

THE INLAND ARCHITECT AND NEWS RECORD

Vol. XXVII.

JULY, 1896.

No. 6



A Monthly Journal Devoted to

ARCHITECTURE,
CONSTRUCTION, DECORATION AND FURNISHING
IN THE WEST.

PUBLISHED BY THE INLAND PUBLISHING CO.,
409-410 MANHATTAN BUILDING, CHICAGO, ILL.

L. MULLER, Jr., Manager. ROBERT CRAIK McLEAN, Editor.

SPECIAL CONTRIBUTORS:

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HENRY VAN BRUNT,	P. B. WIGHT,	IRVING K. POND,
LOUIS H. SULLIVAN,	ALLEN B. POND,	J. R. WILLETT.
WILLIAM S. MACHARG.	C. E. ILLSLEY.	

TERMS: Regular number, \$5 a year; Photogravure edition, \$10 a year. Single copies, Regular number, 50c.; Photogravure edition (including 7 photogravures), \$1. Advance payment required.

The columns and illustration pages of THE INLAND ARCHITECT are open to all alike, merit and availability only determining what shall be published. Contributions appropriate to its pages are always desired.

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Inclination to Encroach on Public Parks.

The consolidation of three great libraries in New York city, and subsequently the proposed erection of a monumental library building, has brought the question of site before the people. There is a general disposition to raze the old reservoir and use the square it occupies for such a building. It is pointed out by *Forest and Stream* that if that picturesque old pile of masonry were removed it is the duty of the city to give the space to the people for a park, and that the library should be built elsewhere. It is time that large cities recognized that they cannot have too many of these breathing places for the people, and still it is the inclination of even the most public-spirited to seek space in a public park for some museum or library. There are no good reasons why this should obtain, and many why it should not. Open spaces where grass and trees can be grown are always too few, and their benefits are greater than that of any library or museum, and any such encroachment should be resisted. Again, besides the constant encroachment that would gain from year to year were such a policy fully inaugurated there is the ever-present danger of these buildings coming within municipal and consequently political control. The Academy of Sciences is threatened with this danger in Chicago, and the Metropolitan Museum in Central Park is not far from the danger line. Let the public refuse to devote a foot of park space to any building, and it will be on the safe side, for ground can be bought upon which to erect these libraries and other public buildings, which, however beneficial, can never take the place of trees, grass and fresh air in the building of a strong and sturdy race.

A Minimum Standard of Ventilation for Buildings. The American Society of Heating and Ventilating Engineers, through a committee appointed for the purpose, have made a very thorough research into the ventilation standards in Europe and America, and while the search for data was in some respects discouraging, the general result is sufficiently definite to allow of a minimum standard for all classes of buildings to be recommended. Thus, for instance, from Russia, it was reported, "the climate was so severe as to require the windows to be sealed up six months in the year." In England, it was stated, that "the architect uses his judgment with regard to arrangements for ventilation," and only in Rome and Switzerland does any attention seem to be shown to the subject of ventilation. In Canada the official regulations require in schools 260 cubic feet of space per pupil, while in the United States experience seems to have established a minimum about 1,800 cubic feet of air per hour per pupil as a standard for schoolrooms. The deductions of the committee are that for all buildings such as schools and asylums, occupied almost entirely by children and youths under fifteen years of age, the minimum amount of air for ventilation shall be 1,800 cubic feet per hour per person, and for those over that age, 2,000 cubic feet. In the matter of gas lighting, each gas jet shall be supplied with 3,000 cubic feet of air per hour. In a matter so important from a sanitary standpoint as that of ventilation, it seems incredible that more definite knowledge has not been obtained and compiled even than that collected by this committee.

ARCHITECTURE AND DECORATIVE ART AT THE ART INSTITUTE OF CHICAGO.

BY P. B. WIGHT.

