interior decoration, building material and equipment. It will cover as wide a range of professional and industrial activity as possible in order that newer ideas in the use of materials and design may be made known to both builder and architect, to the mutual benefit of each.

The Architectural League of New York is now assembling its part of the Exposition, which will embrace architecture, sculpture, mural painting, landscape architecture, interior and exterior decoration, crafts, contemporary American art, building materials and equipment.

THE PASADENA ARCHITECTURAL CLUB

THE PASADENA ARCHITECTURAL CLUB has been very successful in obtaining quarters in the Stickney Memorial Art Building in this city. It is an old half timber, brick and stucco house of English style with shingle roof and well proportioned casement windows. The brick walls have been mellowed with time and the general surroundings are such as will provide splendid environment for those artistically inclined.

Already the club has established classes within the building. The Life Class has grown so large that it has been necessary to divide it into two sections. Several well known local artists visit the classes and give them the benefit of their criticism and help.

A class in Structural Engineering is now formulating plans for the establishment of an atelier to provide the young men with training in architectural design. Several local architects who have studied under Prix de Rome and Beaux-Arts professors have volunteered to coach the men studying in this class, and by the middle of the season we expect the class to establish itself along with the older classes now to be found in the larger cities of the country.

The club recently met with the Los Angeles Architectural Club and the Architects' League of Hollywood. These meetings always bring out a very enthusiastic and a representative gathering of the members and they are looked forward to with much anticipation.

The club is planning to hold monthly dinners at which prominent speakers will give talks and these meetings should provide a splendid means of getting together.



BRONZE DOOR MODELLED AND DESIGNED BY ORONZIO MALDARELLI, SCULPTOR

MEMORIAL TO MRS. W. L. CHITTENDEN, HOPKINS AND DENTZ, ARCHITECTS

THE ADVERTISER IS THE ARCHITECT'S ALLY A letter from a Cleveland architect, Robert W. Dickerson

"I HAVE BEEN MUCH interested in the article 'An Architect Enters a Protest against Advertising' which recently appeared in *Printers Ink*. To no less degree have the comments which it aroused been interesting. While the writer of this article very properly raises a question as to the extent to which manufacturers and distributors of building products may go in their sales pressure, it is my opinion that, in the main, the architect who is keeping abreast of present-day demands, or is even within hailing distance of them, has little to fear of this phase of advertising. "If he should be annoyed or embarrassed occasionally by the necessity of dissuading his clients from using a product on which their hearts are set, or by being forced to admit his ignorance of the existence of some commodity for which publicity has created a demand, in my opinion, his discomfiture is much more than compensated by the improvements and advancements in standards of living, comfort and efficiency which advertising has created.

"It is difficult if not impossible to determine the exact extent to which advertising is responsible for the development of the luxuries of yesterday into the necessities of today. Obviously it has been a most potent influence. The very nature of the relation usually existing between architect and client has been a barrier to progress in this direction. Those commissions where the architect has not been forced to go the limit to provide all that his client has demanded, within the appropriation which he has prescribed, are exceedingly rare. On what basis then can the architect stimulate the demand for garbage burners, water softeners, oil burners, temperature regulation, ventilation and a lot of other items which admittedly increase the pleasure and usefulness of the buildings in which they are placed, but which materially increase its cost? Add to his difficulties in reconciling his client's needs and their limitations the frequently embarrassing fact that the greater the building costs the greater is his commission and you have another reason why he should be thankful that someone else has elevated his client's tastes to the point of demanding all or more than he should have.

"True enough, the architect's job is becoming increasingly difficult and exasperating; but he will not improve his lot by raising his voice in protest against the improvements and developments which are in progress nor against the profession whose business it is to 'tell the world about them.' The same amount of energy devoted to informing himself concerning these advertised commodities and equipping himself to discuss them knowingly with his clients will carry him much farther. Its further effect will be the enhancement of his position in their minds and the cultivation of their respect for his judgment and opinions.

"With a proper relationship of confidence and respect established between architect and owner most of the problems which this 'Protest against Advertising' enumerates will disappear. Ignorance is never better than knowledge, even a little knowledge, and if the architect is properly and adequately informed he has nothing to lose and much to gain if his client has absorbed at least enough knowledge of building products to enable him to 'speak the language'."

Very truly yours, Robert W. Dickerson, Architect.

A REVIEW OF THE STANDARD DOCUMENTS

THE AMERICAN INSTITUTE OF ARCHITECTS has recently published A Review of the Standard Documents, by William Stanley Parker, Past Secretary of the A.I.A. The booklet is a brief review of the development of the documents, together with an explanation of certain clauses about which inquiries have been received by The Institute and answered through the Committee on Contracts.

Every architect using the Standard Documents of the A.I.A. should have one of these brochures for reference purposes. The edition is limited but while they are available copies may be had for \$1.00 upon application to the Executive Secretary of the A.I.A., The Octagon, Washington, D. C.

WILLIAM HENRY CROCKER

1856-1928

WITH THE PASSING of William Henry Crocker, editor-inchief of *The American Architect* since 1917, the architectural profession loses one of its most eminent and interesting personalities. Born a New Yorker, bred a sailor, successful at business, and a noteworthy painter, he brought to American architecture such rounded experience for the background of his criticism as it is seldom the good fortune of any man to possess, almost never the critic. Indeed, the importance of this figure can hardly be over estimated; his opinions were those of the widely traveled, broadly educated, highly cultured man of the world.

William Henry Crocker was born in New York City

on August 25, 1856. He died in Orlando, Florida, on Monday, October 22, 1928, from injuries sustained in an automobile accident in Clermont, Florida, on the preceding Thursday. He lived, then, for almost exactly seventytwo years. We can be thankful for his having had longer life than is allotted to the average man. We must admire the vital energy that so packed each year with vigorous experience that it is difficult for us to realize it reached a stopping point at last. We envy his achievements.

At eighteen his clear-eyed and penetrating countenance, now long familiar at the annual conventions of the American Institute of Architects, belonged to the newly appointed third mate of a sky-sail clipper. A short time previously, young Crocker, after being educated in the public and private schools of the city, had left the College of the City of New York, without finishing his course, for



Photo by Gillies

WILLIAM HENRY CROCKER

the sharper, fresher life of a midshipman in the United States Navy. That was in the seventies, a golden age for sailing men and youngsters seeking active and stinging lives; sails still swept gracefully across the southern seas, whole crews of roustabouts wore themselves ragged in races with rival ships, and rounding Cape Horn was still something of a feat. The New York schoolboy did it three times and sailed twice around the world. On the last trip, while his ship was off China, an exploding cannon so injured his hearing that he had to retire from the sea. Thus a chipper and efficient mate was relegated to land and a young man's career seemed ended at its start.

Some men have a genius for experience. Put them anywhere and you will find them chuckling at the new

and unsuspected twists their lives are taking, turning their paths toward surprising goals, often as different from the last as sea from shore but almost always astonishingly amusing. Crocker was such. At home, he became an accountant for the Phelps Dodge Company and he was later associated with the Seth Thomas Clock Company. His commercial activities were successful, and in Montclair, New Jersey, where he made his home with Mrs. Crocker, whom he married in 1881, and their son, Frederick Speer Crocker, both of whom survive him, he was a prominent figure in civic and athletic affairs. There was no hint yet of the final turn that his career was to take; but in his handling of life the man was unmistakably

an artist; and his artistic consciousness was soon to find a medium of expression.

With Robert Vonnoh and Charles Rosen for tutors, the ex-sailor, the accountant, the man who could pedal a bicycle over the roads with the best in the days when Tom, Dick and Harry were good, began landscape painting, put a great deal of time on it, showed talent, became a member of the Salmagundi Club of New York in 1899, and exhibited paintings on which favorable comment was passed. Still not satisfied with the scope of his activities, he took up the then relatively new and fascinating art of photography, in the practice of which his knowledge of pictorial values gleaned from long hours at the easel no doubt stood him in good stead. At all events, he became proficient at it, a skilled photographer, and as such first became associated with The American Architect in 1905.

Architecture is essentially the art of building usefully and beautifully. In 1905 American architects, impelled by new building materials and methods, were beginning to develop new harmonies of mass and line on a larger scale, to greater heights, with more utility than any builders had ever achieved before. The man who rode out his boyhood on the last of the clippers was to spend the best of his maturity serving the rise of a new art, a new architecture. His mind always young was henceforth devoted to holding up as goals for his adopted profession the high aims of youth. The man was admirably fitted to the job of architectural critic, bringing to his work the calm wisdom of the sailor, the hard common sense of the man of figures, and the deep understanding of the artist. A layman with such attributes and the added advantage of travel might be expected to have a better perspective of contemporary architecture than most men who spend their lives working intimately with it. This layman had. His mastery of the art of handling words together with his other abilities won him the post of associate editor in 1910; seven years later he became editor-in-chief.

