

# PENCIL POINTS

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**F**IRST, the new Editor desires to express his hearty thanks and appreciation to all those who have so generously extended their good wishes. Such messages inspire us to exert ourselves to the utmost to justify the faith placed in us by our friends.

We look upon our new responsibilities as a fascinating adventure. It is one of the joys of life that we think we know the direction we should take and are constantly finding a new trail with fresh tracks. If we had ever held the view that everything worth finding out and saying about architecture and the practice of architecture had been said long ago it would be constantly refuted for we are being continually reminded that social conditions are changing and that causes and effects have often been confused. The human element will always keep the art of architecture in a state of flux. There is no subject which is so intimately connected with human life as architecture and there is no other art which is so bent and trimmed to the social conditions which are everlastingly changing.

The greatest benefit, therefore, that a journal for the drafting room can furnish to the profession it serves is a frank discussion and painstaking showing of the modifying influences of the various activities and tendencies of human life upon architecture. The practical experience of the older generation should be at the service of youth to temper enthusiasm with a chastened experience.

PENCIL POINTS will continue to emphasize the human side of architecture. It will continue to be published *with* our readers rather than *for* them. To this end we want you to tell us what you want to know about,—what is interesting, puzzling or revolting to your sensibilities in your daily experiences in the drafting room. There will always be room for the provocative article which stimulates thought and interest. A good healthy, vigorous difference of opinion is to be sought. We know that we can't please all our readers all the time. Always to present in our illustrations and letterpress, only the

things that are conventionally accepted would be to stagnate. We must seek out the vital problems of the drafting room and present them in such form that the reader may get the greatest possible informative pleasure and inspiration from their study.

Our vision for the future of PENCIL POINTS shows us many new opportunities for service and we are counting on our large family of readers to cooperate with us. We want each issue of our journal to have breadth and inclusiveness. Architecture has its professional and technical side. If we can publish some of the various solutions of the problems

which have to do with design, planning, rendering, field sketches and measured drawings, with the making of working drawings, the selection of suitable building materials and the workmanlike specifications for their use and installation, and for superintendence we will have gone a long way toward meeting the problems of the drafting room.

The use of color in architecture is a subject which is more and more interesting to the profession and especially so to the men whose livelihood is dependent

upon their knowledge of color in rendering.

The New Year is a good time to turn over a new leaf. We take pleasure in announcing that beginning in the January issue and continuing throughout the year, we have resolved to provide our readers with two new "leaves," showing the finest renderings in full color. The subjects will be selected from the work of representative men in the field, and will be faithful reproductions in the colors of the original rendering.

Other new features will be incorporated as our work develops. We will seize upon every idea which will enhance the value of PENCIL POINTS so that it may be representative of the best thought and achievement in architectural practice.

We will try to remember that architecture reaches to greatness in the healthy state which has learned and assimilated the principles of decent living and accepted the moral responsibilities for the amenities of life.

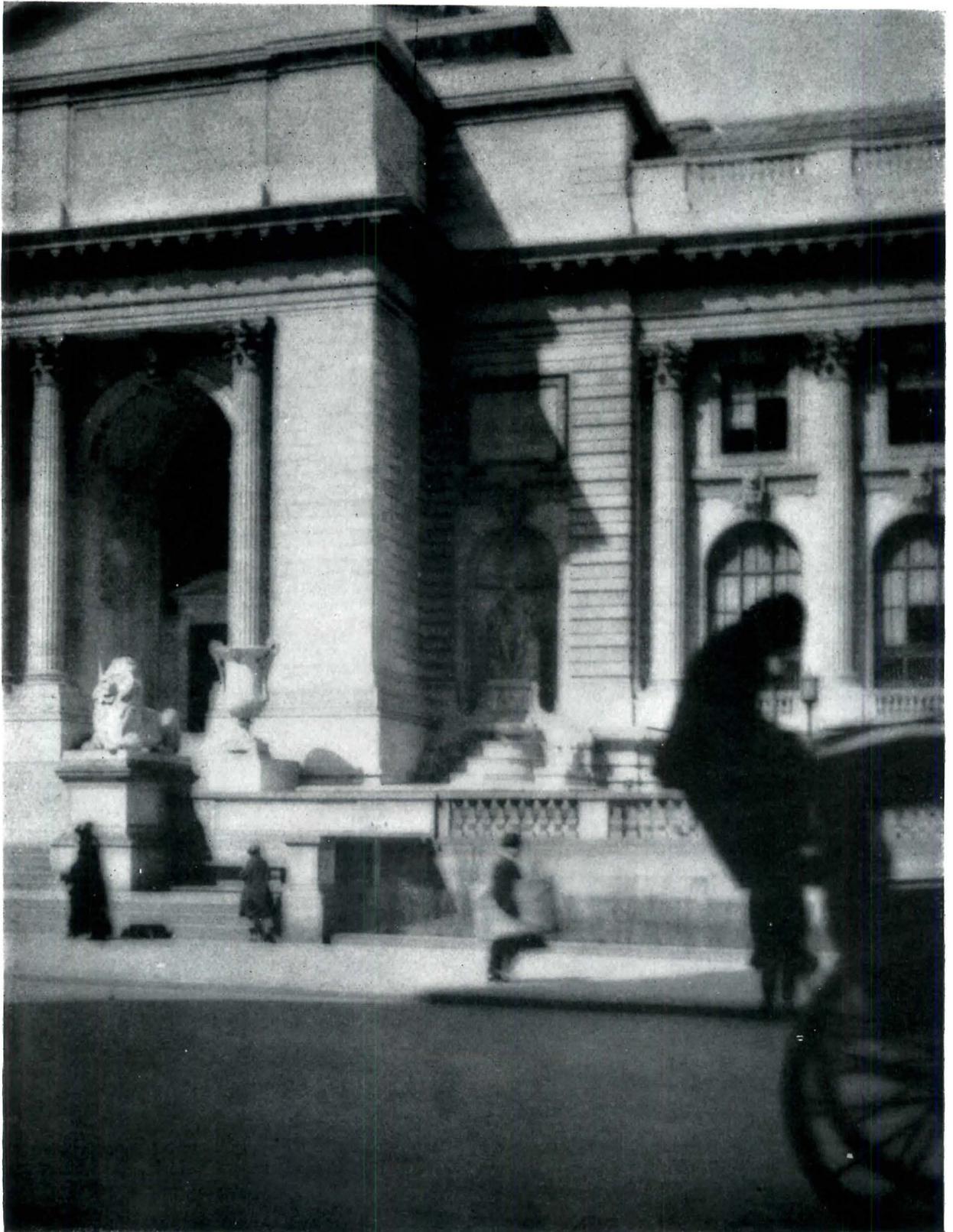
## PENCIL POINTS

extends to you the

Compliments and Best Wishes

of the Holiday Season

Christmas, 1925



CAMERA STUDY OF THE NEW YORK PUBLIC LIBRARY  
*By Kenneth Clark*

# OFFICE PRINCIPLES, POLICIES & PRACTICE

A Reprint of a Booklet written by H. Van Buren Magonigle for the guidance of his Drafting Room, familiarly known as "The Boss's Bible".

**FOREWORD:** We spend a third of our days here, the most important part of our daily lives, and I want it to be a pleasant place for all of us. I want to feel, and want you to feel, that we are all friends working together for one end—to do good architecture. I want you to feel at home here while you are here. And I believe that you will feel at home more quickly if you know what the conditions here are.

First let me say to you that, from all I can learn, a misconception seems to exist as to what the office policies are, what I expect from a man and the like. I have gathered the impression that when a man comes into the office he feels more or less up in the air and his sense of initiative becomes stifled or is abated and that this is partly because I am so very particular and take such an intense personal interest in every detail of the work that the fellows are afraid to go ahead and have a sort of vaguely rattled feeling. Why this should be so I can't fancy, but it has been made evident to me so many times that it is high time for me to state my point of view clearly.

There is hardly any quality I prize above initiative. I want you to have it. It is invaluable to you and to me.

You on your part will realize I hope that architecture is as intensely personal a matter as sculpture or painting and vastly more difficult because one man can't do all of it with his own hands and has to do the greater part with the assistance of his draftsmen. Therefore while you are in my office, it is essential that you should do the *kind* of thing I like—and I like many different kinds of things—simple things, rich things, picturesque things and very quiet sober things. And I try to choose the right parti among these for the problem in hand. I do not like flashy, or commonplace things. Every architect as he works and develops acquires unconsciously certain traits of style that run through all his work—predilections in favor of certain profiles as against others, combinations of profiles, a characteristic line or twist in ornament, a certain quality in composition, in plan and elevation and in the disposition of light and shade, that stamps the work as his. It is for you, if a new comer, to find out as speedily as you can the kind of thing I like. I shall never begrudge the time you spend looking over the old drawings on file to find out—only, don't look *too* far back remember that a man's work insensibly changes and develops as time goes on.

I require that my work shall be well studied, soundly constructed, sacrificing neither the esthetic to the practical nor the practical to the esthetic. Clients as a rule know very little about

architecture, but they know, for example when a push button is in the wrong place.

But do not think for a moment that I want to stifle *your* invention, *your* sense of design, *your* practical ability. I welcome a fresh point of view. Now, it is very human to feel discouraged when your pet idea is turned down. Don't be! Get another, get some more, better and more acceptable to me.

*You* will grow in the process because your inventive faculty, your resourcefulness is put to the test.

Remember that there is nearly always more than one solution of a problem; you may find the best or I may; whichever finds it first, wins.

I don't want to design every smallest detail. I only reserve the right to change or modify your work if it isn't what I want. This fact should not make you feel helpless, discouraged or at sea. This should not make you wait for me to establish a character. That is for you to do, leaving your sketches loose and free for discussion. Remember that we often have to feel our way toward a solution. One cannot always visualize the thing at the start.

I want you to work *with* me as well as *for* me. I feel a strong sense of responsibility to you—for while an office is not a school in the formal sense, it ought to be in the highest and best sense, and I should like to feel that every man who passes through the office has gotten something valuable to *him*. And don't forget that if a man can learn from his chief, his chief can also learn from him.

Don't despise the practical side of your profession. Architecture is a plant of which the root is science—the flower is art. Neglect the root and what happens to the flower?

Don't despise the artistic side either, if you have a practical bent. Be a well-balanced man.

If you will constantly bear in mind that you are training yourself to become a practicing architect, you will see every day's work from a new and interesting angle.

Therefore learn to think and act as an architect, not as a mere draftsman. See your job in the big, as a whole, and see the part you are working on at any time in relation to the whole, in scale, in proportion, in light and shade, in color and in materials.

Learn to use materials properly—their characteristics, textures, possibilities of finish, their suitability for various uses, their limitations and

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their durability. Wherever you go, keep looking at them to see how other fellows have used them and how well or badly.

Remember the good old adage—"All work and no play makes Jack a dull boy." It is perfectly true that in the seven and a half hours of a working day it is impossible to learn enough about architecture for an ambitious man to make sufficiently rapid progress, and that some of his time outside the office must be given up to study. But not all of it. The ideal architect is a cultivated gentleman. Culture is not to be attained by the mere acquisition of facts but by the digestion and assimilation of a wide range of *ideas*. Architecture touches life at all points and unless an architect knows life, the life of the past as well as of his own time, his work will be lifeless, dry and juiceless. He must therefore be an omnivorous reader of great literature, fiction, essays, history and biography. He must therefore mix with the men and women of his time to know human nature, to be at ease in any society in which he finds himself thrown. He must cultivate the acquaintance not merely of men in his own profession but in other professions and occupations and get their points of view. He should hear good music and go to the play. He should see and study good pictures and sculpture. And he should not neglect his body while storing his mind. Take plenty of exercise and keep the blood buzzing through your body. And at all times, in and out of the office, whether working or reading or mixing with people or doing any one of the many things an active mind suggests, **have a good time!**

Any man who says he hasn't time to carry out such a program, I would refer to the example of Theodore Roosevelt who found time to read books, write several, take lots of exercise and all the time be very much President of the United States. We can't all be T. R.'s but his day had only twenty-fours in it just like ours.

When you are working with several others on a job, get to know as much about the job as you can. Don't become so absorbed in the part you are doing that you lose touch with the rest. The part you are doing is no more important than any other part—it is only a part and it has to fit the other parts. Some men fear that if they leave their table they'll be accused of loafing. Now there are four types which the experienced architect picks out in a very short time.

A. The honest, serious, conscientious man who buries himself in what he is doing and barely budges from his table.

B. The man who rarely leaves his own place but makes a pretense of being very busy, and thinks he gets away with it.

C. The man who is nearly always at someone's else table for any one of a dozen bad reasons.

D. The man who is thoroughly interested in his own work but is also interested in the job as a whole, who isn't afraid to leave his table if he wants to and needs to for any one of a dozen *good* reasons. Who knows in a general way what else is going on in the office and yet manages to get his own work done.

If a man wants to loaf, let him loaf with his head and tail up—openly and frankly *loaf*. But let him never soldier. Loafing *may* be resting, but soldiering is "not cricket".

Cultivate a sense of proportion between effort and result. There is a type of man, who, if he has the plan of a room to make at  $\frac{3}{4}$ " scale draws the plan of every window box with every tongue and groove and shows the weights. Another type delights in the endless repetition of some insignificant detail. Others waste hours in elaborate lettering instead of clear simple titles.

Methods and customs are not absolutely inflexible; they must change from time to time if there is to be any progress or growth. But it is essential to the success of the work of the office that certain things be done in exactly the same way by all of you, until some better way is devised. Suggestions for improvements will be welcomed and considered. They should be reduced to writing and dropped in the suggestion box.

**Office Hours:** Office hours are from 9:00 to 5:30 P. M. for five days of the week. During June, July, August and September the office is closed on Saturday. Through the other eight months Saturday hours are from 8:30 to 12.

A reasonable adherence to these hours is of course expected. No office can be run with any degree of efficiency if the men straggle in at all sorts of hours. I recognize that the exigencies of the work may detain you after hours and that there must be give and take. But you must not habitually come late and habitually make up the time at the close of the day.

**Holidays:** The following holidays are observed: New Year's Day, Lincoln's Birthday, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Columbus Day, Election Day, Thanksgiving Day and Christmas.

**Vacations:** The vacation period ranges from July to October inclusive. A man who has been here for six months or more prior to July 1st is entitled to a vacation of one week—if for a year or more, to two weeks.

**Salaries and Overtime:** Salaries are paid monthly on the following plan: You receive a certain fixed salary each month. Overtime is paid for at the regular hourly rate plus one hour's time for dinner. Your hourly rate is determined by dividing your annual salary by 2015, the average number of working hours per year. Your regular salary and the total overtime, if any, are then

added together; absence is deducted for at the hourly rate; in case a man has had no overtime in the month, he is paid his full salary and permitted to make up absence the next month. If he has had overtime, the amount lost is deducted from his overtime.

A raise in salary is a recognition of increased ability and is not given "because I haven't had one in a long time". There may be, and usually is, a reason.

**Telephone Calls:** Please pay Miss Jones for all personal telephone calls at the time of the call.

**Library:** Use the library freely and keep freshened up. I only ask that you treat the books carefully and with respect. It is not merely their cost—no lover of books will abuse one. Piling them **open** one on top of another on your table, soiling or tearing the pages are high crimes and misdemeanors.

Return all books yourself to their exact and proper places at the end of the day.

**Files:** No one except the person in charge of the file-room is permitted to take a drawing from or return it to the files.

No one in the drafting room is permitted access to the correspondence files under any circumstances whatever.

**General Advice:** Co-operate with the man in immediate charge of the work you are doing. Remember that you may be in charge of a piece of work with him to assist you some day. Do your best to maintain pleasant relations with the other men in the office and remember that after all the work and its success is the thing.

**Use your head.**

**Be thorough.**

**Take nothing for granted**—check it up or look it up.

When you don't **know**, ask or look it up.

When you are not **sure**, ask or look it up.

Remember that it takes less time to do a thing right in the first place than to correct mistakes.

When in doubt don't leave out. Too much information is better than not enough—but find the proper mean.

Keep clear and explicit written notes. Don't trust your memory. A piece of paper and a pencil beats the best memory into a cocked hat. But don't spend all your time making notes. Be enthusiastic about it, but reasonable.

**Don't duplicate your own efforts** as you work nor those of other men. Before you begin a piece of work **make sure by asking** whether anyone has tackled it before and just how far he got.

Don't be afraid to ask questions of the proper person at the proper time. When you are absolutely tied up is one of the proper times. Don't keep running to me or to the man in charge of the work to ask questions. As they occur to you while you work, write them down and submit them all at once for settlement. This saves time for everybody.

**Do your own thinking**—and when you strike a snag, don't put it up to me or **anyone else** to do your thinking for you. Reason out for yourself the best solution of the trouble you can and give the results of your thought, **not of your failure to think**—And when you reason be sure your premises are correct.

Learn to think of architecture in three dimensions.

Take pride in making your work cost the office as little as possible.

Keep track of your time on everything you do and make the time bear a proper relation to the commission that will be received for it and remember that every hour you spend on it carries an overhead charge.

Sordid as it may seem, an employer weighs his men according to their productivity. And when the pay roll has to be cut down it is the unproductive man who goes first, not the man who does the most work at the least cost in time and in worry to the Boss. Never fool yourself by thinking, "I may be slow but I'm good". If you are slow you may be good, but not as good as though you were good **and** rapid. Rapidity and accuracy are the result of clear thinking, concentration, and the co-ordination of brain, hand and eye. If your brain works slowly don't admire it just because it is yours.

Ask yourself how much time you waste in the course of the day, by thoughtlessness or carelessness or forgetfulness or unnecessary repetition or marking time or soldiering or supplying the paper factories with the finest pulp or oratory or argument. Such time is paid for in money and if all the time wasted in such ways in all the offices in the country could be estimated in dollars and cents the total would be enough to found a home for indigent architects.

Try to keep your place in order. Don't let stuff accumulate in it. The place for waste paper is in the baskets not on the floor.

**Drawings and Workmanship:** Take good care of drawings. They have to be printed from and must be kept clean, untorn and uncrumpled.

Draftsmanship, meaning the ability to express architecture in black and white, clearly and cleanly, **is expected** of every man in the office. Messy, careless, sloppy, dirty drawings are not tolerated because there is no excuse for such work.

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It is just as easy and takes no more time to make a clean, clear, well arranged drawing than a dirty, mixed-up one. Strike the happy mean between the old maid and the slouch. It is just as easy and takes no more time to draw a clean, good line than a ragged and sloppy one. A well-sharpened pencil with a symmetrical point is the first step toward a good line.

Your draftsmanship should be suited and adjusted to the kind of work you are doing. The pencil you use and the line you make for small scale drawings are not the ones for full size. The same applies to sketches and working drawings.

It requires the exercise of good judgment to make the right kind of drawing for the particular purpose for which it is intended.

When you begin on a job already started but new to you, the first step is to examine the general drawings and specifications to get the relation between what you are about to do and the rest of the job. Don't go it blind.

When you start a new piece of work collect your information as to the practical requirements as soon as possible.

There is an information book which gives all sorts of practical information. This is in charge of who keeps it up to date. Consult it freely. If you have an unusual condition not covered by the information book, he will get it, give it to you, and record it in the book.

There is also a book containing profiles of trims, bases, cornices, etc., details of window boxes and frames, etc., etc., of all sorts and kinds. They are all good. Except for very special rooms, consult the specifications, see what will comply and get me to decide which of these I prefer to use.

Don't work too close; allow reasonable play between rough work and finish. To be stymied for an eighth of an inch is absurd. With the best of care the building will vary from the drawings and this must be discounted in advance.

**Sketches and Studies:** Sketches and studies are sketches and studies, not pictures.

Sketches and studies are for the purpose of establishing general forms and shapes, scale and composition. They should be free, rapidly drawn with a soft pencil. If they have an interesting and sympathetic quality so much the better. But that quality should be a by-product not an end to strive for. Think of them as architecture not as drawings of architecture. Think of the thing to be built not the instrument.

While in studying something, for example a doorway, you need and I need to see it in its entirety in order to judge of proportion, scale, etc. But the builder in ninety-nine cases out of a hundred needs only a partial elevation. Therefore, when you and I have settled on the study what it is go-

ing to look like and you proceed to translate your study into a working drawing, give the builder only what he needs.

When you have made studies for anything and are interrupted, or the work is deferred, turn the studies and data over to the man in immediate charge of the work. Don't let them get buried in your alcove.

**Working Drawings:** Working drawings are neither studies nor sketches nor pictures—they are working drawings.

A good working drawing is that which gives the builder exactly the information he needs to build from, no less and **no more**.

It must be clear and clean and simple.

It must be arranged in an orderly and readable manner on the sheet.

It must be accurately drawn so that scaled measurements will agree with figures.

It must present the essentials and nothing superfluous.

It must avoid unnecessary repetitions.

All titles for drawings must be explicit and comprehensive but brief, so that the title, copied on the index to drawings, will tell exactly what the drawing covers. A good short comprehensive title is hard to compose. Learn to do it.

All **final** drawings are to be placed upon a sheet of a size standard for that job. No drawings of odd and fragmentary sizes are permitted. In every set there should be provision for sheets for the miscellaneous drawings and details that are inevitable. These sheets, with border lines ruled and certain titles printed are kept in the file room.

**Working Drawings.**

**Quarter Scales:** In beginning a set of  $\frac{1}{4}$  scale working drawings the first thing to do is to list up the number and kind required. The next step is to settle the size of the sheet which will be standard for the job and how the drawings may be best arranged on them.

The next is to lay out the key plan on bond paper, copying the sketch plan with all its faults and inaccuracies.

Don't try to correct and adjust as you go along.

(For a building standing free, without lot-line restrictions, work from the inside out—that is, from finished dimensions of rooms. With lot-line restrictions work of course from the outside in.)

Having laid out the key plan, go over it to see where things are tight and cramped, where space is wasted, whether sufficient allowance has been

made for wall thicknesses, furring and the like, examine axes and see what would follow from shifting any of them.

Get all this firmly fixed in your mind. Then pick out the best place to begin adjusting and proceed to adjust in a broad and general way, avoiding minor details like the plague—(I mean for instance, figure out what the total thickness of outer walls will be from plaster to outer face, but **don't draw** anything but the inner and outer lines at this stage; indicate windows with four lines—two showing the width and two showing the box.)

Then lay out **all** the other plans, **all** the elevations and **all** the sections in the same general way. These should all be quickly done with just enough accuracy for this preliminary stage of the work, which is for the purpose of finding out where the snags are (sections, plenty of them, are great snag-revealers) and getting everything moving and brought up to the same point of progress.

Unless the job is in an unusual hurry, the man in direct charge should do all this work or at the most with one other to help him.

At about this point the client is usually to be consulted and further adjustments and alterations made.

Then get prints of these drawings for tentative steel, heating and ventilating, and while these are in the engineers' hands, utilize the waiting time to collect data on plumbing fixtures, electrical work, elevators, dumbwaiters, kitchen and laundry equipment, etc., etc. for future incorporation in the drawings. Up to this time everything is loose and free, nothing really settled, nothing perhaps absolutely accurate.

By this time these preliminary drawings will be covered with free hand notes, column centres closely approximated, ducts shown free hand with sizes marked, approximate position of rising lines for heating, soil pipes, electric outlets and the like.

Go over them carefully to see what effect this or that will have on the architectural appearance, interior and exterior, and what sort of adjustments must be made. Then start a fresh set of drawings on bond paper carefully and accurately drawn, filling in details in the order of their importance and nailing down important or complicated dimensions as you work.

Keep all drawings going in this set as in the preliminary set. Don't show all the ducts carefully and finally on the first story and then find out that some of them have to be changed on account of basement or upper story conditions, or because you didn't know that a structural member would run through it. Don't show W.C.'s carefully and finally and find that the lead bend comes smack over a steel beam.

There are a lot of such don'ts. There will be no excuse for such occurrences because all such conditions should have developed themselves in the preliminary drawings.

For certain types of buildings this set on bond paper will be the final set. For more important buildings they will be traced on cloth.

This must be decided at the time the second set is started—for if they are to be traced on cloth there is an immense amount of work that can be put straight on cloth and thus avoid an enormous amount of unnecessary repetition. For example: Door swings have been established, probably freehand, on the preliminary drawings—**don't repeat** them on the second set and then trace them all over again on cloth. Duct sizes have been marked on the preliminary drawings—unless changed to accommodate the structural or finish conditions **don't repeat** them on the second set and then trace them all over again on cloth. **Don't repeat** notes taken from the preliminary set on the second set and then repeat them again on the cloth set. All indication of material will be drawn on the cloth.

We now come to a very important stage—the placing of notes and figures on the drawings. Take one room in a building as an example—it may have the following and more, in it or in the walls. Floor plugs, base plugs, bracket outlets and ceiling outlets with their wattage, switches, push buttons, thermostats, vacuum cleaner outlets; radiators or registers with their sizes; ducts with their sizes; rising heat lines; soil pipes; chases; figured dimensions; the name of the room and its number; the numbers of the door and window openings! notes as to special conditions. To arrange all this mass of material so that it is all legible and clear, so that notes don't come just where dimension lines and tick-marks are, and so that the room is not so cluttered up with it that one can't see the room, takes thought and care; it can't be done hap-hazard.

#### Working Drawings.

**Lettering:** Lettering must be of moderate size, clear, compact and distinct. Avoid eccentric, affected or fantastic lettering.

#### Working Drawings.

**Figuring:** Now as to figuring: One of the most difficult things a draftsman has to do is to figure a drawing simply, clearly and properly. The tendency is to give too many figures, multiplying the chance of error.

Make your figures of moderate size, clear, black and distinct, and if fractions must happen, don't make them of microscopic size, just because fractions are smaller than whole numbers.

In laying out a plan we of course work from main axes and from finished dimensions. Establish these figures for your own convenience and that

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of others as you work, but when you figure the plan finally, figure from rough to rough, remembering that brick walls are built first, tile or stud partitions thereafter and the finished work is installed last. Remember that in a frame building the frame is erected before the chimneys are built.

In general, figure from center to center of openings, interior as well as exterior. Partitions are to be figured from side to side.

Totals are essential.

Fractions are to be avoided wherever possible. If you get eighths of an inch your figuring is wrong somewhere. Find the hair and pull it out.

### Working Drawings.

**Notes:** Don't be afraid of putting notes on drawings. Notes clearly worded are invaluable. But be sure they are clearly worded and tell exactly what you mean—and be sure you know what you mean. An ambiguous note can make more mischief than none at all.

A great deal of repetition may be saved by general notes, which should be assembled in one place on the sheet. For example, it is the common practice to figure the size of every door at every opening; doors may be usually divided into two or three types as: Room Doors, Closet Doors, Double Doors. A general note stating that "except where otherwise specially noted doors will be of following sizes: Room Doors 3.0x7.0, etc." will suffice and save an immense amount of time.

**Details:** Rough out details on tracing paper. If you are studying the four walls of a room, work them up over each other, and then assemble them on the final sheet. **Don't make completely finished drawings on thin paper and then trace them all over again on the final sheets.** If you indicate materials on the preliminary studies, do it free hand. This method of working, if intelligently carried out, is a great time-saver—if unintelligently, it is the worst time-waster I know of.

The theory is that it is difficult to plan out the position of the various necessary plans, sections and elevations that go to make up a finished sheet in advance with the greatest clearness and without loss of space. But if they are roughed out on separate pieces of thin paper, the latter can be arranged logically, clearly and in a much condensed form within the border line of the final sheet. Lots of men completely misunderstand this very simple method, which doesn't take the brains of a Michael Angelo to grasp.

When you have a close condition rough it out at full size to make sure what you propose will work, **and save the full size study.** In certain cases you may find it advisable to make a number—so that by the time the scale detail is complete the job is almost full sized also. Then assemble them on a final sheet.

A detail to be sent to a country carpenter must usually show construction, whereas to show construction on one to be given a first class cabinet maker is simply waste of time. Use judgment about such things.

When you are full sizing, rough out the profiles, getting the main facts as close to what you think I like as possible and submit them in that form. Don't submit finished drawings; they may be so modified in some part that everything else is affected. As to ornament remember that you are ornamenting construction, not constructing ornament—it is the profile that counts; get the profiles right and then we will decide what ornament is suitable for those profiles.

In making drawings of an important room, remember that it is quite as essential to show the accurate locations of electric light outlets, switches, base plugs, floor plugs, vacuum cleaner outlets, thermostats and the like, as any other item of information respecting the room.

**Checking:** When a drawing is finished as far as you can carry it, hand it over to the man in charge of the work for checking. When it has been checked it will be returned to you for correction if necessary. The moment you have corrected it, return it to him again.

You will be held directly responsible for the correctness and completeness of your own drawings. If your drawings are wrong the work will be wrong. The fact that they are to be checked does not relieve you then or thereafter of your responsibility.

**Supervision:** If you are sent out to superintend, observe the following:

Fill out your report blanks fully and clearly, remembering that you are the office eyes and ears.

Don't let anyone on the job get too familiar with you. Call anyone on the job by their first or last name, if you like, but don't give them a chance to call you anything but Mr. ———.

The contractor is not the natural enemy of the Architect. Be just, fair, and firm with him and his men.

Keep your temper. It is well sometimes to show righteous wrath—but do it deliberately and with purpose, not because you have **lost** control of yourself.

Don't neglect practical things for the esthetic or vice versa. Cover the job thoroughly. Make written notes as you go through.

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It is impossible to state here everything to avoid or look out for. Therefore I say once more and finally, **USE YOUR HEAD!**

# MASTER DRAFTSMEN, XVI

THOMAS HASTINGS

THAT an architect should always remain a draftsman, that he should continue to draw with T-square and triangle, and not fall into the practice of designing exclusively with a roll of thin paper and a soft pencil, is a conviction that Thomas Hastings reiterates and puts into practice. He has a room in the suite of offices of his firm where he works over a regulation drafting board putting in several hours a day usually no matter how many demands are made upon his time by the necessity for meeting those with whom he has business. It is in this way rather than in sketch form that he transmits his designs to his organization.

Hastings has always been a draftsman. When he was about nineteen years old he decided to prepare himself for entrance to the Ecole des Beaux Arts, in Paris and from that time he took up special studies, including mathematics, history and French one half of the day while working in an office the other half of the day. He continued this preparatory study for about a year and when he was twenty years old he went to Paris and entered the Ecole des Beaux Arts. There he became a

student in the atelier of Jules André under whom Laloux, H. H. Richardson and many other of the most distinguished men had previously studied. At the time Hastings was in André's atelier Deglane and Redon were there as "*anciens*" and Hastings "niggered" for both of them.

Upon his return from Paris, Hastings, who was then about twenty-four years old, entered the office of McKim, Mead & White. There he became acquainted with John M. Carrere, who was supervising the work on a house that was being built in Baltimore, by McKim, Mead & White, while Hastings was working on the designs. He and Carrere found that they could get along well together and in about a year they formed the firm of Carrere & Hastings, an association that lasted until Carrere's

death in 1911. They took a small office in the building in which McKim, Mead & White had offices. They had a house or so to do and it seems also did some work occasionally for McKim, Mead & White.

Then came Flagler, who was a member of the congregation of which Hastings' father was the pastor, with the commissions that were to give the members of the young firm their first opportunity to

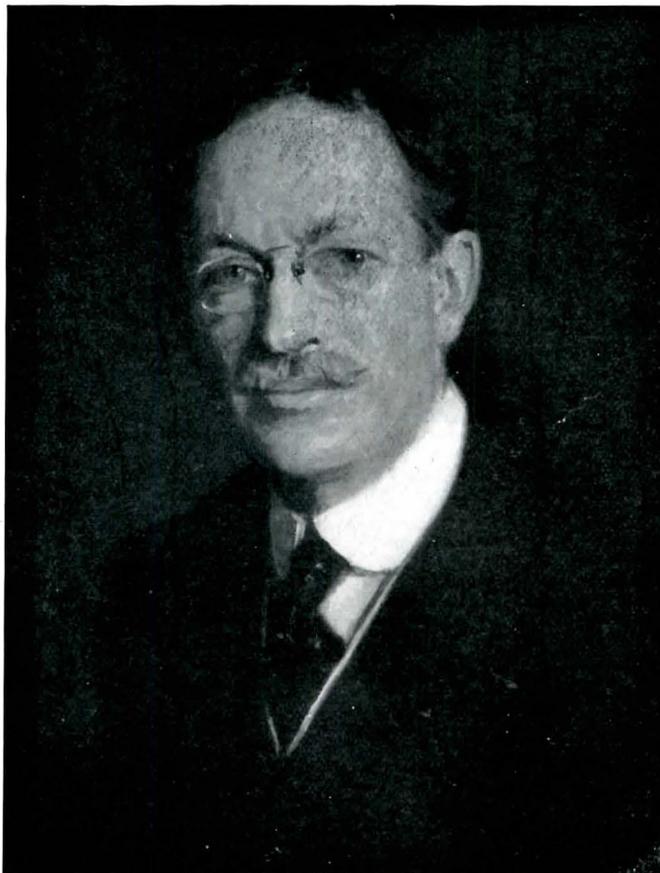
demonstrate their ability as architects. For Flagler, they built the Ponce de Leon Hotel at St. Augustine, Florida and the Alcazar Hotel at the same place. The building of two churches at St. Augustine followed, one a Presbyterian church, the other a Baptist church.

Upon obtaining the commission to design the Ponce de Leon Hotel, Carrere & Hastings required larger working quarters and they took an office on a more ample scale at 3 Bowling Green.