THE Schools of the Art Institute of Chicago have closed the season of 1895-6 with an exhibition in the northeast rooms of the second floor, which will remain open indefinitely during the summer. The attendance during the year has been remarkable and outnumbers that of any other art school in this country. In the regular day schools there were 146 in the Life Class, 153 in the Antique Class, 115 in the Intermediate Class, 135 in the Elementary Class, 75 in the Designing Class, 31 in the



Modeling Class and 39 in the Architectural Class, making a total of 694. In addition to these the Evening Schools and the Saturday Classes brought the total up to 1697. Those which will most interest our readers are the Designing, Modeling and Architectural Classes. Of these it is interesting to note that in the Designing Class there were 8 men and 67 women, in the Modeling Class there were 3 men and 28 women, and in the School of Architecture there were 38 men and 1 woman. In view of the demand for skilled modelers in the arts cognate to architecture it is remarkable that there were so few men pupils. Is it possible that the women intend to monopolize this field? It seems that the Art Institute offers great advantages to the large number of draftsmen now out of employment, who might avail themselves of its privileges to acquire experience in a field that would be comparatively easy to fill after their experience in the offices, and in which they might in the future find better opportunities for employment when business revives.

The instruction in these departments during the year has been under the admirable direction of Louis J. Millet, professor of Architecture and Designing; Walter F. Shattuck, instructor in Architecture and Perspective; William K. Fellows, instructor in Architecture (who has just taken the Prize of Rome from the American school, and will be absent two years); Albert L. R. Van den Bergen, in charge of Room of Application, Designing Class; and Mary G. Hess, assistant in the Designing Class. Besides these W. L. B. Jenney, William A. Otis, W. S. McHay and James R. Willett have lectured before the Architectural Class.

The Department of Decorative Designing, from its longer experience, still takes precedence, as judged by its results, over that of architecture, and, indeed, over all the other departments of the school. It is under the direction of Mr. Millet, assisted by Miss Hess. The object of this class is to educate students as practical designers, so that they may be prepared to go directly from the school into professional work, and many of them do. The course is similar to the well-known schools of design and applied art for women in eastern cities, excepting that men are not excluded from the school. The course embraces the study of historical ornament, practice in drawing as well as water and oil color rendering, the study of the theory of design and exercise in original designs for stained glass, wall paper, rugs, book covers, metalwork, carved wood, interior decorations, carpets and decorative work of all kinds. The class is conducted upon what may be

called the *atelier* or studio system, in which the teacher is in immediate communication with each pupil, and varies the instruction to meet individual cases. All are required to draw from casts, chiefly of ornamental forms, in which the collections of the Art Institute are so rich, especially in the collection of casts of French historical ornament, which were brought to Chicago for the World's Columbian Exposition, only a part of which are, however, available for want of room to set them up. By this they acquire a facility in drawing quite as well as in the antique classes and an acquaintance with the forms of decoration in the great periods of art. Very soon this drawing is alternated with exercises in original design, at first simple and relating chiefly to form, rather than color, and gradually increasing in difficulty until they form a series of compositions on stated subjects embodying the main problems and applications of ornamental design. Meanwhile, there is regular instruction in the use of water colors, and the designs are executed in all varieties of mediums.