Mr. Crocker was of peculiar value to the architectural profession. Seeing American architecture first with the eyes of a highly skilled outsider, when he came to belong fully to it, he ever retained the power of viewing it objectively, as a good critic should, and this faculty together with his keen perception for essential values enabled him to judge quickly and well. He saw the possibilities inherent in the new American architecture, and put his editorial pen-point on them nicely. Proud of America's architectural accomplishments, he made it his business to hold them up before the world. His service was appreciated. Architects throughout the country knew him and enjoyed his charming personality. A layman, he had the unique distinction of being made an Honorary Associate Member of the New York Chapter of The American Institute of Architects. The honor thus conferred was but his due; he belonged to the profession as truly as any man could. American architecture owes William Henry Crocker a debt that it can best pay by maintaining the splendid standards in whose support he spent so many years .- HARVEY WILEY CORBETT.



AMERICAN LEGION MEMORIAL MONUMENT AT SARASOTA, FLORIDA

CLARE C. HOSMER, ARCHITECT

The monument has been erected at one of the busiest sections of Sarasota and combines a traffic signal station and flag pole.

NOTES FROM THE

DETROIT ARCHITECTURAL BOWLING LEAGUE Now THAT election is over, we can forget tariff, brown derbies and farm relief and devote our attention (outside of office hours) exclusively to the science of striking out from the first frame. Just watch our scores improve!

The standings on Nov. 9th were as follows:

~~	11			
Donaldson & Meier 20	4			
McGrath & Dohmen 18	6			
Frank H. Nygren 13	11			
Janke, Venman & Krecke 12	12			
Albert Kahn 12	12			
Smith, Hinchman & Grylls 11	13			
Van Leyen, Schilling & Keough 10	14			
Weston & Ellington 10	14			
Malcomson & Higginbotham 8				
Louis Kamper 6	18			
Individual high-1 game-Gleasman (V. S. & K.)				
" " 3 games—Lindeman (J. V. & K.)	633			
Team high-1 game-McGrath & Dohmen				
" " 3 games—Donaldson & Meier	2721			
Individual high average-Gleasman (V. S. & K.)	185			

LOS ANGELES ARCHITECTURAL CLUB

THE Los ANGELES Architectural Club, through the Small Home Plan Bureau, is supervising the conducting of a small house competition for the students of the Architectural Department of the Polytechnic High School. Prizes to be awarded are: first, a year's membership in the Los Angeles Architectural Club; second, a set of Architectural Digests; third, a year's subscription for *The Architect and Engineer*; fourth, a year's subscription for the *California Home Owner*; and three special prizes of one year subscriptions for *The Pacific Coast Architect*.

Working drawings of the prize winning plans and any others approved by the Club committee will be sold through the Bureau if the students wish.

The Los Angeles Architectural Club is one of the Clubs sponsoring the Annual Architectural Exhibition to be shown at the Architects' Building. This exhibition is of more than local interest, since the progress of architecture in Southern California is being watched significantly by architects all over the world.

Pictures for the exhibition are being selected by a committee made up of well-known architects, with Palmer Sabin, chairman. Judged by its character in previous years, the exhibition will present works of Southern California's most prominent members of the architectural profession.

The closing date for our Christmas Card competition is Dec. 18th. All members are urged to hurry and submit their designs that they may be on display at the December meeting. Prizes to be awarded are Guptill's *Sketching and Rendering in Pencil* and his *Drawing with Pen and Ink*.

UNIVERSITY OF MIAMI NEEDS BOOKS

THE UNIVERSITY of Miami's Department of Architecture will be glad to receive books for the library. The department was started last year and is doing very well, but the library is woefully in need of books.

Contributions should be sent to John Skinner, Head of the Department of Architecture, University of Miami, Miami, Florida.



DECORATIONS BY J. MONROE HEWLETT FOR THE PARTY GIVEN BY DELANO AND ALDRICH AT THE ARCHITECTURAL LEAGUE IN NEW YORK

The silver balloons surrounding the lights and the large clusters on the walls arranged to simulate branches of huge grapes added greatly to the charm of the setting for the celebration of the Twenty-fifth Anniversary of the firm.

DELANO AND ALDRICH CELEBRATE THEIR TWENTY-FIFTH ANNIVERSARY

ON OCTOBER 29TH the Twenty-fifth Anniversary of the founding of the firm of Delano & Aldrich was celebrated at the Architectural League. The large room was decorated, appropriately for the "Silver Wedding," with garlands of silver balloons, leaves and ribbons. The guests consisted exclusively of past and present clients of the firm and members of the office force.

In an entertainment held before supper Mlle. Agnes de Mille danced and Mlle. Lucrezia Bori sang. Mrs. Douglas Robinson then read a poem she had written for the occasion and presented to Messrs. Delano and Aldrich on behalf of all their clients, a sum of money which is to be used to bring to America each year a French student of architecture, in an endeavor to show some appreciation to the French government for the gratuitous education given all students at the Ecole des Beaux Arts. Both Mr. Delano and Mr. Aldrich are diplomés of this school.

Ambassador Dwight Morrow sent two silver bowls by aeroplane from Mexico City, and many other gifts were received. A birthday cake weighing 147 pounds, and crowned with a Greek temple in sugar, was presented by the office force, together with a parchment scroll containing a testimonial from the men in the office and all their signatures.

A NATIONAL ASSOCIATION OF ARCHITECTURAL CLUBS

ALL CLUBS AND ORGANIZATIONS composed of men in the architectural profession and its allied arts are invited to

submit ideas and suggestions for the organizing of a National Association of Architectural Clubs.

The outstanding object of this Association at the beginning would be to have an exchange of literature and ideas for the mutual benefit of all organizations expressing a willingness to become members.

The New York Architectural Club, Inc., through its President, Edward F. Clapp, has taken a very definite step towards promoting such an Association. Copies of the 1928 Year Book and the Constitution and By-laws were sent to a few outstanding Clubs some months ago. More recently a larger number of Clubs were supplied with copies of *Pencil Dust*, a small pamphlet which this Club is issuing to its members and friends. This has started an exchange of literature with quite a number of other Clubs.

The New York Architectural Club, Inc., wishes to express its willingness to send a copy of its 1929 Year Book to any Club desiring same. Any other Clubs wishing to make exchanges and take an active part in this proposed Association should write to this magazine.

PENCIL POINTS will be glad to devote such pages as are required to the work of the various Clubs in such an association and act as a medium of exchange for them.

The following Clubs now stand ready to become affiliated in this Association: Syracuse Architects Club, The Architects' League of Northern New Jersey, The Architectural Sketch Club of Chicago, The Pittsburgh Architectural Club, The Architects' Association of Indianapolis, and The New York Architectural Club.

We shall be pleased to hear from others.

"WHY COMPETITION"

As ANNOUNCED in the November issue, a collection of well-known architectural books is being offered as the first and only prize in a competition for a manuscript not to exceed five hundred words stating why the competitor has chosen architecture for his life work. Manuscripts must be mailed to the Editor of PENCIL POINTS so as to reach his office at 419 Fourth Avenue, New York, not later than December 30th, 1928. For detailed information see page 734 of November PENCIL POINTS.

T SQUARE CLUB ATELIER OF PHILADELPHIA

THE ATELIER has started another year, which from all appearances looks as though it will be a busy one. No less than thirty-eight members worked on the first project with an abundance of "niggers."

In the absence of our Patron, Professor Jean Hebrard, who is in Europe, Paul Cret has very kindly taken over the criticism of the Class A men. Dr. Cret is assisted by Walter Antrim, who was the B Plan critic of last year, and John Evans. This is Mr. Evans' first year at the Club and we wish to extend our hopes for a very enjoyable season.

This year the Atelier has been put on its own—as the saying goes—and this plan has met with the boys' undivided approval. They are now a self-governed body with responsibilities of no little importance. Under the leadership of James Jackson, Massier; Lloyd Malkus, Sous-Massier and Albert Ware, the Atelier representative, they will endeavor to win the highest honors in the field of Beaux-Arts competitions.



DIRECT PEN AND INK SKETCH BY ROLAND A. WANK, OF NEW YORK



THE AMERICAN DESIGNERS' GALLERY

THE AMERICAN DESIGNERS' GALLERY has announced the opening of a cooperative gallery at 145 West 57th Street, New York, for the exhibition of contemporary decorative art. The opening exhibition will be on view until Christmas. Among architects whose work is being shown are Raymond M. Hood, Ely Jacques Kahn, Joseph Urban, and Ralph T. Walker.