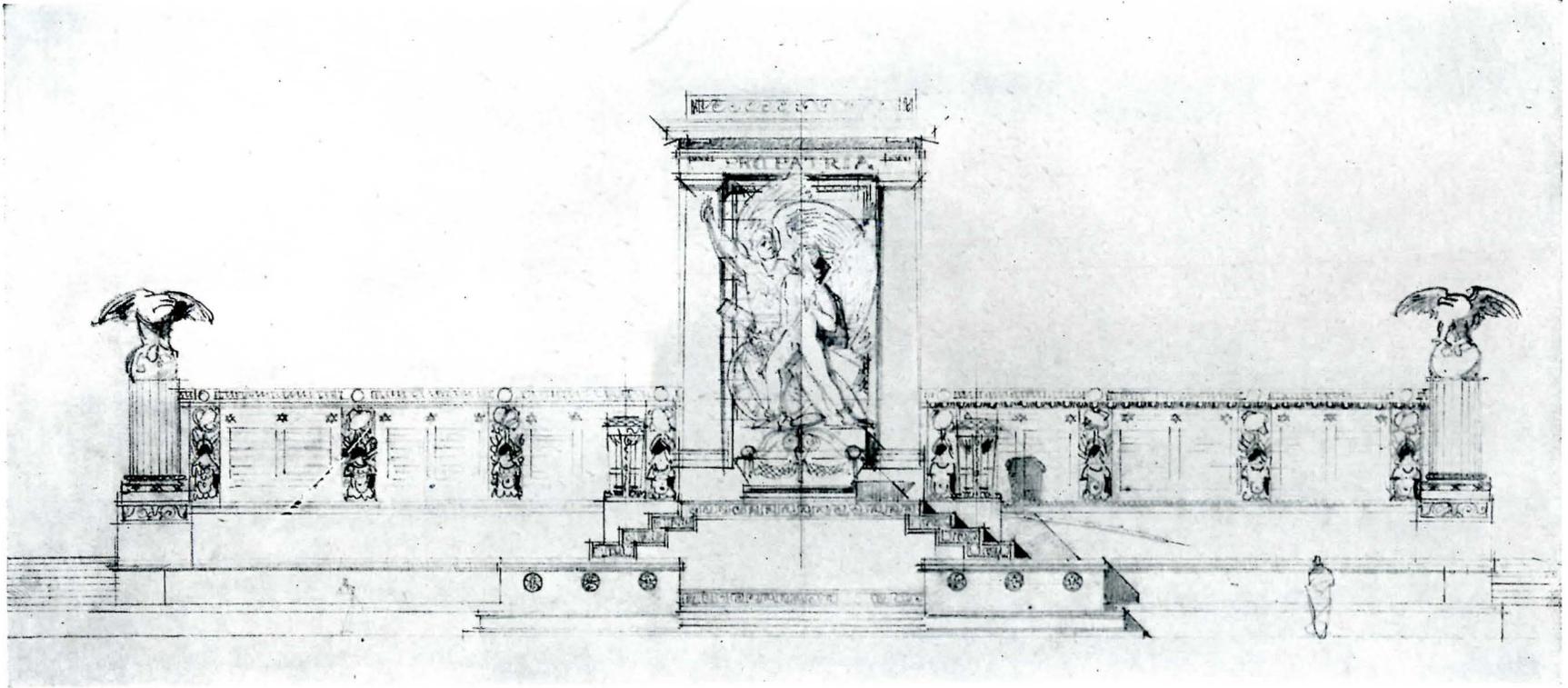
The next event of great importance was entry of the firm upon the competition held for the choice of an architect for the Cathedral of St. John the Divine. This brought out clearly the position Hastings has always maintained in the matter of design character or

style, for he firmly believes that we should solve our architectural problems in harmony with the traditions of our more immediate predecessors in the art,—that we are living in a continuation of the Renaissance and should not go back of that to the Gothic for inspiration or guidance. He feels strongly that to do so is unnatural, and not the right way to express modern life. He is an enthusiastic admirer of Gothic architecture, but opposed to attempts to work in the style today. Hastings is heartily glad that the architects of the Gothic period designed and built as they did, that they made their marvelous contribution to the art of the world as a true and natural expression of the life and spirit of their times. But he regards the Gothic period as a beautiful thing that is finished, and that we of today, should not revert. He feels

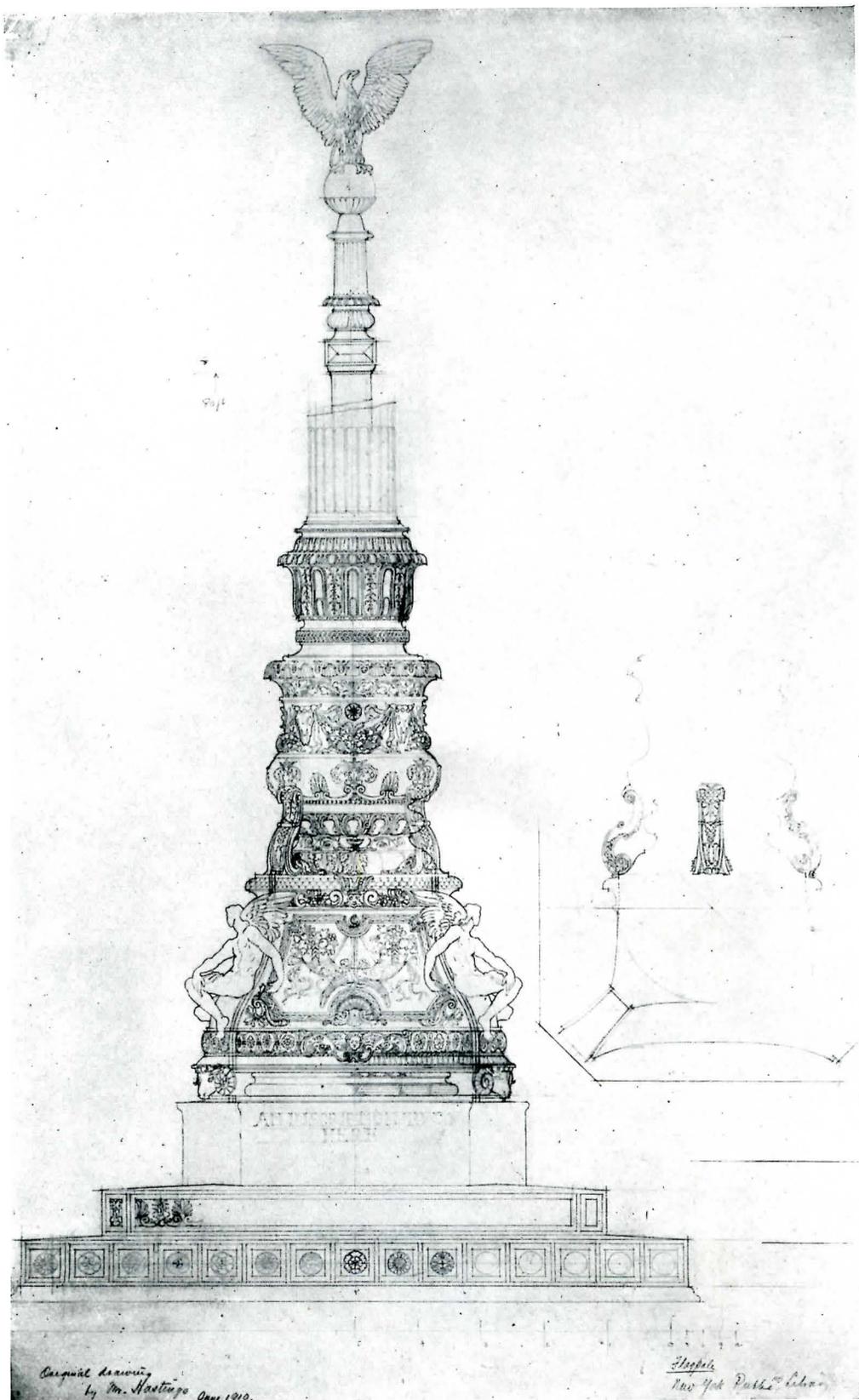
(Continued on page 60)



THOMAS HASTINGS



*Drawing by Thomas Hastings.*  
EARLY STUDY FOR ALTAR OF LIBERTY FOR MADISON SQUARE, NEW YORK CITY

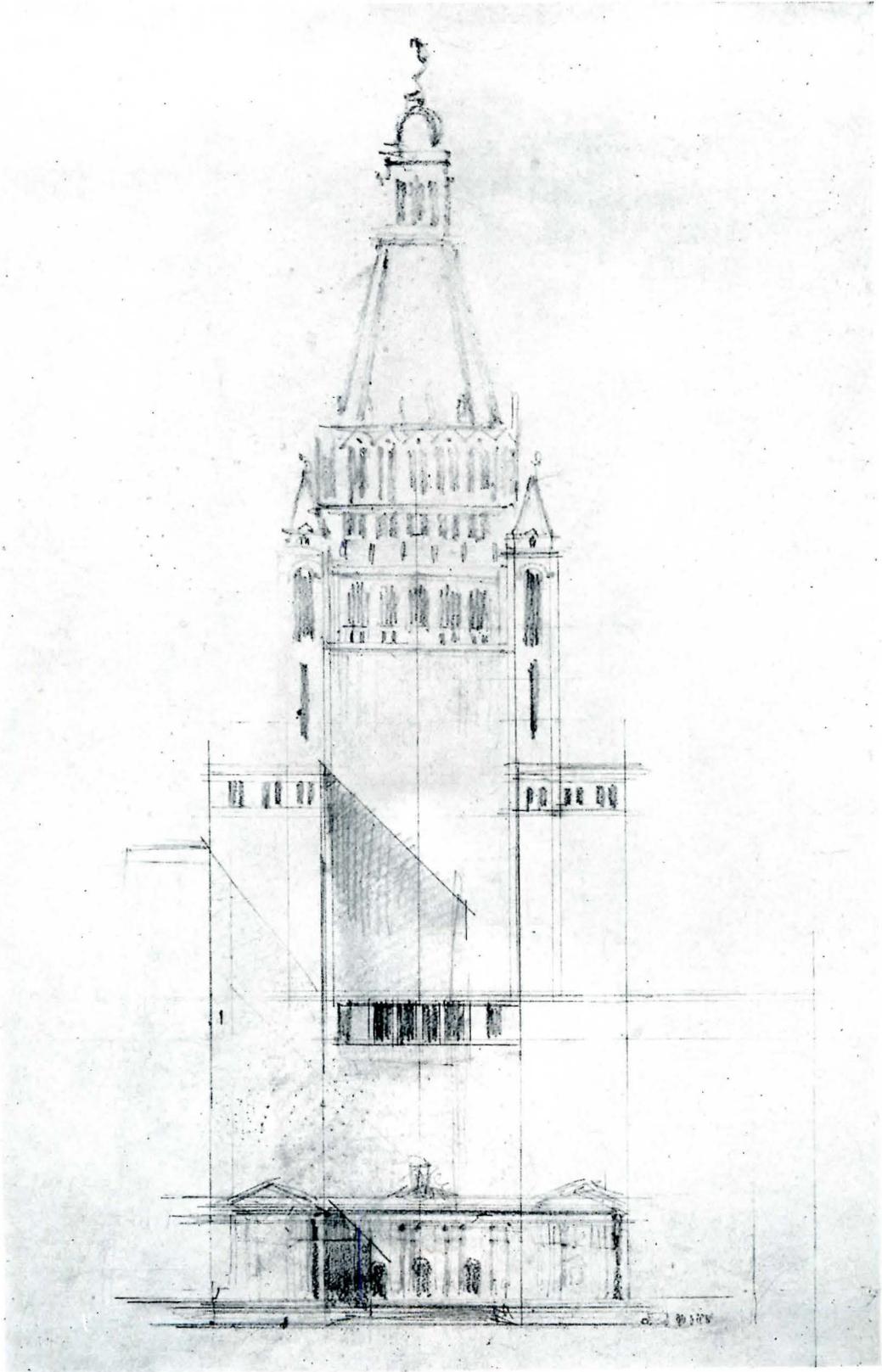


Original drawing  
by Mr. Hastings June 1910.

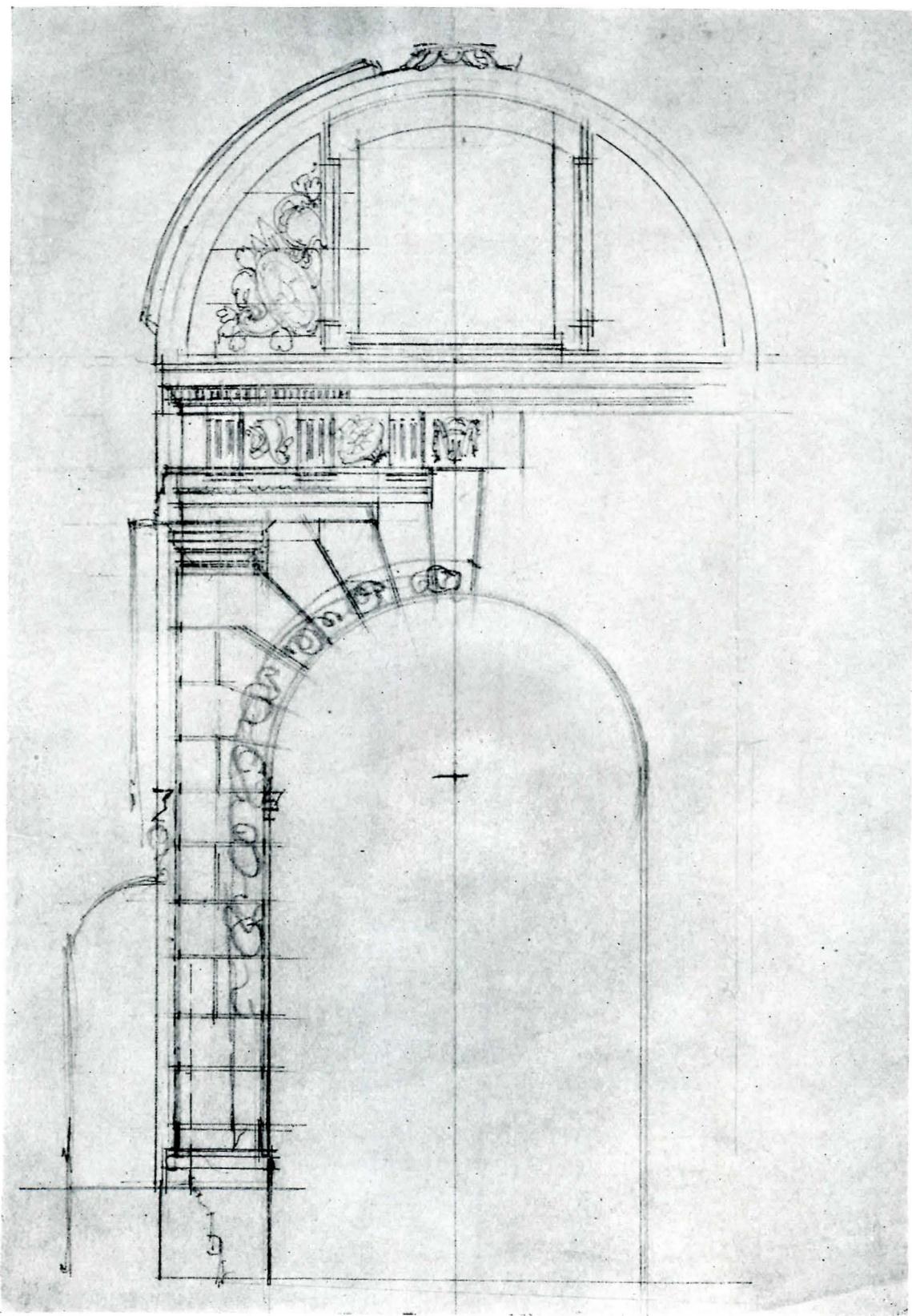
Flagpole  
New York Public Library

Drawing by Thomas Hastings.  
FLAG POLE FOR NEW YORK PUBLIC LIBRARY

PENCIL POINTS



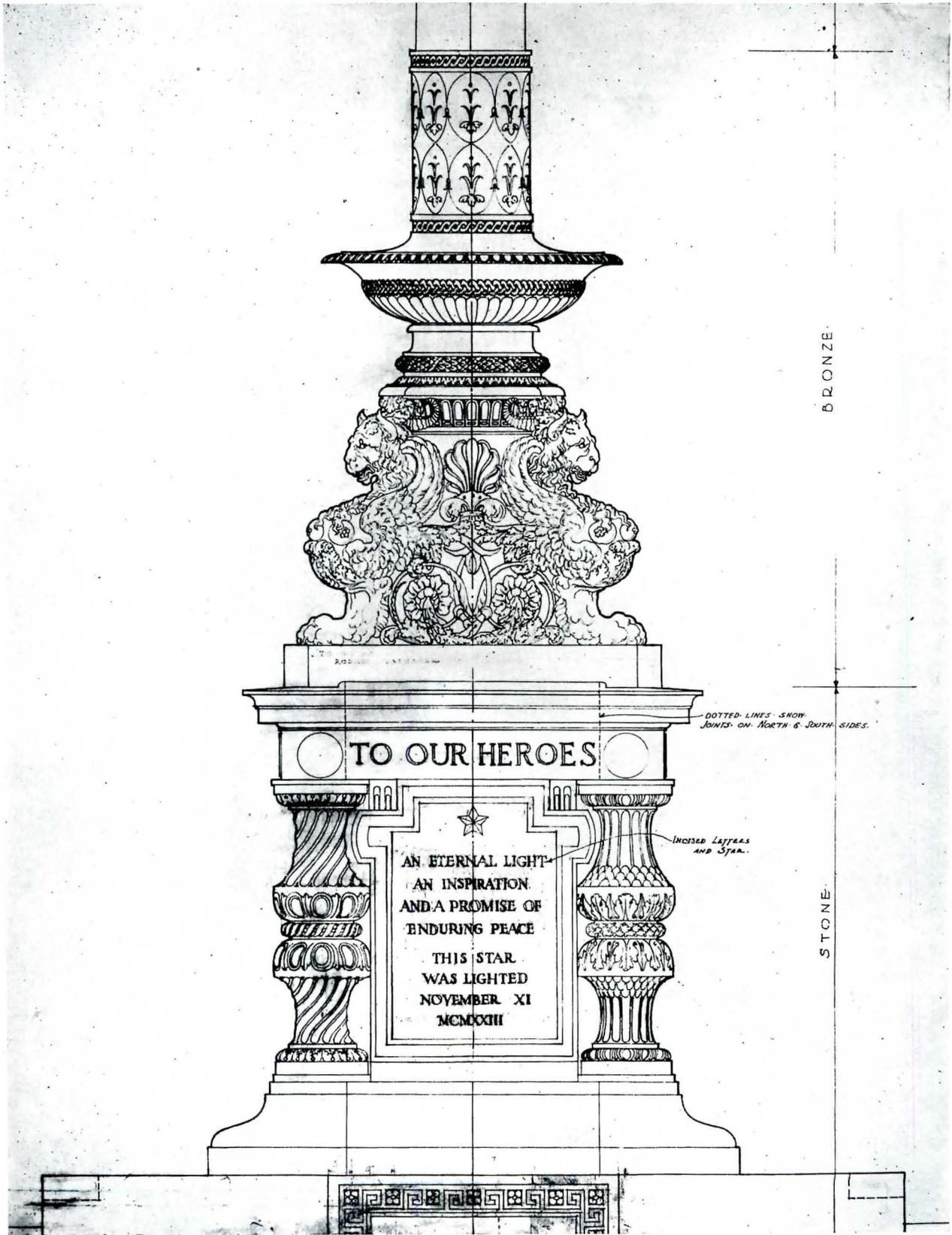
*Drawing by Thomas Hastings.*  
ROUGH SKETCH FOR THE DESIGN OF AN OFFICE BUILDING



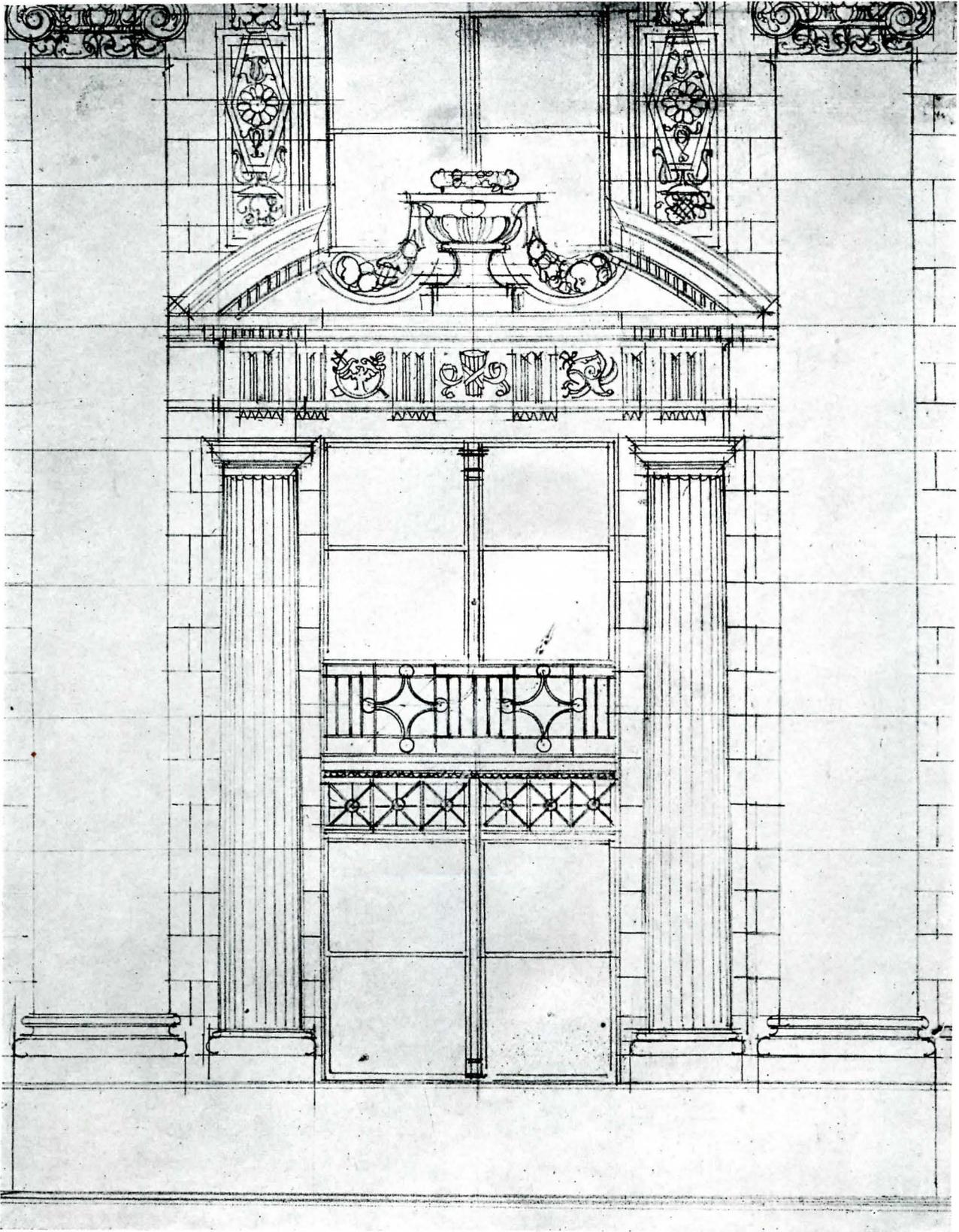
*Drawing by Thomas Hastings.*

EARLY STUDY FOR ENTRANCE OF THE STANDARD OIL BUILDING

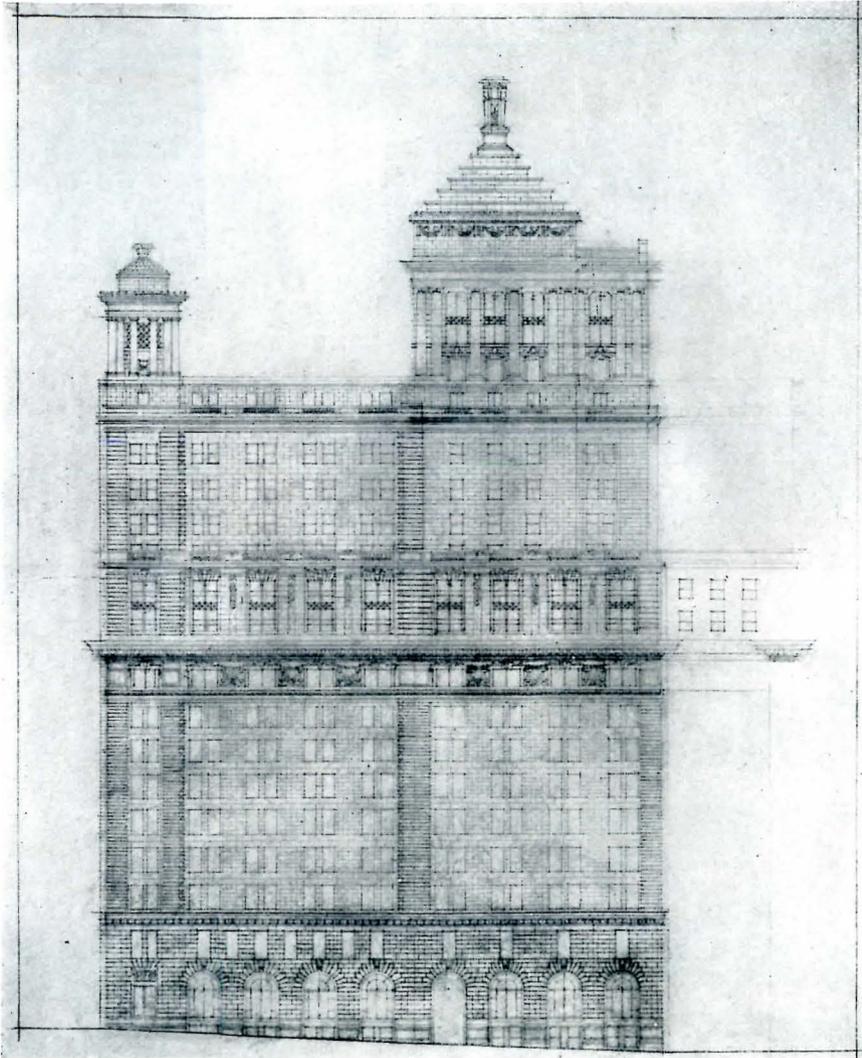
PENCIL POINTS



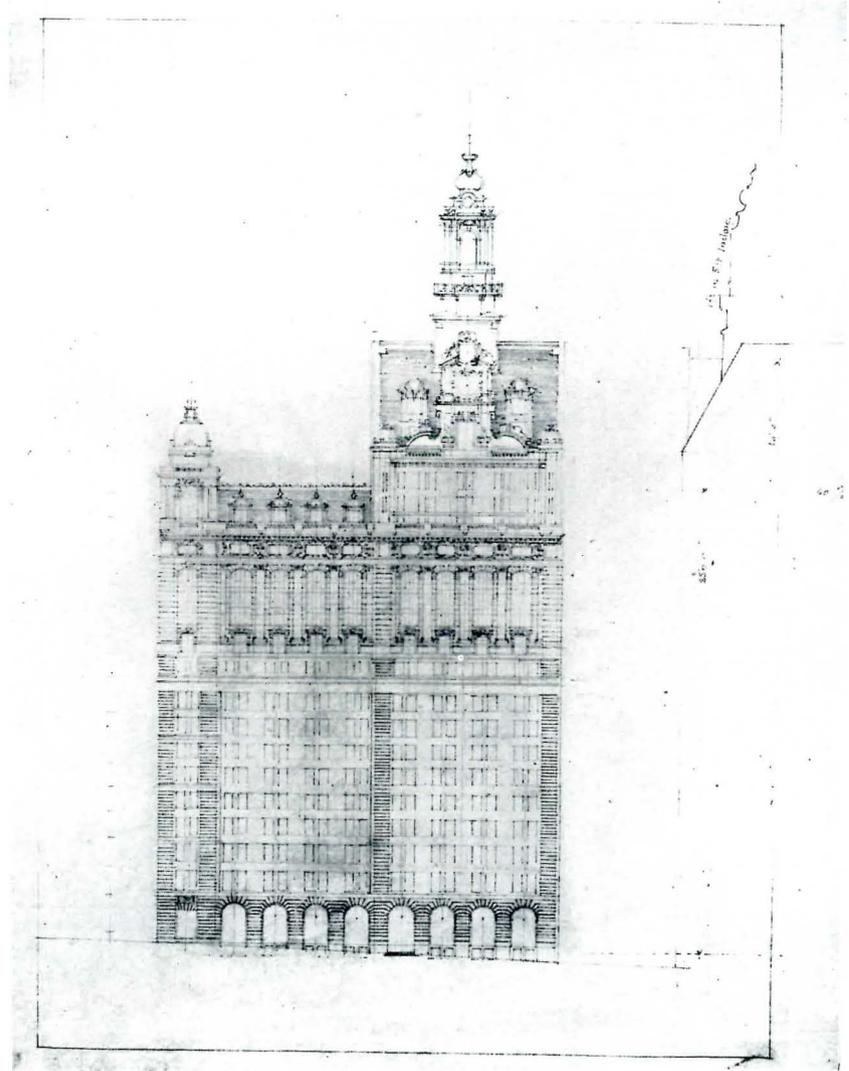
Tracing from a Drawing by Thomas Hastings.  
DESIGN FOR THE FLAG POLE IN MADISON SQUARE, NEW YORK CITY  
(See design for cap on page 60)



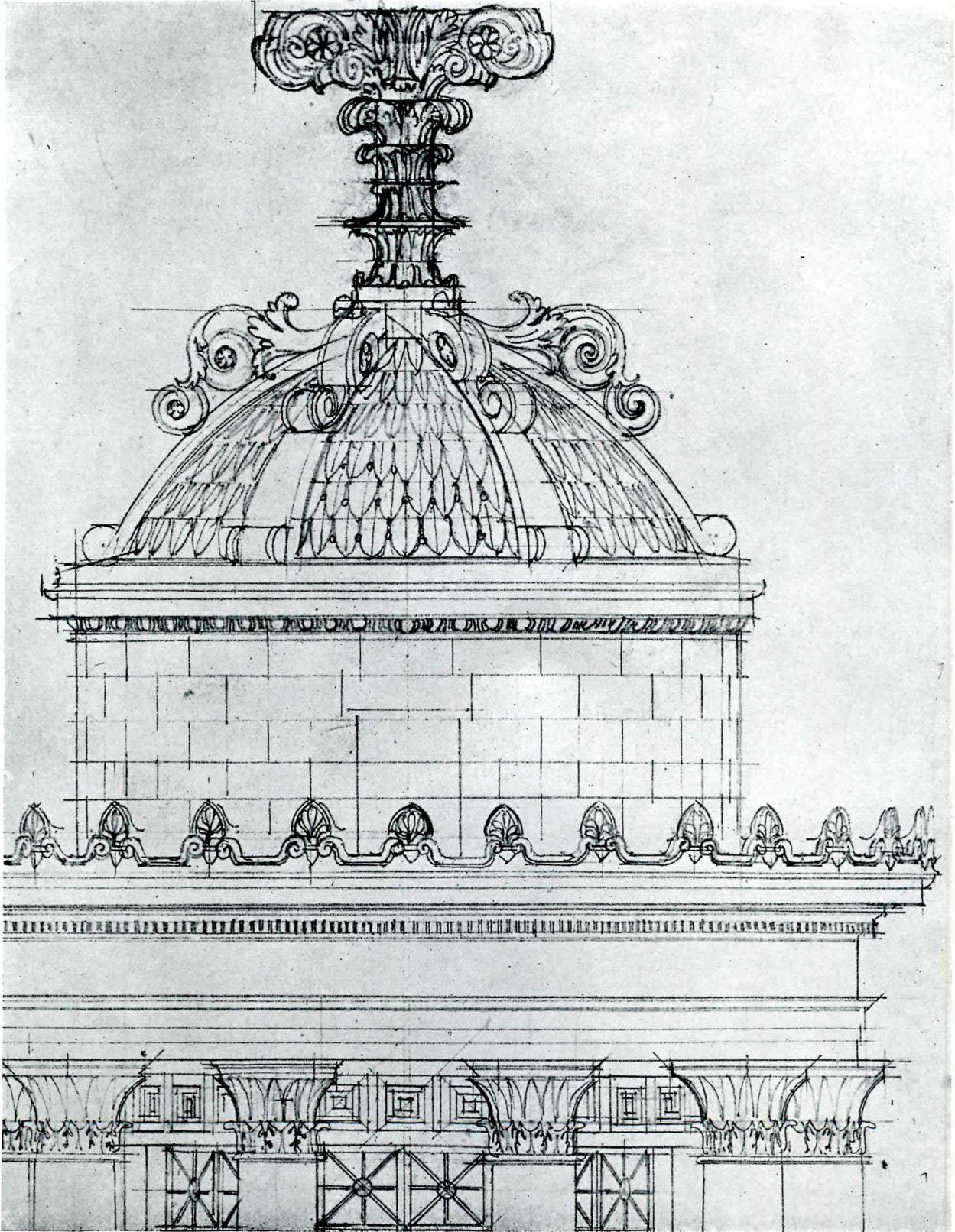
*Drawing by Thomas Hastings.*  
DETAIL OF STUDY FOR AN OFFICE BUILDING



*Drawing by Thomas Hastings.*  
AN EARLY STUDY FOR THE STANDARD OIL BUILDING



*Drawing by Thomas Hastings.*  
STUDY FOR AN OFFICE BUILDING

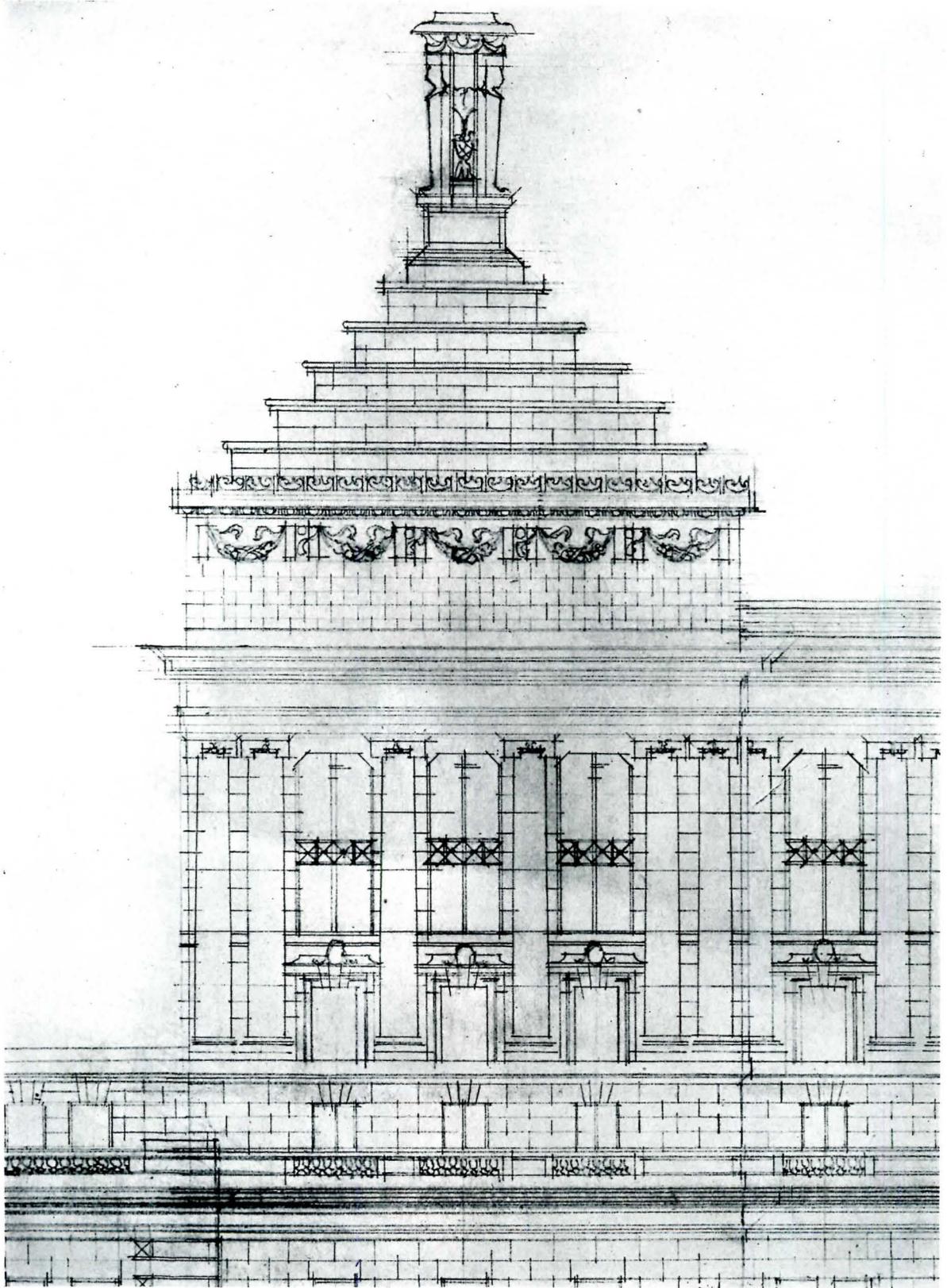


*Drawing by Thomas Hastings.*

**DETAIL OF EARLY STUDY FOR THE STANDARD OIL BUILDING**

*(A portion of drawing reproduced at the exact size of the original. See page 56 for reproduction of entire drawing.)*

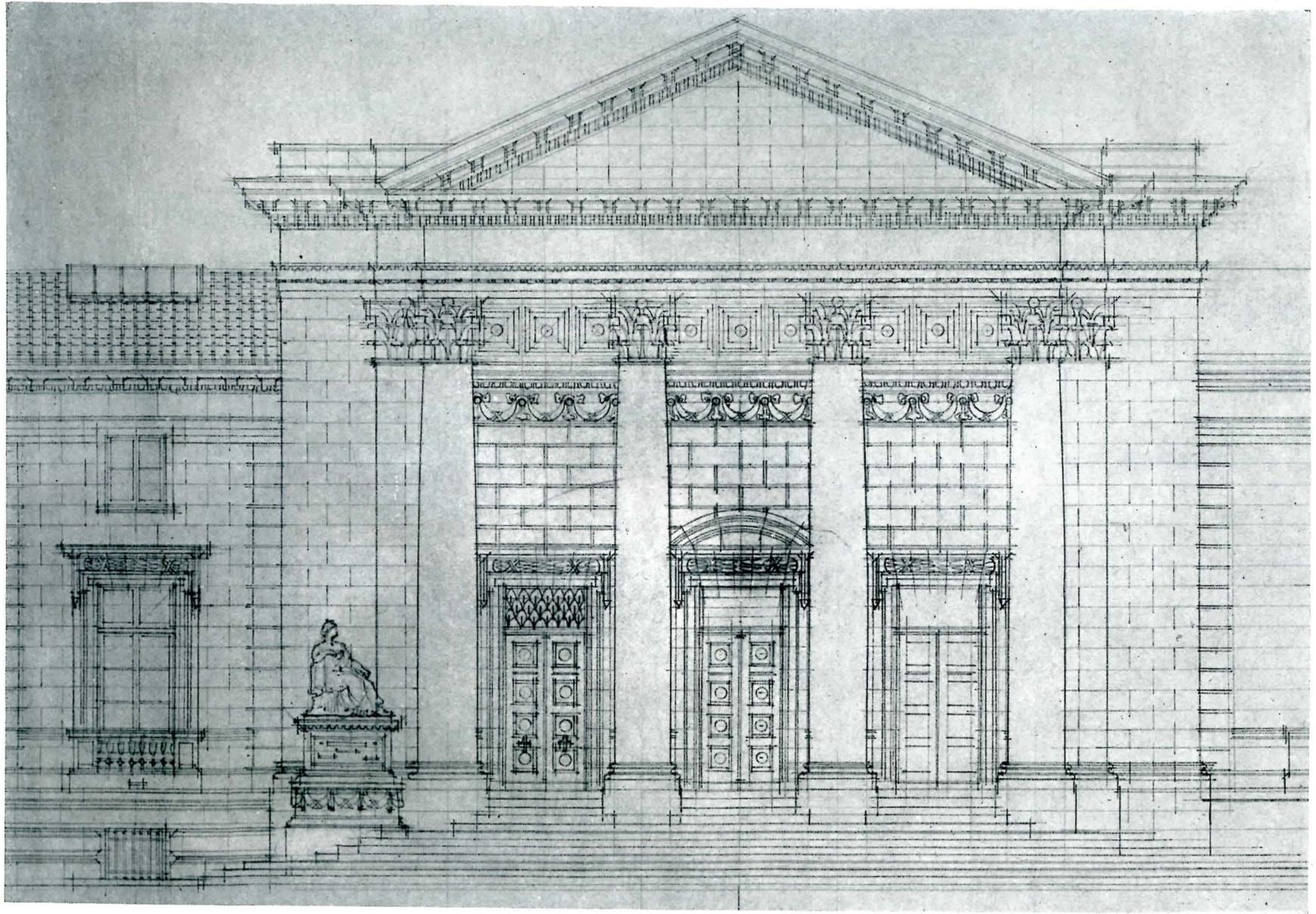
PENCIL POINTS



*Drawing by Thomas Hastings.*

DETAIL OF EARLY STUDY FOR THE STANDARD OIL BUILDING

*(A portion of drawing reproduced at the exact size of the original. See page 56 for reproduction of entire drawing.)*



*Drawing by Thomas Hastings.*  
DETAIL OF FIRST STUDY FOR NATIONAL AMPHITHEATRE, ARLINGTON CEMETERY, WASHINGTON, D. C.  
*(Exact size of original. See page 60 for entire drawing.)*

## PENCIL POINTS

that Gothic is something we cannot do in the true spirit since our life is in its essence of Classic derivation through the Renaissance. In submitting the design of Carrere & Hastings in the competition for the Cathedral of St. John the Divine, Hastings made use of most of the number of words supposed to be devoted to a description of the design, as a means of conveying his objections to the employment of the Gothic manner in modern times.