The library contains many valuable books upon decorative art of which the students of design make constant use, each student setting up from the beginning a scrapbook of tracings which gradually forms a reservoir of useful patterns selected by the student himself. Problems in specific historical and national styles are avoided early in the course until the student has become acquainted with the general principles of the arrangement of design. This is contrary to the practice of many schools of design, but the results seem to justify the method, the designs even of the first year showing much originality and an unusually high level of average excellence. The course is eminently practical, and graduates from this class are at work as professional designers in various manufacturing establishments in Chicago and elsewhere. A feature of this department, of the greatest value and importance, is the workshop, or room of application, in which the students, under the direction of Mr. Van den Bergen, carry out their designs in actual material. The object in view is, not to learn special trades, but to become acquainted with the limitations and peculiarities of the material. During the past year a great amount of shopwork has been done, chiefly in the direction of plastic decoration and polychrome relief work. The exhibition shows the result of a competition among the women students in the modeling of an architectural spandrel ornament, full size, of which nineteen are exhibited. Some of the examples are quite as good as we could get from the average of professional modelers. Six very ambitious attempts, all by women, may be found in one of the basement rooms, where, for want of space, and because most of them are unfinished, they lie on their backs on the floor. The subject given was a section of wall decoration in full relief combining two pilasters and an arch, to be executed in plaster and about ten feet in height. Each competitor—all young women—was given a historical style, and told to carry it out as best she might by reference to the books and casts of the Institute. The workroom soon assumed the appearance of a modeling and casting room of a World's Fair "staff" contractor. The result is remarkable, considering that the women had not had any distinctively architectural training, while the execution demanded in every case a knowledge of architectural construction and form in which previous studies of purely decorative forms were only helpful in matters of detail. The results give the impression that the directors of the school imposed a heroic task upon weak bodies, and rather overstepped the bounds of discretion and good judgment. But the women accepted it with woman's heroism. The results from an architectural point of view are rather remarkable, and it is not to be wondered at that the Moresque example was the most successful, and the Gothic example the most unfortunate. The hardest task was the Hindoo example.

On the walls of the exhibition room, besides the spandrel panels already mentioned, are groups of drawings and paintings covering the following subjects of competition: Design for a rug in oil color, six drawings; design for all-over wall paper, in distemper color, twelve drawings; wall paper frieze, in distemper color, ten drawings; mosaic border for floor, in oil color, fourteen drawings; lace handkerchief in Chinese white on blackboards, twenty-three designs; a recessed fireplace in water color, ten designs; picture frame, to be executed in composition on wood and gilded, fourteen designs. The designs for a baptistry, executed in water colors, of which there are nine, each shown by two drawings, are ambitious architectural compositions. Two of the male students entered this against the women, and were at home in the

task. There are also designs for glass mosaic ceilings, illuminated verses—being exercises chiefly in lettering, book covers, one-day sketches for various objects; and not of least importance, posters for a flower show, in which the greatest exuberance and facility of design have been shown, and the widest freaks of fancy admissible.

The School of Architecture is now just three years old, and considering its infancy, makes a very respectable and creditable exhibit. It would be unfair to compare its results in general with those of the older and eastern schools of architecture, but in a few instances the competitive designs of the students are equal to the best that have been seen in recent years. Among several of equal merit we have selected for illustration the design for the façade of a country club house, by F. G. Mueller. If not so named, it might be called "Design for a suburban palace of moderate dimensions, in the French chateau style of the sixteenth century." But the composition and rendering are good from an architectural standpoint, even though there is little to suggest in this or most of the other designs that they are for a country club.

The architectural school of the Art Institute is, as is generally known, conducted in conjunction with the technical schools of the Armour Institute, which in addition to its regular curriculum

from plates, after the manner of the French school and all well executed. The exercises in shades, shadows and perspective, under the direction of Professor Shattuck, are illustrated by many careful drawings illustrating the thoroughness of his system of instruction.

The next school year will commence September 17.

In this connection it may be in order to throw out a suggestion. The largest and most valuable casts of the French historical examples of architecture which were exhibited at the World's Columbian Exposition have been in storage since 1893, because the Art Institute has no place to display them. There seems to be no prospect of this being done until the east wing and central hall of the Institute are built. There is no certainty of this being done for years to come, and meanwhile part of the ground which this will occupy has been covered with temporary buildings for the schools of art. But the campus in the center is vacant. It seems as if the directors might find the way to set up these examples in a temporary building until they can be permanently housed; for the students of the school, the architects of this city and the public ought not to be deprived of their use if it is possible to do this.