MODERN ART EXPOSITION FOR CHICAGO

A LARGE EXPOSITION of modern American industrial and decorative art will be held under the auspices of the Association of Arts and Industries and the Art Directors Club of Chicago in Mandel Brothers department store, Chicago, in January. The coming exposition will be wholly American and exclusively modern; it is being organized by a manufacturers' association and will be staged by an independent committee of architects and artists.

Organization of the exposition is being undertaken by the Association of Arts and Industries and its auxiliary, the Art Directors Club of Chicago. The architectural and artistic aspect of the exposition have been placed in the hands of an executive committee of two architects, a sculptor and an industrial designer, all of whom are actively practicing their profession in Chicago. This committee has designed the architectural setting for the exposition and will supervise the selection and installation of everything exhibited. The members are: Harold Warner, architect associated with the Art Institute of Chicago, chairman; Alfonso Iannelli, sculptor and head of the department of design in the school of the Art Institute; Frank Sohn, architect, art director for the Vitrolite Co., and president of the Art Directors Club of Chicago; and Barry Byrne, modern architect.

Irving K. Pond, Chicago architect, is a member of a Chicago committee headed by Dr. Robert B. Harshe, director of the Art Institute of Chicago, which is assisting in the organization of the show. A similar committee in New York will select work from the eastern states for the exposition. It consists of Hardinge Scholle, director of the Museum of the City of New York, chairman; Harvey Wiley Corbett, Richard F. Bach, associate in industrial art at the Metropolitan Museum of Art; Ely J. Kahn and Mary Fanton Roberts.



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. Competitions close the fifteenth of each month so that contributions for a forthcoming issue must be received by the fifteenth of the month preceding the publication date in order to be eligible for that month's competition. Material received after the closing date is entered in the following month's competition.

THE PRIZES in the regular monthly competitions have been awarded as follows:

Class I—M. C. Nead of Dayton, Ohio. Class II—Arthur Slade of Surrey, England. Class III—Egon H. Lins of New York. Class IV—Milton Tucker of Philadelphia, Pa.

WHY?

By Arthur Slade (PRIZE—Class Tevo—November Competition) Why is it, when the paper men Take up their ink and mighty pen, To laud the praise of some great pile Lest we its merit should beguile;— They tell us of the builders grand, Who order bricks and stone and sand, Of his organising powers, And what he does with leisured hours.— All his hopes, his fears and cares, By what god he mostly swears, Where his wife buys all her dresses, (How alive the Daily Press is!) They deal at length with Foreman Joe, And the friends he used to know; All about his bonny kids, How he spends his hard earned quids,-When his cat last had some kittens, If his aunt wears woolen mittens! They tell of Bill, the plumber's mate, And his girl whose name is Kate;-Then of Sam, the 'prentice hand, Whose skill is known throughout the land!-But do they tell us of the man, Who slaved away for months on plan-And steel and concrete,-plumbing too, That others might have jobs to do; He who toiled with all his might, Working far into the night-Sorting out some awful snag (Whose energy must never flag!)-Of him they seem to fight quite shy,-But what I want to know is "Why?"



ROAD BRIDGE OVER RAILWAY AT DAYTON, OHIO—PENCIL SKETCH BY M. C. NEAD (PRIZE—Class One—November Competition)

[815]

COMPETITION FOR A HOUSE PARTY BUNGALOW-REPORT OF THE JURY OF AWARD

THIS COMPETITION, which was frankly announced in a spirit of foolishness, has developed some solutions of the problem of a most decidedly interesting character considered seriously, or as seriously as it is possible to consider a building designed entirely for the purpose of having a lot of fun.

The first prize goes to the drawing submitted by Raymond L. Voscamp of Kansas City, Missouri. He has treated practically the entire lot in such a manner as to provide facilities for the comfort and entertainment of the group of people called for in the program. Any congenial crowd being turned loose in a place like this certainly has no one but themselves to blame if they do not have just one grand and glorious time, which is of course what one is supposed to have at a house party. The plan is great and we would like to see it built—maybe it will be. We like the idea of providing facilities for playing Drop the Handkerchief. In fact we like the whole thing and think that Mr. Voscamp is to be congratulated.

And the second prize goes to Miss Elisabeth Coit of



"Applying for His First Position as a Pencil Pusher," by Egon H. Lins, of New York (Prize—Class Three—November Competition)

New York. Her plan in some respects is even better than that of Mr. Voscamp although on the whole, in the opinion of the Jury, not quite so good. But it is a great plan nevertheless. The elevation in the opinion of the Jury is much less happy than that of Mr. Voscamp.

And now we come to the third prize scheme by C. C. Colby of Cambridge. Brother Colby has certainly entered into the spirit of this competition and no mistake about that. It isn't necessary for us to describe in detail the good points of this scheme, all we have to do is to look at the drawing. The designer has been fortunate, not to say ingenious, in selecting so many entrancing views for the enjoyment of the members of the house party at all times of day and night Where else can you have a panoramic view of the Alps, a vista of the Grand Canyon, a view of Mt. Blanc?? The answer obviously is nowhere! And we like especially the idea of sitting on the stairs leading from the terrace and being able to see the sun come up and go down in exactly the same place. Mr. Colby has brought to the solution of this problem a certain carefree abandon coupled with great skill and cunning combining to produce a rare and satisfactory solution of the house party bungalow problem.

And the first honorable mention goes to the drawing submitted by Miss Jeannette Shirk, who it will be recalled won the second prize in our recent LOVE-NEST COMPETI-TION. Lack of space prevents us from showing Miss Shirk's drawing here, but it will be printed in this department next month.

All in all we feel that great advances have been made in meeting and disposing of some of the architectural problems of modern origin. Architecture, if it is to serve our modern civilization to the fullest extent, must keep abreast of the times or even anticipate our changing requirements, rather than lag behind. We feel that in solving the LOVE-NEST problem and in disposing for all time of the HOUSE PARTY BUNGALOW problem the publishers and readers of PENCIL POINTS have gone far to justify their existence.

The question is, what next? We are quite ready to go if someone will only tell us in what direction. Let earnest study be given to the subject of our next competition. Suggestions will be welcomed. In the next issue of PENCIL POINTS we shall disclose the prizes selected for the prize winners in this competition.

HOWARD SHAW, ARCHITECT DIED MAY 6TH, 1926

Reprinted from "Poetry" for July, 1926. Submitted by R. Martin Stevenson of Philadelphia.

Remember? We, the city, shall remember, When living leaves of summer downward bend To kiss the leaves of stone on his carved lintels, And his white pillars through the dusk ascend.

For he made wood to feel and stone to dream. Out of the rock, lightly as blooms a flower, His sensitive hand evoked the spell. Remember?— He is our silver spire, our lighted tower.

Remember? We, the city, shall remember, Thankful to art that, since all arts began, Now and again stand out against oblivion The features of a building or a man.

-Agnes Lee.

HERE AND THERE AND THIS AND THAT



PRIZE WINNING DESIGN BY RAYMOND L. VOSCAMP, OF KANSAS CITY, MISSOURI Competition for a House Party Bungalow

[817]

PENCIL POINTS



Second Prize Design by Elisabeth Coit, of New York Competition for a House Party Bungalow

HERE AND THERE AND THIS AND THAT



DESIGN PLACED THIRD, BY C. C. COLBY OF CAMBRIDGE, MASSACHUSETTS Competition for a House Party Bungalow

[819]



EDITH



ADRIAN



FRED



FRANCIS

THESE CHILDREN ARE HOMELESS

WE ARE very much encouraged by the number of inquiries received by the State Charities Aid Association asking for information about the homeless children whose pictures have been appearing in this department. The four children who are shown here need homes and loving care. Can you at this glad season of the year help to make some little child happy? Legal adoption is not necessary if those taking the children into their homes do not wish to take this step. Miss Sophie Van S. Theis, of the State Charities Aid Association, 22nd Street and Fourth Avenue, New York, will be glad to talk with anyone interested in these or other children.

Edith is a bright, happy natured little girl of five with very fair hair and deep blue eyes. She is interested in everything and is most attractive in appearance. She is a lovable, sensitive child and would fit into almost any foster home. Edith is of American, Catholic parentage.

Twelve-year-old Adrian is a little thin for his age but is a nice looking, quiet boy and other boys and girls always like him. He is well behaved and of good disposition. He has medium hair and hazel eyes.