After some years, the practice of the firm having grown, still larger quarters were needed and Carrere & Hastings removed to 44 Broadway. There they took the upper two floors of an old private house that was entered through 44 Broadway, an old-fashioned office building.

The next high spot in the career of the firm was the winning of the competition for the New York Public Library. This brought about another removal of the firm's offices, for it appeared highly desirable that the offices should be uptown, where the work could be carried forward more efficiently. Consequently they took space at 28 East Forty-first Street.

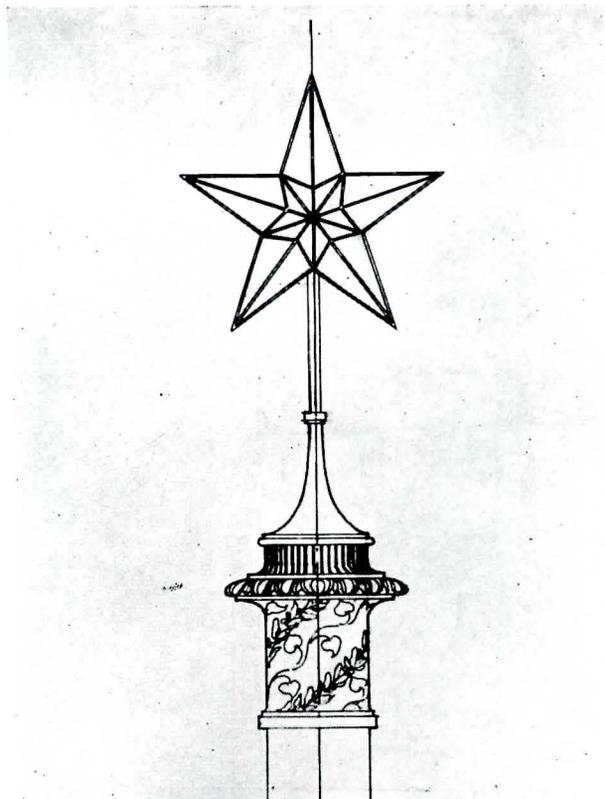
As Hastings became more and more absorbed in the work he was doing personally, he found the usual

office hours to be inadequate so he fitted up rooms in the office where he could remain over night. This was a delightful but strenuous method of carrying on his practice. The volume of work increased however until it became necessary for the firm to move to 225 Fifth Avenue where they occupied one half of the top floor of the Brunswick Building. They remained in these offices for a number of years and then Hastings moved uptown to his present offices at 52 Vanderbilt Avenue. Hastings has always felt a desire to be near his work at all times so he conceived the idea of having a "bungalow" on the roof above his offices which are on the top floor of the building.

Thomas Hastings has received many distinguished honors. He is an Academician of the National Academy of

Design, a Member of the Academy of Arts and Letters (Trustee of same), Member of the Royal Vienna Association of Architects, Member of Committee of Visitors to Columbia University, (Architectural Department). He is a Chevalier of the Legion of Honor, decorated by the French Government, has several times been a Director of the Amer-

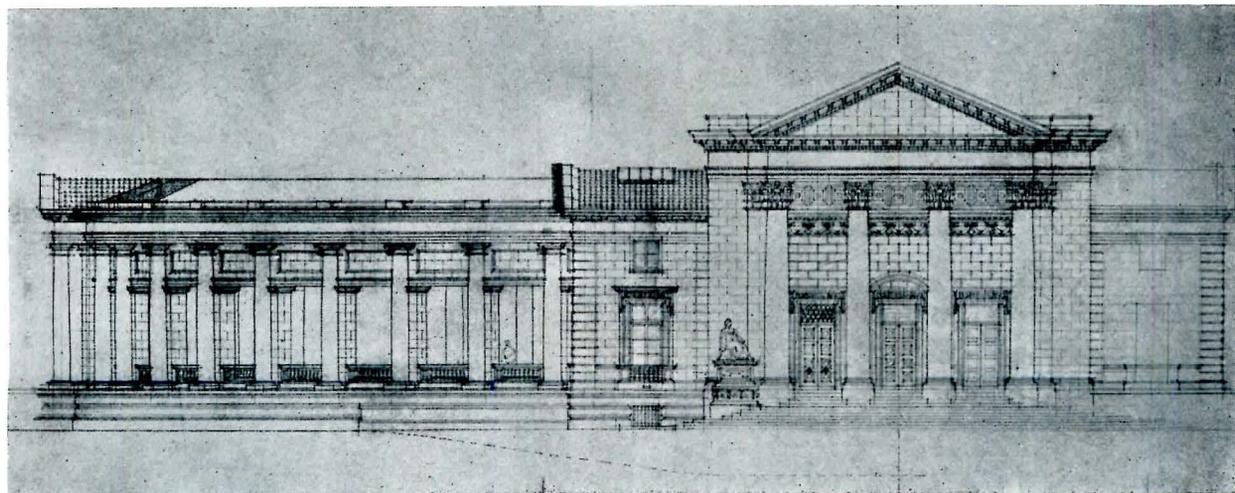
(Continued on page 88)



*Drawing by Thomas Hastings.*

DETAIL OF FLAG POLE IN MADISON SQUARE

(See drawing of base on page 54)



*Drawing by Thomas Hastings*

FIRST STUDY FOR NATIONAL AMPHITHEATRE, ARLINGTON CEMETERY, WASHINGTON, D. C.

# DESIGN IN THE DRAFTING ROOM

By JOHN C. BREIBY

FOR this paper in our series on design, we have selected an apartment house problem. The architect in this case was given the commission to design a number of apartment houses to be built in Florida. The commission was received direct from the client without a competition and without the necessity of making preliminary sketches, small scale drawings or an elaborately rendered perspective of the proposed scheme. The study of the design began after the commission was given.

The problem presented to the architect was to design the buildings and to prepare working drawings, etc., for apartment houses containing eight apartments each. Each of the buildings was to be two stories in height and no one of them might exceed 3,500 square feet in ground floor area. The apartments were to consist of three rooms and bath—living room, chamber and a combination dining al-

cove and kitchen. While the plans were required to be typical in general arrangement for all of the apartment houses under consideration, it was permitted to make slight changes in the arrangements of the window spacing, recesses for balconies, etc., to allow a certain amount of flexibility in the design of the facades for the several buildings. It was not absolutely necessary to consider the buildings in their relation to one another in group form, as they may be erected on single plots. The possibility of building the various units as one large group, how-

ever, was taken into consideration in the study of the whole problem.

Figure 1 indicates the required general conditions. Figures 2 and 3 illustrate the typical first and second floor plans which were developed after much study and thought and might be called the first "arrived studies," but they do not illustrate the final study of

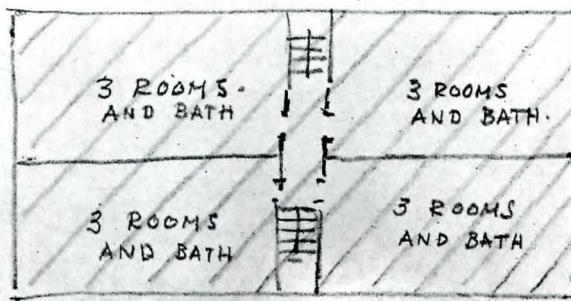


Figure 1

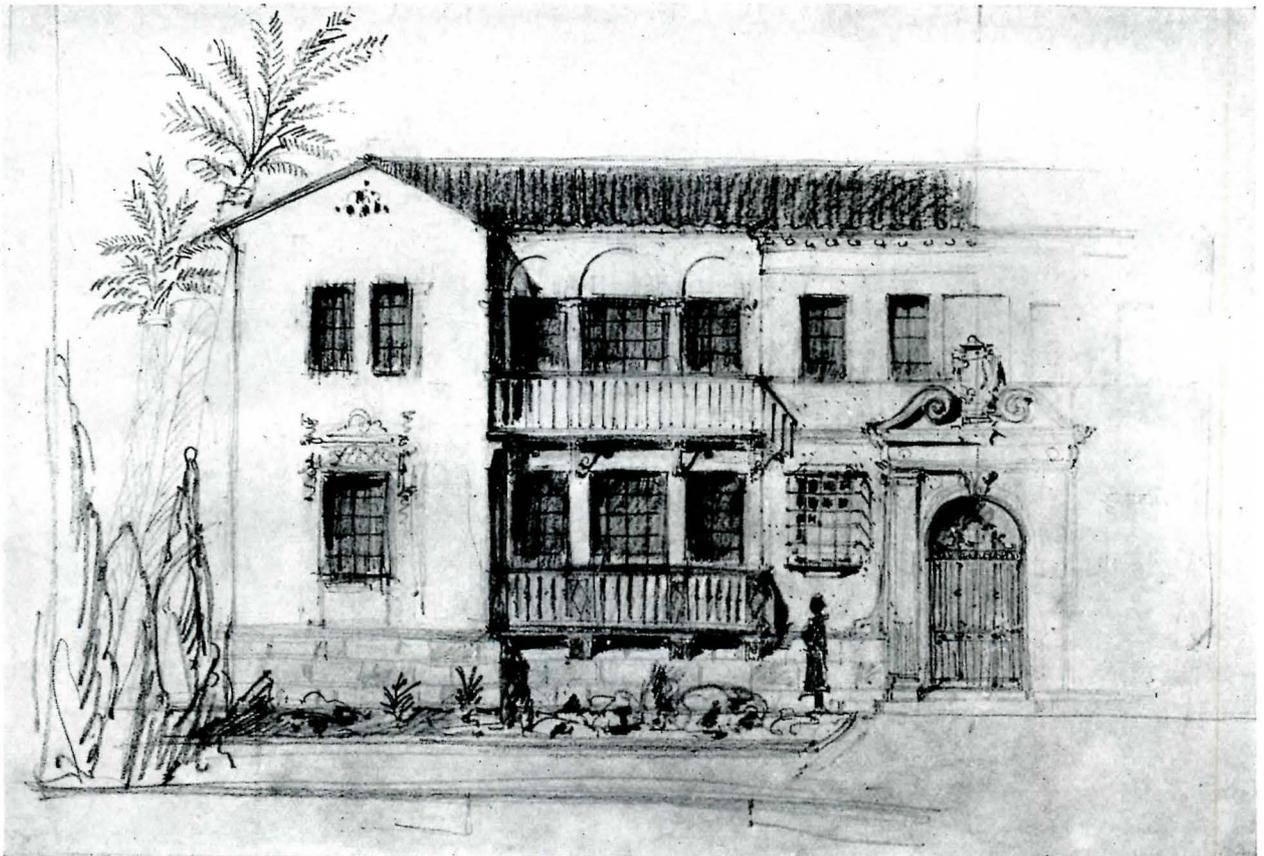
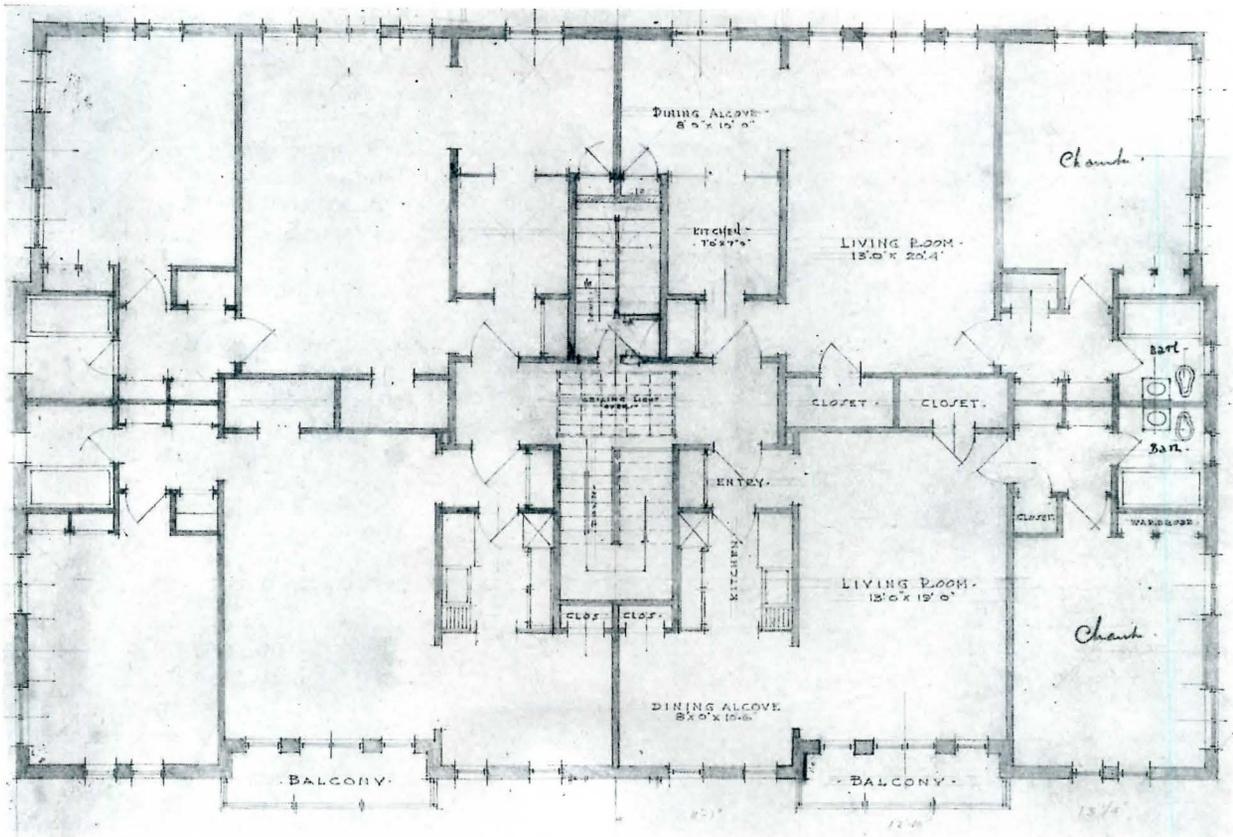
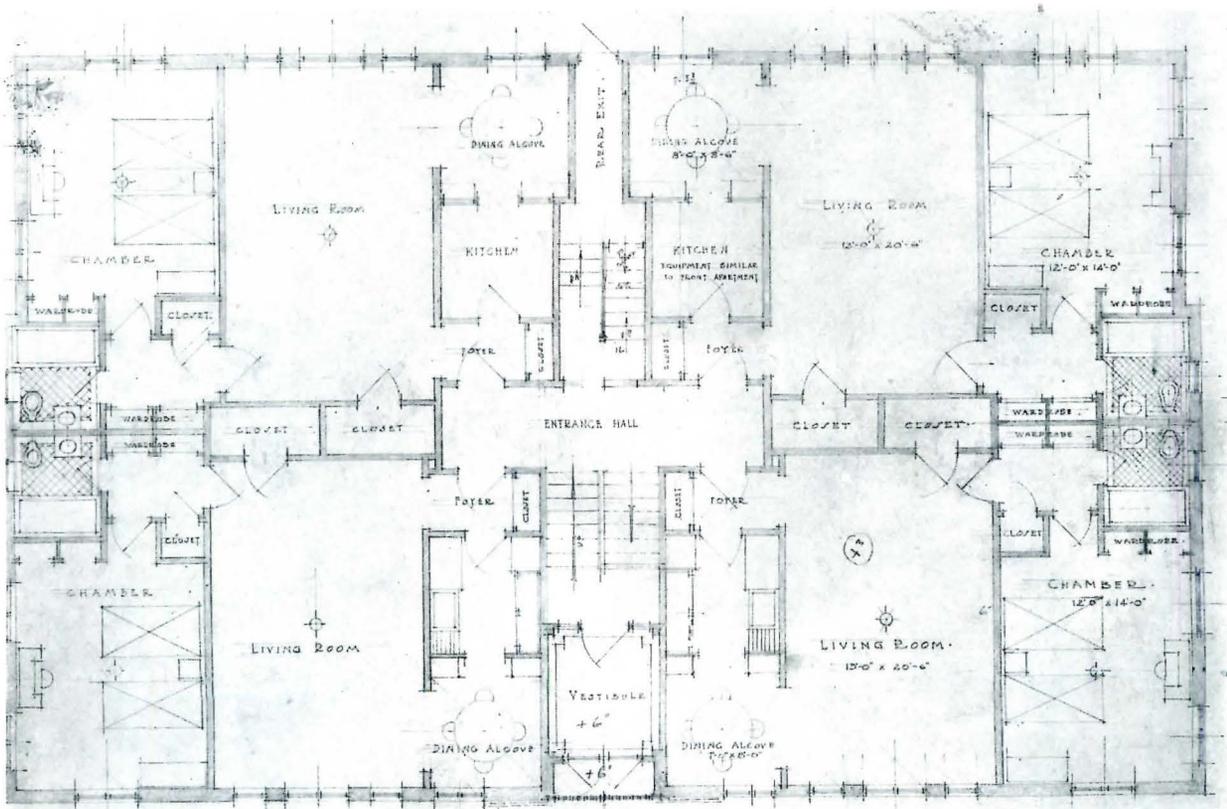


Figure 4

# PENCIL POINTS



Second Floor Plan



First Floor Plan

DESIGN FOR APARTMENT HOUSE AT JACKSONVILLE, FLORIDA  
 HARRY CREIGHTON INGALLS, ARCHITECT

the plans. The progress or development studies of the plans are not shown nor are the later studies which have been made in connection with the design of the main facades.

The first general scheme for the front elevation of what I shall term "Building No. 1" is illustrated by Figure 4. The designer selected the architectural style which he deemed appropriate to the warm Florida climate and sought his inspiration from the buildings which have been erected in countries where the sunlight is strong and vivid. As the plan contemplates a symmetrical building, only half of the elevation was drawn for this preliminary study.

rendered drawing was made to show to the client, (Figure 8), so that he might be able to visualize the design more readily as a completed structure. This drawing also gave the designer the opportunity to weigh his design as a whole for light and shadow effects, values of colors, scale, etc.

The client was evidently a much traveled gentleman, for when he saw the design with its heavy arch treatment over the entrance door he made the amusing comment that it suggested to him "an entrance to a prison in Peru." This criticism necessitated a re-study of the entrance feature. A sketch flap was prepared which presented a new study, lightening

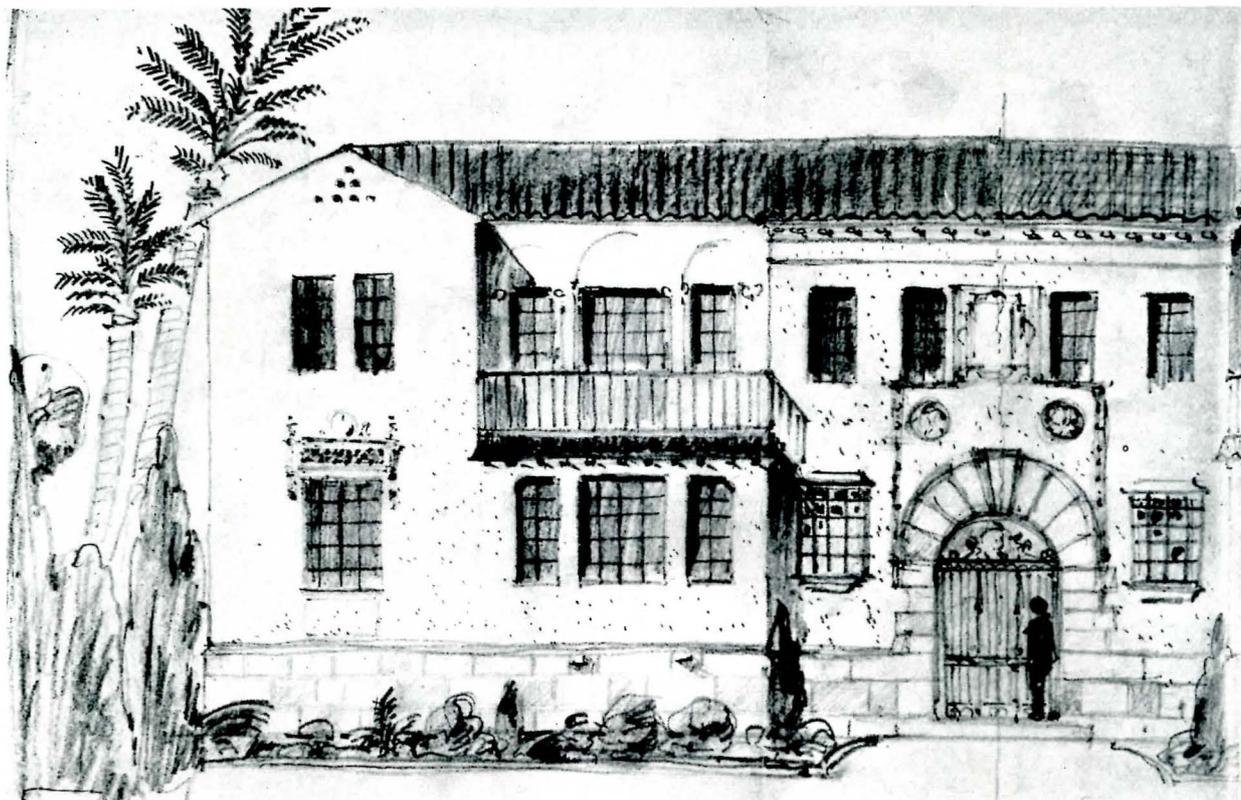


Figure 5

It was felt that the first study of the design was a little too monumental and that the entrance door motif might be better if it were changed to the more charming and strikingly beautiful arch treatment so often seen in the buildings of old Spain. The developed or progressive study is illustrated by Figure 5. A rapid tracing was made of this study and "fopped" over and pasted to the other side of the sketch to complete the whole facade. The completed result is seen by the drawing reproduced as Figure 6.

A more careful line drawing was next made to determine the window sizes accurately, keeping in mind that only stock sizes will be used. The floor heights were determined and the balconies indicated clearly. This drawing is illustrated by Figure 7.

When the study of the design had progressed to this stage, a rather careful, though not laborious,

the character of the design and incorporating more color. The flap was placed over the drawing illustrated by Figure 8 and the sketch next shown the client for his approval was our illustration Figure 8a.

Light and air as well as convenient and liveable rooms play an important part in establishing the rental value of apartments. This is just as true in Florida as elsewhere, and the stipulation that the design provide as much light and air as possible was a constant consideration in the study of this problem. These facilities were amply provided in the so-called completed design illustrated by Figure 8, but the designer felt that by a little more study of the plans the dining alcoves or rooms could be utilized for loggias, thereby increasing the light and air in the apartments. The working drawings are now being made, carrying out this scheme or solution. Figure 10 is

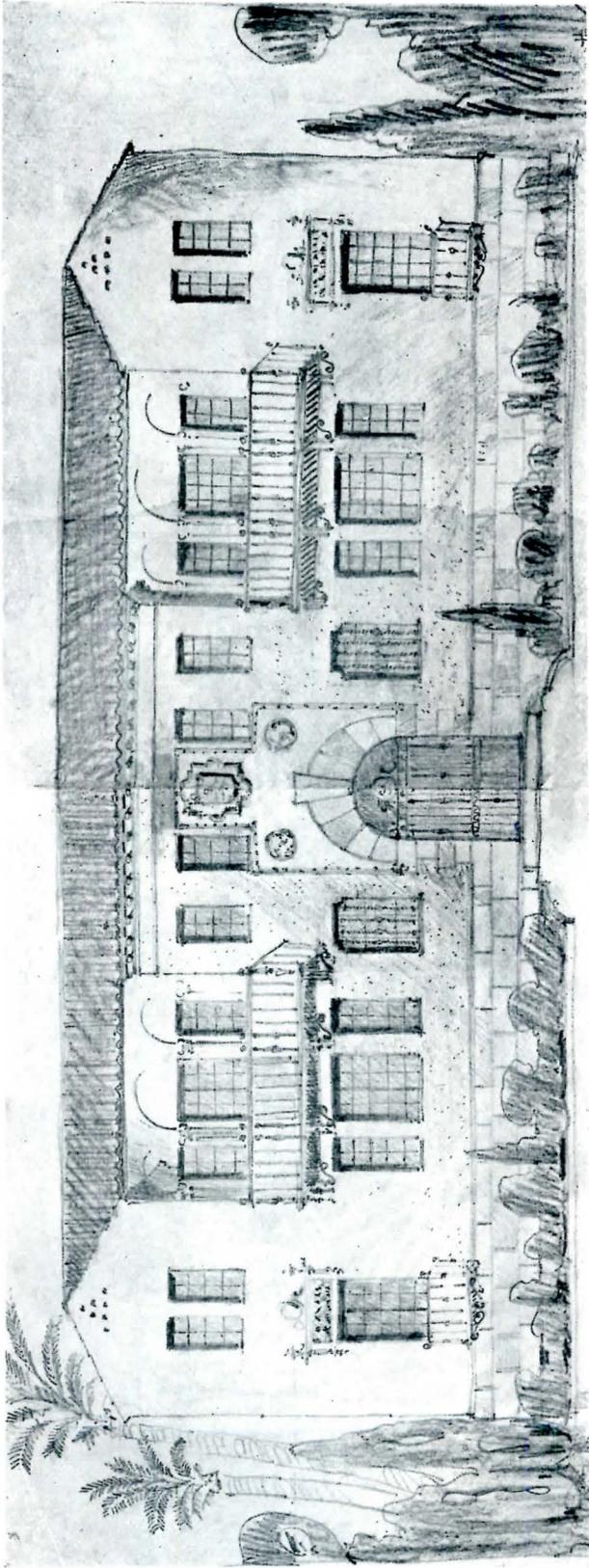


Figure 6

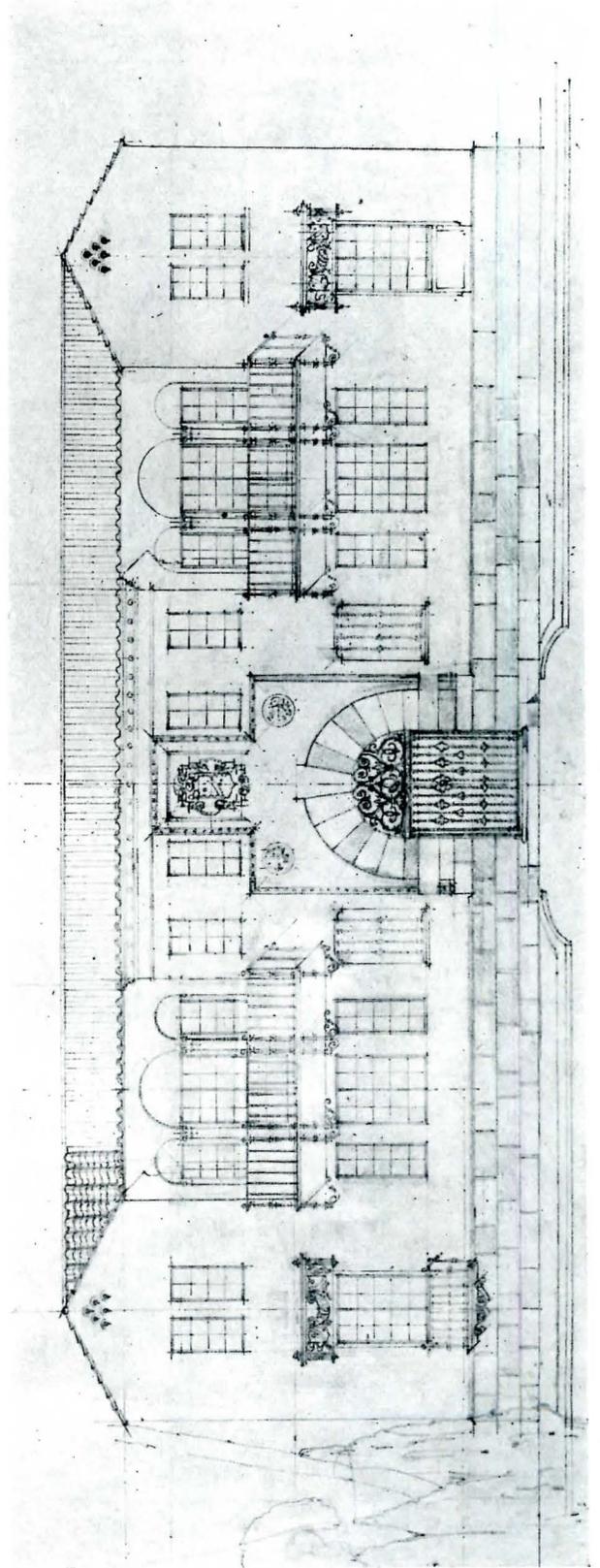


Figure 7

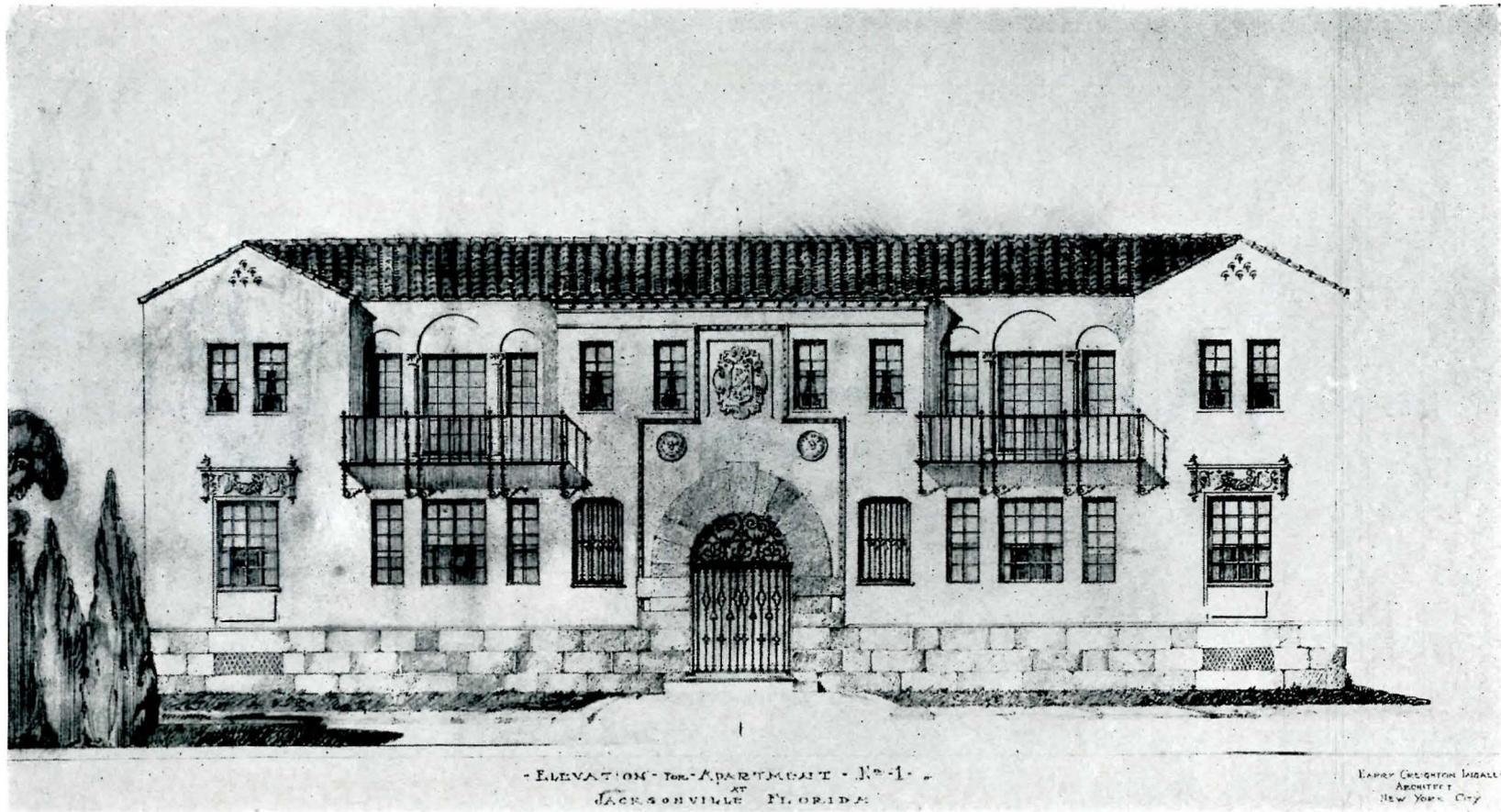


Figure 8

DESIGN FOR AN APARTMENT HOUSE AT JACKSONVILLE, FLORIDA  
HARRY CREIGHTON INGALLS, ARCHITECT

## PENCIL POINTS

a hurried sketch of one of the loggia treatments over the entrance door.

The rear elevation is shown by Figure 11. It is a fairly completed study which needs no special comment.

The sketches of the elevation were made at the scale of  $\frac{1}{4}$ " equals one foot. The building is not large, and the whole facade could be studied at quarter inch scale instead of commencing the study at one eighth inch scale.

Two sketches, (figures 10 and 12) were made to suggest other possible designs for the apartments using the same type floor plans.

I have not attempted to give any rules which should be followed in making sketches or in develop-

or sections where careless speculative building operations are going on or have been completed.

I have mentioned the above especially to the family of "PENCIL POINTS" readers, for among us are many architects and draftsmen who accept commissions to make drawings for unscrupulous speculative builders and for real estate development companies. These classes of "clients" do not want the benefit of the designer's practical experience and knowledge of the right construction and the proper building materials to use. They realize that good design gives a definite, tangible and added market value to a building but they seem to think of the design as mere "stage scenery" which can be held in place by cheap and flimsy construction. The archi-

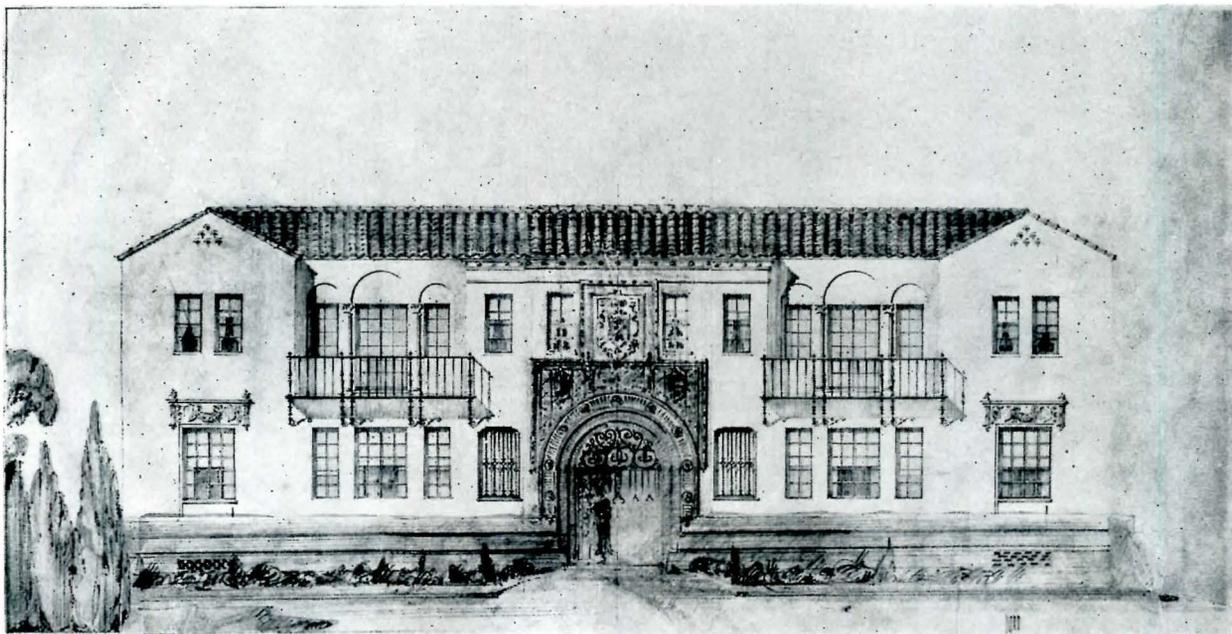


Figure 8A

ing the design in the drafting room. I have merely endeavored to show the general sort of work which falls to the lot of all, shall we say "Pencil Pointers!"