DESIGNING CLASS—ROOM OF APPLICATION, 1895.
Students of Architecture and Design at work on Mosaic, Plastic Decoration, etc.

of scientific studies instructs the architectural students in descriptive geometry and graphical statics, leaving the more artistic training to the Art Institute. Therefore we find in this exhibition examples of the work of both.

The subjects for original design, which have been given out during the year and in which the work is competitive, have been, among others, "A County Jail," "A Dispensary," "The Side Entrance to a Museum of Fine Arts," "The Façade of a City House," "A School for Boys," "A Classic Tomb," "A Country Club," and "A Decorated Ceiling." In the competition for a jail and dispensary the want of knowledge of technical requirements is evident. In the "Façade for a City House" it is interesting to note that there are four designs in French Renaissance, two in free Renaissance, and one Venetian. The last, which is best in design and rendering, bears a strong resemblance to a dwelling recently built on the Lake Shore Drive. The "Country Club House," except in one instance, wherein the French half-timbered system is used, seems to resemble in every other design a suburban residence rather than a club. The best designing in these competitions is found in the "Decorated Ceiling" series. In each case it is a colored ceiling, and all are carefully studied in details. The best rendering is found in the design for a classic tomb, the water color by Frank H. Foulk being especially meritorious. There is the usual collection of colored and shaded details of the classic orders copied

"GLIMPSES OF THE BUSINESS SIDE OF AN ARCHITECT'S LIFE."*

BY JAMES R. WILLETT.

YOU can learn an immense amount from contractors if you will make a habit of discriminating between contractors and contractors, so that you know whose word to believe and whose not. While you should not get too intimate with contractors, nevertheless you should try to draw them out, they possess a vast amount of knowledge which would be of great value to yourself; but don't draw from one contractor alone, that is apt to tie you up to a certain extent, and perhaps cause too much of an intimacy between you; draw information from every one that you can; compare their statements. The way to do this is to be good at listening, asking perhaps an occasional question. Don't contradict the contractor, that is the way to shut him up, and the shutting up should not be on his side; let him talk freely, and in the few questions you may ask him, let the tendency be to draw him out; usually it is better not to argue with the contractor, certainly not until you have got all the ideas you can get out of him; it makes no difference whether you agree with him or not, he will state his own case far better if he is let alone, whereas if you contradict him he is very apt to get in a huff, and as you are a young man, say or think "That young fool thinks he knows something." This gets up a spirit of antagonism between you by which you are the loser. Do not imagine that inexperience can impose itself as wisdom on experience, it cannot be done.

* Extracts from lectures delivered to the Senior Architectural Students at the Art Institute, Chicago, Illinois, commenced on page 43, No. 5.—Concluded.

Some owners after having requested you to take bids, inform you that they intend a certain bidder to have the work, although they usually expect not to pay the bidders for the time and trouble they have been put to. They do not usually see anything improper in this. It is never honest to require labor of others where you do not intend that they shall get any recompense therefor; and in such cases as this, it is the architect's duty to state this to the owner, and while he cannot control the owner in the disposition of his own money, it is his duty not to allow himself to be made a party to a wrong.

It is no small labor at times for a bidder to make out an accurate estimate of what a building will cost; the bidder does it on the presumption that he has a fair chance for the work. Where the architect knows he has no chance at all, he is a party to a fraud if he allows such a thing to occur. It is true that owners are usually honest men and have no intention of wrongdoing; they regard it, and have often been informed by contractors, and architects, too, that it is a custom of the trade; but it is never a proper custom of any trade to practice deceit; so long as all the parties entitled to know the facts are fully informed and there is no deception used, then no one has a right to complain, be the result what it may. If an architect can do no more, he can inform the bidders that there are parties that have a preference. If you wish men to deal honestly with you, the best way to attain this end is to show the example by being honest in your dealings with them.