Fred, now and then, shows a streak of mischief but he is, for the most part, a docile little boy and is very honest. He has light hair, fair skin and blue eyes and is of Protestant, American parentage. He is a healthy, wellbuilt youngster of nine years.

Francis' large blue eyes with their black lashes fairly sparkle and he is an unusually active youngster, full of life. He has nice features, a refined little face and is above average in intelligence. He is seven years old and is of American, Protestant parentage.

CONTRACTS AND SPECIFICATIONS IN THE YEAR 1519

(Being a part of an agreement between the executors of King Henry VII and Peter Torrigiano, called Torrysany here, and covering the erection of a tomb for the late king.)

EDITOR'S NOTE: The following is quoted from Robert Stuart's "Dictionary of Architecture," published in London about 1838. It was submitted by Milton Tucker, of Philadelphia.

(PRIZE-Class Four-December Competition)

"...., the foresaid *Peter* covenanth promyttith and graunteth and hym and hys executors by thise pnts byndith to make and work and doo to be made and wrought wel clenly workmaly curiously and substancyally floure basements of blake marble square of the gretenesse every square oon foote ... and on the same he shall sett iiij [IIII] other basements of white marble ... and upon the same iiij basements of white marble he shall set iiij pillours of copper gylt ... and upon the same iiij pillours of copp. gilt he shall set a creste of copp. gylt ... and upon the same he shall make of white marble a vault wt archytraves and frese and creste with all colours thereunto belonging according as apereth by *the patren* and upon the said crests he shall sett iiij aungells of erthe bakid in an oven after the colour of white marble.....

"And the foresaid Peter cov'nn'tith promythth and g'nn'tyth by these p'nts that all the whyte marble aforesaid whiche shal be necessary for all the foresaid worke shalbe of oon p'fitt white coloure and that also all saide blake marble requisyte to the said p'mysses shalbe in lykewyse of oon p'fite coloure. And all the copp. convenyent to the foresaid worke shalbe good pure fayre and clene copp. and that he the same Peter at hys owne propre costs and expensys shall fynde and by aswel alma'n of white marble and blake marble as alman copp. and other things necessary and requysyte for the making fynysshing and p'fyghting of the same Awlter and other the pmysses.

Moreover the said Peter cov'n'tyth and gun'tyth by these p'nts that he the same Peter at hys owne propre costs and expensys shall wele surely puerly clerely sufficiently and workemanly gylde or do be gylt with fynde golde all the foresaid copp. work in and aboute the foresaide Awlter and other p'mysses. And that all the foresaid blake marble and white marble necessary and requysite to all the foresaid worke shalbe grav'd and workmanly wrought according to the said patren. All the which basements Aungells Awlter and other the p'mysses above specifyed and to the same necessary as vs aforesaid the foresaid Peter covenn'tyth and gun'tyth by these p'sents fully to make ende and fynysh and the same at his owne propre costs . . . before the first day of the moneth of Novembere the which shalbe in the yere of oure Lorde God M : V : XIX

"IN WITNESSE whereof the p'ties aforesaid to thise endentures enterch'ungeably have set their sealys. Yovyn the day moneth and yeres above specifyed."

A CORRECTION

ON PAGE 578 of the September issue the caption appearing under Figure 1 is incorrect. The drawing is an example of an English open-timber roof. We wish to call this to the attention of our readers in order that the error may be corrected in file copies.

FIRST ARCHITECT: My latest client has had the plans for his house changed at least a dozen times. SECOND ARCHITECT: My latest client has a wife, too.

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THE SPECIFICATION DESK A Department for the Specification Writer

CHROMIUM PLATE AND ITS PROCESSING

By A. D. Richardson

WHEN DRAWING up chromium plating specifications for exposed plumbing, hardware and electrical fittings, the architect may often have been confronted with a perplexing problem because of the conflicting statements which he may have heard or read regarding this process. He may have heard from one source which he considered reliable that chromium plate would never rust, and another source which he considered equally reliable may have told him that this was far from being a fact. He may have heard from

one source that chromium plate was so hard that it could not be scratched, and another source may have contradicted that statement. He may have known of instances where chromium plate has withstood the acid test of actual service, and he may also have known of others which were complete failures. He may even have had the chromium plate on his automobile withstand the atmosphere wonderfully well, only to learn of the grief, which his next door neighbor with the same make and model car as his own, has had with this same process. These and other conflicting reports and observations may have raised a doubt in his mind as to the actual value of the process. Should he or should he not specify chromium plate for his clients? Is the process sufficiently developed commercially for him to take the responsibility of recommending it? If it is, how must he word his specifications in order to be

sure he will secure uniformly good processing? The answer to these and other questions which might arise in his mind, is to learn more about the handicaps which the process presents, at least insofar as they apply to those articles in which he is interested. Knowing the handicaps, he should learn what steps it is necessary to take to overcome them. Having this information, he is then in a position to decide how to specify. In this way only can he hope to arrive at a decision which will be fair to both himself and his client.

The advantages which chromium plate, when satisfactorily processed, has over nickel plate, are already so well known to the average architect, that to discuss them here would be a waste of time and effort. Unfortunately, however, while the process itself is everything which is reasonably claimed for it, the satisfactory processing is a very difficult matter. When to this great difficulty in the processing is added the inherent weaknesses, from a rust proofing standpoint, to be found in the properties of the metal itself, it can readily be seen how much care must be exercised when writing specifications for chromium plate in order to insure not only good results, but uniformly good results.

Let us consider first the properties of chromium as they apply to rust proofing. As this article deals only

Architects and Specification Writers

Do you know how to specify in order to get the best results on chromiumplated details? Do you realize that iron or steel must first be plated with nickel, then with copper, and then with nickel again before the thin layer of chromium is applied? Do you know that articles treated in this way and exposed to weather will last many times as long as the same articles nickel-plated?

The author of this article, who is the Plant Engineer of the National Chromium Corporation, has here explained these and other points about the use of chromium so that you may prevent disappointment caused by the improper application of this valuable protective coating to architectural detail. with resistance to atmospheric corrosion, we shall not attempt to look into those other properties of chromium in which we are not at the present interested. In order to properly understand these properties as they apply to the subject under discussion, it will be necessary to first give a brief outline of what causes metals to rust, and then show how it is necessary to process such metals in order to give the best possible rust resistance.

When the word rust is mentioned, it applies only to iron or steel. Broadly stated, rust is caused by the combination of iron with oxygen from the atmosphere. Most other metals, as, for instance, aluminum, copper, nickel, etc., also combine with oxygen from the atmosphere. The same chemical change takes place in them when they combine with oxygen as it does in iron, but they are not looked upon as rusting. No one ever speaks of aluminum,

or copper, or nickel as rusting. The reason for this is that the compound formed in any other metal when it combines with oxygen does not expand to any great extent beyond the space the metal itself in its original form occupied. This being the case, the combination of the metal with the oxygen, known as the oxide of the metal, does not lift off the base. In the case of iron, however, the oxide that is formed lifts off easily from the base, partly due to poor adherence and partly due to the fact that even with small changes of temperature the oxide expands to a markedly different degree than does the iron base. Thus portions of the iron are being continually exposed and a gradual eating away of all the iron results. However, in the case of other metals, the oxide that is formed does not lift away from the surface; instead it forms a thin, impervious coating over the base metal, and actually protects it from further corrosion.

If a piece of iron were placed in a vacuum, it would remain free from rust. But in the atmosphere the oxygen penetrates the microscopic pores of the metal and forms what is known as a galvanic couple between the iron itself and the impurities which the iron contains. This galvanic action is hastened by the moisture in the air, and because of this, iron rusts more readily in moist climates than it does in dry climates.

A galvanic couple is an electrolytic action, which takes place between two dissimilar metals. To understand this more thoroughly, it might be stated that when two dissimilar metals are in contact with one another, and oxygen and moisture are present, the oxygen causes an electrolytic action. All the atoms in one of these metals form the positive pole of an electrical circuit, and all the atoms of the other metal form a negative pole. The metal which forms a positive pole is known as being electropositive to the other metal, and the metal which forms a negative pole is known as being electro-negative to the first metal. That metal which is electro-negative to another metal will be the first one to oxidize when a galvanic action is set up between the two, and the electropositive metal will not become oxidized until the electronegative metal itself has first become fully oxidized. This is one of the reasons why cadmium and zinc are such good rust resisting metallic coatings for iron and steel. They are both electro-negative to iron, and because of this, when a galvanic couple is set up, it is the cadmium or zinc which is first attacked, and the iron or steel underneath remains free from the attack of the oxygen until such time as the cadmium or zinc is itself oxidized.