And now, apart from our subject, but related to it, I want to append a word of warning of grave importance to architect and draftsman.

I shall take the liberty of repeating a prediction and warning by former Fire Commissioner, Robert Adamson, of New York, in which he speaks of possible great conflagrations in districts where one and two family frame houses are rapidly being erected or rather "slapped up," separated from each other by only a few feet. While Mr. Adamson's warning was made particularly regarding rapidly growing districts within New York City limits, this warning should be heeded by all cities and towns throughout the United States.

I need not dwell upon the unsanitary conditions arising from permanent or temporary "community" cess pools, etc., which are often installed in districts

and draftsman who make the picture, as a rule, has no opportunity to superintend the workmanship or to know that the right construction and materials are actually used. How can the architect know, who does not superintend his own work, that proper flue linings are installed and heating ducts adequately protected where carried in frame partitions or that the chimney and the framing around it are so constructed as to eliminate the chimney as a cause of fire? How many speculative builders provide tight stops fitted in between the studs and floor joists to dam the flue-like openings and thus confine a fire to one section? There are innumerable other hazards which the well trained superintendent would guard against and which are entirely neglected in the "slapped-up" class of house referred to by the former Commissioner Adamson. The architect or draftsman who prepares drawings for unscrupulous builders, speculators or real estate development companies, simply to "make a little money on the side" and permit their interest in the finished build-

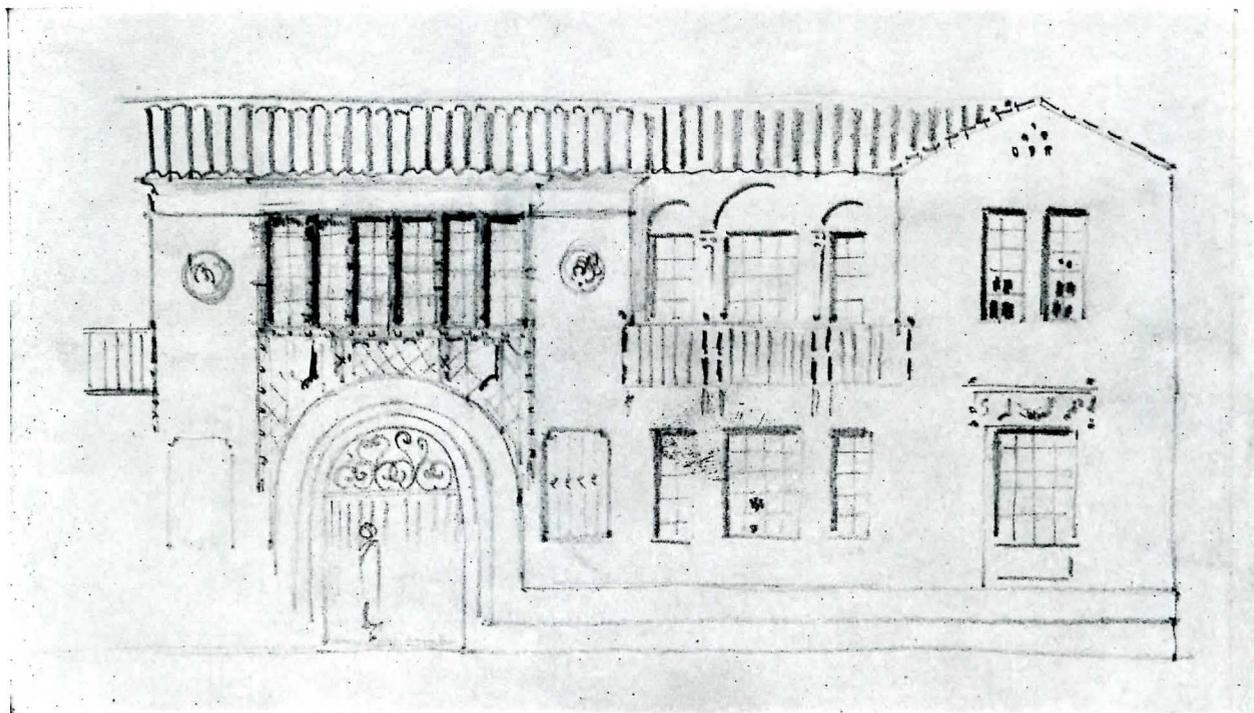


Figure 9

ing to cease with the delivery of the drawings, is equally guilty with them should human lives be lost as a result of careless and dishonest construction. I have seen so much of this "Jerry-built" work carried

on that I would like to feel that the members of the profession were awake to the graveness of the situation and would make it a part of their business as far as they are able to prevent such operations.

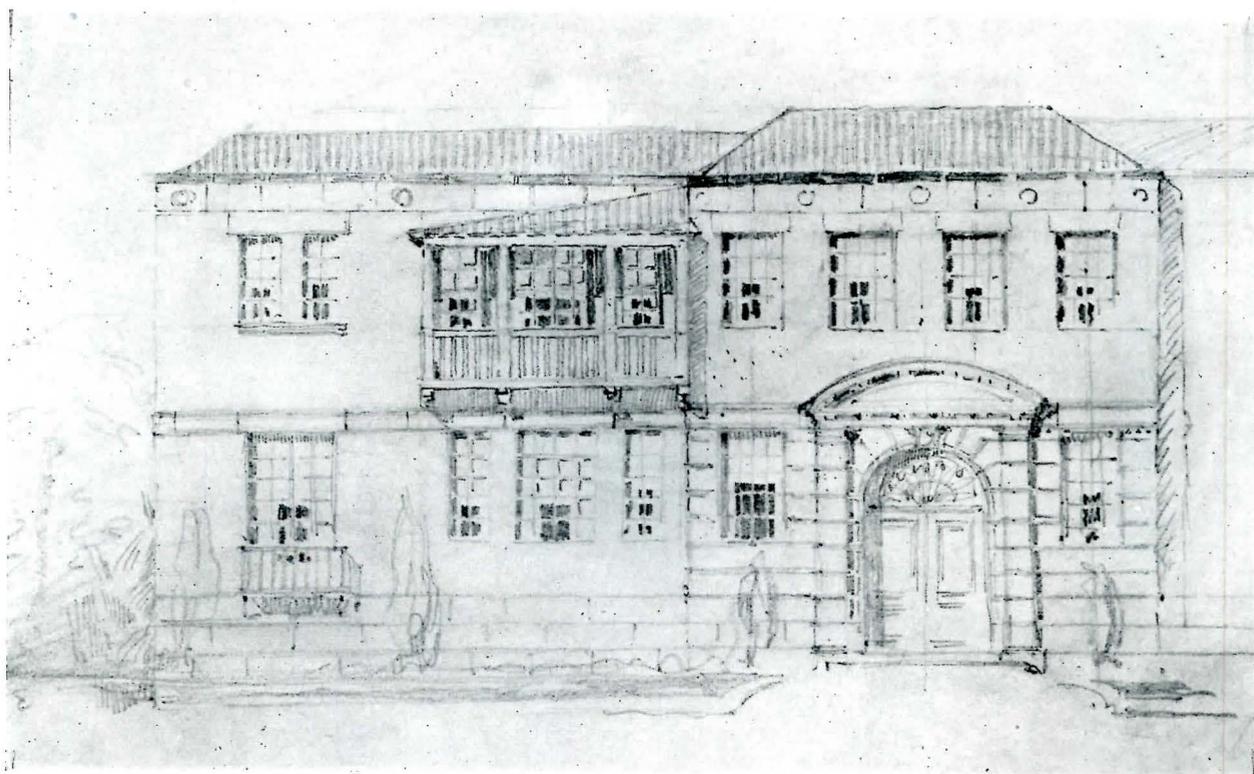
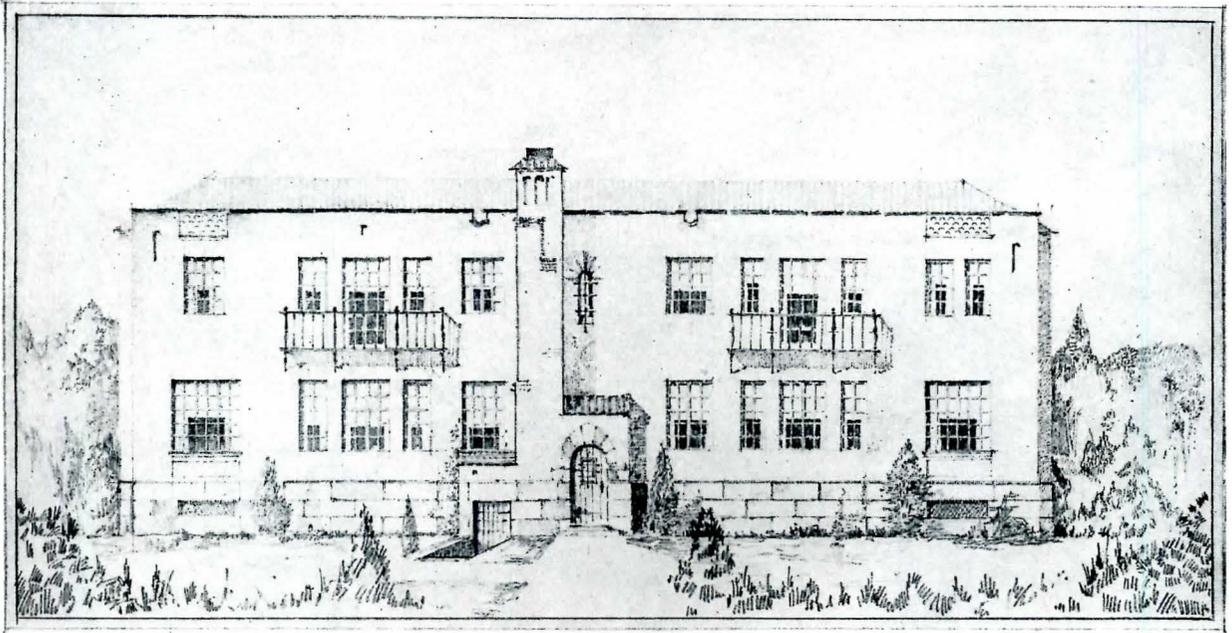


Figure 10

## PENCIL POINTS

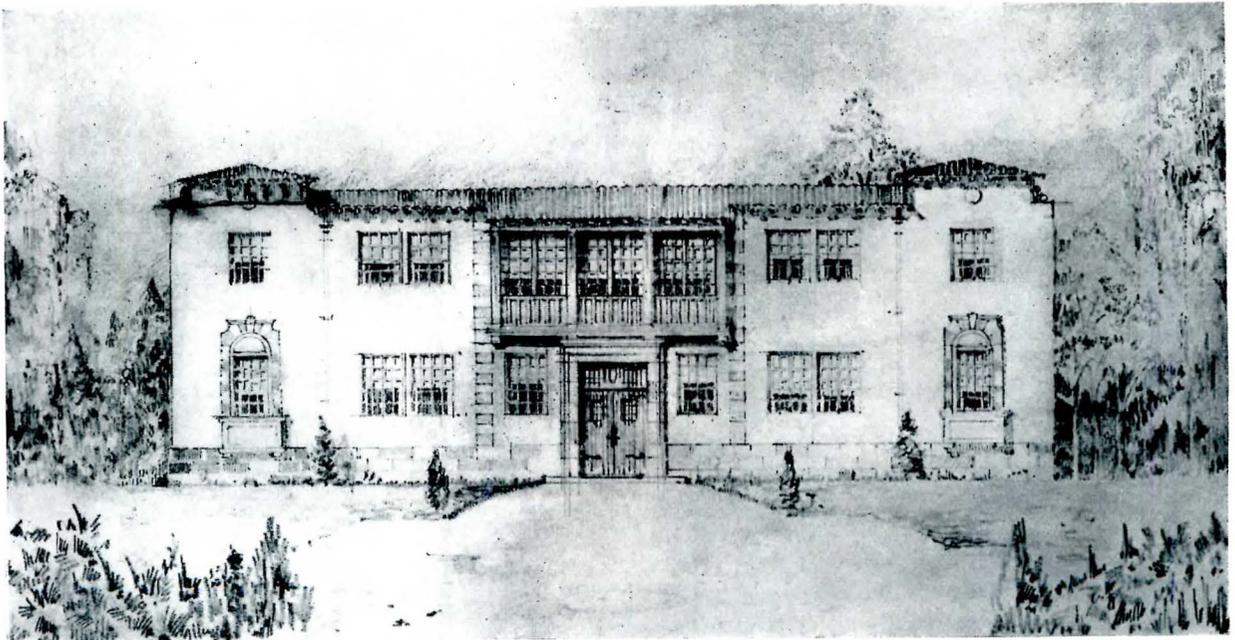


*Figure 11*

In closing this word of warning, need it be said that buildings (not even to be called homes) of this nature ruin forever many pleasant and delightful neighborhoods?

What has been said about the danger of erecting poorly constructed frame houses in congested districts should not be construed as an argument against the design and erection of houses and other buildings

of wood, in part or all, when built in the open residential sections of a community. Wood has been blamed for many of the faulty construction practices—short-cut practices in construction which regardless of the material used could never produce anything but failure. The environment, the character of the building and the architectural style desired dictate what materials to use and the principles of sound construction how to use them.

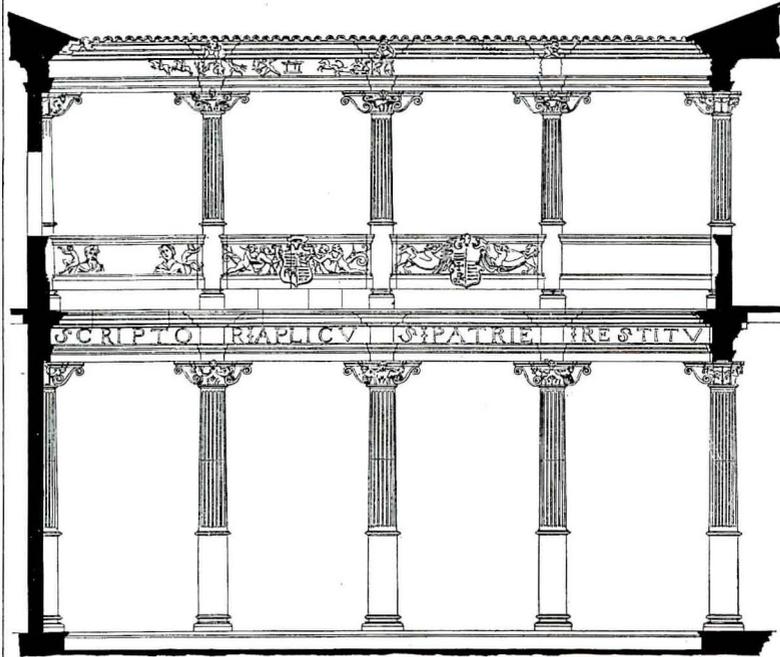


*Figure 12*

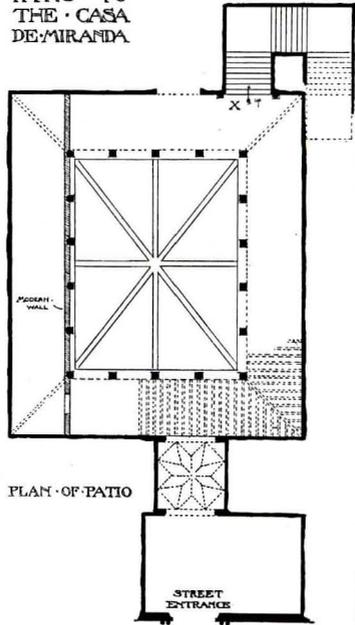
SCALE OF 0 10 20 30 FEET

BURGOS

ELEVATION  
PLAN AND  
DETAILS OF  
PATIO TO  
THE CASA  
DE MIRANDA



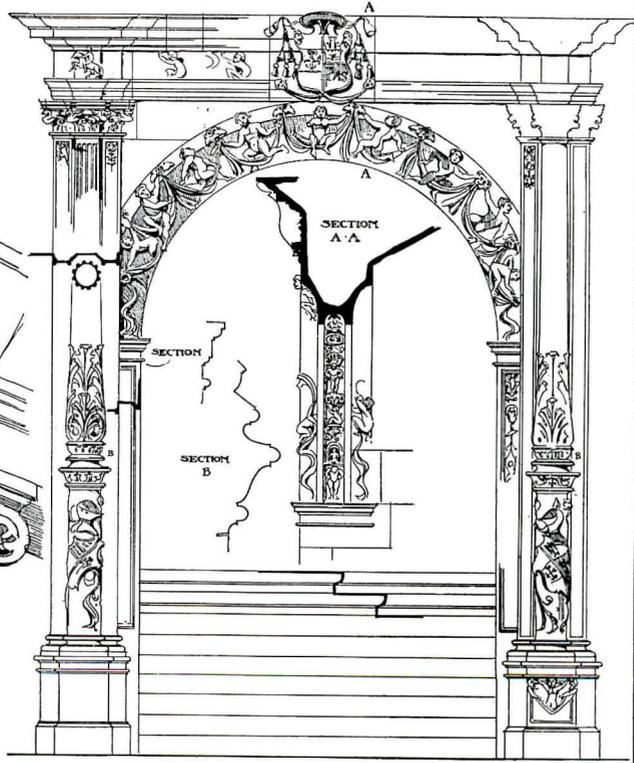
ELEVATION OF PATIO



PLAN OF PATIO



SKETCH OF BRACKET CAPITAL  
GROUND ARCADE



PORTAL TO STAIRCASE  
SEE PLAN AT X

RENAISSANCE ARCHITECTURE AND ORNAMENT IN SPAIN  
A PLATE FROM THE WORK BY ANDREW N. PRENTICE

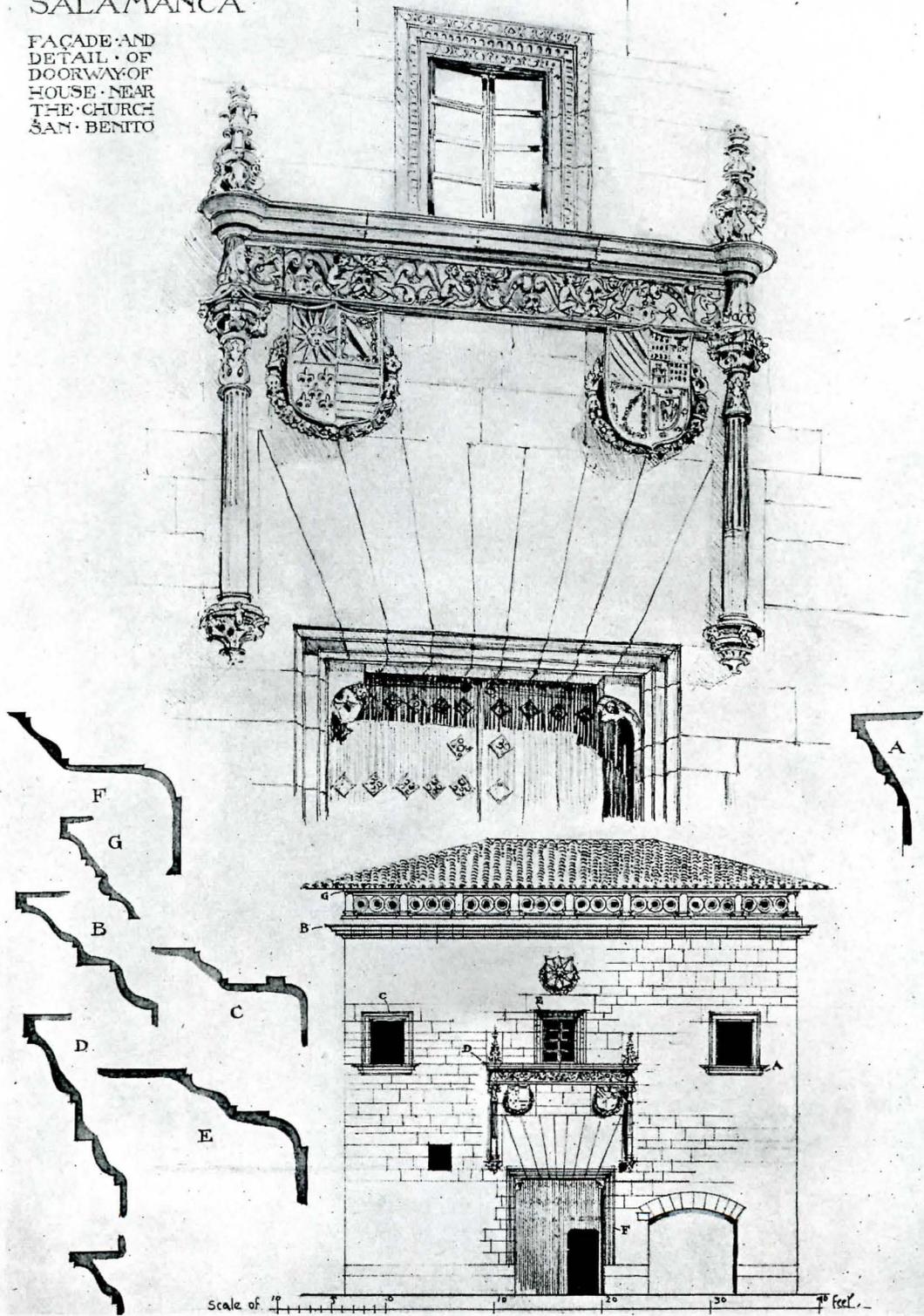
PLATE XLV

*"A typical example of a Spanish nobleman's town residence which was built by the famous Condes de Miranda, and is now in a half ruined condition. The fine stone patio contains some of the best bracket capitals in Spain. The doorway from the Calle de la Calera has two columns on either side and is surmounted by a beautiful sculptured panel ornamented with female figures, and shields. Over the staircase is a richly panelled stone vault."*

VOLUME VI, NUMBER 12

SALAMANCA

FAÇADE AND  
DETAIL OF  
DOORWAY OF  
HOUSE NEAR  
THE CHURCH  
SAN BENITO

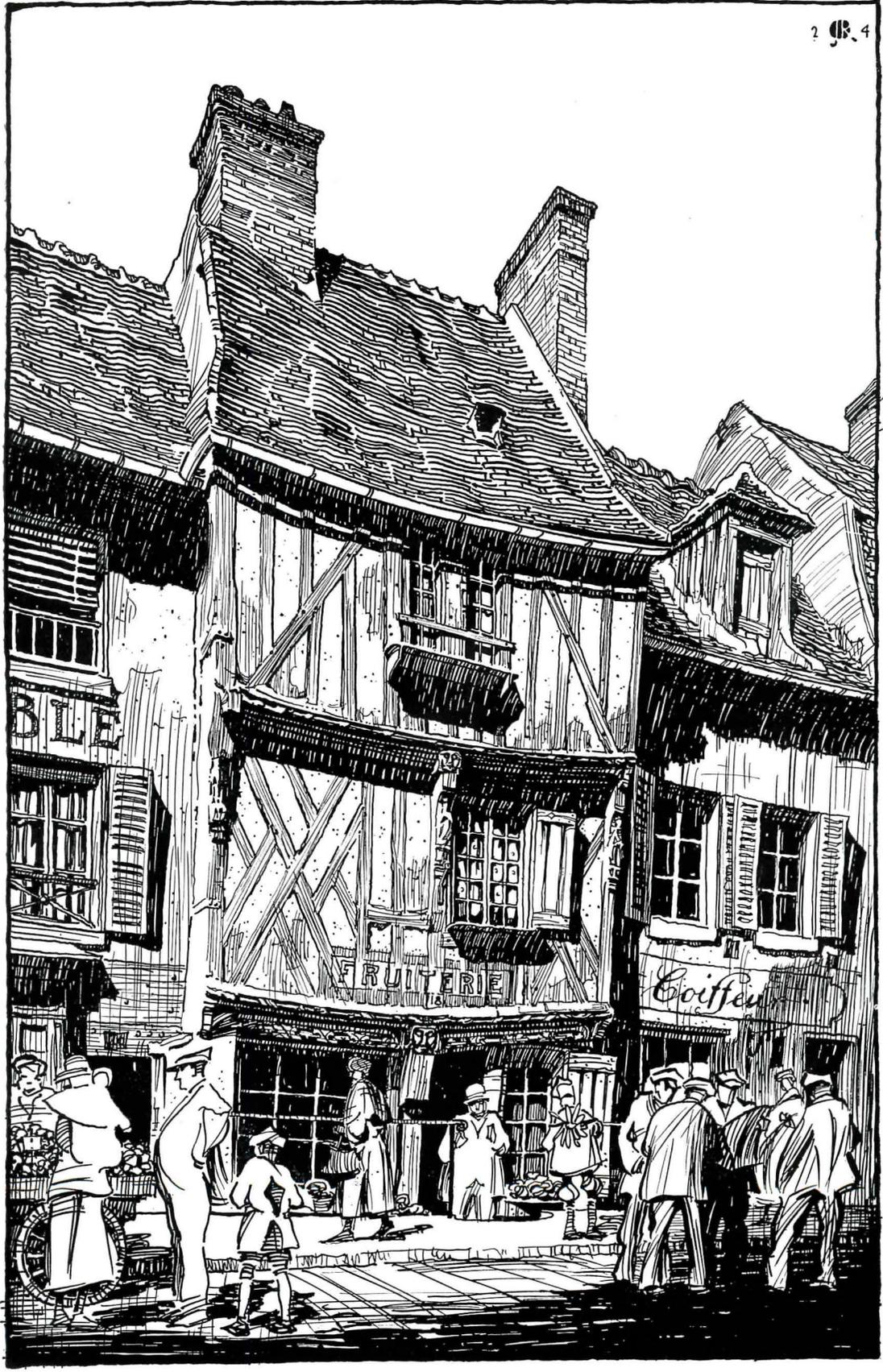


RENAISSANCE ARCHITECTURE AND ORNAMENT IN SPAIN  
A PLATE FROM THE WORK BY ANDREW N. PRENTICE

PLATE XLVI

*This plate shows the street front of one of the quaint houses to be met with in Salamanca. "It is remarkable for the deep radiating voussoirs and the pleasing design of its doorway. The projecting roof is kept low, although it was evidently intended to be supported on arches springing from columns to form an open loggia at the top of the house. The idea seems to have been abandoned, as only the lower part of the pillars have been built."*

VOLUME VI, NUMBER 12

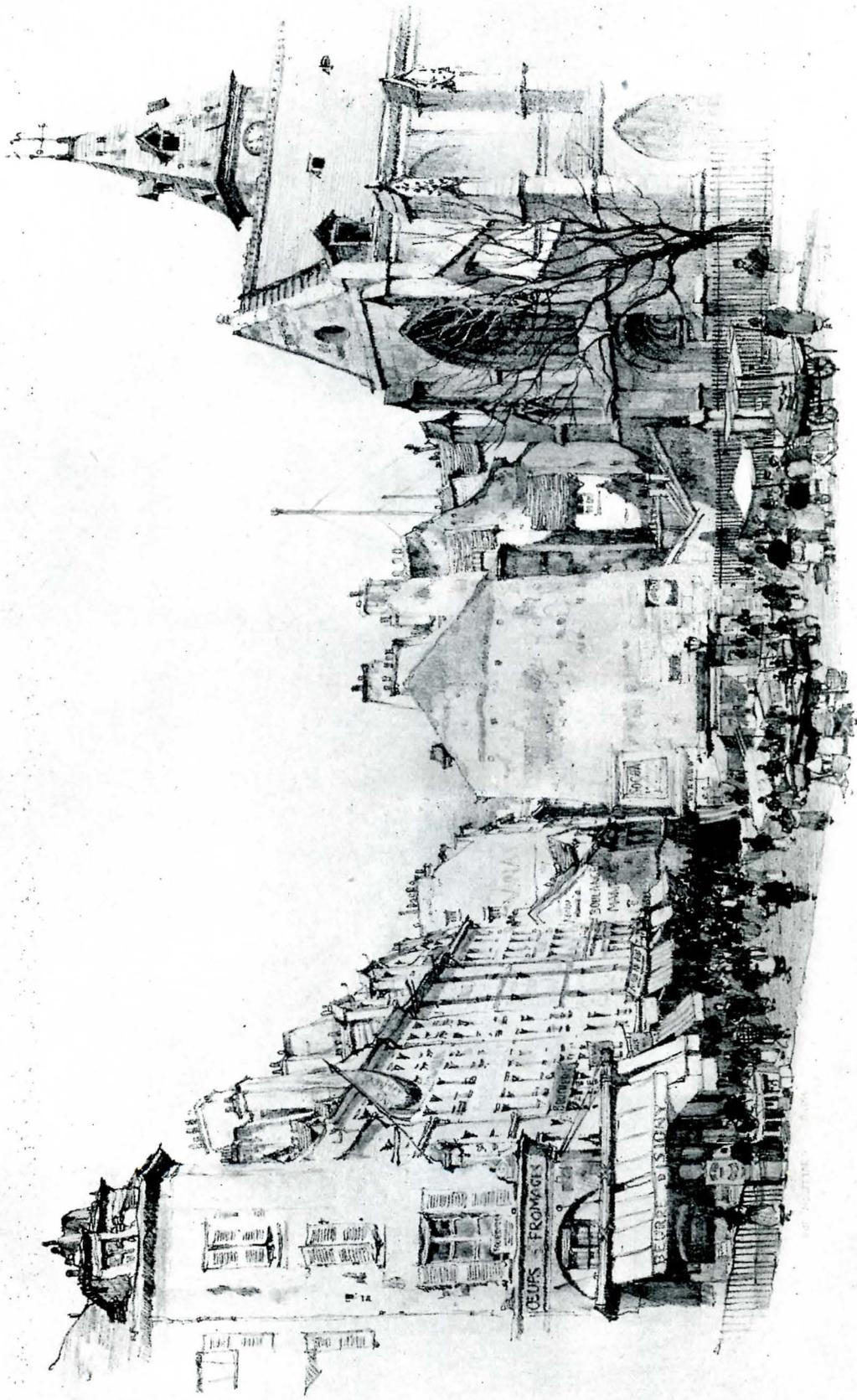


PEN AND INK DRAWING BY JOHN RICHARD ROWE  
OLD HOUSE AT COMPIÈGNE

PLATE XLVII

*Reproductions of drawings by John Richard Rowe have been published in the plate pages of this magazine from time to time, but they have always been lithographs or drawings in lithographic pencil. Now we are able to show an example of Mr. Rowe's work in a different medium, pen-and-ink. The drawing reproduced on the other side of this sheet is a strong, direct piece of pen drawing as well as an interesting presentation of a well chosen architectural subject.*

VOLUME VI, NUMBER 12



LITHOGRAPHIC CRAYON DRAWING BY SAMUEL V. CHAMBERLAIN  
RUE MOUFFTARD, PARIS

PLATE XLVIII

*On the other side of this sheet we have reproduced a drawing in lithographic pencil by Samuel V. Chamberlain. The subject is a rather secluded market district on the Rive Gauche in Paris. Mr. Chamberlain has printed his drawing on a spongy Chinese stock which gives added softness and charm to his treatment of the subject.*

VOLUME VI, NUMBER 12

# A SELECTION OF DRAWINGS OF WORKS BY THE LATE DONN BARBER

THE memorial exhibition of the works of Donn Barber held recently in the galleries of The Architectural League of New York has suggested the desirability of presenting something in the nature of a memorial exhibition of the works of this architect in these pages, where they may be seen by a wider audience. In accordance with the practice of this magazine of publishing drawings in preference to photographs, a number of renderings and sketches representing some of the many notable works of Donn Barber have been selected for reproduction here. These buildings are already known to most architects, and draftsmen through the illustrations that have appeared in the architectural magazines that record current architecture, but it is felt that to group them together here will be interesting. In addition to the interest that attaches to the buildings as works of architecture the renderings and sketches have an interest all their own, as examples of draftsmanship.

It is natural to refer first to the design for the Broadway Temple, for it is at once the most unusual of all of his buildings and the crowning work of Donn Barber's professional career. On page 78 is shown a rendering by Hugh Ferriss of the design for this building, while on page 79 are shown two other drawings, one a study of the mass and silhouette of the building and the other a tentative study for the main portal.

The design for the Broadway Temple is an epoch-making one. It undoubtedly marks the beginning of the practice of building accommodations for religious purposes into structures that have a large part of the space devoted to uses which make the church self-supporting, and perhaps even profit-producing. Figures prepared by a real estate expert show that this building will yield a profit through the rentals received from apartments, hotel rooms and stores in

the building, and it is intended to devote the profit earned in this way to the advancement of religious causes and to philanthropy.

The elements of the problem in the case of the Broadway Temple were to provide space for a church with Sunday school rooms, etc., a hotel, and apartments. The architects' solution places the

church auditorium and its related rooms in the lower part of a great central tower, the upper part of which is occupied by a complete modern hotel.

In the stories between the auditorium and the bottom of the hotel is the gymnasium with its swimming pool, placed where it is convenient for use in connection with both the church and the hotel.

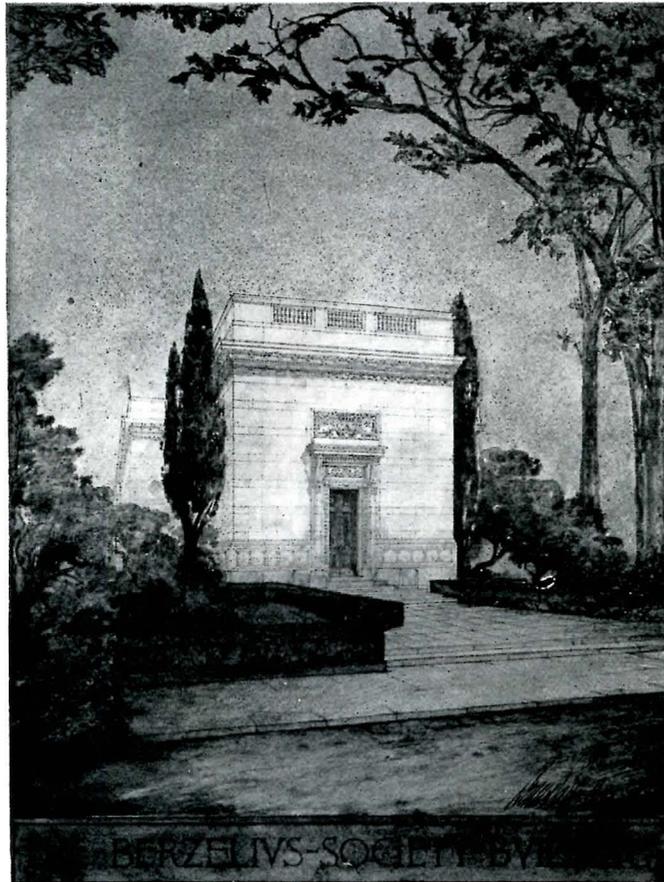
Flanking the central tower are two complete and independent apartment houses. These parts have been combined skillfully in a highly effective composition.

One of the conditions which complicated the architect's task was the irregular shape of the plot of ground on which the Broadway Temple is to be built. But this has been made to contribute to the interest of the composition through introducing an element of variety,

one of the minor towers engaged upon the corners of the great tower having been made larger than the others to make the plan of the tower portion approximate the shape of the plot of ground.

The religious feeling necessary in such a design is obtained by the use of the central spire and by the treatment of the great main portal which gives access to the church. The whole will be topped by a large cross which at night will blaze with electric lights making it visible from a distance. The Broadway Temple will stand on what is probably the highest spot in New York City and will be a landmark for miles around.