The architect should take pains to see that both the owner and the contractor understand the terms of the specifications. This does not mean that you shall instruct each in all the details of it, for the contractor may be supposed to understand them without being shown; while the owner would not understand them without a regular procedure of instruction; but the architect should take pains to see that all the business points are understood by both parties, as he will have the enforcement of the contract, and it will simplify his work if they both thoroughly understand it. Should any doubts occur to the architect as to how a clause might be interpreted, he should see that this clause is so altered as not to permit a double understanding.

After selecting the contractor—and it is usually best for the architect that the owner should do so, especially when the architect is young and inexperienced—then comes the making of the contract. In very large works the contract may be drawn up by attorneys, indeed in some respects it is best for the architect that it should be so done, but usually the contract is drawn up in the office of the architect, and he must be prepared to make it. Contracts are not usually difficult to draw. A short and plain statement of the business facts of the works under consideration which are to be carried out, make the best contract. The specifications and drawing should contain all the technical description of the work, and the contract all the ordinary business part. It is best that the specifications themselves form part and parcel of the contract, or at least be attached thereto.

The drawings should be regularly numbered, and a list of these given in the specifications. It is well to have both the owner and the contractor sign the principal drawings, indeed it is well to have them sign all of the drawings, though this is not common; often none of the drawings are signed. The title should be on the upper right-hand corner of the drawings, and also the number of the sheet. If it is desired to bind the drawings together they can be bound on the left-hand side.

With regard to the ownership of drawings: The owner sometimes claims them as his own personal property, while the architect regards them as his property, as tools used in the erection of the building and ultimately to remain in his possession; in the same manner that a carpenter while using his tools on the work of erecting a building does not, at the completion of the work, leave the tools as the property of the owner. It is a disputed question, and it had better be settled by stating in the contract that the drawings are to remain the property of the architect.

Contracts are not always written exactly the same, nevertheless there is a general resemblance. The greatest point of difference is usually over the question of arbitration. The custom has been for the architect to be appointed arbitrator and his decision made final on all parties. This has been objected to by the contractors, who claim that the architect, being paid by the owner, is not the proper one to decide between them. There is much to be said in favor of the contractor's ideas; all sorts of plans have been got up to avoid this difficulty, by bringing in a board of arbitration, etc. But, whatever the legal questions may be, the fact is that many of the decisions called for must be given without delay or the work brought to a stop. After all, the decision must be given by some man or men; if the architect is sufficiently in the confidence of the owner to be employed, and of the contractor to sign a contract subjecting him to his authority, then he ought to be sufficient to decide questions that may come up between them. The great advantage of him so deciding is that he is acquainted with all the facts in the case, ought to be readily able to give a decision, and he can give that decision without delay and without additional expense, which a board of arbitrators is sure to involve, sometimes to a considerable extent.

It is the business of the contractor to know about the architect and his reputation before he signs a contract; if he fails to do so, or if he signs a contract accepting an architect as arbitrator where he does not believe the architect is honest, competent or the proper person to give a decision, then he is a wrongdoer and should suffer for the consequences of his folly. The standing of any architect, who has resided in a place for any considerable period, is generally well known to more or less contractors, better

known usually to contractors than to owners. Some architects look upon contractors as their natural enemies and vice versa; I think at times that both have had reason to do so. The contractors generally think that the architect, being paid by the owner, is necessarily his servant and must obey the owner's orders. I am speaking of the architect who does his business in a purely professional manner, who has no building interest except in the absolutely professional way; who has no financial interest as owner, stockholder, etc., in the work, in fact none whatever except the professional fee which he is legitimately entitled to, and whose interest in the building is in the superintendence of it, and only the superintendence, without any other interest whatsoever.

It has been said you should not assume the contractor to be dishonest nor treat him as such. Now that is true. On the other hand, neither must you assume him to be honest, competent and willing to do the work according to design. In superintendence, you are employed to superintend the work, and it is part of your duty, therefore, to see that the work is done, either by yourself or by deputy. It is a distinct violation of your duty to take the contractor's word for the work being done correctly; the owner could do that as well as you and save the cost of superintendence. Therefore, while you treat the contractor as an honest, straightforward man, you must see for yourself that the work is done right.