Now chromium is also electro-negative to iron, and it would be presumed because of this fact that chromium also would make almost as good a metallic coating for the resistance to rust on iron or steel as does cadmium or zinc. We say almost, because the nearer one metal is to another in the electromotive scale, the less will be the intensity of the electrolytic action set up between them. Chromium is further away from iron in the electromotive scale than zinc or cadmium. Therefore, the electrolytic action would be somewhat greater. However, this difference in potential would not matter so much if other conditions were similar. Unfortunately, they are not, and therein lies the fact why chromium when applied directly to iron or steel is not the excellent rust resisting coating which many believe it to be.

For reasons which no chemist has as yet been able to satisfactorily explain, chromium remains passive when a galvanic couple is set up. This means that the chromium is not attacked by the oxygen as one would presume it should be, considering its position in the electromotive scale. Instead the oxygen penetrates the pores of the chromium and attacks the iron underneath. Due to the difference in the co-efficient of expansion between the iron oxide and the co-efficient of expansion of the iron itself, the iron oxide (or in plainer words rust) either causes the chromium plate to lift from the iron underneath or else it seeps through the pores of the chromium and remains on the surface of the plate. It can be seen from this that chromium plate deposited directly on a base metal such as iron or steel is indeed a very poor rust resistant. And this same action also takes place when chromium is applied directly to other metals such as copper or nickel, only, of course, to a lesser degree. The reason it takes place in lesser degree on other metals is because of the smaller difference in the coefficient of expansion between the

oxide in other metals as compared with iron oxide.

There are two major factors which must be considered to determine whether or not a metallic coating is a good rust resistant to a base metal. It is not sufficient for such a coating to be electro-negative to the metal which it covers. The plated metal must also be deposited on the base metal in sufficient density to protect it. Obviously a plated metal which cannot be deposited without freedom from pores cannot give as good protection against rust as another metal which can, provided of course, all other things are equal. Now cadmium and zinc can be so deposited, but unfortunately again, chromium cannot. The main reason for this lies in the fact that the current density employed in depositing the first two metals is much lower than the current density it is necessary to employ to deposit chromium; lower in fact, by about 90%. To understand this more fully it is necessary to know that current density is the amount of electrical current per unit area, which it is necessary to employ in any electro deposition of metals in order to give a satisfactory plate. In the plating of any metal there is a certain current density at which that metal deposits more densely than at any other point. This point varies somewhat with the metal being plated, but not to a very great extent. Fall below that point or go above it, and the plate will not be as dense as if the specific point were employed. Cadmium or zinc can be satisfactorily plated at suitable current densities to insure a dense plate. But chromium cannot be satisfactorily plated at a current density low enough to insure a dense plate. The result is that chromium plate is porous.

It might appear from all the above that chromium plate is a very poor rust resistant. But this is not so. While it does not resist rust to quite as great an extent as does cadmium or zinc, it is nevertheless, if satisfactorily applied, at least ten times as good a rust resistant as is nickel plate. But it is made a good rust resistant only by satisfactory processing. This processing must be done in such a manner as to overcome the handicaps outlined. And to do this satisfactorily and uniformly, is no easy matter. But it . can be done.

Assuming that a metallic coating such as cadmium or zinc, deposited directly on iron or steel, is electro-negative to iron, and will, therefore, protect the iron from rusting, at least until such time as the coated metal itself becomes oxidized, and assuming further that such a metal can be satisfactorily processed in sufficient density so that the coated metal will be comparatively free from pores, and, therefore, keep the moisture away from the base metal for a longer period of time, such a coating cannot, nevertheless, last forever. Therefore, if the base metal itself is more highly resistant to rust in one case than it is in another, it would in the former instance remain free from rust longer than it would in the latter instance. In other words, the rust resisting qualities of any coated metal depends to some extent on the rust resisting qualities of the base metal itself. The less resistance the coated metal offers to rust, the more important is it to start with a base metal which in itself is highly rust resistant. Now chromium while electro-negative to iron, remains passive when attacked by the oxygen from the atmosphere, and as it cannot be plated on a base metal without being porous, its rust resisting qualities will depend to quite an extent on the rust resisting qualities of the base metal which it covers.

Bearing in mind that the utility of an article quite frequently determines the quality of the metal from which this article is made, it would be well, if some comparatively cheap mechanical means could be found to increase the rust resistance of any base metal. As we know that porosity accelerates rust, we know that if we could close up the pores in the base metal that we would make it more rust resistant. This can very readily be accomplished to at least some extent by polishing the surface. It stands to reason that the friction exerted by a polishing wheel on a metallic surface will close up the pores of a metal to at least some extent, and by so doing increase the resistance to rust.

It should also appear obvious that if the rust resisting qualities of the base metal can be further improved by prior deposit of other metals before the chromium is applied, that the final coat of chromium plate will also offer greater resistance to rust. If this is so, then it would appear that the ideal manner in which to use chromium plate to retain its luster permanently would be to first apply some metal to the base of iron or steel which will in itself be a good rust resistant. We know now that the rust resistance of such a coating depends on its position in the electro-motive scale and in its ability to be deposited in a dense plate free from pores. Besides chromium itself there are only three of the more common metals which are electro-negative to iron. These three are aluminum, zinc and cadmium. Now aluminum cannot be satisfactorily plated on iron or steel, and while it is true that zinc or cadmium can, no satisfactory way has as yet been found by which it is possible to chromium plate over either of these two metals. Nor can any other metal such as nickel or copper be satisfactorily applied over either one of them. If this were possible, we could zinc or cadmium plate first, then nickel or copper plate and finally chromium plate. However, as this cannot be done it can readily be seen that there is no alternative left but to use such metals as CAN be satisfactorily plated with chromium which in themselves can be applied to iron or steel, and process them in such a manner that will give the best rust resistance possible. Of the more common metals, there are but two which can be so employed. They are copper and nickel.

It might prove useful for future reference to list the more common metals in the order in which they appear in the electromotive scale. Any metal which appears after another metal or other metals is electro-positive to that or those metals, and any metal which appears before another metal or other metals is electro-negative to that or those metals. The electro-negative metal is, of course, that metal which will first oxidize when in contact with oxygen from the atmosphere. Following is the table:

	Aluminum	4.	Cadmium	7.	Lead
2.	Chromium	5.	Iron	8.	Tin
:	Tinc	6	Nickel	9	Copper

It might be stated at the outset that lead and tin cannot be used to advantage as prior coatings for chromium, for reasons which it would serve no worthwhile purpose to discuss at the present time, considering the purpose of this article. Aluminum, zinc and cadmium have already been disposed of. This leaves only nickel and copper, both of which are electro-positive to iron. Having only these two metals, what is the best manner in which to process them, and why?

As stated previously, the nearer one metal is to another in the electromotive scale, the less will be the intensity of the galvanic action that will take place between them, when they come in contact with one another when moisture from the atmosphere is present. This being the case it seems logical that a coating of nickel (which is

directly after iron in the electromotive scale) over a base of steel or iron would resist atmospheric corrosion far better than would a coating of copper, (which is much further removed from iron in this scale than is nickel) to the same steel or iron base. Besides the advantage which nickel has, insofar as its position in the electromotive scale gives it, it has the additional advantage of remaining much more passive when a galvanic action is set up than has copper. This fact will become more apparent when one stops to think how much more readily copper plating discolors than does nickel plating, and we now know that this discoloration is nothing more or less than oxidation. Therefore, the first step in processing a piece of iron or steel after it has been satisfactorily polished is to apply a coating of nickel. The thickness of this coating will vary somewhat depending on a number of conditions, such as the quality of the plated article, the solution used, etc., but in general it might be stated that a twenty minute deposit of nickel over a piece of polished steel or iron will give satisfactory results, provided further correct processings are used.

On top of the original twenty minute deposit of nickel an hour acid copper plating has been found to be most satisfactory. Acid copper plating is a type of copper plating which has distinct advantages over another type of copper plating which is known as cyanide copper plating. Its main advantage lies in the fact that the copper deposits more rapidly from this solution than does the copper from the cyanide bath. Further it lends itself mor readily to polishing because of the softness of the plated metal as compared with cyanide copper plate. The copper in contact with the nickel will not cause as intense an electrolytic action as would the copper over the iron, because copper is further removed from iron in the electromotive scale than it is from nickel. It must always be remembered that besides taking into consideration the position of the various metals in the electromotive scale, we must also attempt to make the plate as nearly impervious to moisture as possible. This can be done not only by securing a dense plate at the time the metal is deposited, but also by polishing after plating. Now copper is a comparatively soft metal, and when the one hour acid copper plate is polished, it "flows" quite readily and in so doing closes up to quite an extent the pores which may have been present after the plated article was removed from the copper bath. There also is another reason why an hour acid copper plate is recommended, and not one of shorter duration. If less metal were deposited, the possibility of cutting through the copper plate with the polishing wheel would naturally be greater.