The other drawings selected for reproduction here suggest the variety that exists in Donn Barber's



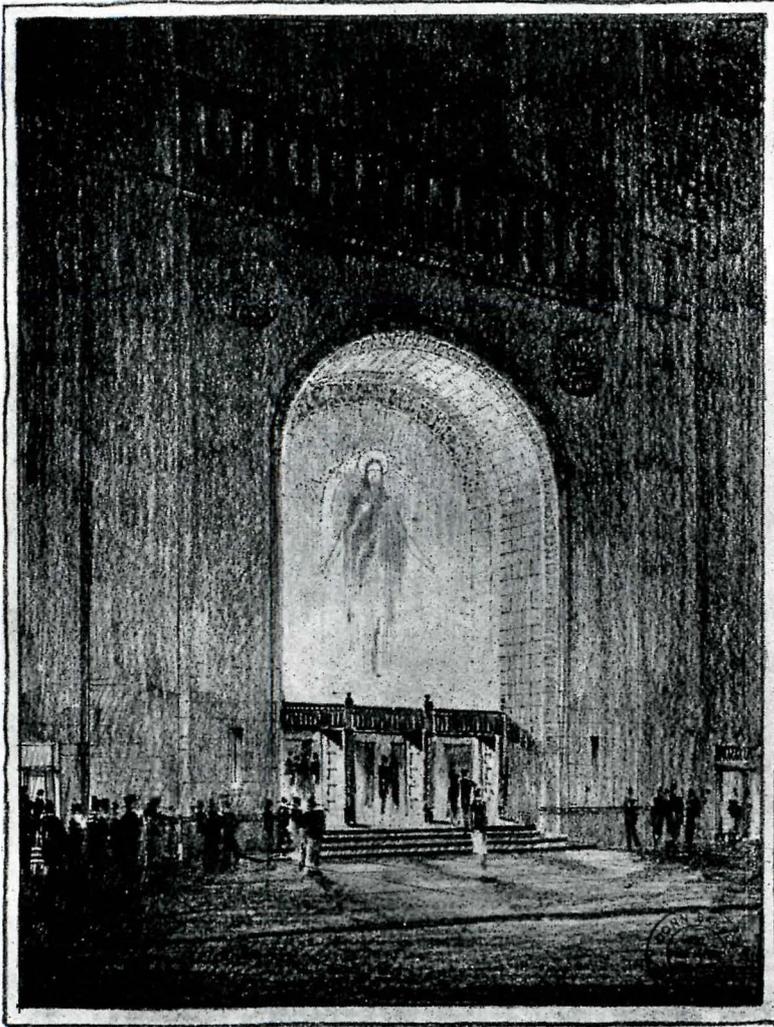
THE BERZELIUS SOCIETY BUILDING AT  
YALE UNIVERSITY

*Donn Barber, Architect.*

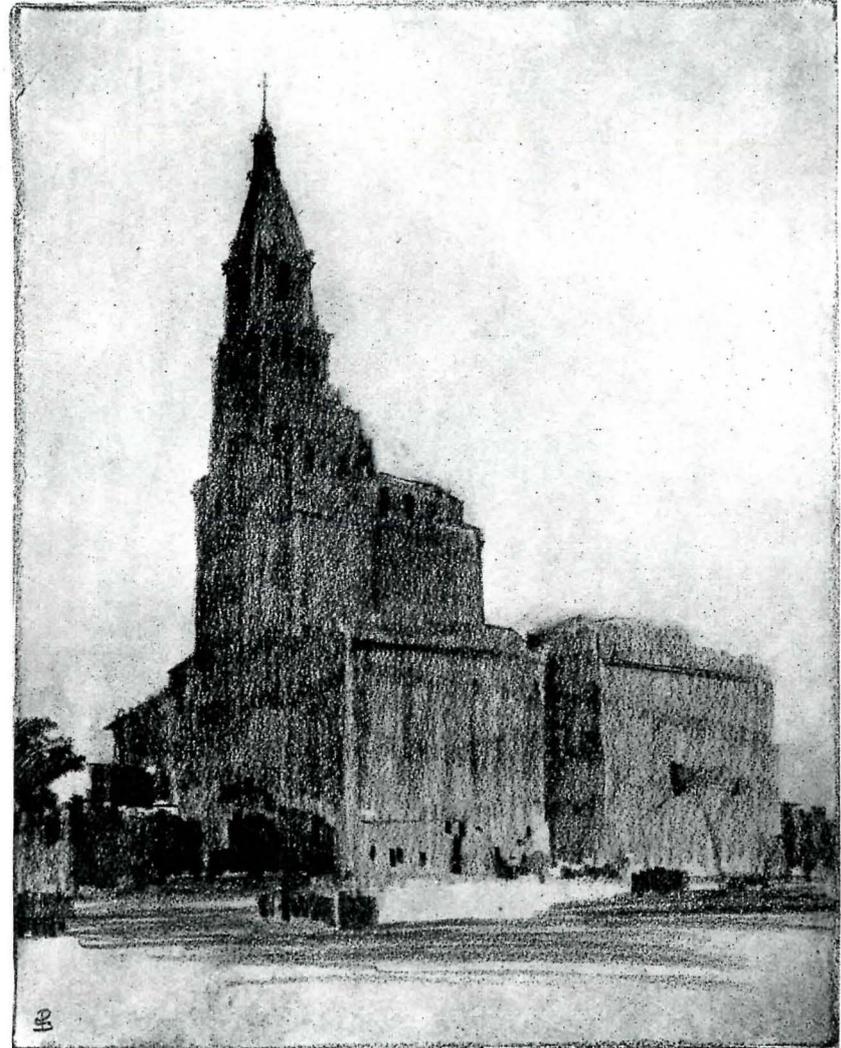
PENCIL POINTS



*Rendering by Hugh Ferriss*  
PROPOSED BROADWAY TEMPLE, NEW YORK CITY  
*Donn Barber, Architect.*

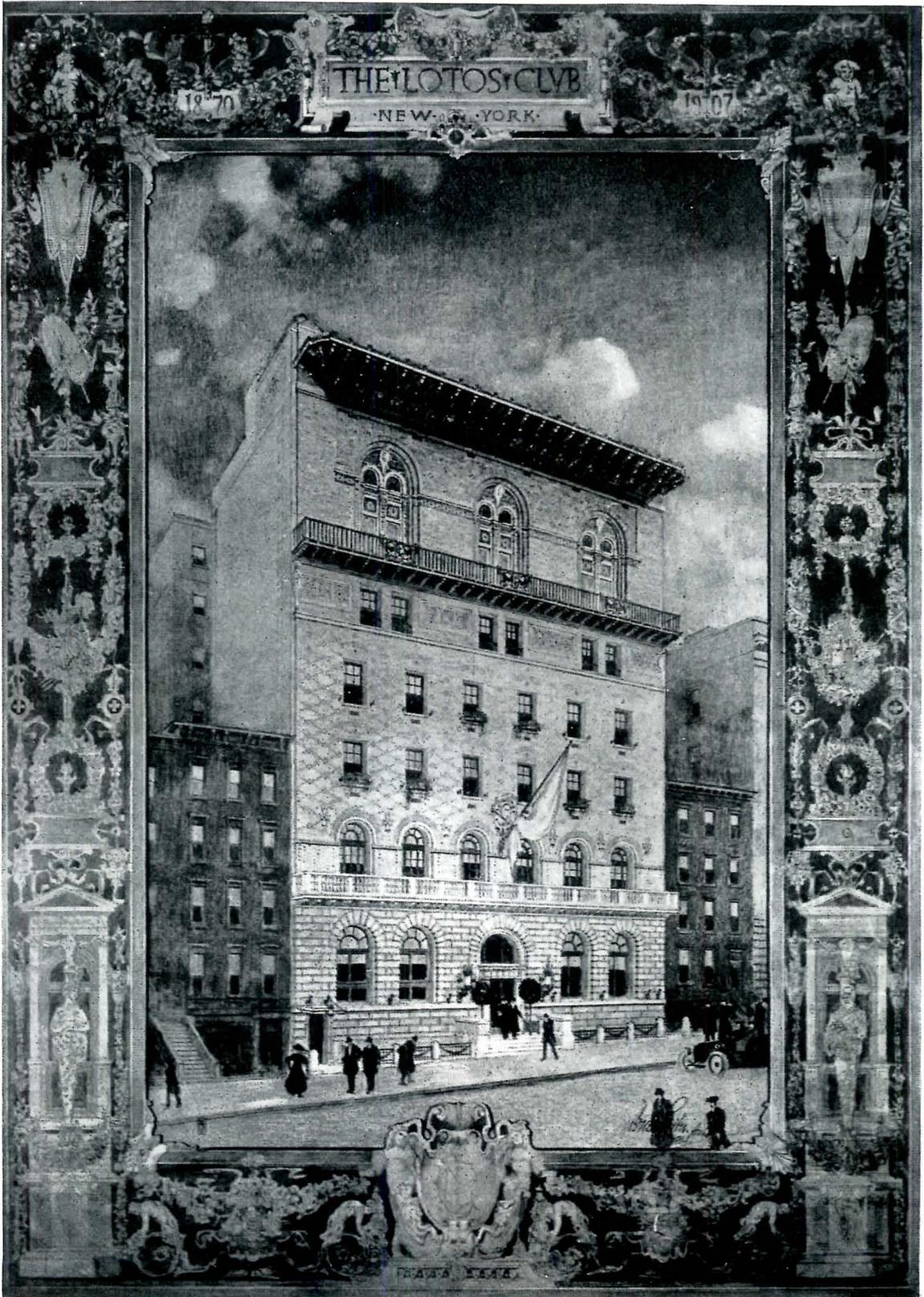


STUDY FOR MAIN PORTAL OF THE BROADWAY TEMPLE  
*Donn Barber, Architect.*



STUDY OF SILHOUETTE OF THE BROADWAY TEMPLE  
*Donn Barber, Architect.*

PENCIL POINTS



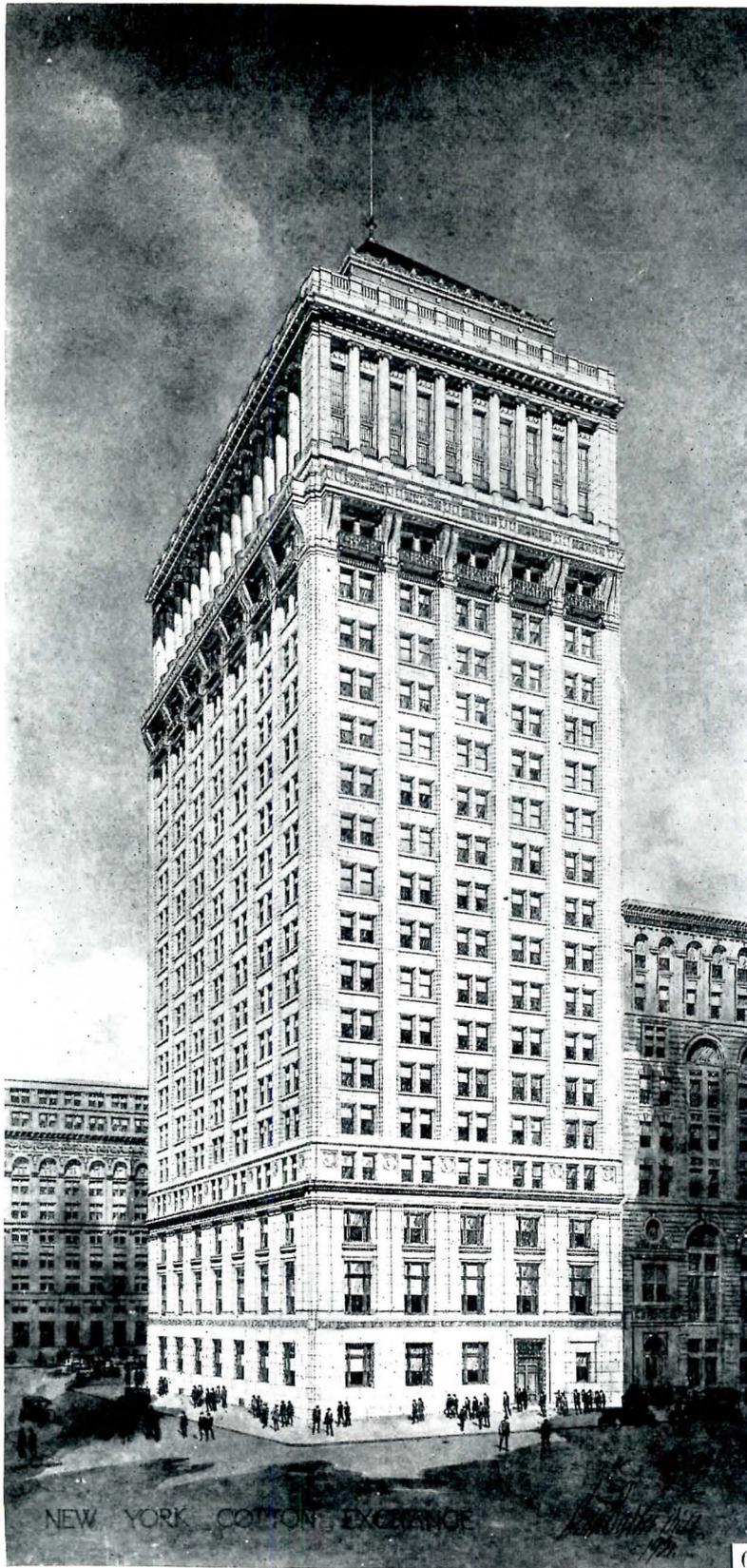
THE LOTOS CLUB, NEW YORK CITY  
*Donn Barber, Architect.*



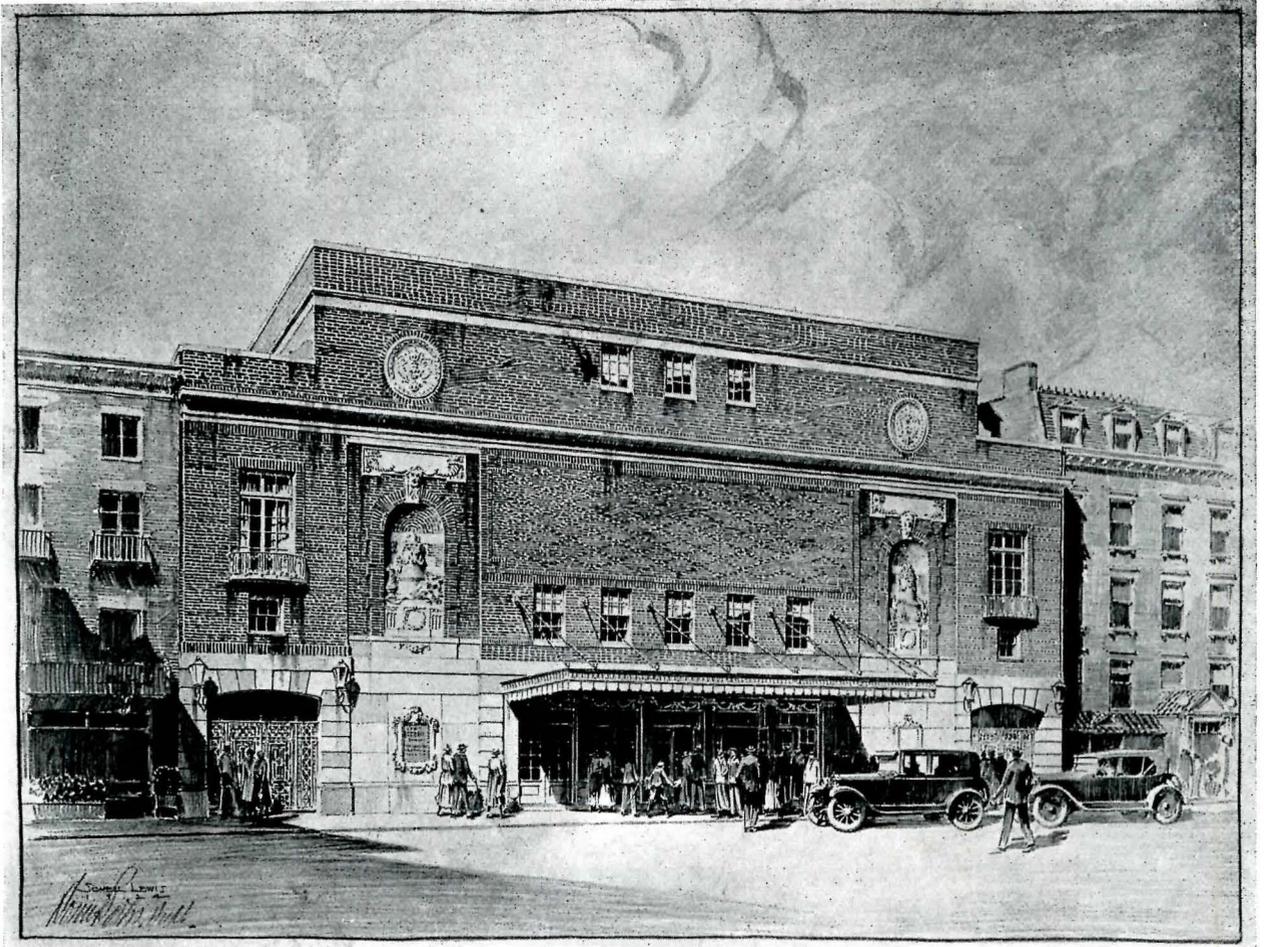
NATIONAL HEADQUARTERS  
YOUNG WOMEN'S CHRISTIAN ASSOCIATION

NATIONAL HEADQUARTERS, YOUNG WOMEN'S CHRISTIAN ASSOCIATION, NEW YORK  
*Donn Barber, Architect.*

PENCIL POINTS



THE NEW YORK COTTON EXCHANGE  
*Donn Barber, Architect.*



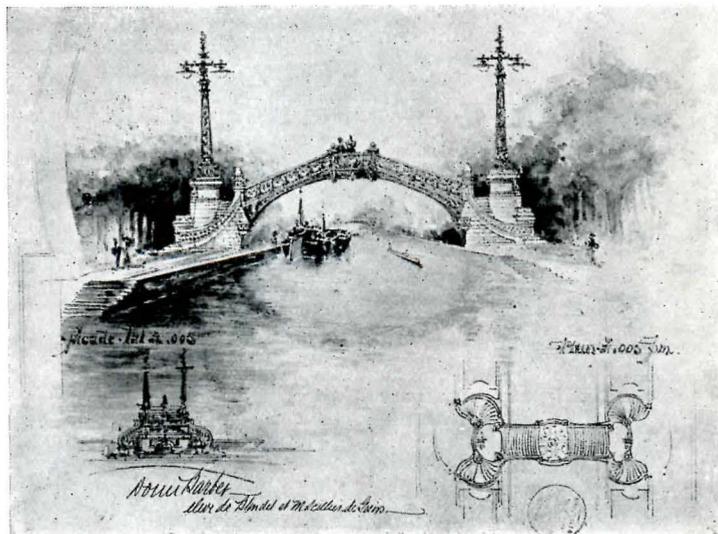
*Drawing by Schell Lewis.*

DESIGN FOR A THEATRE BY DONN BARBER

works—in the uses of the buildings and in the styles of treatment. The Berzelius Society Building at Yale, the Lotos Club, on Fifty-seventh Street, the National Headquarters for the Young Women's Christian

Association, the New York Cotton Exchange and the design for a theatre all bear the evidence of earnest and able architectural study and masterly treatment of each different problem.

STUDENT PROBLEM  
BY  
DONN BARBER



AWARDED  
A  
FIRST MENTION

# PENCIL POINTS

REG. U. S. PAT. OFF.

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DECEMBER, 1925

## THE AMERICAN ACADEMY IN ROME

THE American Academy in Rome has announced its annual competitions for Fellowships in architecture, painting, sculpture, landscape architecture, musical composition and classical studies. In the fine arts the competitions are open to unmarried men, not over thirty years of age, who are citizens of the United States; in classical studies, to unmarried citizens, men or women.

In painting and sculpture there is to be no formal competition involving the execution of work on prescribed subjects, as formerly, but these Fellowships will be awarded by direct selection after a thorough investigation of the artistic ability and personal qualifications of the candidates. Applicants are required to submit examples of their work and such other evidence as will assist the jury in making the awards.

For the Fellowship in sculpture, the stipend is provided by the Rinehart Fund of the Peabody Institute of Baltimore, Md. The Fellowship in musical composition will be the Horatio Parker Fellowship.

For each Fellowship in the fine arts, the stipend is \$1,250 a year for three years, with some additional allowances for material and model hire; in classical studies, there is a Fellowship for one year with a stipend of \$1,250, and a Fellowship paying \$1,250 a year for two years. All Fellows have opportunity for extensive travel, and Fellows in musical composition, who travel about six months of the year in visiting the leading musical centres of Europe, receive an additional allowance of \$750 a year for traveling expenses. In the case of all Fellowships, residence and studio (or study) are provided free of charge at the Academy.

Entries will be received until March first. For circulars of information and application blanks, address Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue, New York City.

The American Academy has also announced that the fourth Summer Session for teachers and graduate students in the classics, history and related subjects will be held in Rome from July 5 to August 13. The Director will be Professor Grant Showerman of the University of Wisconsin, who was Director of the Summer Sessions of 1923, 1924 and 1925.

The work will consist of one comprehensive and unified course designed to communicate a general acquaintance with the city of Rome in all its phases from the first settlement to the present time, and a special acquaintance with it in the time of Cicero, Caesar, Virgil and the first Emperors. For further details write to Professor Grant Showerman, 410 North Butler Street, Madison, Wisconsin.

## THE NEW YORK ARCHITECTURAL CLUB, INC.

IF the spirit of warm friendship displayed at the various social affairs of the club is to be considered an indication, The New York Architectural Club is certainly due to be one huge success.

For example, witness the effect of the dinner-dance given by the club at the Knickerbocker Grill on the 20th of October. Even at this writing, almost four weeks after the affair, whenever two or more draftsmen meet, the conversation is bound to include it, and many a good laugh is caused by the reminiscence of some incident or other that took place. This is very remarkable, when one considers the swift pace, and the multifarious activities crowded into the life of the average New Yorker. It all goes to prove that the club is being laid on a sound foundation, and that is summed up in good fellowship, congenial and sympathetic companionship and the understanding due to kindred interests. It has been decided to have an affair of this kind each month.

The infant club has now attained the ripe old age of about eight months, and the membership roster reaches close to six hundred in number. The Board of Directors is considering various propositions for a club house, and without a doubt some definite action will be taken in this direction in the very near future.

At this time it may be considered apropos to mention briefly the history, the aims and the ambitions of the club.

It is a very peculiar situation that smaller cities and towns all over the country have had architectural clubs for a long time. Yet New York, the center of the architectural profession of the entire Western Hemisphere, where many of America's best architects are located, and where so much great work is conceived and executed, never had an architectural club worthy of the name, spirit and purpose. Various feeble attempts have been made in the past to organize and found clubs, but these were either poorly launched or were not properly organized. The nearest thing to a club has been the Architectural Bowling League of New York, which is now 19 years old, and going stronger than ever.

Now, the same men who have always been the moving spirits in the Bowling League, have organized the club, and all indications show that their work is well grounded. The Bowling League and its resources is in back of the club, and will always remain an active part of the organization. This also applies to the Architectural Tennis Tournament organization and the Architectural All-Star Base-Ball Club, both recently formed.

The Architectural Club of N. Y., Inc., is now an accomplished fact, gaining momentum every day. The primary aims of the club are to bring the men in this profession more closely together through social and fraternal activities and the rendering of all possible aid in securing positions for men out of employment. Thereby giving us an opportunity to obtain a better understanding of one another and our problems, and in this way add to the cheerfulness of life as much as possible. While the employers will have absolutely no say or control in or over the club, the club has, and will always retain the most cordial relations with the employers, especially since there is not the slightest reason to do otherwise. In recognition of this fact, some of the best known leading architects in this city have expressed their unsolicited approval of the club, and have offered financial backing, if the draftsmen desire it.

The ambitions of the club are to obtain a good sized club house centrally located, which will bring in revenue other than dues. The club portion of the building to have comfortable lounge rooms, auditorium, meeting rooms, library, ateliers, bowling alleys, gymnasium and dormitory.

All this can be easily had, if the men pull together, and judging by the enthusiasm shown by the first 600 members, we most assuredly will have them in the not distant future.

## PENCIL POINTS

So far the members have been taken in as charter members, thereby paying no initiation fee, and will continue so for only a short time hereafter. Perhaps only until the membership reaches the 1,000 mark. Thereafter it is proposed to place an initiation fee of \$25 or \$50 on each application for membership, which is no more than fair, considering that the founders have done all the organization and stabilization work. The dues are \$10.00 a year and considering the type of organization, this amount is very small indeed. The membership is in three classes. Class "A" consisting of men employed by practicing architects. Class "B" consisting of men in the allied arts, such as engineers, employees in builders' offices and others connected with the various trades, etc. Class "C" will be honorary members. The class "A" men only will have the controlling vote in the regular meetings, and the class "B" men will vote only in the election for officers at the general meetings.

There are several thousand architectural draftsmen in New York and vicinity, and as all indications show that without a doubt the majority will belong to the club, it therefore stands to reason that when vacancies occur in the various offices, the club men will be first to know of them, and will be in preference. It therefore follows that the time is not far off when a draftsman must ask himself, not can he afford to belong to the club, but **can he afford to be out of it.** This is merely the forecast of a condition which any man with a little common sense can foresee, and which will automatically follow as a matter of course, just as sure as sunrise and sunset.

The writer will gladly give further information, and assist applicants that qualify in the above mentioned classes to join, if they will call on him, or send their address.

### Architectural Bowling League Section

The Bowling League is nearing the end of the first round for 5 man teams, and at this writing the standing of the teams is as follows:

| No. | Office                      | Won | Lost |
|-----|-----------------------------|-----|------|
| 1   | Cass Gilbert                | 11  | 1    |
| 2   | Warren & Wetmore            | 14  | 2    |
| 3   | Alfred C. Bossom            | 9   | 2    |
| 4   | Guilbert & Betelle          | 9   | 3    |
| 5   | Don Barber                  | 12  | 4    |
| 6   | McKim, Mead & White         | 12  | 4    |
| 7   | McKenzie, Voorhees & Gmelin | 12  | 4    |
| 8   | James Gamble Rogers         | 6   | 5    |
| 9   | Andrew J. Thomas            | 7   | 7    |
| 10  | Starrett & Van Vleck        | 5   | 5    |
| 11  | Thomas W. Lamb              | 7   | 8    |
| 12  | Peabody, Wilson & Brown     | 7   | 9    |
| 13  | J. E. R. Carpenter          | 6   | 8    |
| 14  | Holmes & Winslow            | 5   | 10   |
| 15  | Schwartz & Gross            | 4   | 8    |
| 16  | Allen & de Young            | 3   | 8    |
| 17  | Benjamin W. Morris          | 2   | 7    |
| 18  | Shape, Bready & Peterkin    | 2   | 12   |
| 19  | W. L. Stoddart              | 0   | 15   |
| 20  | Schultz & Weaver            | 0   | 13   |

The New York Architectural Club, Inc.,  
The Architectural Bowling League of N. Y.,  
The Architectural Tennis Tournament, and  
The Architectural All-Star Base-Ball Club,  
individually and collectively are grateful for this opportunity to heartily wish all their friends a happy and gay Christmas season, and a very prosperous New Year.

HENRY SASCH, *Secretary*,  
Care of Donn Barber,  
101 Park Avenue,  
New York City.

### A CORRECTION

THE rendering of "The Most Holy Place," on the November cover of PENCIL POINTS was made by Mr. Birch Burdette Long.

Mr. Arthur Neal Robinson, 623 Candler Building, Atlanta, Ga. is very desirous of securing copies of PENCIL POINTS for the following issues:

1920—July, August, September, October and December  
1921—January, March and April

### DETROIT ARCHITECTURAL BOWLING LEAGUE

THE Detroit Architectural Bowling League is off to a good start on its fourth season. There were a few changes in the teams this year but the friendly spirit of competition and good fellowship, which has always prevailed, is as strong as ever.

We intend to break all existing records this year, and, incidentally give New York or any other league team, which claims to understand bowling, an exhibition of "knockin' 'em dead." Bring on your seconds!

The standings of the teams on Oct. 30th were as follows:

|                                 | W. | L. | Pct. |
|---------------------------------|----|----|------|
| Janke, Venman & Krecke          | 17 | 7  | .708 |
| Malcolmson & Higginbotham       | 15 | 9  | .625 |
| Geo. D. Mason & Co.             | 14 | 10 | .583 |
| Smith, Hinchman & Grylls        | 14 | 10 | .583 |
| Donaldson & Meier               | 13 | 11 | .542 |
| McGrath, Dohmen & Page          | 13 | 11 | .542 |
| Albert Kahn, Inc.               | 12 | 12 | .500 |
| Weston & Ellington              | 11 | 13 | .458 |
| Van Leyen, Schilling & Keough   | 6  | 18 | .250 |
| Simmers & Waalker               | 5  | 19 | .208 |
| 2nd High Score                  |    |    |      |
| 1 game—Carmiencke (V.L. S. & K) |    |    | 256  |
| 2nd High Score                  |    |    |      |
| 3 games—R. Fraser (D. & M.)     |    |    | 637  |
| Team High Score                 |    |    |      |
| 1 game—McGrath, Dohmen & Page   |    |    | 995  |
| Team High Score                 |    |    |      |
| 3 games—McGrath Dohmen & Page   |    |    | 2796 |

### BOSTON ARCHITECTURAL CLUB

FOLLOWING the usual summer hiatus, during which time important additions and improvements were made to the Club House, the winter activities have started with a "bang." The student enrollment for our night classes is about 150, the preliminary design having over forty and a waiting list besides. Our usual atelier system is followed with Professors Haffner of Harvard and Carlu of "Tech" in supreme command. The more advanced problems are conjunctive with those of Harvard and "Tech" day schools, with judgments at the same time and by the same Jury, independent and yet competitive.

The Educational Committee of the Club in general supervision of all work and policies is J. N. Holden, *Chairman*, E. Leslie Morgan, James Ford Clapp, Robert P. Bellows, Maurice Feather, Bruce Ellwell and Henry R. Shepley.

The Instructor in charge of Preliminary Design is Mr. John F. Alter; Two Week Sketch Class, Mr. Holden; Analytique, Mr. Morgan. Classes "B" Plan and "A" Messrs. Haffner and Carlu.

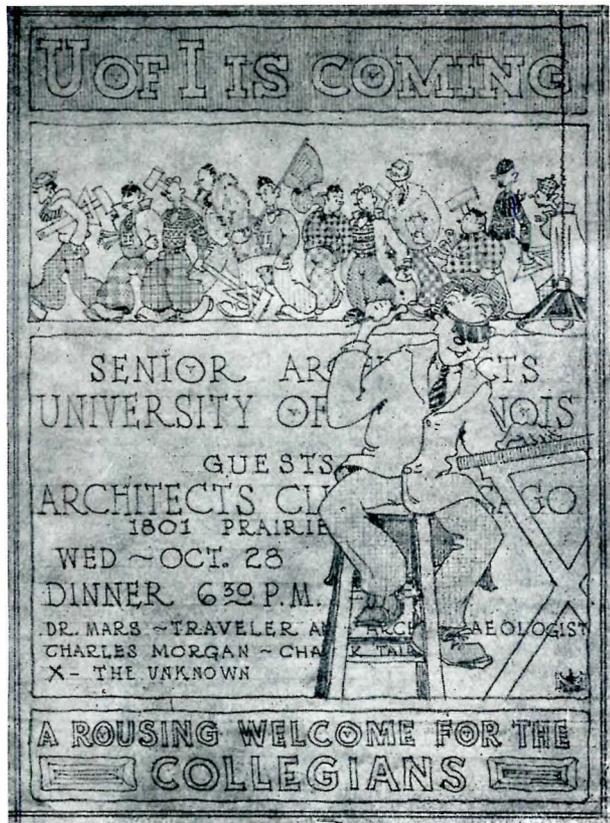
The atelier system has more nearly the atmosphere of the Paris ateliers than any found in this country and the success of the students in the "Rotch" and other important competitions places our "after hours" system of instruction, where the day workers can educate themselves while working, pretty nearly the top of any work carried on in or for the profession of architecture.

A competent Committee will look after and provide recreation in the form of dances, frolics etc., during the winter.

The life class has just started most auspiciously under the leadership of Mr. A. L. Kelley; The Water Color Class under Mr. Carroll Bill will start next week and the important construction classes under Mr. Charles Shedd and Mr. Temple. The History of Architecture lectures by Mr. Louis C. Newhall complete a thoroughly comprehensive curriculum. When one realizes that twelve of the last nineteen winners of the "Rotch" came via the gate-way of our endeavor and that winners of scholarships are now at Harvard and Princeton Universities out of our Atelier, the magnitude of the results accruing from the individual devotion of the gentlemen who give their best to the up-raising of the profession is convincing.

Truly the Profession must be proud of and wish God-speed to The Boston Architectural Club and its faithful few.

## PENCIL POINTS



INVITATION ISSUED BY THE ARCHITECTURAL SKETCH CLUB OF CHICAGO

### THE ARCHITECTURAL SKETCH CLUB OF CHICAGO

THE following men submitted solutions for the first problem of the Beaux Arts Institute of Design.

#### Class "B" Analytiques

Edgar Nelson                      Fenton Russell  
D. Rothe

#### Class "B" Projets

P. Schweiker                      E. Tourtellote  
T. O. Menees                      Ed. Weiss  
W. Navarra                        G. Eisenberger  
E. Wallden

The boys are up and at them again after their first charette and all are now busily engaged on the current problem. The subject of the current problem in the Class B Analytiques is "A Tomb like that of Napoleon." 23 esquisses have been turned in on this problem. For the Class B Projets 8 esquisses have been submitted. The problem this time is the design of "A Tennis Court Bldg." "A Pedestal for An Equestrian Statue" was the subject of the Class "A" Esquisses. For which 3 solutions were turned in.

After a summer of varied activities the Architectural Sketch Club of Chicago turned out en masse for the first problems of the year. The great problem was the holding of the annual Golf Tournament which afforded the draftsmen and architects a great medium for their various and individual solution.

There were some twenty contestants entered and a good solution was turned in by each.

The Tournament was staged on October 3rd, at the Dixmoor Country Club.

The Committee in charge was very energetic and due to their combined efforts a precedent was established in the offer of first prize which consisted of a silver loving cup. The conditions governing the award were that the winner's name would be inscribed upon the cup together with the year in which said winner won it as club champion. There were prizes offered for a club member's blind bogey scores, and the blind bogey prize for visitors

for a low net score was open to either. The members were requested to invite any of their friends as visitors or guests. Mr. Elmer J. Fox was the competitor who submitted the best solution for the problem and was awarded the first prize together with the title of Club Champion. Mr. Clarence Farrier, Mr. A. S. Morphett and Mr. George M. Nedved were awarded the members' prizes for low blind bogey scores. The blind bogey prize for visitors went to Mr. W. T. Walters and the low net score prize was awarded to Mr. E. Roe. The tournament proved to be a great success as it helped to foster some very interesting inter-office competition. We were also very fortunate in the fact that the weather man was in great humor and furnished us with very good golfing weather.

On October the 28th, the Architects Club of Chicago, an organization of which the Sketch Club is an integral part, had as their guests the members of the senior class of the University of Illinois. The day was spent in visiting the various architectural offices in the city and in the evening the guests repaired to the Club rooms for dinner. After partaking of a very excellent dinner, the balance of the evening was devoted to a program arranged by the Architectural Sketch Club. Dr. G. C. Mars, gave a very interesting talk upon his impressions gleaned at first hand while traveling abroad. Dr. Mars was followed by Mr. Charles Morgan whose "Chalk Talk" on "Composition and Sketching" was very educational and interesting. Mr. Morgan illustrated the various points which he wished to emphasize and in this way his subject was very clearly brought home. In view of the fact that Mr. Morgan is one of the recognized men of the country in this type of work, his talk was received with great enthusiasm by the draftsmen and students who were present. The balance of the program was devoted to Mr. Andrew Rebori who is known for his untiring effort in behalf of the Ateliers in the Beaux Art Institute of Design. Mr. Rebori talked on his impressions of Architecture, some of which sparkled with rich humor. The program was well attended. Some 125 members and guests being present.

Under the auspices of the Educational Committee, of which Mr. T. O. Menees is chairman, a tour of inspection through the Decorator's Supply Company was held on November the 31st.

The members were conducted by Mr. Metzger personally through the plant where they acquired some very helpful information pertaining to the possibilities of plaster and composition work. Through the kindness of Mr. Metzger, the party was enabled to see some actual plaster casting take place which was very educational and interesting. Each member was presented with a very serviceable book on plaster and composition work.

The above mentioned committee is now at work upon plans for a similar tour of inspection through the ornamental iron works of A. E. Coleman, a definite date of which will be announced in the near future.

Friday, December the 18th, will be devoted to "The Arts Ball" which will be held at the Congress Hotel. All members of the Architectural Sketch Club should be present as a very interesting and entertaining evening will be guaranteed. More detailed information will be announced shortly by our Entertainment Committee who are now working upon the final plans for the affair.

At the Board of Directors meeting held on November 2nd, the following applicants were accepted as members of the Sketch Club to whom we extend a royal welcome:

|                   |                        |
|-------------------|------------------------|
| Hal Pereira       | Jesse E. Shellenberger |
| Wm. F. Koenig     | Edward Russ            |
| Edgar H. Nelson   | Wm. J. Doran           |
| Fenton H. Russe!! | Elmer R. Hawley        |

### PARTNERSHIP WANTED

An experienced architect and structural engineer with a good record of achievement in Pittsburgh, New York and the South, desires to connect with a New York architect either as partner or to supervise the production of buildings, including the writing of specifications and oversight of the drafting-room. Fully qualified in every way to deliver the goods. Salary commensurate with services rendered. Address A. W. S. care of Pencil Points.

## PENCIL POINTS

### BROOKLYN CHAPTER OF A.I.A. ANNOUNCE COMPETITION

**T**HE Brooklyn Chapter of the A.I.A. has announced a competition open only to Student Affiliates of the Chapter who are at the present time within the territory and jurisdiction of the Brooklyn Chapter. The competition is part of a general program of student recognition and education, planned by the Chapter for the Student Affiliation of the organization. The subject of the competition is "A Gasoline Filling Station." There will be three cash prizes, each accompanied by a certificate of award, and an undetermined number of Honorary Mention Certificates: First Prize, \$100; 2nd Prize, \$50; 3rd Prize, \$25. The program has been submitted to and approved by the Competition Committee of the American Institute of Architects. For copy of the complete program address Lester B. Pope, Pratt Institute, Brooklyn, N. Y.

### ATELIER RECTAGON OF BUFFALO

**T**HE Atelier Rectagon of Buffalo, one of the liveliest barring none, on November 6th introduced six of a list of nine to friend Nebuchadnezzar.

Roy McMurray wrote an elaborate ritual, humorous to the extreme, but in the solemn manner presented, became very impressive.

H. A. Weiland designed an elaborate "set" in keeping with the ritual. The candidates were led before the temples exemplifying the five Orders where they learned the chief characteristics of each one. Their journey ended before a Mohammedan praying tower wherein dwelt the high and all mighty Architect, at whose feet they bowed and petitioned for the knowledge and ability to attain this most high place one day for themselves.

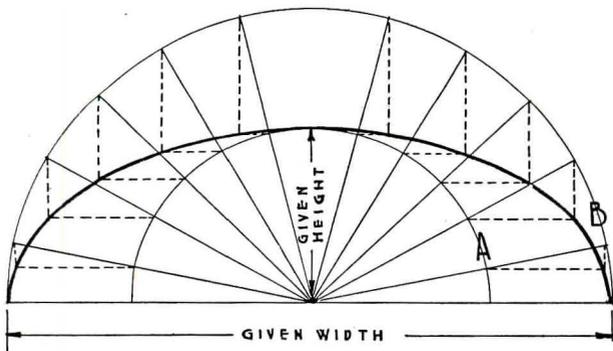
It was the first attempt the Atelier has made in this work but its success was very gratifying and well worth the effort to carry it through.

The Atelier through its committee on education, headed by H. A. Weiland, is conducting a series of lectures each Friday evening. These lectures in general are on topics pertinent to the every day practice in the drafting room. The lecturers are men engaged in contracting, manufacture of building materials or engineers of the various branches of the work of the profession. The older men are gaining as much benefit from the undertaking as the juniors.

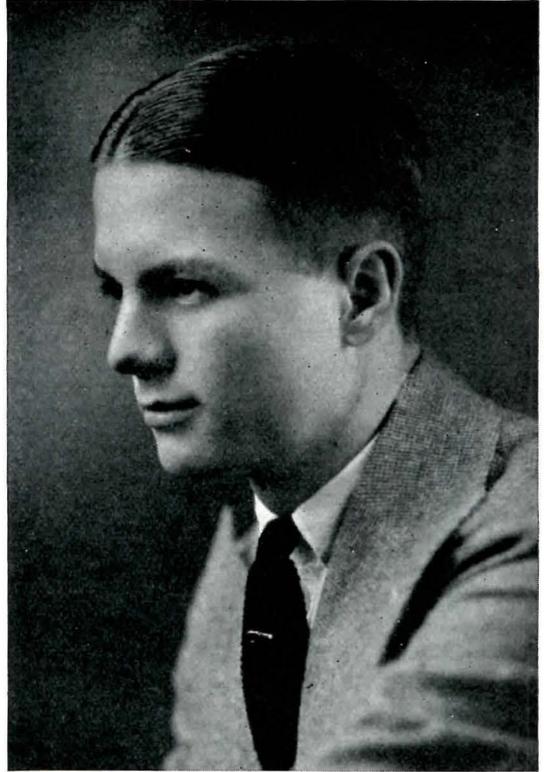
### ANOTHER WAY TO DRAW AN ELLIPSE

**H**OWARD C. LONEY of Washington, D. C., has sent us another method of drawing an ellipse which we reproduce below. He says that this is the style used by Architects in Washington, and is an easy way to get an arch for doorway or windows, by drawing freehand or by using the French curve.

### · ELLIPTICAL · ARCH



- GIVEN- WIDTH OF ARCH AND HEIGHT OF ARCH.
- 1.- DRAW SEMI-CIRCLE A-DIAM OF GIVEN HEIGHT.
  - 2.- " " " B- " " " WIDTH.
  - 3.- PROJECT DOTTED LINES AS INDICATED FROM POINTS WHERE RADIATING LINES DRAWN FROM CENTER INTERSECT CIRCLES A AND B.



G. M. PEEK

**G.** M. PEEK has recently returned from Egypt where he was sent in 1924 by the Metropolitan Museum as a member of their Egyptian Expedition. He spent seven months in Egypt making restoration drawings of Mentuhotep and Hat-Shep-Sut Temples across the Nile from Luxor and made drawings of a temple known as Hibis Temple at the Kharga Oasis in the Sahara desert. After leaving Egypt Mr. Peek spent six months travelling, studying and sketching the architecture of Greece, Turkey, Asia Minor, Italy, France, Switzerland, Spain and England.

He was born at Palatka, Florida in 1900. He received his B. S. degree at John B. Stetson University, DeLand, Florida, in 1920, and after obtaining his license to practice worked in numerous architectural offices in Florida. He attended Harvard University, School of Architecture, for three years, receiving his degree of Master of Architecture in 1924. During his course at Harvard he worked for two years in the office of Allen & Collens, Architects, of Boston. Mr. Peek is now employed as architect for the Home Construction Co., of Bradentown, Florida.

### FOR THE ATTENTION OF SPECIFICATION WRITERS

**T**HE Hydrex Asphalt Products Corporation, calls our attention to two items which have recently appeared in these pages wherein the term "Membrane Method" has been used by authors in connection with products other than those furnished by the company in question. The items appear on page 97 of the September issue and page 101 of the October issue. Both Mr. Beach and Mr. Gaertner used the term "Membrane Method" without knowing that these words are trademarked by the Hydrex Asphalt Products Corporation. We are assured it was not the intent of either writer to ignore the property rights of the company and that in their articles they used the words in their general sense as they have come to be quite generally used throughout the profession.

This notice is printed merely to inform the specification writers of the existence of the trademark and its ownership by the Hydrex Asphalt Products Corporation.

## PENCIL POINTS

### PERSONALS

WESLEY LESHER BLITHE, ARCHITECT, has removed his office to Suite 726, Public Ledger Bldg., Independence Square, Philadelphia, Pa.

HARRY MARSHAL, ARCHITECT, has moved his office from Providence and is now practicing at 205 Ferlita Bldg., Tampa, Florida.

FRANCIS E. DUNLOP, ARCHITECT, has removed his offices to 30 North La Salle Street, Chicago, Ill.

HARLEN E. SHIMMIN, ARCHITECT, has removed his offices to 404-5 Bulkeley Bldg., Cleveland, Ohio.

RALPH C. FLEWELLING, ARCHITECT, has removed his offices to 423 Camden Drive, Beverly Hills, Calif.

NORMAN H. HILL, ARCHITECTURAL ENGINEER, has removed his offices to 1135 S. W. St., Rear, Miami, Florida.

EDGAR SHELTON has opened an office for the practice of architecture at Texas Technological College, Lubbock, Texas.

JOHN G. STASSE AND HARVEY P. BARNES are now associated for the practice of architecture with offices at 175 Fifth Avenue, New York.

### ADDRESSES WANTED

ANYONE knowing the correct addresses of the following will confer a favor by sending them to this office, Pencil Points Press, Inc., 19 East 24th Street, New York City.

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VIRGINIA—L. D. Bean, B. Franklin Hart, 3rd, Marshall Wells, University.

WEST VIRGINIA—Paul C. Kintzing, Huntington.

### MASTER DRAFTSMEN, XVI—THOMAS HASTINGS

(Continued from page 60)

ican Institute of Architects, is Chairman of the Sardis Exploration Society Commission, President, Beaux Arts Institute of Design, one of the Founders of the Federal Art Commission, Chairman, Lincoln Highway Commission, Director in the Museum of French Art and was at one time President of the Architectural League of New York, one of the Founders, and several times a Director.

The practice of Carrere & Hastings has never been confined to one type of building but has been broadly inclusive. Among the best known of their important works are; the New York Public Library, Century Theatre, Manhattan Bridge, Staten Island Terminal, Ponce de Leon Hotel, and the Standard Oil Building. Hastings' great triumphal arch built (temporarily) in honor of the home coming troops was one of his most effective designs.

Hastings has always taken a keen interest in the development of the younger men in the profession, and in educational work. His genialty is as well-known as the importance of his architectural work.

EUGENE CLUTE

### MONKS AND JOHNSON ANNUAL OUTING

A MOST interesting and unusual outing was enjoyed by the employees and members of the firm of Monks & Johnson, Architects and Engineers, Boston, during the last month. A committee organized the members taking care of transportation, food, recreation, etc., which would do credit to the A. E. F. Starting out in a grand parade from Boston the autos of frolickers wound its way down the beautiful south shore boulevards arriving at their rendezvous, a summer house at Brant Rock, just before noon. A few games were played before the noon lunch when much apple cider and other "goodies" were imbibed only to be quickly forgotten in favor of the exciting contests between single and married men, architects and engineers, old folks and young, no! old were young this day. There were relay and sack races, nail driving contests for girls, tug of war and races between married and bachelor boys and a "free for all" eating contest, the latter unofficial. The tennis games and bowling caused much anxiety and some laughter. The Casino which was reserved for the Clam Bake proved inadequate perhaps due to the unusual amount of broiled lobster consumed with its accessory trimmings and other things but after some more bowling and a few moonlight waltzes by the firm's own orchestra the crowd of merrymakers regained normalcy again only to become more lively with the advent of an even larger jazz orchestra. A huge bon fire on the beach made a very fitting picture as the crowd sang old fashioned songs to the tune of strumming banjos and toasted marshmallows until the cool blue hours of night beacons them home again. Everyone had such a rollicking good time that engineers forgot their slide rules and bosses their intense reserve, even the moon forgot to retire.

JOHN S. BARNEY

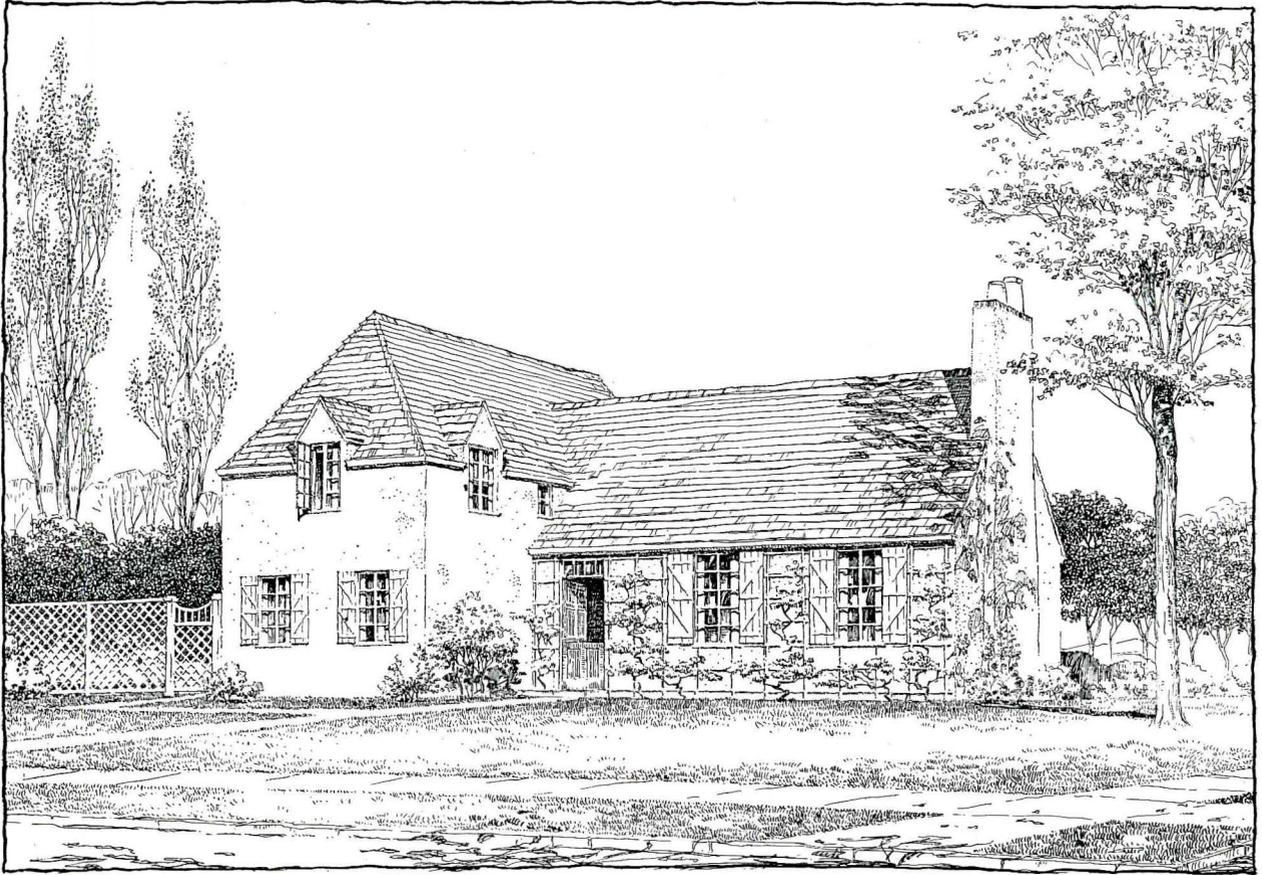
JOHN STEWART BARNEY, architect and landscape painter, died November 22nd, at his home, 863 Lexington Avenue, New York, following an operation three weeks ago. He had been ill five weeks.

Mr. Barney was fifty-seven years old. He was born in Richmond, Va., the son of Charles G. Barney, of New York. He was graduated from Columbia in 1890, and then studied architecture in Paris. When he returned to New York some twenty years ago, he designed many well known buildings, among them the Broadway Tabernacle, the Church of the Holy Trinity, in East Eighty-eighth Street; the Hotel Navarre, and the Hart Memorial Library in Troy. In 1915 he turned his attention to painting, using for the most part scenes about Newport and Bar Harbor. He exhibited annually at the Kingore and Ehrlich galleries.

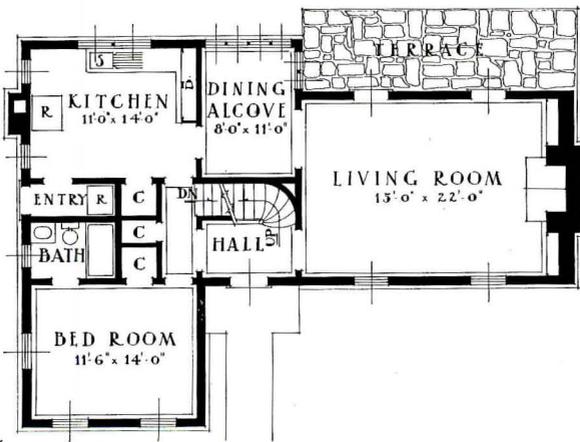
### A NEW YEAR'S SUGGESTION

NOW is a good time for every draftsman to open a savings bank account and put some money away every week. Business throughout the country is good and so far as we can see is going to be for quite a while; but the good old pendulum has a way of swinging back and the laws governing such things have not been repealed. A tidy little wad laid away in a safe place is a pleasant thing to contemplate.

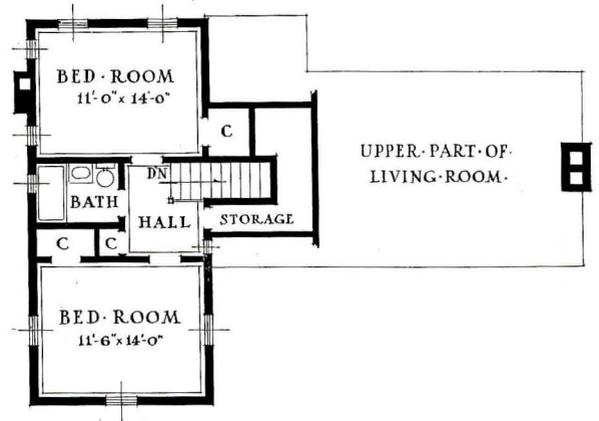
PENCIL POINTS



Perspective



First Floor Plan



Second Floor Plan

DESIGN FOR SMALL HOUSE INSPIRED BY FRENCH PRECEDENT

FOSTER AND VASSAR, Architects



## FIELD SKETCHES IN PENCIL

By Students of the Columbia School of Architecture  
*Sketches and Explanations by Torrance Fiske and J. Crawford Byers*

THE sketches which are reproduced may be of interest to readers of PENCIL POINTS as the product of a certain school training and an interest in sketching.

As students of architecture, we are all vitally interested in sketching. It is a language we must acquire. I think I feel about it just as the immigrant feels about a chance to learn to write English.

When I came to Columbia School of Architecture two years and a half ago, I knew nothing of sketching. Evidently the gentlemen who planned the work were expecting such as me, for they lost no time placing a pencil in my hand, and putting me hard at it on one pretext or another. Even the lecture courses, it developed, required drawings, and soon, for the fun of it, many of us were trying to sketch the pictures flashed on the screen for a few seconds during history lectures. If this diversion accomplished nothing else, it did at least disclose to us the first consideration in the art of sketching.

I mean the necessity to distinguish and select the essential elements of the subject, throwing away all the rest. This is hard to do. It seems to me it is one of the very hardest things of all to develop,—this seeming extravagance. But so important is this ability to separate the essential from the non-essential in all fields of intellectual endeavor, and so well does sketching develop this attitude of mind, that it might well be included as a subject of study in any liberal program of education.

An architect told me of travelling through Europe with a young graduate of an architectural school, who insisted on carrying with him a

portfolio full of renderings by famous artists. To these he referred from moment to moment throughout the process of his own sketching. That man was fundamentally wrong. He did not comprehend that the life of the sketch must come from the personal conception of the subject, and that technique alone is like the dead body of a man.

After this mental process must follow the technical skill to express what you see in the way you see it.

But there is much that we should learn about technique from others' work. It is necessary to acquire a vocabulary for this kind of expression, and one legitimate means is the careful study of good drawings. From Hugh Ferriss' work might well spring the question "Why draw in line,—a mere convention? Why not in planes, as things exist?" From a study of Chester Price will come a greater appreciation of values, and of strokes well made,—so sure and always so clean; and from Otto Eggers a sense of texture, a feeling of stone on stone, and a conception of the possibilities of light effects. There is much that such men can teach us.

I wonder if I could speak of artistic feeling and imagination? But such forces, like most of the best things in the world, defy analysis. Perhaps it is sufficient to recognize the part they play in art.

To sketch with facility is to write the language of architecture. It is an accomplishment essential to the finished architect. It may be that good sketches are produced only by those born with extraordinary talents, but I think that they are within reach of any one who is reasonably

## PENCIL POINTS

susceptible to beauty, and who possesses an intelligent and sustained desire to learn.

These were my conceptions and background when last summer I went to Siasconset, a quiet summer colony on the eastern tip of Nantucket Island, looking straight out to sea. The little cottages, many originally fishermen's houses, are weathered shingle of lovely silver color, and are miniature in scale. In June they are buried under masses of Rambler roses.—*Torrance Fiske*

THE subjects of all the accompanying sketches were found on Cape Cod and the island of Nantucket. Jewett and I started out with the laudable aim of acquiring facility in outdoor pencil-sketching, and chose Cape Cod as a field for our endeavors because of the simplicity and charm of the old houses, the beauty of the countryside itself and because the Cape limited our field, to some extent, geographically. In addition to this we planned to make a short side-trip to Nantucket, as Fiske was staying there, and we had heard from him that "sketching was good."

The trip was made by motor and was a great success as far as the abundance and quality of material found. Our only difficulty was with the natives who wanted to see the "pitchers"—they were forever leaning on our shoulders and insulting us by asking what we were drawing.

The most interesting single architectural feature we encountered was the doorway, both the simple dwelling-house type and the more elaborate and pretentious church entrance. The church doorway at Barnstable attracted us at once. As a matter of fact it was the best part of

the church. It appealed to us because of its excellent scale, and deep shadows. The detail was extremely interesting—this I think was the only instance in which we found Ionic capitals used. The workmanship was beautiful. A group of youngsters who had climbed a tree near us added interest by dropping small twigs on our drawings as we worked.

The Provincetown doorway is an excellent example of the domestic type. The hand of the village carpenter is much in evidence and lends an increased charm to a beautiful design.

The sketches at Siasconset were the most appealing of all to me. We found a village of old houses, built to withstand the severe winters of Nantucket, which seemed to grow out of the soil. The majority date to the seventeenth century, and are a real taste of American vernacular architecture. They make no pretense at architectural adornment, and their charm is entirely one of mass. Their appeal is purely due to the picturesque quality of their small scale, consistent throughout, their sagging roof lines and extreme climatic suitability.

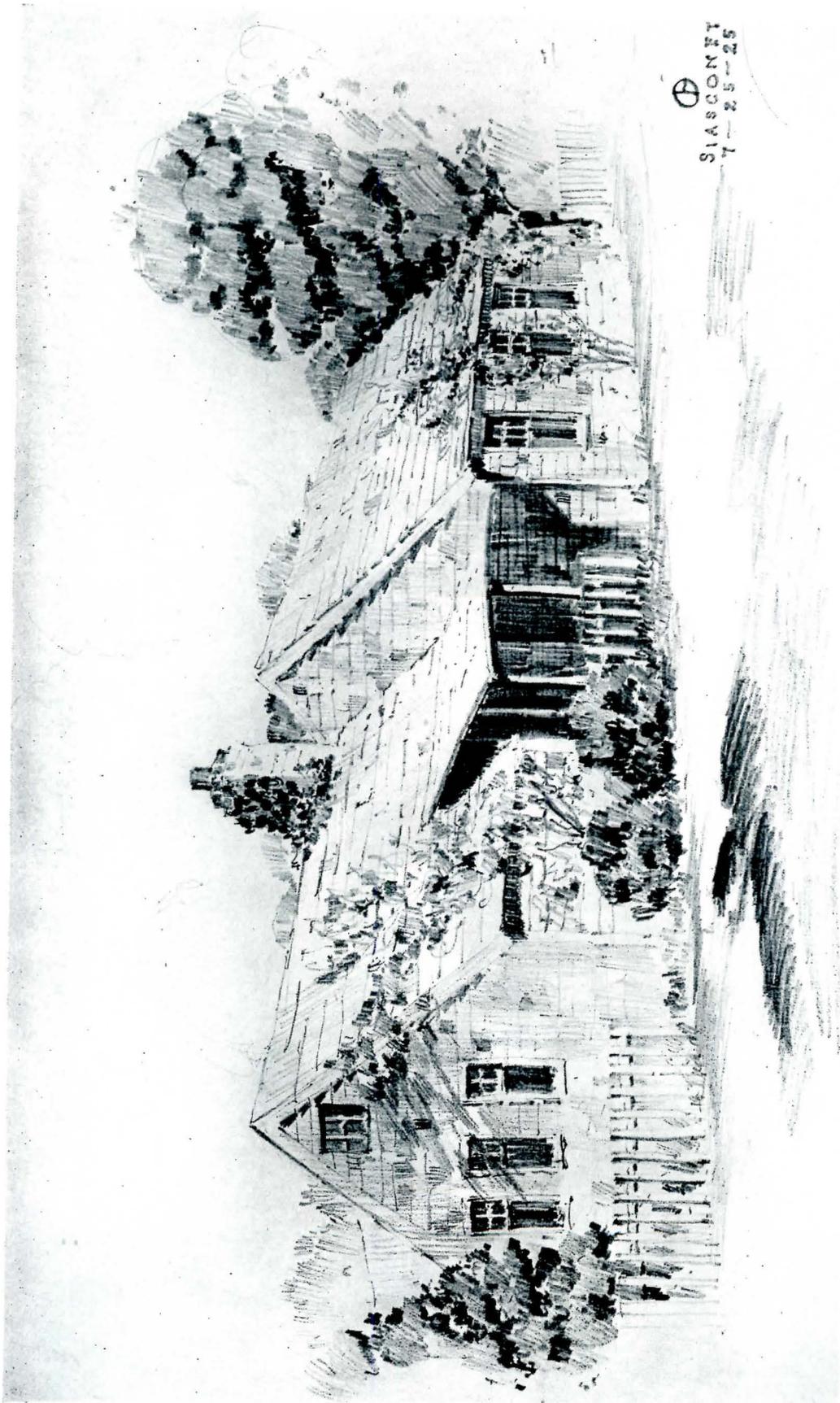
The foregoing gives, in a sketchy way, the reasons for which our subjects appealed to us. We started out with no definite idea of what we were to find; our plan being simply to go along in haphazard fashion and to stop when we found something worth drawing. We acquired a new appreciation of Early American Architecture; a realization that mass counts infinitely more than profuse detail, and that the mistakes of a village carpenter can often accomplish more than the synthetic product of the trained architect—*J. Crawford Byers*



"SNUG HARBOR"

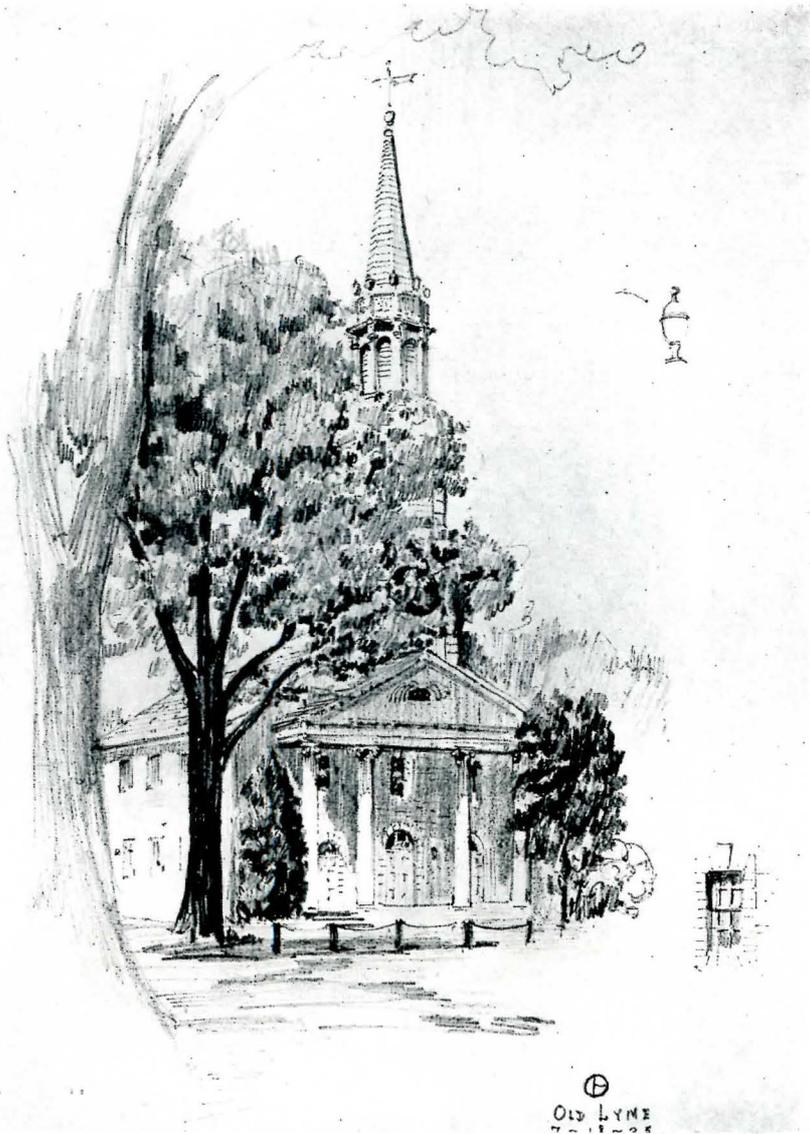
SKETCH AT "SNUG HARBOR," SCONSET, MASSACHUSETTS

By *Torrance Fiske*

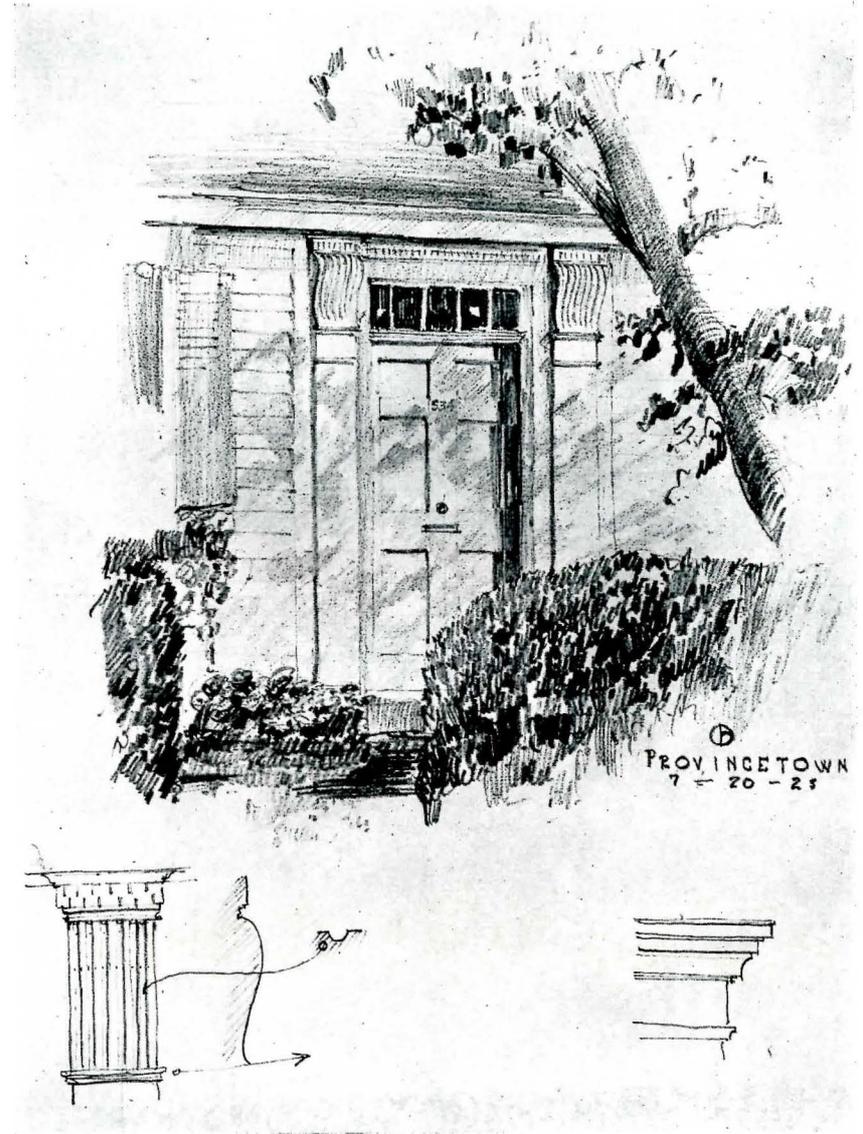


SKETCH MADE AT SIASCONET, MASSACHUSETTS

*By J. Crawford Byers*



CHURCH AT OLD LYME



DOORWAY AT PROVINCETOWN

*Sketches Made by J. Crawford Byers*

# HERE AND THERE AND THIS AND THAT

CONDUCTED BY RWR

THE crop of sketches is pretty fair this month and the prize in this class for the period ending November the fifteenth is awarded to Armand Carroll of Philadelphia. We are glad to see so many contributions carrying names quite unknown to us. Many a fellow—and some girls—have had their work reproduced for the first time in PENCIL POINTS. You sketchers who have never submitted your material for publication are not only invited, but urged, to send your drawings for consideration in this department. There is no implied promise to publish everything submitted, but one thing we do promise—every contribution will receive the most careful consideration.

The bosses are gentlemen, of their kind there are few.  
As for the head draughtsman,—why he pushes work through.  
He whistles and sings all morning long,  
Killing the tune of an old time song.

The rest of the bunch are happy and glad,  
when the ghost comes around, so more things can be had.  
We all have our faults, that we cannot deny,  
But we'll strive for good Architecture I'm sure  
Till we—cease to exist.

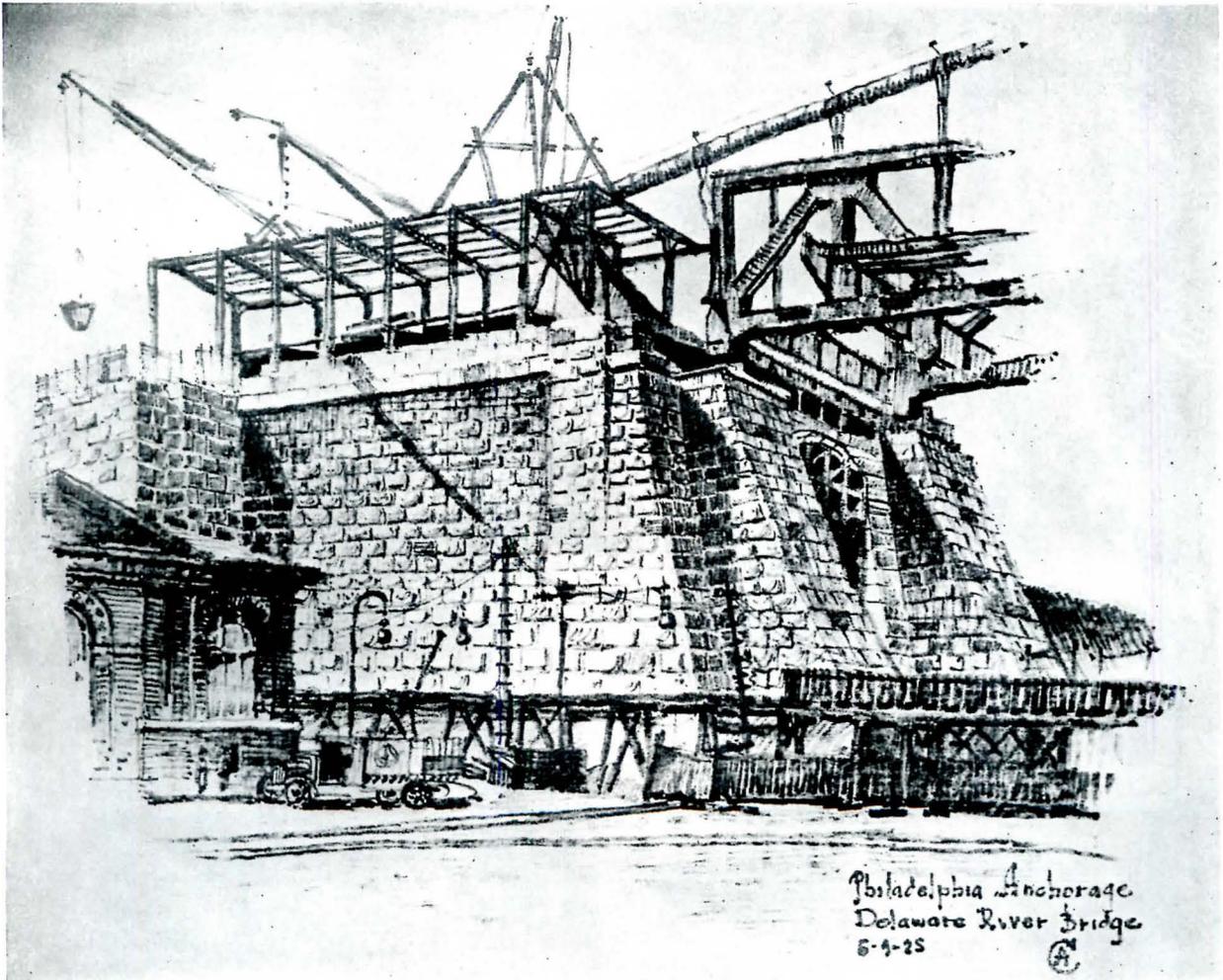
*Jiggs*

POETRY is scarce this month and not much to brag about at that. Charles H. Jagemann gets the prize in this class and it certainly was a cinch for him as he had no competition:

This is the office where plans are made,  
With few good men, who are poorly paid.  
Jobs of all kinds are tackled and solved,  
No matter how complicated or how involved.