It must be remembered that the successive coatings of nickel and copper referred to above were both applied to metals which are electro-positive to the above plated metal. This means that the coated metals were not given as good protection as if they were plated with metals which were electro-negative to the plated metals. It also stresses further the necessity for a plate as nearly free from pores as possible because, as pointed out previously, if it were possible to apply a metal entirely free from pores the moisture from the atmosphere would have no opportunity to reach the base metal and the base would, therefore, remain free from rust. It further stresses the necessity for polishing the copper to attempt to close up the pores so far as possible.

Having given the base metal a twenty minute nickel plate and an hour acid copper plate as well as a polishing operation, the next step is to apply an hour nickel plate. This plate affords real protection, in that the nickel now applied is electro-negative to the copper plate beneath it, and will, therefore, oxidize before the copper plate becomes oxidized. The apparently heavy plate is used in this case not only to give it better protection on account of the amount of deposit, but also because it again becomes quite necessary to polish the nickel. Not only is the nickel polished in order to close up the microscopic pores which are in the plated metal, but also to bring out the luster for the final plate of chromium.

Having processed the article with a twenty minute nickel plate, an hour acid copper plate and an hour nickel plate with suitable intermediate polishing operations, the object is now ready for the chromium bath. Laboratory experiments and actual service tests have shown that about a four minute chromium deposit over a base of steel processed as outlined above, give the most satisfactory results. This relatively small deposit of chromium is applied because it has been found that if the object were plated for a greater length of time, the high current densities which it is necessary to employ in chromium plating would cause the plate to crack in spots and therefore subject certain sections of the plate to a quicker attack to oxidation than others.

After the object has been chromium plated for a duration of four minutes, it then becomes necessary to again polish such portions of the plated article as do not take a natural lustrous plate. At this point is where a serious handicap is often encountered. While it is true that chromium plate reproduces the finish of the surface to which it is applied, such as mirror finish, satin finish, etc., it is nevertheless also true that this condition cannot be controlled to perfection. Hence the necessity for polishing. But because of the youth of the chromium plating industry there are comparatively few operators, who can do satisfactory chromium polishing. Due to the hardness of chromium a certain amount of pressure is required to properly polish this plate. But due also to the very slight deposit of chromium which the plated article receives, too much pressure will cut through the metal. There is a certain "feel" which the operator must familiarize himself with before he is able to do satisfactory chromium polishing, and to acquire this "feel" requires experience which the average operator has not been able to acquire because of his unfamiliarity with chromium polishing.

To clarify the impression that any chromium plated article will resist surface abrasion, let us consider the following facts:

Chromium is at least five times as hard as hardened steel and when applied to another metal gives a surface hardness almost equivalent to the results obtained were it possible to liquify a diamond, and apply it to the same metal in the same thickness. However to get some idea of the thickness of the chromium deposited on such a metal, it might be mentioned that chromium deposits at the approximate rate of .0004" an hour. Chromium is usually given a four minute deposit over nickel plate which is one fifteenth of an hour. Therefore chromium deposited over nickel plate would be one fifteenth of .0004" or less than .00003". It can readily be seen that such a slight deposit cannot give any real resistance to abrasion.

Knowing as we now do something about the ability of chromium plate to resist abrasion, and also of the electromotive scale, and how it can be employed to protect the base metals from oxidation, we can determine how brass or copper fixtures, about which the architect's interest is centered, should be processed to resist either abrasion or oxidation. If resistance to oxidation is required, the article should be nickel plated before the chromium is applied. The nickel being electro-negative to the copper will afford protection against oxidation to the base metal and will materially retard the formation of copper oxide or green verdigris, as it is more commonly called. But the coating of nickel must be of sufficient thickness to not only give the desired protection, but also to withstand the friction it is subjected to on the polishing wheel. In general a half hour nickel plate has been found to give satisfactory results. Over the nickel the usual four minute chromium plate is applied. This in turn is polished.

Where resistance to abrasion is required to a greater extent than resistance to oxidation, the better plan to follow is to have the base metal plated direct for a longer duration of time. A coating of .0002" of chromium is sufficient to resist light friction loads for an indefinite length of time and such articles that are continuously handled, like door knobs, flush valve handles, etc., will be found to give much better results if plated direct on the base metal for one half hour.

The main reason difficulties arise in satisfactorily applying chromium to base metals can be found in the comparative inefficiency of the chromium plating solution that is in use today. Compared with the acid copper bath, which is recognized as the standard of comparison in the plating industry, the chromic acid bath is less than 15% efficient under normal operating conditions. To this comparative inefficiency can be traced practically all the faults of unsatisfactory processing.

It should appear obvious that a comparatively inefficient solution like the chromic acid solution will not deposit as satisfactorily as would another much more efficient solution, as for instance an acid copper or a nickel solution. The result is that this inefficiency must be overcome so far as possible by the more careful operation and control of the bath. The average nickel or copper solution does not require the proportionately careful attention as to composition and temperature as does the chromium solution, nor need the current density be so accurately calculated.

Experience has taught that copper and nickel and practically all other electrically deposited metals can have these factors vary within wide ranges, and still obtain a resultant satisfactory plate. In chromium plating, however, each article presents an individual problem and unless all factors to be considered are in proper balance, the resulting plate will not be satisfactory. Therefore, the same methods employed in depositing other metals cannot be used when chromium is deposited. Chromium plating to give satisfactory results must be operated and controlled as an exact science and anything short of this one method of procedure will prove disastrous. Unfortunately the average plater who has experimented with chromium not only has not the technical knowledge necessary to do satisfactory chromium plating, but because such technical knowledge is not necessary in the plating of all the other metals with which he has had experience, he refuses to recognize the necessity for such technical knowledge. The result is that chromium plated articles without number have been put on the market which have not proven satisfactory. This has given the chromium plating industry the proverbial "black eye," and the result is that many architects are sceptical in considering chromium plate in their specifications on such articles on which it could undoubtedly be used to great adyantage.

As a general rule it will be found that such organiza-(Continued on page 71, Advertising Section)



DRAWING IN PEN AND INK AND CHARCOAL BY PETER BEHRENS, ARCHITECT Advertising pavilion of glass and iron for the german mirror-glass manufacturers in cologne



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 under this heading free of charge.

QUERIES AND ANSWERS. In this department we shall undertake to answer to the best of our ability all questions from our subscribers concerning the problems of the drafting room, broadly considered. Questions of design, construction, or anything else which may arise in the daily work of an architect or a draftsman, are solicited. Where such questions are of broad interest, the answers will be published in the paper. Others will be answered promptly by letter.

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. Owing to the very large number of advertisements submitted for publication under this heading we are asking those desiring to use this service to make their advertisements as short as possible.

Notices submitted for publication in these Service Departments must reach us before the fifteenth 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

James M. Miller, 820 W. 36th Street, Los Angeles, Calif., wants copies of PENCIL POINTS for March, 1926 and June 1926.

H. R. Kolsom, 11020 Thrush Avenue, Cleveland, Ohio, has for sale all copies of PENCIL POINTS from January 1923 to October 1928 with the exception of January 1927.

Stephen J. Ames, 208 Pennington Avenue, Trenton, N. J., wants copies of PENCIL POINTS for April and August 1925.

Harold A. Childs, 343 M. A. C. Avenue, East Lansing, Mich., wants a copy of *The Architectural Record* for November 1926, Country House number. He will pay \$0.75 if copy is in good condition.

For sale: Set of Garner & Stratton's Domestic Architecture of England During the Tudor Period, bound in two volumes, \$100.00; Set of Letarouilly's Edifices de Rome Moderne, with map of Rome, bound in three volumes of plates and one of text—the original Paris Edition, \$135.00. Write Box R. T. P., care PENCIL POINTS.

Mr. Van Vleck of Starrett & Van Vleck, 393 Seventh Avenue, New York, N. Y., wants copies of PENCIL POINTS for July, September, and October, 1920.

William F. Shuma, 2109 So. 57th Avenue, Cicero, Illinois, has for sale copies of PENCIL POINTS for the entire year of 1921. Advertising pages have been removed.