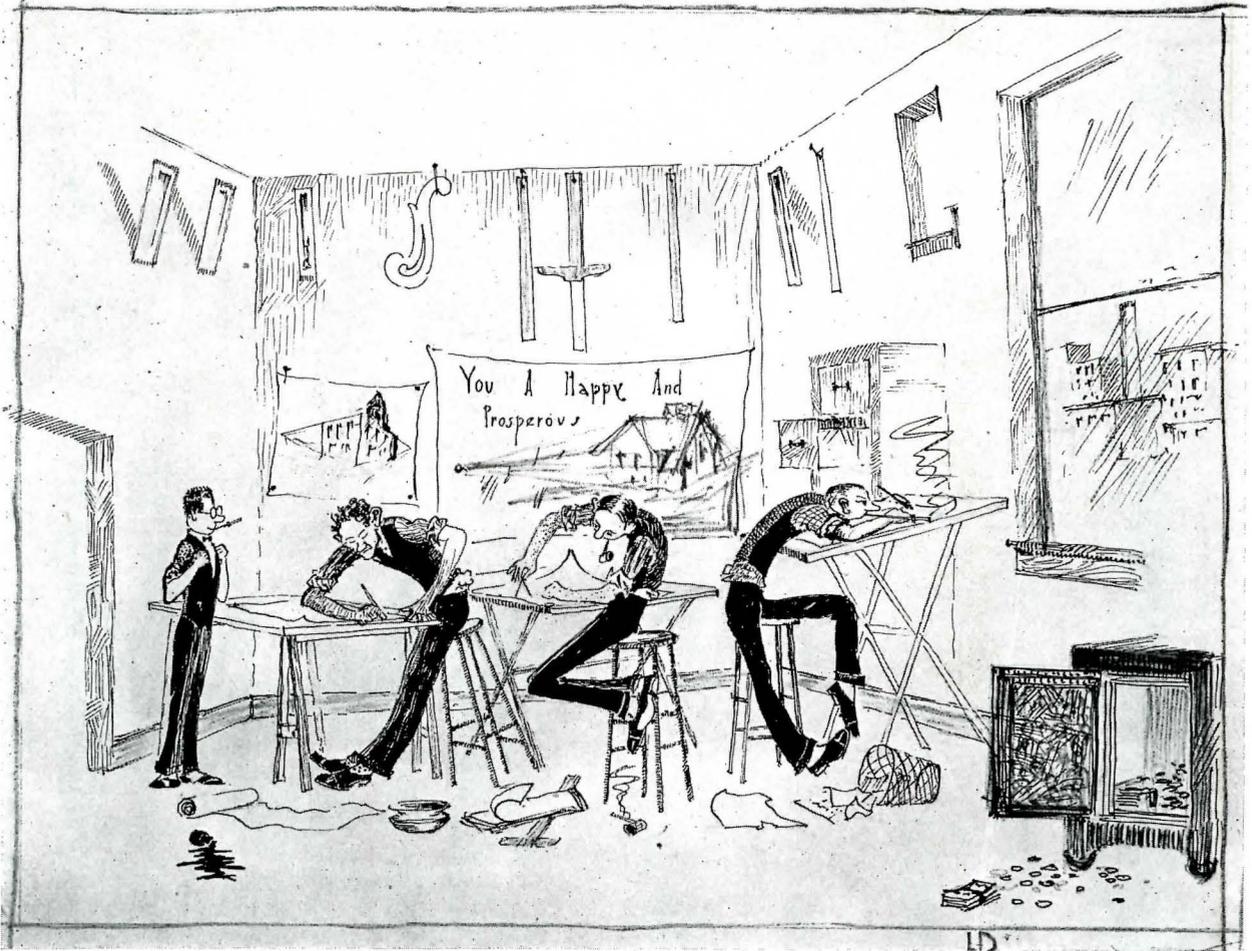
WE THOUGHT of entering a poem ourselves but didn't. Guess all the poets must have gone to Florida and they must all be so busy down there building ten and fifteen million dollar buildings that they just haven't had any time to write poems.

H. C. REIFF, St. Louis, Mo., is awarded the prize in the Cartoon class and the prize for Class 4 goes to Helmer N. Anderson.



SKETCH BY ARMAND CARROLL  
(PRIZE—Class One—November Competition)

PENCIL POINTS

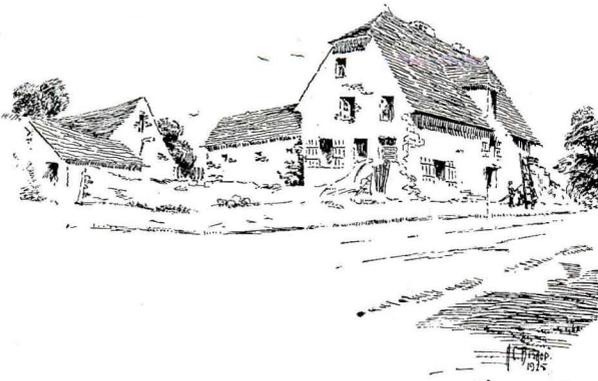


CARTOON BY H. C. REIFF, ST. LOUIS, MO.  
(PRIZE—Class Three—November Competition)

Remember! Full particulars of our monthly competitions may be found under this heading in the August and September issues. To those interested who have not access to copies of these numbers, information will be sent on request.

Part II of Knobloch's "Good Practice in Construction", containing 52 plates, duplicating none of those in Part I, is now on the press. Price \$4.00.—Adv.

DO YOU like the plates from Prentice's "Renaissance Architecture and Ornament in Spain," as reproduced in this issue? If so, we shall be pleased to publish more. If you will tell us what you want, we are right here to scramble around and get it for you.



PEN AND INK SKETCH BY HAROLD C. BISHOP

ABOUT the sketch below Mr. Peek has written us: "Apropos of small sketch of myself plus two 'black body-servants' under umbrella would say that laborers receive as high as 35 and 40 cents a day in Luxor, less my seeming luxury be misunderstood!"



SKETCH OF G. M. PEEK AT WORK IN EGYPT.

PENCIL POINTS



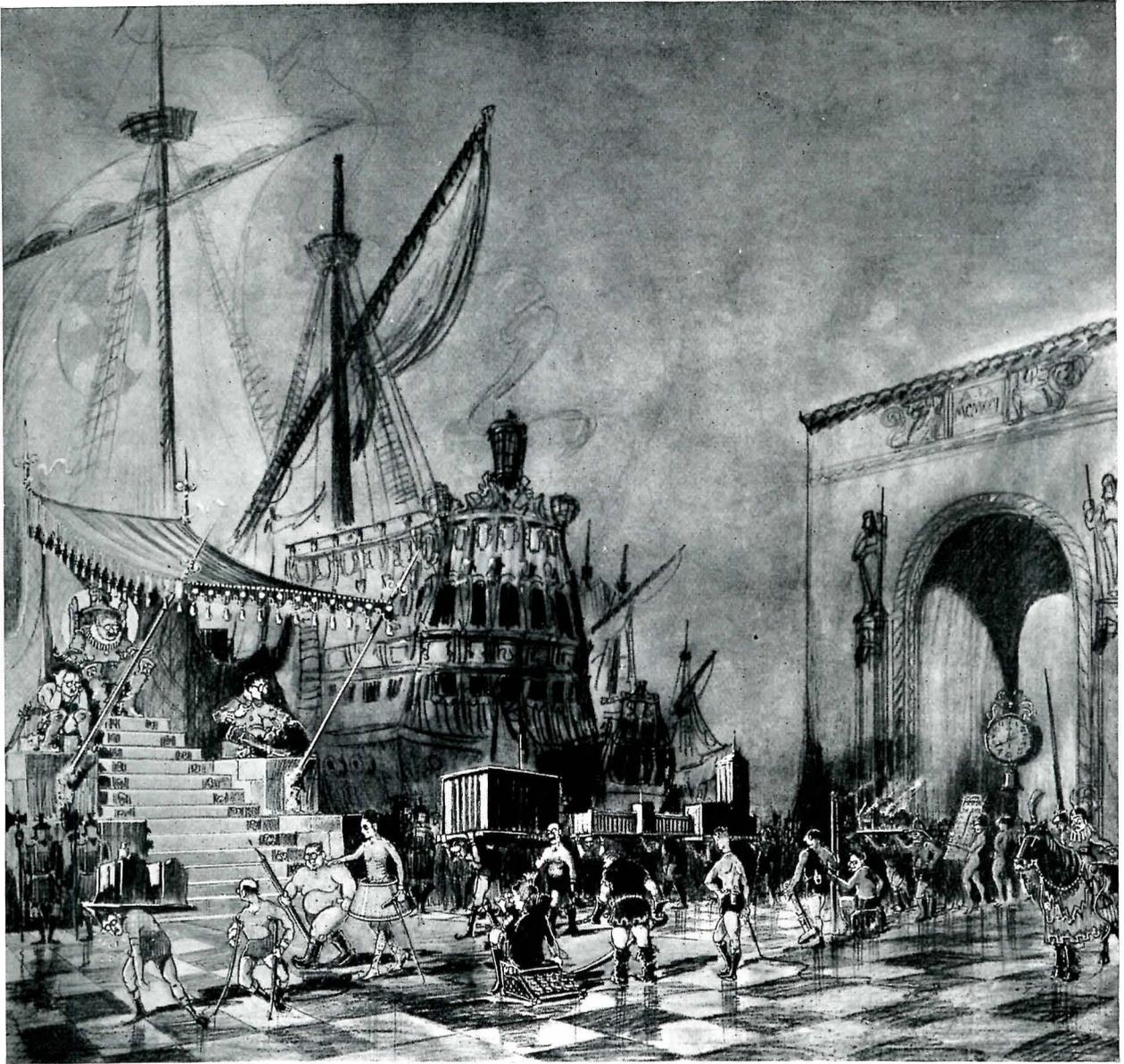
SKETCH BY HENRY R. DIAMOND



BOOKPLATE BY HELMER N. ANDERSON  
(PRIZE—Class Four—November Competition)



PENCIL AND WATER COLOR SKETCH BY HAROLD C. BISHOP, REGINA, SASKATCHEWAN



CARTOON DRAWN BY ROBERT W. HUBEL AND RUSSELL E. YATES

*(This drawing represents the return of Mr. Albert Kahn from a six weeks' tour of Europe. The slaves are shown parading before "the boss" and his two brothers, Louis and Moritz. The various department heads are facing the reviewing stand hoping that the work carried on during Mr. Kahn's absence meets with his approval.)*

ROUND THE DRAFTING TABLE

**THE CRAB**—Head draftsman and realizes it. Has no use for any graduates of architectural colleges—been in the game 35 years. Wants to know who's been using his pet ruling pen—whadd'ye think pen wipers are for anyway—keep your elbows off his table and for gosh sake can that whistle.

**PERCY**—You just can't help calling him Percy—for that's his name. The original story book architect, horn rimmers, straight stemmed pipe, and collar open at the neck. And playful! Just listen to Miss Krutz, the steno, scream when he tears tracing paper! Rips it a bit at the time, long and painful, you know. My, what a cut up.

**THE BOSS**—The guy you can never find when you are stumped on his notes about that Bixby job; but blot that perspective you've been on for three days and he's there every time. You'd be surprised how wrapped up in your career he is, and how fatherly he can talk—when you mention that little raise. But, all in all, he has one excellent attribute, a John Hancock on the weekly check.

**THE PEST**—Writes specifications, curses the steno and in his spare time offers—Helpful Hints to Draftsmen! Your treatment's too stiff, or the building is out of line. And what is that, a vine or a fire escape? Oh, for a dark night and a piece of lead pipe!

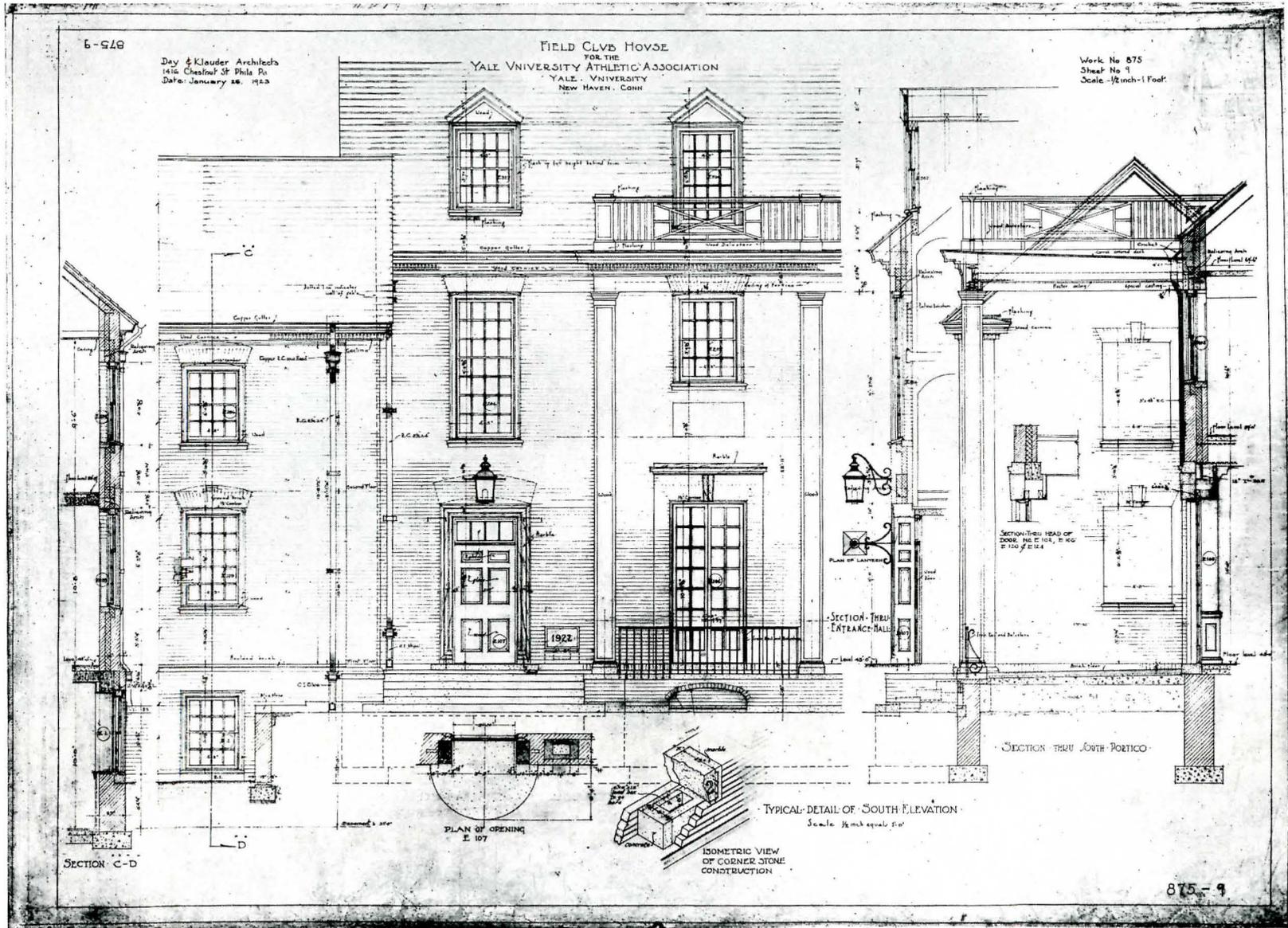
*J. Sutton Steffan,  
Brookhaven, Miss.*







DETAILS OF CONSTRUCTION



FIELD CLUB HOUSE FOR THE YALE UNIVERSITY ATHLETIC ASSOCIATION, NEW HAVEN  
*Day & Klauder, Architects.*

# THE SPECIFICATION DESK

A Department for the Specification Writer

## SPECIFICATIONS

By W. W. BEACH

### ROOFING AND SHEET METAL WORK, PART XIV

PART XIII in the November issue of PENCIL POINTS contained Division G, Structural Steel, and Division H, Miscellaneous Metal Work, of the General Contract specifications for a Consolidated District School building. The next in regular order are Divisions I, Roofing, and J, Sheet Metal Work.

These two divisions are frequently combined or, when separated, as in the present instance, are susceptible of various "permutations and combinations," dependent upon individual office practice and the customs and preferences of local contractors.

For instance, if the building is to have more than one kind of roofing, such as pitch-and-gravel for flat surfaces and tile or slate for steep inclines, with sheet metal flashing for all or a portion of same, it would be desirable to have a single guaranty cover all roofing and flashing. If this work is made an independent contract it should, for the sake of such guaranty, be made a single division. But, if one is dealing only with a general contractor who provides all guaranties, such contractor can sublet the roofing to more than one concern without worrying the architect.

In cities where there are sheet metal concerns which do no pitch-and-gravel or other flat roofing, or roofing contractors who confine themselves strictly to that branch, the separation of the two divisions is desirable.

There then arises the question as to how comprehensive to make each of the two. We will assume it to be advisable to use a pitch-and-gravel (or slag) roof with self-flashing, carrying a ten-year guaranty. No slate or tile is required for this particular job. (Specifications for these two materials are gotten out by the slate producers' association and by the manufacturers of roofing tile, available upon application.)

Whether or not the duct work is to be included with other sheet metal is also to be determined. There can be no doubt but that is the proper place for it but architects who have formed the habit of employing outside engineers to design their heating and ventilating systems find them most tenacious of the privilege of including the duct work with same, either as a direct part of the steam work or of a separate ventilating contract. The effect of this is to limit competition to large steam contractors, who maintain their own sheet metal departments, or to force their competitors to include the work and sublet it to a sheet metal concern. In any event, it is liable to cause friction by having two sheet metal contractors on the job.

An architect who has his mechanical engineering done in his own office finds the work costing less if the ducts go with the remainder of the work of that trade. The contention that it is necessary to have a guaranty from a ventilating concern that the ducts will do the work expected of them carries little weight inasmuch as, once properly designed, they are very easily supervised during installation and need no guaranty. We will proceed on that assumption.

#### DIVISION I. ROOFING

*Note.* (Introductory for all Divisions) The Contract and General Conditions of these Specifications, including the Supplementary General Conditions, govern all parts of the work and are parts of and apply in full force to these Specifications for Roofing. The Contractor shall refer thereto as forming integral parts of his Contract.

#### ARTICLE 1. *Scope of work.*

(A) THE ITEMS under this Division include.

- (1) ALL ROOF COVERING in place.
- (2) ALL FLASHING in connection with roofing.
- (3) SUCH OTHER WORK as is herein set forth.

#### ARTICLE 2. *Materials.*

(It will be noted that, in other Divisions, Art. 2 comprehends a "General Description" of the work embraced in the Division. This is unnecessary for Roofing, it being practically a single subject.)

(A) IN GENERAL. All materials for roofing work shall be best quality obtainable for the various requirements, delivered at building in unbroken packages bearing Maker's labels, which shall be delivered to the Superintendent. List of acceptable Makers may be seen at the Architect's office.

(B) FELT shall be tar-saturated, weighing not less than 14 lbs. per 100 sq. ft.

(C) TAR PITCH shall be best grade, straight-run, American coal-tar pitch, having melting-point at about 130° F.

(D) SLAG OR GRAVEL shall be dry, free from dust or dirt, and shall range in size from  $\frac{1}{4}$ " to  $\frac{5}{8}$ ". In cold weather it shall be heated immediately before being used.

#### ARTICLE 3. *Workmanship.*

(A) PREPARATION. The roofing surface shall be swept clean and carefully inspected and the attention of the Superintendent called to any inequalities, cracks or holes that need remedy, as the Contractor will be held strictly responsible for covering any and all roofing surfaces, in accordance with his guaranty. No roofing may be laid without due notice to the Superintendent.

(B) FIRST COAT shall be a uniform coat of the pitch, heated to proper consistency and evenly applied after surfaces have been approved.

(C) LAYING FELT. Over the foregoing pitch there shall be laid 4 plies of tarred felt, lapping each sheet  $24\frac{1}{2}$ " over the one preceding and mopping back with pitch the full width under each lap, so that, in no place, shall felt touch felt. All felt shall be laid free from wrinkles and buckles.

(D) TOP-COATING. Over the entire surface of roof, covered as above, shall be poured from a dipper a uniform coating of pitch into which, while hot, the slag or gravel shall be embedded.

(E) FLASHING shall be constructed, at all intersections between roofs and vertical surfaces, by mopping the side-walls with pitch for entire space between roof and top of flashing and extending 2 plies of roofing felt up against same to a uniform line 8" above roof at high points and 12" above at low points. Flashing shall be mopped between coats and upper edges secured with wood lath rigidly nailed. Exposed surfaces shall be thoroly mopped with hot pitch. Similar flashing, without lath, shall be provided under all metal cap-flashings, such as around skylights and curbs.

(F) WEIGHT of pitch used shall not be less than 200 lbs. net per 100 sq. ft. of completed roof. Gravel shall weigh not less than 400 lbs. per 100 sq. ft. and slag not less than 300 lbs. per 100 sq. ft.

(G) PATCHING, repairs, changes or other work, after roofing has been completed, shall be done only in the presence of the Superintendent and shall be equal in every particular to the approved work adjoining.

(H) ROOF CONNECTIONS shall be of copper of proper size and approved design, suited to this class of roof. One shall be placed at top of each down spout, ready for connection by Plumber. They shall be set on roof slab (without

# PENCIL POINTS

## WORKMANSHIP

sump) and extend thru same and shall be built into roof covering and flashed in such manner as to be water-tight and to properly serve the intended purpose. Drainage from same shall be properly cared for until the Plumber has made his connections. Each outlet shall be supplied with an approved heavy copper bee-hive or basket strainer.

### ARTICLE 4. *Inspection and Guaranty.*

(A) FINAL INSPECTION. Just before completion of the contract, the Contractor shall make a careful examination of all parts of the roofing and flashing, make all necessary repairs, in accordance with Par. G in preceding Article, and place all portions of roofing and flashing in perfect condition, ready to submit for acceptance.

(B) GUARANTY. The Contractor, in undertaking this work, hereby guarantees all roofing and flashing applied under this contract to be and remain water and weather-tight for a period of ten years after the final acceptance of the work and agrees to repair and make good, in whole or in part, as may be required, promptly on demand, any and all imperfections which, in the judgment of the Architect, may be due to defective material, workmanship or method of installation, which may appear during the term of the guaranty, and including any other work disturbed in connection therewith. Connections to outlets are included in the guaranty.

## DIVISION J. SHEET METAL WORK

*Note.* (Same as introductory to Division I).

### ARTICLE 1. *Scope of Work.*

(A) THE ITEMS under this Division include:

- (1) ALL SHEET METAL WORK in connection with Roofing.
- (2) ALL SKYLIGHTS AND VENTILATORS.
- (3) LOUVRES FOR FRESH AIR INTAKES.
- (4) ALL SHEET METAL DUCTS AND REGISTER FACES.
- (5) SUCH OTHER WORK AS IS HEREIN SET FORTH.

### ARTICLE 2. *General Description.*

(A) SKYLIGHTS shall be provided, with puttyless copper bars and wire glass.

(B) VENTILATORS shall be provided on skylights and to vent roof spaces and toilet room ducts.

(C) COPPER LOUVRES shall be provided to protect fresh air intake.

(D) ROOF SCUTTLE AND CURB shall be covered with copper.

(E) COPPER BOX shall be provided, with cover, for hole in corner-stone.

(F) DUCTS shall be installed in ceilings, partitions, chases and attic as shown, with extensions to or from register faces in each story. Fans will be provided complete, with housing, by Heating Contractor but this Contractor shall provide duct work complete, including indirect radiator housing, extensions from air intake to fan inlets, from fan outlets to all fresh-air ducts and all fresh-air vent and re-circulating ducts of every description.

(G) REGISTER FACES shall be provided for all fresh air and vent openings, including inlets and outlets to radiator recesses.

(H) GALV. IRON LINING, with asbestos backing, shall be provided in radiator recesses.

(I) BLACK IRON HOOD shall be provided over kitchen range.

### ARTICLE 3. *Materials.*

(A) GALV. IRON shall be an approved make and brand of copper-bearing sheet iron of the gages specified for the various locations but, in no case, to be less than No. 26 gage. All bolts, screws, nails and rivets in galv. iron work shall be galvanized. All galvanizing shall completely cover all surfaces with a heavy coat, without breaks.

(B) COPPER shall be cold-rolled, of the weights specified for the various locations but, in no case, to be less than 12 oz. per sq. ft. All nails and rivets in copper work shall be copper.

(C) SOLDER shall be best grade "half-and-half" (approximately  $\frac{1}{2}$  lead to  $\frac{1}{2}$  tin), applied with approved rosin or cut-acid flux, as may be required.

(D) BLACK IRON for kitchen hood shall be as above specified for galv. iron, without the galvanizing.

(E) WIRE-GLASS for skylights shall be  $\frac{1}{4}$ " thick with rough, ribbed or hammered surfaces.

(F) CANVAS for connections from fan outlets to ducts shall be best quality 12 oz. cotton ducking, soaked in linseed oil to be air-tight.

### ARTICLE 4. *Skylights.*

(A) CONSTRUCTION. Skylights shall be of approved "puttyless" design, built of galv. iron framing, with all members designed proportionate to size and span and all parts exposed to the weather covered with copper in approved manner. Minor division bars may be made of bent copper of approved cross-section, without iron core. Plates shall be rigidly anchored to curbs and all bottom members properly flashed. All skylight-bars, cross-bars and bottom receiving-bars shall be provided with proper gutters designed to carry condensation-water to roof outside. All parts shall be absolutely water-tight.

(B) SHOP DRAWINGS and Maker's specifications of skylight construction shall be submitted for approval as provided in the General Conditions.

(C) GLAZING. All skylights shall be glazed with wire-glass of full sizes to fit between bars and set in accordance with approved details. Spring-members shall be adjustable, with screws or bolts, to tightly clamp the glass. All glass shall be satisfactorily cleaned before work is accepted.

(*Note.* There is really little need of skylights in ordinary school house design and they should be avoided wherever possible, being one of the most fruitful sources of annoyance (next to outside gutters and down-spouts) of any feature of building construction which may later harass the Buildings and Grounds Committee.)

### ARTICLE 5. *Ventilators.*

(A) TYPE of ventilator shall be in accordance with sample in Architect's office, or similar approved design, and shall be submitted and passed upon before delivery.

(B) SIZES shall be as called for and shall be taken to be the least inside diameter in each instance.

(C) CONSTRUCTION shall be as specified and in accordance with the Maker's standard details, with all exterior parts of 12 oz. copper, except the roof or top portion, which shall be 16 oz. Where so indicated, the tops shall be flat and glazed with single sheets of  $\frac{1}{4}$ " wire-glass. All ventilators shall be well secured in place on approved box-bases, flashed and counter-flashed in best manner. Those over toilet room vent-ducts shall be provided with balanced dampers, complete, with cords to operate from location directed in each case. Each ventilator shall be equipped with bird-screens of No. 14 copper wire in  $\frac{3}{4}$ " mesh, rigidly attached. Each of two larger ventilators shall be fitted with center steel finial, 4'0" high, with eye at top and sufficiently strong to serve as masts for attachment of radio aerials.

### ARTICLE 6. *Ducts and Radiator Housing.*

(A) INDIRECT RADIATOR HOUSING. The 4 sets of indirect radiation in basement shall be housed in No. 18 gage galv. iron on framing of  $1\frac{1}{4}$ " steel angles, all put together and riveted in the most rigid manner. Housing shall include bottom plates.

(B) FRESH AIR INTAKE shall be built as detailed, with rigid louvres and copper wire bird-screen, as specified for ventilators. Jambs, sills and mullions shall be reinforced with yellow pine, included under "Carpentry." Ducts of No. 18 gage galv. iron shall extend from intake frame to the two first sets of indirect radiation and be riveted to collars of same. Each duct shall be fitted with full-sized damper as detailed, with approved quadrant for holding rigid at any angle. Openings to radiators from each fresh-air duct shall have rim fitted with pins or detachable collar to provide for the ready removing and placing of muslin air-strainer. In-take ducts shall extend from radiator housings to fans and from fans to inner radiator sets and shall be properly connected to collar in each instance. Doors of same material as ducts, 20" x 24", shall be provided wherever necessary to render all sides of radiation easily accessible. These doors shall be hung on  $2\frac{1}{2}$ " x  $2\frac{1}{2}$ " galv. or bronze butts and be secured with hasps and staples in such manner as to be satisfactorily air-tight. All connections from ducts to fans shall be effected by means of a loose collar or bellows of cotton ducking, with edges rigidly secured to collars on ducts and fans with riveted or bolted steel bands. These bellows shall have sufficient slack to prevent transmission of vibration without impeding passage of air.

(C) DUCT SYSTEMS. Ducts shall be extended as shown from each of the two fan systems to the risers and thence, with necessary bends and runs, to fresh-air register-faces and grills. Vent-ducts shall extend from vent-register-faces in the various locations shown, with necessary bends, risers and horizontal runs, either to emit into roof space at level

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18' above third story ceiling or, in case of all toilet room vents, to extend to and connect with bases of roof ventilators. Ducts shall be of sizes shown or, where limiting conditions prevent, may be changed by special permission but without reduction of cross-sectional area. All vertical ducts and small horizontal ducts shall be of No. 26 gage metal, sides of horizontal ducts wider than 16" of No. 24 gage, and tops and bottoms wider than 16" up to 24" of No. 24 gage. If wider than 24", tops and bottoms shall be of No. 22 gage, except that all parts of ducts from inner radiator housing to first branches shall be of No. 18 gage. All ducts shall be rigidly supported on or from structural members of building and shall be put together in best manner with double-lock seams, with all cross-joints lapped in direction of flow of air and soldered. All changes of direction shall be effected by curves of largest possible radius, none less than 4" on short side. Each duct shall be enlarged at end to form box to fit register-face and, if at right angle, shall have curved deflector to meet same. All connections to register-faces shall be neatly flanged all round and shall be provided with approved method for attachment of register-faces. All ducts larger than 60" perimeter shall have reinforcement of light steel angles all round, about 6'0" o. c. For large ducts at radiation housing, these angles shall be 1 1/4" x 1 1/4", about 4'0" o. c. All angles shall be attached by means of galv. rivets, 1/4", 6" o. c., for small angles and 5/8", 5" o. c., for 1 1/4" angles. Where two or more ducts adjoin, single air-tight partitions may be used between them. If such ducts are both vent, the partition may be omitted (unless one is a toilet-room duct) but no partitions shown in fresh-air ducts may be omitted. Structural members shall be properly framed around duct openings with due allowance for passage of full-size ducts.

(D) DIRECT RADIATOR ENCLOSURES. Certain radiators in vestibules shall be enclosed as shown, with enclosures lined with No. 26 gage galv. iron, covered on back with heavy asbestos paper wherever wood members are located within 6" of radiator. The iron sheets shall extend from floor to top of radiator in each case and shall curve over tops of same to form deflectors, with flange connections to tops of grills.

(E) REGISTER-FACES. Each fresh-air and vent opening shall have a register-face of the size indicated, neatly finished against wood or plaster and firmly secured in place. Register-faces in plastered walls shall be white-japaned, those in vestibules bronze plated and all others black-japaned. In general, fresh-air register-faces shall have lower edges 7'0" above floor and vent-register-faces 3" above floor, the latter to be readily removable for cleaning ducts and to be neatly cased in connection with base, as called for under "Carpentry." Grills in front of vestibule radiators shall be of special design, as detailed, and shall also be removable to afford access to valves.

(F) SHOP DRAWINGS of all duct and register work shall be submitted for approval, as specified in General Conditions. These drawings shall be in accordance with actual measurements taken at building and shall take note of all interferences and shall represent actual conditions.

### ARTICLE 7. Miscellaneous Items.

(A) SCUTTLE AND CURB shall be covered with copper as specified, with all seams double-locked in best manner and fastened to wood-work by means of nailed cleats or lugs, locked into seams. No nails may be driven thru surface of copper. Scuttle shall fit neatly over curb, not too tight, and the latter shall have flashing extend over or under roofing material, as case may be, to make thoroly water-tight.

(B) SLIDES IN LANTERN-ROOM PARTITION shall be of No. 22 gage galv. iron in frame of same, all as detailed. Slides shall be held in place by sash-cord running over pulleys as shown, with piece of film in cord, placed directly over machine, to act as fusible-link.

(D) COPPER BOX for corner-stone shall be provided and delivered to the Superintendent to receive deposit and then permanently sealed and soldered by the Contractor and made absolutely air-tight and moisture-proof.

(E) HOOD over kitchen range shall be of No. 20 gage black iron, with frame and supports of 1 1/4" steel angles, all as detailed and neatly riveted together.

## HISTORICAL SKETCHES OF AMERICAN BUILDING INDUSTRIES

### Origin and Development of Metal Doors and Trim

*This article, delivered as an address before the Construction Club of New York, by Mr. John A. Westman, is the first of a series of sketches dealing with important branches of the building industries. Other articles dealing with other industries will appear in these columns from time to time.—Editor.*

Doors have become such a common human necessity that they are taken as a matter of course, and the average person pays little or no attention to them—in fact the word DOOR is very similar in most languages and the meaning of it so well understood that a definition is rarely asked, and most people would hesitate before being able to offer a proper description. Yet, it is and has always been a protective contrivance; the qualities of which mean much to human comfort, safety and even life.

Ever since shelter became a necessity as a defense against the elements and other untamed foes, some sort of a door has been indispensable. Perhaps they began with just a narrow opening to a larger protected space of some sort, at which point alertness for defense could be concentrated. It is easy at any rate to imagine how this doorway was first barricaded with stones or branches; gradually improved by hides and various contrivances until some crude pivoting device developed, whereby a large block of stone, or perhaps a section of a tree could be more or less readily swung into place. Much human thought has been centered on doors and doorways since that time to bring them up to present day standards.

It may be in order to introduce our little talk on metal doors and trim, their origin and development by some reference to the early types of doors in general.

Actual records of the first use of doors appear to be lost in the mists of antiquity. However, history makes mention of the use of all metal doors as early as c-1897 B. C. when Kung Kin of China had iron (probably wrought) doors made for his palace entrances. These doors were ornamented with wrought bronze and may have been the prototype of hollow metal doors.

Dr. Geo. C. Gerland and Daniel G. Brinton in their history of "Races and Peoples" mention stone doors c-3000 B. C. used by the Incas of Peru on forts, and wood doors on palaces and temples; doors being used primarily for defense. The interior doorways had curtains and doors operated vertically.

In c-2000 B. C. the Assyrians used wood and metal doors in exterior walls. These doors were hinged. In c-2500 B. C. Pueblo Indians on communal houses or joint tenements used doors of wood and hides.

The wall of China c-1500 B. C. had hinged gates of wood and metal.

The Encyclopedia Americana, 1903, speaking of Egypt B. C.—"The doors themselves in private dwellings of antiquity were usually of wood, and in structures for religious or public purposes, of metal and occasionally of marble and turned on pivots, not hinges. These pivots were often of stone."

Arthur E. Weigall in "Antiquity of Upper Egypt" writes of Acasia wood doors inlaid with gold, swinging on pivots in the temple of Amenhotep 111, c-1411 B. C.

Prescott in "Conquest of Mexico" states that Pizarro found doors of solid gold in the Inca Palace c-1540 or 1550 B. C. Apparently, price was not, in those times, of paramount consideration, or perhaps then as now abundance of available material governed.

Records show the use of wood doors with bronze strips in Egypt and Chaldaea (Babylonia) in c-3500 B. C. These were pivoted and not hinged.

No early Greek doors appear to have been preserved, and of Roman doors, the only extant examples are the magnificent bronze doors of the Pantheon 124 A. D., somewhat altered in the 16th Century.

The value of bronze metal and the ease with which it could be broken up and cast, or made into coins may have caused the disappearance of some of these ancient bronze doors both in solid or hollow cast form.

Doors discovered in King Tut's tomb by Lord Carnarvan in 1922 were of thin bronze sheets applied to panelled frames of wood. These doors are 3,500 years old and photographs of them may be seen in the Egyptian Depart-

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ment of the Metropolitan Museum of Art in New York City.

Early records show doors of the King Tut type made of single panels of wood. In Egypt where the climate is intensely dry, there would be no fear of their warping, but in other countries, it would be necessary to frame them, which, according to Vitruvius, Roman Architect and Engineer, was done with stiles and rails in the third century.

King Solomon's Temple in 1000 B. C. had doors described as made in timber and of olive wood. Homer dwells upon doors cased in silver or brass.

This early method of using thin sheets of the more precious metals to encase wood panels displays the same thought later carried out in the so-called Kalamein construction, and shows the persistence of practices when once originated.

Of metal doors of early origin, preserved for our time, probably the best known today are the bronze doors of the Baptistery in Florence by Andrea Pisano and by Lorenzo Ghiberti.

Ghiberti received his commission to execute these doors in November 1403. It was not until April 1424 that the doors were completed and set up. Evidently the making of doors was a labor of love and his production schedule therefore was not on the same basis as business is performed today.

Iron doors were known about 2000 B. C., although the iron age is generally quoted as occurring about 1100 B. C.

There are in existence many notable examples of cast bronze doors of a later period, such as Byzantine 330 A. D. doors of the Hagia Sophia at Constantinople.

As late as March 10, 1925, a cable was received in New York from Geo. A. Reisner, Director of the Harvard University, Boston Museum of Fine Arts Egyptian Expedition, definitely establishing the discovery of a tomb near the Giza Pyramids, as being some 1700 years older than the period of Tutankhamen. The burial chamber of this tomb was closed by a door, which is not described but indicates the use of doors in that period.

Today we can hardly think of doors without also giving a thought to hinges and locks, without which doors would be more or less useless. The exact period when the hinge was substituted for the pivot in the use of doors is not known, but evidently the change brought about another method of strengthening and decorating doors with iron bands. The strap hinges and escutcheons around the lock mechanism form elaborate ornamentations, but this is a subject by itself and we are obliged to leave it in more competent hands for discussion.

With various materials at hand we find the early people selecting their materials for doors with an eye to their suitability for the purpose in mind. Their first idea seems to have been adequate protection. For this they found iron and other metals admirable, and as their skill developed they used these metals for ornamental purposes as well. Today we find combined in our metal doors utility and protection together with great attractiveness.

The industrial or production era ushered in by the application of steam and other mechanical power brought a new realization of the enormity of waste by fire losses, and the importance of the proper protection of a doorway attracted some attention. The single plate iron door remained, however, the only available fire stop in door openings until the modern introduction of wood doors covered with metal. At first an alloy of zinc, lead and tin called Calamin was used, to form a protective coating on the light iron sheets applied to the wood. This gave rise to the German designation "Kalamein" for this type of door. This name has come to be used for wood construction covered with light metal of various kinds; as we sometimes speak of bronze Kalamein, which is of course a misnomer.

Tin clad fire doors apparently were introduced by Mr. Edward Atkinson of New England, a cotton mill owner, who did much in fire prevention, starting about the year 1876. He was assisted by Mr. Byron Weston, who invented the sliding devices for doors about 1877.

In principle the tin clad door is a derivative of the tin roof applied to wood roof boards. This type of door has largely taken the place of the old heavy iron door which was commonly used in fire walls. Owing to the fact that iron, in actual fire, becomes red hot and

transmits great heat, at the same time bulging and warping, thereby permitting entrance of sparks, it was gradually superseded by the tin clad door.

Mr. Atkinson invented the automatic release. The fusible alloys used by Mr. Atkinson in his fusible links were in turn invented by Sir Isaac Newton, the great scientist.

From about the year 1880, Campbell and Bantossell, a New York or Brooklyn firm, did much to popularize metal covered wood work. This type of building trim reached its full development in the early part of the 20th Century, when such structures as the Barclay Building at 200 Broadway and the Metropolitan Building at 23rd Street were equipped with it.

The development of the steel frame building again called attention to the necessity of making these tall buildings more fire safe than had previously seemed necessary for the low type of building, and the movement for fire safety and fire protection assumed world wide interest; an organization in England called the British Fire Prevention Committee was founded in 1897, functioning on similar lines to the National Board of Fire Underwriters in this country. This Committee called a nationwide congress which assembled in 1903. This congress recognized that fire protection comprises both fire prevention and fire fighting, and the invitations sent out extended to architects, engineers, surveyors, municipal officials, legislators and insurance officials. They met in council with professional and volunteer brigade chiefs, and salvage officials. The work accomplished in these four days at this international congress was truly amazing. If this subject aroused such enormous interest in Europe with a comparatively low fire loss, what concern should it not be on this side of the Atlantic with our enormous yearly fire waste and our much taller buildings?

In the late 80's Charles P. Dahlstrom came from Stockholm to this country, and the development of the metal door as we know it today really starts with this man. He was a mechanical genius and after being employed in various capacities he became connected with the Fenton Metallic Company of Jamestown, New York, which later became the Art Metal Construction Company. Here he found the first attempt being made on any considerable scale to replace wood furniture with that of metal. Filing cases and desks were fashioned of sheet steel, and in order to make them sell, were painted to imitate wood grain. Banking institutions were the principal customers, and with the introduction of metal filing cases, complete banking screens and counter equipment were added to this line. These screens called for doors which also had to be made of metal and in the construction of these doors the old joinery methods of wood door construction were largely followed. The doors were heavy and quite expensive.

The growth of fireproof building construction and the consequent demand for metal doors gave Mr. Dahlstrom a clear idea that here was the field for his ingenuity, experience and energy. During several years of experimental work he developed a system of metal door construction which would employ lighter gauge metal, be stronger and more artistic in appearance, and which could be produced for a fraction of the cost of the more cumbersome construction then being used. He patented his invention and submitted it to his employers who did not feel justified in taking it up, ingenious as they deemed it to be, because they could see no way of actually carrying out the ideas in practice. In February, 1904, Mr. Dahlstrom formed a small company to carry on the work as a separate enterprise.

It must be remembered that in those days acetylene and electric welding were unknown; rivet fastenings being employed on all joints. Examples of this early work are to be found in the United States Express Building, New York, and also in the Singer Tower in the same city.

The construction having been successfully worked out, crude fire tests were made; and no weaknesses developing specimens were sent to the laboratories of the National Board of Fire Underwriters in Chicago. After the test, which was entirely satisfactory, the product took its place as an approved fire door.

Along with the door, the necessary accessories such as jambs, bucks, casings, transoms, sidelights, etc., had to be developed. In this work a new method for drawing or

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rolling moldings from strip steel was utilized and dies designed for the various shapes required. As a means of sustaining the company during these experimental days, the molding branch of the business was developed commercially, the American Car and Foundry Company using a number of shapes in the construction of steel cars used on the London subways. This later led to the design of the pullman steel sleeping car and the steel equipped dining car.

Aside from the mechanical difficulties which had to be smoothed out, a proper finish had to be devised. In the early days the public demanded doors in imitation of wood. Fortunately now, however, the material is being treated more frankly by most users as a metal product, without any attempt at camouflage.

About 1908 the acetylene welding processes were perfected, making it possible to produce hollow metal doors without infringing the Dahlstrom patent. Mr. J. W. Rapp engaged in the business, producing a light metal door in considerable quantities. One of the first buildings to be equipped with this material was the Fifth Avenue Building on the site of the old Fifth Avenue Hotel. Another pioneer manufacturer was Mr. A. J. Ellis, and others have become engaged in the work in various parts of the country.

I feel that much is yet to be accomplished in perfecting and extending the use of fireproof construction through a better understanding on the part of owners and the general public, of the many advantages involved. In many instances fire-proof construction is employed only because required by law, and not because of an appreciation of additional values and safety entirely apart from legal considerations.

Hollow metal door construction is now being employed in very large units in the equipment of huge power stations and other similar structures. The largest hollow metal unit in existence in this country of which I have knowledge is a pair of hollow bronze doors 28 feet high, 13 feet wide and ten inches thick, installed in St. Joseph's Cathedral, Buffalo, N. Y. after designs by Aristedes Leonori of Milan, Italy.

Those of us intimately connected with the industry feel that while much has been done in developing and perfecting methods, much more can and will be done in future. We bespeak the active cooperation of members of the Construction Club and the architectural profession generally, and feel justified in assuring you that the research departments and technical staff of all the manufacturers are ready to place their complete facilities at your disposal.

### MEETING OF THE PRODUCERS' RESEARCH COUNCIL

**T**HE Semi-Annual Meeting of The Producers' Research Council, which was held in Chicago on November 10th and 11th, was a most enthusiastic and successful affair. Members of the Chicago Chapter, A.I.A., and the Illinois Society of Architects, were all invited to attend the sessions, and a number of them were present.

The first session on Tuesday morning was taken up with Roll Call, Reading of Minutes, and Address of the Chairman of the Council, Mr. O. C. Harn; and Welcoming Speeches by Mr. H. B. Wheelock, President of the Chicago Chapter, A.I.A., and Mr. Byron H. Jillson, Acting President, Illinois Society of Architects.

In Mr. Harn's speech he mentioned, among other things, two objectives of the Council, the first being that of future activity in bringing together Architects and Producers, this object having many developments, some of which are now seen clearly, but others will develop as the movement goes along; a number will in fact be slow in developing. The other point is that of immediate use of the individual service which the Council can render its members through the Scientific Research Department of the Institute, and in turn render service to the architects through the same agency, this being a matter of today and not the future.

Mr. Wheelock welcomed the members of the Council very heartily, if for no other reason than that they were affiliated with the Institute, and the Chicago architects have great pride in their organization. He considered the Council not as individuals but as a group working for the architects and searching down deep to help get rid in the future of some of the troubles of today. He felt that the organization was doing great things of mutual benefit, and brought out the

fact that the Council was also working along the lines of standardization, which is one of the objectives of the Institute.

Mr. Jillson, who is acting in place of Mr. Fox, welcomed the Council in all sincerity and wished for the success of the efforts being made for cooperation with the Institute.

Mr. Harn, Chairman of the Council, mentioned a number of instances in which direct benefit to the architects had been obtained through contact with the Scientific Research Department, in that advertising matter had been entirely revised along suggestions made by them, so as to make the matter of much more benefit to the Institute members.

Reports were rendered by the Membership Committee, the Bulletin Committee, and the Educational Committee, the latter dealing particularly with the subject of films, lectures and lantern slides of an industrial nature, for which a plan of cooperation is being worked out, whereby they may be available for Chapter meetings and Collegiate Schools of Architecture.

Plans were discussed for making even a closer contact between the Institute and the Council in the future, for furthering the objectives of each organization.

At the afternoon session Mr. N. Max Dunning, Chairman of the Structural Service Committee, A.I.A., and Technical Director of the Scientific Research Department, A.I.A., gave a most enjoyable and instructive talk on the movement as he has seen it in the last few years and the future activities which lay before it. He brought out the thought that the trend of the times makes it necessary for an architect to become more of a business man, and the business man realizes more and more the need of cooperation with a man with a contemplative mind and a detached point of view. He felt that the possibilities of close cooperation between the Institute and the Council were very great indeed and were hardly fully realized, even by those who have been most active in cooperation. He felt that a complete understanding of each others problems would be of the greatest benefit to the building industry, and mentioned one of the problems of keeping down the increasing cost of living by the best possible construction and workmanship.

Mr. Coulton, of The Tyler Company, mentioned the fact that all those interested in the movement should get into it at once and not stand aside and wait until the program is completed.

After a most enjoyable dinner at the Club House, the members of the Council were invited to attend a Joint Meeting of the Chicago Chapter for that evening. Mr. Wheelock, after the regular business of the Chapter had been disposed of, turned the meeting over to Mr. Dunning, who explained to the architects who were not familiar with the movement just what it was all about, outlining the work and mentioning the need of the younger architects particularly, for some responsible source from which they could obtain information which they often lacked, and the Producers' Council, with the Scientific Research Department of the Institute, was supplying this need.

Mr. Jillson spoke again of his interest in the work and mentioned several possibilities of service. Mr. Dunning brought out the fact that the Council movement, which was affiliated with the Institute, was an actual and real affiliation, of which the Institute should get as much benefit as possible.

Mr. Harn gave further information in regard to the Council's work, and then those present listened to a scholarly address by Dr. G. C. Mars, of the American Face Brick Association, on Humanity, Ethics, and Comparison between Artistic and Commercial Temperaments.

Mr. George C. Nimmons, Chairman of the Educational Committee, A.I.A., mentioned the tentative program of films, etc., which had been submitted to them for their consideration, and action would be taken very shortly. Mr. LeRoy E. Kern, Technical Secretary of the Scientific Research Department, explained fully to the architects the work which is being done by that Department, not only for the Institute but for the Council.

Mr. Irving K. Pond gave a very happy speech and expressed himself as much pleased with the idealistic atmosphere of the evening.

The second day session was opened with a discussion on Promoting the Use of Standard Specifications, by Mr. Kern, and also a discussion by Mr. Samuel Warren, of the Atlas Portland Cement Company, on the responsibility of the architect in seeing that Specifications are followed.

The general discussions of this day, which were participated in by all members and the architects present, were most instructive.

# 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.*

**Lighting Data.**—Series of 31 uniform bulletins covering every phase of modern lighting and of great value to the architects, draftsmen and specification writers. This list of bulletins in a vertical cloth covered container may be secured on application to the Edison Lamp Works of the General Electric Co., Harrison, N. J.

**Interior and Exterior Decorative Ornament, Catalog No. 8.**—Handsomely illustrated catalog of composition and plaster relief ornamentation. Contains hundreds of illustrations of ornaments in Fibrous Plaster, Exterior Composition, Interior Composition, Portland Cement, Imitation Caen Stone. Price lists, dimensions, fully indexed. Stiff cover, 254 pp. 9 x 12. The Fischer & Jirouch Co., Cleveland, Ohio.

**Ford Hardware.**—Attractive looseleaf portfolio containing illustrations and descriptions of hand wrought hardware. 9 x 12 $\frac{3}{4}$ . Ford Hardware Company, 25 West 45th Street, New York.

**Excelsior Caen Stone Cement.**—Catalog giving information about and describing uses of this material. Specifications, directions for plasterers. 7 $\frac{1}{4}$  x 10. The Cleveland Builders Supply & Brick Co., Leader-News Building, Cleveland, Ohio.

**The Protection of Walls.**—Catalog describing interlocking tile. A. I. A. File No. 3h 1926. Details, sectional drawings, illustrations, detailed data and specifications, table for figuring quantities 16 pp. 8 $\frac{1}{2}$  x 11. Interlocking Tile Corporation, Union Trust Bldg., Cleveland, Ohio.

**Atlantic Terra Cotta.**—Monthly magazine for architects and draftsmen. Vol. 8 No. 1 treats of Studies in Polychromy—The Romanesque with color plate by Leon V. Solon and much other interesting material including text by Mr. Solon. Atlantic Terra Cotta Co., 350 Madison Ave., New York.

**The Rivet-Grip System of Bank Vault Reinforcement.**—Handbook on the design and construction of modern bank vaults. Illustrations, diagrams, tables, layouts, details, installations and specifications.—File No. 18-a 4e24. 34 pp. 8 $\frac{1}{2}$  x 11. The Rivet-Grip Steel Co., Cleveland, Ohio.

**The Book of Masterbuilt Floors.**—Loose leaf portfolio on the subject of floorings for various types of buildings. Standard specifications and much useful data. 70 pp. 8 $\frac{1}{2}$  x 11. A. I. File No. 3b2. Portfolio also includes section on waterproofing, A. I. A. File No. 3b4. The Master Builders' Co., Cleveland, Ohio.

**Van Dorn Jails and Prisons.**—Catalog 5c, contains reliable information about Van Dorn steel cells, locking devices and tool proof material. Many illustrations, floor plans, cross sections, list of installations. 36 pp. 9 x 12. The Van Dorn Iron Works Co., Cleveland, Ohio.

*Published by the same firm, Van Dorn Building Material Products, Catalog No. 94-B contains a wide variety of building specialties, illustrations, price lists, tables of capacities. 16 pp. 6 x 9.*

**Eller's "Perfect-Fit" Steel Ceilings.**—Catalog No. 25 presents latest improvements in artistic decoration in Sheet Metal for ceiling and sidewall purposes. Contains many illustrations of reproductions of period designs, general instructions, rules for estimating, price lists and much useful data. 6 $\frac{1}{2}$  x 9 $\frac{1}{2}$ . 138 pp. The Eller Mfg. Co. Canton, Ohio.

*Published by the same firm, Exterior and Interior Sheet Metal Products. Catalog No. 24 describes pressed standing seam roofing, corrugated roofing and siding Kant-Leak non-syphoning roofing, V crimp roofing, weather brick and pressed brick siding, metal shingles, eaves troughs, conductor pipe, metal cornices, skylights, steel ceilings, etc. profusely illustrated, full information showing application prices, tables of sizes, etc. 192 pp. 6 $\frac{1}{2}$  x 9 $\frac{1}{2}$ .*

**Architects' Handbook on Metal Doors & Trim, Elevator Enclosures, Conduo-Base.**—Handsomely illustrated handbook describing hollow metal doors, frames and trim, Underwriters' labeled doors and frames, elevator enclosures, conduo base, smoke screens and stair enclosures, adjustable metal partitions, telephone and coupon booths, wainscoting, combination and unit door frames, dumbwater openings, cold rolled, drawn or pressed steel and bronze shapes. Also contains standard specifications, cross sections, plans, diagrams, full size sections, color cards of finishes, list of installations, etc. 8 $\frac{1}{2}$  x 11. 108 pp. The United Metal Products Co., Canton, Ohio.

**Drival.**—Booklet describing waterproofing and decorative coatings for cement, stucco, stone and brick walls. Covers the problem of waterproofing and stain prevention, contains illustrations, specifications, also color card showing shades in which Drival may be procured. 20 pp. 5 $\frac{1}{2}$  x 8. The Billings-Chapin Co., Cleveland, Ohio.

**Puritan Drinking Fountains.**—Catalog B-2 illustrates and describes automatically controlled drinking fountains. Contains prices, dimensions, specifications and list of installations. 36 pp. The Halsey W. Taylor Co., Warren, Ohio.

**The Auto's Turn.**—Brochure containing a true story and illustrating and describing The "Universal" Automobile Turntable, typical installations, cross sections and diagrams, also testimonials and list of users. 31 pp. 6 x 9. The Canton Foundry & Machine Co., Canton, Ohio.

**Manual of Revolving Door Construction and Architectural Design with Standard Specifications.**—Contains illustrations, details, cross sections, capacity tests, construction features, special features, floor plans, operating chart, tables of weights, etc. 24 pp. 8 $\frac{1}{2}$  x 11. A. I. A. File No. 17al. Van Kannel Revolving Door Co., 250 West 54th St., New York.

**Architectural Monographs on Tiles and Tilework.**—No. 3 contains the Architectural Ceramics of Persia, Ancient, Medieval and Modern, by Rexford Newcomb, Prof. of History of Architecture, University of Illinois. Many interesting illustrations and color plates. 32 pp. 7 $\frac{1}{2}$  x 11. Associated Tile Mfrs., Beaver Falls, Pa. Price \$1.50.

**Partitions for Offices and Factories.**—Construction details and list of installations. The Mills Co., 5320 St. Clair Ave., Cleveland, Ohio.

*Published by the same firm. Folder describing and illustrating metal partitions for toilets, office and factories, bins and shelving. Typical installations, also construction details. 8 $\frac{1}{2}$  x 11.*

**Hand Book on House Heating by Gas.**—Contains diagrammatic description of Bryant Gas Boiler, applications, ratings and weights, dimensions, dimensional sketch, specifications, etc. 11 pp. 8 $\frac{1}{2}$  x 11. The Bryant Heater Mfg. Co., 925 E. 72nd St., Cleveland, Ohio.

*Published by the same company, Hand Book on Hot Water Supply, describing the Bryant Automatic Hot Water Storage System and containing valuable engineering information. Also, Handbook of the Bryant Warm Air Furnace describing Bryant Gas Heating for steam, vapor, hot water and warm air.*

**Modern Heating and Ventilating.**—Catalog of heating specialties and ventilating equipment for all services. Illustrations, roughing-in dimensions, tables, specifications, typical installations, typical details, completely indexed. 286 pp. 4 x 7. The Bishop & Babcock Co., Cleveland, Ohio.

**Eclipse School Furniture.**—Catalog illustrated in color containing sizes and range of adjustment tables, specifications, details. 32 pp. 8 $\frac{1}{2}$  x 11. The Theodore Kundtz Co., Cleveland, Ohio.

**Hotstream Heaters, Catalog No. 27.**—Contains illustrations and description of Hotstream Heaters, specifications, details, price lists. The Hotstream Heater Co., Cleveland, Ohio.

**The Duplex.**—Handbook illustrating and describing Duplex joist hangers, wall hangers, concrete block hangers, I-Beam hangers, Wall plates, wall boxes, post caps, post bases, wall ties, concrete inserts. Illustrations, diagrams, cross sections, dimensions, directions for use, tests, points to be considered in selecting or designing, results of tests, testimonials. 8 x 11. 60 pp. The Duplex Hanger Co. Inc., Cleveland, Ohio.

*Published by the same firm. Duplex Joist Hangers and Post Caps. Booklet No. 25 illustrates and describes this line of specialties. 4 x 9. 14 pp.*

**Iron Work for the Sidewalks, Catalog No. 10.**—contains sidewalk doors, coal hole covers and rims, area grates, area rails, sidewalk and floor ventilators, coal chutes. Illustrations and descriptions, price lists sections, specifications. 12 pp. 6 x 9. The Columbia Iron and Wire Works Co., Canton, Ohio.

**Sash Chain.**—Folder containing full information concerning Hodell Sash Chains and Wire Chains of Quality. A. I. A. File No. 27al July 1, 1924, Nos. 1, 2, 3, and 4. Specifications, tables. The Chain Products Co., Cleveland, Ohio.

**All-Purpose Ventilators.**—Folder illustrating and describing the Mack Ejector Air-O-Matic Ventilator. 8 $\frac{1}{2}$  x 11. The Stark Sheet Metal Works Co., Rex and 2nd Sts., S. E., Canton, Ohio.

**"Buckeye Gray" Sandstone.**—Catalog describing this product, containing explanations and suggestions, specifications, and 18 plates showing construction. 8 $\frac{1}{2}$  x 11. 32 pp. The Ohio Quarries Co., Citizens Bldg., Cleveland, Ohio.

**The Thomas Stoker.**—Folder describing this product, illustrations, cross section. L. S. Shaw & Co., 5716 Euclid Ave., Cleveland, Ohio.

**Pivot Sash.**—Folder containing details of sill construction and blueprints and specifications of plank frame window, rope hung window, circle top sash, casement windows, vertical pivoted window. The Williams Pivot Sash Co., Cleveland, Ohio.

**Monel Metal and Nickel Buyers' Guide.**—Issue of October 1925, contains names and addresses of dealers where Monel products can be procured. International Nickel Co., 67 Wall St., New York City.

## PENCIL POINTS

**Scientific Clothes Dryers.**—Catalog illustrating and describing various types of clothes dryers for hospitals, residences, apartments, clubs, institutions, etc. Plan views, side elevations, specifications. 5 x 9. 24 pp. The Scientific Heater Co., 2100 Superior Viaduct, N. W., Cleveland, Ohio.

*Published by the same firm, The Scientific Super-efficient System for Warming and Ventilating Homes, How Scientific Safety Garage Heaters are Installed and Operated, 1925 Improvements in the Scientific Safety Garage Heater.*

**Triangle News.**—November number is special news issue, containing much interesting news on the activities of R. & B. and recent installations completed. 9 x 11½. 34 pp. Richardson & Boynton Co., 260 Fifth Ave., New York City.

**Looking at Some Old Things in a New Light.**—Booklet containing talk and demonstration by Mr. C. F. Kettering of the General Motors Research Corporation for the benefit of the 8th Delco-Light Sales Convention. Delco-Light Co., Dayton, Ohio.

**Hollow Walls of Brick and How to Build Them.**—New illustrated booklet containing complete information on the ideal wall, including full data on new types of the ideal wall. Description and construction data, details, specifications. 8½ x 11. 24 pp. The Common Brick Mfrs. Assn. of America, Cleveland, Ohio.

**Yeomans Automatic Electric Junior Drainage Pump.**—Leaflet No. B-330 describes new automatic electric drainage pump for light service. Yeomans Bros. Co., 1448 Dayton St., Chicago, Ill.

**Water Softening.**—Bulletin containing extremely interesting and valuable information on the subject. Illustrations, formulas, etc. 6 x 9. 48 pp. National Lime Assn., 918 G Street, N. W., Washington, D. C.

**Softsilk.**—Data sheet illustrating and describing gravity liquid soap system. 8½ x 11. The Gerson Stewart Corp., Cleveland, Ohio.

**Insul-Glaz Tile and Caen Tile.**—Details of Construction in standard folder A. I. A. classification No. 23a. Many full page detail drawings, tables, estimating and specification data. 8½ x 11. The Clay Products Co., Brazil, Indiana.

**Doric and Gothic Brick.**—Brochure in color showing artistic brick work. Chapter on art of stippling. 32 pp. 6 x 9. Western Brick Co., Danville, Ill.

*Published by the same firm, The Cloister Brick, brochure showing adaptability of this brick in the modern residence and apartment, schools and churches, public buildings, factories and warehouses. Color plates. 6 x 9. 32 pp.*

**Wheatley Tiles.**—Portfolio of color plates showing application of faience tiles to floors, walls and chimney pieces, etc. Plates showing a large variety of tile inserts in polychrome. Stock mouldings in any color. 10 x 12. The Wheatley Pottery Co., Cincinnati, Ohio.

**Sectionfold and Rolling Partitions.**—New illustrated booklet, also covering subject of Hygienic School Wardrobes. Layouts, sections, details of construction, etc. 40 pp. 8½ x 11. J. G. Wilson Corp., 11 East 36th St., New York.

**Zenitherm, the Universal Building Material.**—Brochure in sepia showing application of this material on several interesting jobs. Detail drawings and complete data. 8½ x 11. Zenitherm Co., 405 Lexington Ave., New York.

**Enameled Brick Data Sheet.**—Condensed information with 8 detail drawings showing special shapes, construction drawings, etc. 8½ x 11. American Enameled Brick & Tile Co., 52 Vanderbilt Ave., New York City.

**Decorative Linoleum Floors.**—Large folio with 14 color plates presenting artistic scheme of decoration and furnishing for every room in the house. Furniture, both antique and modern has been combined with suitable draperies, wall and floor coverings to create pleasing effects. Armstrong Cork Co., Lancaster, Pa.

**Austral Windows.**—A. I. A. File 27-c-1 Catalog No. 26, illustrating complete line with detail drawings, specifications, weather strip details, etc. 48 pp. 8½ x 11. Austral Window Co., 101 Park Ave., New York City.

**Metal Weatherstrip Details.**—Looseleaf portfolio with strong binder containing 48 pages of drawings and specification data on weatherstrips for all types of service. 8½ x 11. Chamberlain Metal Weatherstrip Co., Detroit, Mich.

**Everything for the Fireplace.**—Portfolio with illustrations of fireplaces and fireplace fixtures and accessories, including the Glow-Hot electric grate, a new feature. Standard filing size 8½ x 11. Colonial Fireplace Co., 4603 Roosevelt Road, Chicago, Ill.

**Fireplace and Flue Construction.**—The Covert system with diagrams, sections and details. Specialties. Also includes data on sidewalk doors and wind-proof scupper. 16 pp. 8½ x 11. The H. W. Covert Co., 137 East 46th St., New York City.

**Duriron Acid-proof Drain Pipe.**—Handbook for architects and engineers covering layouts for laboratories and other conditions involving the problem of pipe corrosion. Much valuable technical data. Sectional drawings, tables, specifications. 20 pp. 8½ x 11. The Duriron Co., Dayton, Ohio.

**Tapestry Brickwork.**—Brochure illustrated in color containing both exterior and interior treatment. 48 pp. 8 x 11. Fiske & Co., 25 Arch St., Boston, Mass.

**Grinnell Adjustable Pipe Hangers.**—Catalog No. 3. Handbook on the subject of adjustable hangers for all types of service. Complete engineering and specification data. Handy pocket size. 4 x 9. Grinnell Co., Providence, R. I.

**Lighting Fixtures.**—A. I. A. File 31-F-23.—Handsome portfolio showing complete line of exterior and interior lighting fixtures done in photogravure on one side of the sheet only. About 100 pages are included. The same material is presented in a bound volume for those preferring it. In case bound book is desired ask for Catalog No. 15. 8½ x 11. Edwin F. Guth Company, 2623 Washington Ave., St. Louis, Mo.

**Milcor Architectural Sheet Metal Guide.**—Covers roofing, ceilings and other sheet metal items presented in an attractive and helpful manner. 64 pp. Milwaukee Corrugating Co., 3rd Ave., & Burnham St., Milwaukee, Wis.

**Mueller Tile.**—Illustrated brochure showing architectural faience, polychrome panels, Flemish, Hand-Made Tile, Norman, Flash Mosaic and other ceramic products. 48 pp. Mueller Mosaic Co., Trenton, N. J.

**Norton Floors.**—Loose-leaf portfolio with one color plates and 27 pages of drawings and specifications, covering stair treads and various types of floor construction suitable for a wide variety of uses. Standard Filing size. Norton Company, Worcester, Mass.

**Poles Worthy of the Stars and Stripes.**—Catalog covering the subject of flag poles for various uses. Diagrams showing best method of applying to buildings, etc. 4 x 9. 32 pp. The Pole and Tube Works, Inc., Ave. D and Murray St., Newark, N. J.

**Ruud Automatic Gas Water Heaters.**—Publication No. 860. New publication covering subject with all information for the specification writer presented in convenient and non-technical form. 40 pp. 8½ x 11. Ruud Mfg. Co., Pittsburgh, Pa.

**Portfolio of Specification Data.**—Covers floor treatments, dampproofing and waterproofing, interior and exterior painting and technical paints for all uses. Complete specifications of all products and data concerning their application. Standard filing size. L. Sonneborn Sons, Inc., 114 5th Ave., New York.

**Cypress Pocket Library.**—Volume 28, trellises and arbors, pergola-garage containing 23 original designs. 88 pp. Volume 35 Sun Parlors, balconies, etc. 48 pp. Volume 44, authentic Colonial Homes. 192 pp. with many detail drawings. Southern Cypress Mfrs. Assn., New Orleans, La.

**Modern Homes.**—Illustrations and floor plans of small houses suitable for interpretation in wood construction. 50 pp. Southern Pine Assn., New Orleans, La.

**The Gospel of Fresh Air.**—9th Edition. Covers subject of ventilation and ventilators for all types of buildings. Much specification information and technical data. 36 pp. 8½ x 11. The Swartwout Co., Cleveland, Ohio.

**Thatcher Furnaces.**—New catalog with color plates showing complete Thatcher line. Sections, layouts and specification data. 24 pp. 8½ x 11. Thatcher Furnace Co., 30 St. Francis St. Newark, N. J.

*Published by the same firm, Thatcher Ranges. Uniform in style and size with above, covering full line of ranges for residence, club, restaurant and other uses.*

**Ancient Beauty for Modern Buildings.**—Illustrated brochure dealing with columns for both exterior and interior uses. 10 full pages of sketches. 40 pp. 8½ x 11. Union Metal Mfg., Canton, Ohio.

*Published by the same firm, Pergolas, Rose Screens and Sun Dials. Illustrated brochure on subject of garden accessories. 24 pp. 8 x 11.*

**Van Duprin Self Releasing Fire Exit Devices.**—A handbook on the subject. Illustrations of all types, sections and details. Complete instructions for specification and installation. Instructions for swinging doors. A very valuable book for every specification writer. 96 pp. 8½ x 11. Vonnegut Hardware Co., Indianapolis, Ind.

**Weisteel Compartments.**—Catalog No. 11 describing compartments of all types. Blue prints showing construction and method of erection. Specification, including hardware. A useful book to all in any way interested in industrial buildings, public buildings, schools, hospitals, etc. 32 pp. 8½ x 11. Henry Weis Mfg. Co., Atchison, Kansas.



# PENCIL POINTS



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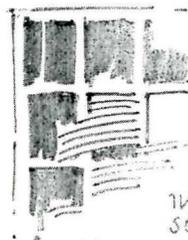
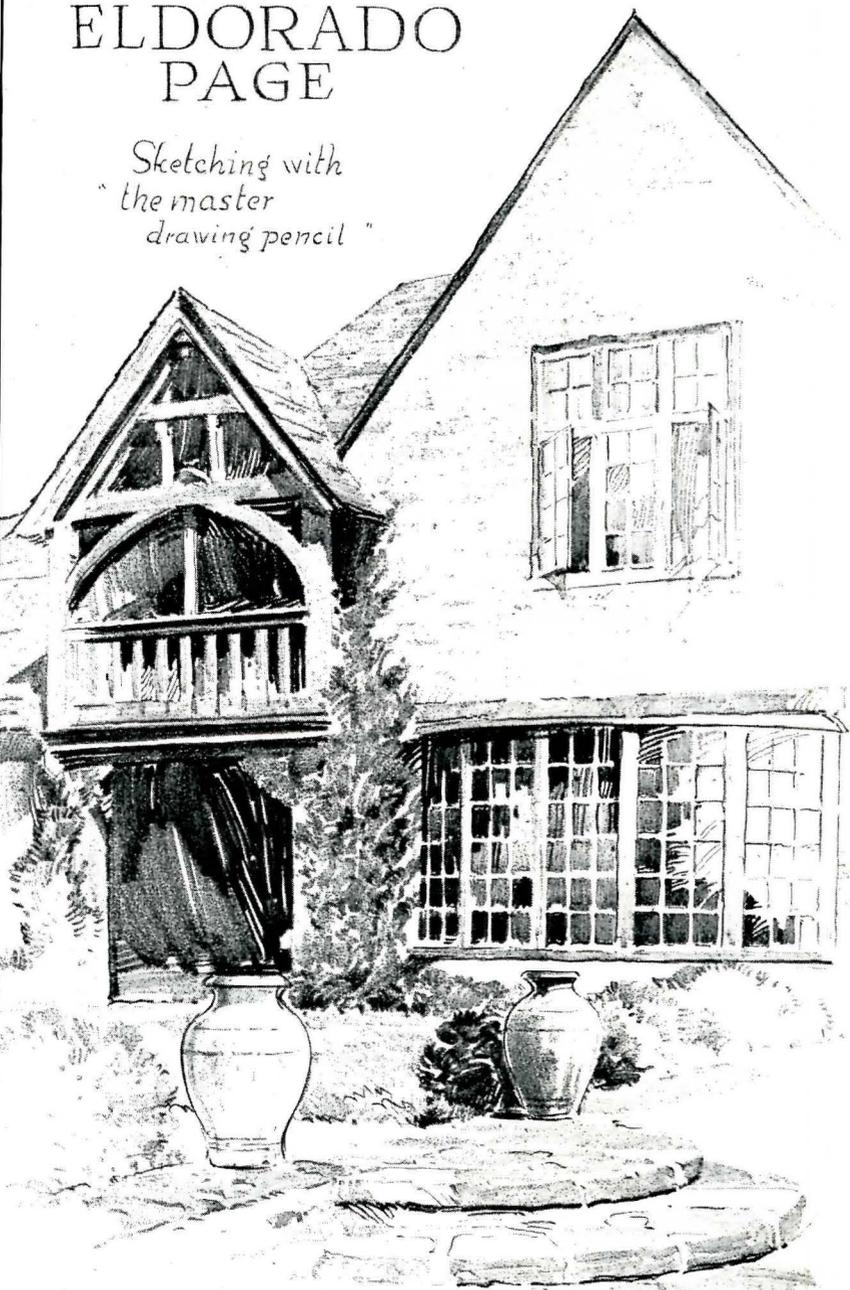
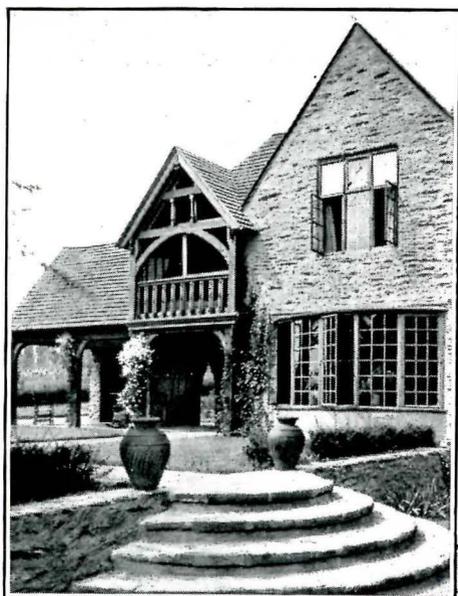
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| G. M. PEEK .....                 | Dec.  |



# The ELDORADO PAGE

*Sketching with  
"the master  
drawing pencil"*



*Note the  
use of  
fine line  
with broad  
strokes for  
variety*



*Diagram  
to show  
"Path of  
Interest"  
selected*

Country Home of  
Mr. Heatly G. Dulles  
Villa Nova Penna.  
Mellor, Meigs and Howe, Architects

*Ernest W. Watson*

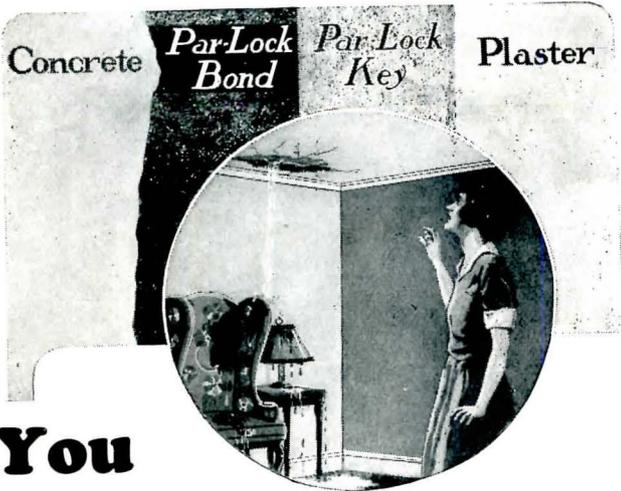
**PATH OF INTEREST**—A sketch should always have a center of interest. The artist must decide at the outset which detail of his subject is to be thus featured and begin his rendering at that point. The darkest tones usually should be concentrated there and enough white left to give them proper accent.

Should tone then be impartially distributed over the entire subject?

Almost never. It should be so placed as to give a feeling of movement or sweep of interest across the sketch. "Path of Interest" is an appropriate term for this type of treatment.

Try making diagrams like that shown on this page before beginning the rendering. This method of composing should help one to avoid spotty effects and scattered interest. It will also help you to decide "what to leave out," which is quite as important as "what to put in"—sometimes even more important. The student is advised to avoid large areas of tone. They usually make a drawing look labored.

It is a good plan to lay down the pencils frequently and set the sketch up at a little distance for criticism. Such an inspection is likely to result in the discovery of errors.



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Can**

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