We will pay a dollar apiece for the following copies of The White Pine Series of Architectural Monographs: Vol. 2, No. 1, February 1916, Houses of the Middle and Southern Colonies; Vol. 2, No. 3, June 1916, Early Houses of the Connecticut River Valley; Vol. 3, No. 1, February 1917, Three-story Houses of New England. Please address communications to Box No. KW, care of PENCIL POINTS.

PERSONALS

FRED G. ROUNDS, ARCHITECT, has opened offices in the Advocate Building, Chehalis, Washington, and would like to receive manufacturers' samples and catalogues.

THEODORE W. MARTIN, JR., architectural designer, 46 Pawling Ave., Troy, New York, would like to receive manufacturers' samples and catalogues.

WILLARD C. HAMILTON, architectural student, 6211 Goodrich Ave., St. Louis Park, Minn., would like to receive manufacturers' samples and catalogues.

SAMUEL E. HILLGER, REGISTERED ARCHITECT, and WALLACE P. BEARDSLEY, ARCHITECT AND ENGINEER, have formed a partnership for the general practice of architecture, with offices in the Seward Block, Auburn, New York.

SIDNEY FINCK, architectural student and draftsman, 718 Shephard Ave., Brooklyn, New York, is starting an A.I.A. file and would like to receive manufacturers' samples and catalogues.

WILLIAM H. WHEELER, ARCHITECT, has moved to 409 California Bank Building, San Diego, Calif.

L. O. STRUBLE, architectural draftsman, 258 15th St., Milwaukee, Wis., would like to receive manufacturers' samples and catalogues for his A.I.A. file.

PHINEAS F. CHEADLE, architectural designer, 1167 Union Ave., No., Portland, Ore., wants manufacturers' samples and catalogues pertaining to English, Colonial and Grecian design, especially Georgian, employing fireclay products, copper, brass and bronze; and general fixture and equipment catalogues.

GRAHAM KING, ARCHITECT, C/O the Architectural Department, Erie Railroad, 71 West 23rd St., New York, N. Y., is starting an A.I.A. file and would like to receive manufacturers' samples and catalogues.

ARCHER & GLOYD, ARCHITECTS, announce the association of Joseph W. Radolinsky, formerly with Thomas Lamb, New York, and the formation of Archer & Gloyd, Incorporated, 916 Pioneer Trust Building, Kansas City, Mo.

PERSONALS (Continued)

Howard F. BALDWIN, ARCHITECT, has opened an office for the practice of architecture at 339 St. Paul Place, Baltimore, Md., and would like to receive manufacturers' samples and catalogues.

M. R. LA VAUGHN, architectural student and artist, 4146 46th Street, San Diego, Calif., would like to receive manufacturers' samples and catalogues.

R. E. MAJOR & COMPANY, ARCHITECTS & BUILDERS, have moved to 1554 W. 69th St., Chicago, Ill.

KENNETH F. JONES, LANDSCAPE ARCHITECT, has opened an office for the practice of Landscape Architecture and Town Planning at 910 Kahl Building, Davenport, Iowa. THE ARCHITECTURAL DEPARTMENT of Home Smith and Company have opened their new offices in the Administration Building, Lambton Mills Post Office, Ontario, Canada, and would like to receive manufacturers' samples and catalogues.

C. W. BACON, architectural draftsman, 170 Monroe St., New Britain, Conn., would like to receive manufacturers' samples and catalogues for his A.I.A. file.

CHAS. H. OWEN AND FRED. W. CLARKE announce their association for the practice of architecture under the name of Owen & Clarke, with offices at 4 St. Joseph St., Mobile, Ala.

SWARTZ & RYLAND, ARCHITECTS of Fresno, Calif., have opened a branch office at 301 Pearl St., Monterey, Calif., for the practice of Architecture and would like to receive manufacturers' samples and catalogues covering building equipment.

C. REUBEN MOBERG, architectural student, 11 Fern St., Providence, R. I., would like to receive manufacturers' samples and catalogues.

LEONARD S. FRANKEL, JR., architectural draftsman, 1132 Summit Ave., Jersey City, N. J., is starting an A.I.A. file and would like to receive manufacturers' samples and catalogues.

RICHARD KINNICUTT, architectural student, 140 Pitman St., Providence, R. I., would like to receive manufacturers' samples and catalogues for his A.I.A. file.

ABE NATHANSON, architectural student, 2121 61st St., Brooklyn, New York, would like to receive manufacturers' samples and catalogues.

C. L. KLIEN, specification writer and draftsman, 1721 Avenue N, Brooklyn, New York, would like to receive manufacturers' samples and catalogues.

JOSEPH MURPHY, architectural student, 86 Denver St., Pawtucket, R. I., would like to receive manufacturers' samples and catalogues for his A.I.A. file.

EUGENE F. CRAIL, CONTRACTOR, Gallatin Gateway, Gallatin Co., Montana, would like to receive manufacturers' samples and catalogues.

ARTHUR H. G. KASTNER, architectural draftsman, 780 Cherokee Ave., St. Paul, Minn., is starting an A.I.A. file and would like to receive manufacturers' samples and catalogues.

MARSHALL GARDNER LINDSAY, architectural designer, will shortly be associated with the new firm to be known as The E. F. Casey Company, and will engage in the designing and execution of Commercial Display Windows and Interiors. The new organization will appreciate the receipt of manufacturers' catalogues, details, samples and price lists. Temporary address, 240 Oneida St., Pittsburgh, Pa. SAMUEL PELTON, ARCHITECT, 55 West 42nd St., New York, N. Y., would like to receive manufacturers' samples and catalogues.

SYDNEY W. LUCAS of Canberra, Australia, desires to correspond with one or more of the younger members of the profession of architecture in the United States. He may be addressed c/o Federal Capital Commission, Canberra, F. C. T., Australia.

THE ARCHITECTS AND BUILDERS EXHIBITS, INC., of 1 Niagara Square, Buffalo, New York, has opened, in connection with their Exhibit, a reference catalogue library for architects and will welcome catalogues from all manufacturers who have not already sent theirs.

W. G. ECKLES, Director of School Building Service, State Department of Education, Jackson, Mississippi, is starting an A.I.A. file and would like to receive manufacturers' samples, catalogues, and specifications.

EUG. LAROSE, ARCHITECT, 3725 Berri St., Montreal, Canada, will continue to practice Architecture at this address and would like to receive manufacturers' catalogues and samples previously sent to Larose & Simard, 927 Cherrier St.

FREE EMPLOYMENT SERVICE

(Other items on pages 120 and 128, Advertising Section)

Position WANTED: Architectural designer, 16 years' experience in the design of all classes of buildings both monumental and commercial. Capable of making working drawings, perspectives and renderings. Location immaterial. Box No. 612, care of PENCIL POINTS.

Position WANTED: Young man, 27 years of age, practical carpenter and architectural student studying evenings, with some experience, desires permanent position with architect as beginner in Chicago. M. P. Mackiewicz, 941 Noble Street, Chicago, Ill.

POSITION WANTED: Architectural designer desires permanent position with office doing high class work. Preliminary sketches, rendering in pencil, water color, etc., working drawings and details. Eight years' experience. Age 31. Married. Salary \$65.00 per week. Box No. 615, care of PENCIL POINTS.

Position WANTED: Registered architect-designer, has done work here and abroad, seeks position in charge of work. Box No. 616, care of PENCIL POINTS.

POSITION WANTED: Junior architectural draftsman, 1 year's experience, 5 years' school, High School graduate, desires connection with architect or engineer. Salary secondary. Good letterer and tracer. Box No. 617, care of PENCIL POINTS.

POSITION WANTED: Senior draftsman wishes to make change. Ten years' experience, last eight years with prominent New York architect. Thoroughly familiar with apartment house, hotel work, and all New York City laws governing same. Particularly able at apartment house planning, cooperative and rental, simplex or duplex. Also former Class "A" student at Beaux-Arts Institute of Design. Excellent references. Box No. 618, care of PENCIL POINTS.

POSITION WANTED: Architectural draftsman with ten years' general experience would like to locate with an architectural office, preferably in the southeast. Thoroughly experienced in planning both architectural and structural design, details, and specifications. Able to take charge of small office. Box No. 619, care of PENCIL POINTS.

PUBLICATIONS

OF INTEREST TO THE SPECIFICATION WRITER

Publications mentioned here will be sent free unless otherwise noted, upon request, to readers of PENCIL POINTS by the firm issuing them. When writing for these items please mention PENCIL POINTS.

National Super-Smokeless Boiler.—Leaflet illustrating and describing this smokeless furnace used with coal and oil. 4 pp. Standard filing size. National Radiator Corp., 55 West 42nd St., New York City, N. Y.

The Story of Oak Floors.—15th edition. Brochures in sepia with color plates covering the application of oak floors, in its various finishes, in all types of buildings. 24 pp. $6\frac{1}{2} \times 9\frac{1}{2}$. Oak Flooring Bureau, 1234 Builders Bldg., Chicago, Ill.

Modern Heat.—A series of eight folders on the subject of installation of oil heat in commercial buildings as follows: "The Modern Heat for Hospitals," "The Modern Fuel for Clean Cities," "The Modern Heat for Theatres," "The Modern Heat for Hotels," "The Modern Heat for Schools," "The Modern Heat for Department Stores," "The Modern Heat for Apartment Houses," "The Modern Heat for Office Buildings." All standard filing sizes. Oil Heating Institute, 420 Madison Ave., New York, N. Y.

Stockade Wall Construction.—A.I.A. File No. 10-a-5. New book on the subject of this type of wall construction. Full information on the erection of Stockade Wall, setting window and door frames, steel casement with roll screen and without wood trim, setting plates for rafters, joists, etc., gables and dormers, recesses, etc., all illustrated with detail drawings. Also perspective cut away drawing of a typical Stockade home showing use of Stucco finish. 32 pp. Standard filing size. The Stockade Corporation, 228 No. La Salle St., Chicago, Ill.

Clock Systems and Signal Equipment.—A.I.A. File No. 31-i-2. Architect's and Engineer's reference book and specification manual. Signal equipment for every purpose as recommended for schools, hospitals, hotels, public and office buildings, fine residences. Very valuable information. 64 pp. Standard filing size. Time-Systems Co., 7755 Grand River Ave., Detroit, Mich.

Webster Vacuum Systems of Steam Heating.—A.I.A. File No. 30-c. Bulletin B-500-A. Illustrates and describes these systems for heating large buildings of every type, for groups of buildings and for many varied conditions. Typical layout. 19 pp. 8 x 10¹/₂. Warren Webster & Co., Camden, N. J.

WeisSteel Integral Shower Stall.—A.I.A. File No. 29-h-3. Folder illustration and describing this shower stall in detail. Specifications. Standard filing size. Henry Weis Mfg. Co., Inc., Elkhart, Indiana.

"Sirocco" Unit Heaters.—A.I.A. File No. 30-d-11. Bulletin No. 7418. Illustrates and describes this unit for heating factories, warehouses, shops, garages, and industrial institutions of all types, for floor and ceiling applications, high and low pressure types. Application diagrams, piping diagrams, dimension diagrams. 52 pp. Standard filing size. American Blower Co., Detroit, Mich.

Beautiful Sani-Onyx, A Vitreous Marble.—Handsome catalog, just off the press, illustrating and describing this attractive line of Vitreous Marble for bathrooms, kitchens, breakfast nooks. Sectional wall suggestions, interesting wall treatments, caps and borders, "spot" designs. Also treatments for theatres and public buildings, bedroom furniture tops, hospitals, barber shops, meat markets, restaurants, hotels, cafeteria and soda fountain equipment. Beautifully illustrated in color. 119 pp. $8\frac{1}{2} \times 11\frac{1}{2}$. Marietta Mfg. Co., Indianapolis, Indiana.

Miller Lighting Fixtures.—Catalog No. 162. Attractive catalog illustrating and describing line of lighting fixtures in period designs. Many color illustrations. Full line of shades of all types, stiff cover. 55 pp. Standard filing size. The Miller Co., Meriden, Conn.

Sager Metal Weatherstrip.—Details of Sager interlocking parting bead equipment installed on double hung window, detail of Sager rib strip equipment installed on a double hung window, details of Sager spring bronze equipment for outswinging casement sash, details of Sager water tight bottoms for inswinging casement sash, details of Sager metal door equipment. Details of various types of weatherstrips, specifications. 8 pp. $8\frac{1}{2} \times 11\frac{1}{2}$. Sager Metal Weatherstrip Co., Chicago, III.

Whale-Bone-Ite Closet Seats.—A.I.A. File No. 29-h-22. Catalog W-5128. Looseleaf catalog illustrating and describing this line of closet seats. Prices, dimensions, hinge equipment, seat measurements, also full information about the White Seat De Luxe. 61 pp. Standard filing size. The Brunswick-Balke-Collender Co., 623 South Wabash Ave., Chicago, Ill. Akoustolith Sound Absorbing Plaster.—New brochure on this subject. Contains graph showing absorption of Akoustolith Plaster, article on the development of Akoustolith Plaster, specifications, general information. 8 pp. Standard filing size. R. Guastavino. 40 Court St., Boston, Mass.

Novoid Cork Tile.—A.I.A. File No. 23-b-4. Bulletin 282. New catalog illustrated in color showing the uses of this cork tile. Patterns, installation data, specifications, etc. 8 pp. Standard filing size. Cork Import Corp., 345 West 40th St., New York, N. Y.

G. & G. Telescopic Hoists.—A.I.A. File No. 30-i-1. Booklet illustrating and describing this device for ash removal and handling material between floors. Models, specifications and full information on the subject. 23 pp. Standard filing size. Gillis & Geoghegan, Inc., 535 West Broadway, New York, N. Y.

McCabe Door Hangers.—Catalog No. 24 illustrates and describes ball bearing door hangers, track and hardware for all types of sliding and folding doors. Overhead carrying devices, expansion bolts, ball bearing wheels, rolling ladders. Price lists, plans, and elevations, sectional drawings, etc. 59 pp. Standard filing size. McCabe Hanger Mfg. Co., 425 West 25th St., New York, N. Y.

Hangar Construction.—Pamphlet giving concise review of the elements of Airplane Hangar design. Detail drawings. 4 pp. Standard filing size. The Macomber Steel Co., 10th & Belden Ave., Canton, Ohio.

Rufkote Plastic Stone.—Textbook of textures by F. N. Vander-walker, developed for the benefit of architects and craftsmen as an aid to better development of interior plastic decorations. Beautifully illustrated in color and full of valuable information. 5 x 8. 96 pp. H. B. Wiggins Sons Co., Bloomfield, N. J.

Sanitary Elimination of Garbage Waste.—A.I.A. File No. 35-j-41. Folder referring to basement-fed Kernerator for homes already built and also for new homes where the standard Kitchen-fed type cannot be used on account of there being no suitable flue above. Illustrations, sections, etc. Kerner Incinerator, Milwaukee, Wis.

Preesteel Stairways.—A.I.A. File No. 14-d. Catalog No. 30. Illustrates this type of stairway. Strength tests, designs, details, patents, specifications, installations, estimate information. Also illustrates treads, newel posts, balustrades, platform construction, etc. 92 pp. 8½ x 11. Woodbridge Ornamental Iron Co., 1515 Altgeld St., Chicago, Ill.

BluBag Finishing Hydrated Lime.—A.I.A. File No. 21-a-1. Portfolio showing photographic reproductions of the modern trend in decorative wall treatments using BluBag Finishing Hydrated Lime. Condensed specifications for the reproduction of textured finishes in actual building practice, as well as detailed specifications for white coat finish and lime plaster base coats. Standard filing size. The Woodville Lime Products Co., Toledo, Ohio.

National Fittings.—A very valuable book just published containing fittings for every standard requirement. Trade Bulletin No. T-17-027. Outlet boxes and covers, economy cable and loom boxes, switch boxes, flexsteel fittings, ovalflex fittings, ovalduct, loomwire. Fully illustrated. Prices and tables. 70 pp. $8\frac{1}{2} \ge 10$. National Metal Molding Co., Fulton Bldg., Pittsburgh, Pa.

Hotpoint Electric Air Heaters for the Home.—Catalog illustrating in color and describing this type of heater for the home and office. Portable and built-in models. Installation instructions for built-in air heaters, miscellaneous data on heating, etc. Standard filing size. 16 pp. Edison Electric Appliance Co., Inc., 5600 W. Taylor St., Chicago, Ill.

Wet Walls and Efflorescence.—A.I.A. File No. 5-m. What efflorescence is and how to avoid it, with examples showing the results of neglect. Also results of two investigations conducted at the National Bureau of Standards, U. S. Dept. of Commerce, Washington, D. C. 26 pp. $8\frac{1}{2} \times 11$. American Face Brick Association, 130 No. Wells St., Chicago, Ill.

Chimney Pots.—A.I.A. File No. 5-h-3. Contains 30 different chimney pot designs, each made in from four to ten different flue sizes and in any one of eight different colors. Complete price list included with catalog. Many illustrations of chimney pots in use on residences. Atlantic Terra Cotta Co., 19 West 44th Street, New York, N. Y.