While you must hold the contractor up to the full responsibility for the work, you must also see that he has justice done him. Sometimes this very desire of justice may lead you into conflict with the owner, either through ignorance on his part or otherwise; and it is scarcely necessary, I presume, to say that you must be on your guard against yielding to the owner in such cases where you believe the owner to be in the wrong. Proper explanation, together with courteous bearing, will usually bring everything right; but in any case you must not allow yourself to be used as an instrument of wrongdoing. The owner sometimes presumes upon the fact that he is your paymaster; but you have accepted the duties of a judge, and if you fail to fulfill them, then you are no longer honest. While this may sometimes cause you to lose the good will of the owner, and to lose his custom, yet on the other hand, when you are in the right (of course that is to be taken for granted) it inspires him with a respect for you, and gives you a hold on his confidence that nothing can shake. If the owner finds he can influence you, especially to do a thing that is of doubtful propriety, he will think perhaps the contractor can do the same thing, and rate you accordingly. While you must not be in a hurry to find fault, nevertheless you must equally be vigilant to detect errors of any kind; and although the architect is not responsible to the contractor for the detection of any errors, he is responsible to the owner. It is always desirable to have a good feeling existing between all persons engaged on a building. No architect, and especially a young one, should be in a hurry to find fault; there is no readier way of an architect losing the confidence of a contractor and the owner than unnecessary fault-finding. A few mistakes like that will, and ought to, cost an architect the confidence of both parties.

The architect being superintendent over a building, different kinds of work come under his supervision, and sometimes work which he is not specially acquainted with. The owner usually gives credit to the architect for knowing more or less about everything going into the building; he may be generally right in taking this position, as he does not know the limits of an architect's knowledge, nor of his ignorance. The architect, therefore, should guard against being held responsible for work which he is not competent to design and look after, by so informing the owner. As, for example, some time ago it was stated in an architectural journal that a chimney shaft had been built, according to the design of the architect, in a large building; after the building was built the chimney was found to be of insufficient size, and it became necessary to pull the chimney shaft down (which meant to gut the building), and rebuild the same on a larger scale. The owner charged the expense of this rebuilding to the architect; a lawsuit followed, in which the architect stated that he had made the flue according to the usual custom; that he was not an expert in such matters as steam engines, chimney shafts, etc., and that he was not to be held accountable for the trouble. The court decided against the architect. I think the verdict was a just one. It is true that the architect is not expected by the architectural profession to be expert on such matters as large chimney shafts and their proper sizes, but he should have so informed the owner, and either procured the proper assistance, or let the owner have done so.

What is an architect's proper position? In what way, if at all, does the architect's duty to the owner and the contractor differ? As a matter of good workmanship and justice, that is common, a duty you owe to each, but there are some differences nevertheless. The contractor is assumed to know his business, to understand the drawings and specifications, and to be up generally in his particular trade. It is no part of the duty of the architect to furnish a contractor with information about the technical matters of his own trade; if he does not know them already, he should not undertake the work. On the contrary, the owner is not supposed to know anything about building, and it is the duty of the architect to furnish such knowledge on the owner's behalf, either himself or by calling in assistance; now having done that, all other duties are in common between the two; the one is just as much entitled to equal justice from the architect as the other. I state this particularly because the architect is paid by the owner, and this might influence the architect; beware of this, be sure to be just to both.

The contract having been duly executed, the next thing is to lay out the work upon the ground. It is no part of an architect's duty to lay out the building on the ground; that properly belongs to the contractor. It is the business of the contractor to lay it out in accordance with the drawings. Moreover, there are certain objections to the architect laying it out; the marks may be rubbed out—who is responsible therefor? The architect cannot be there personally all of the time to see that the marks on the ground are preserved while the contractor, or his men, are usually there constantly. It would usually be impossible for an architect to swear, after a lapse of some time, that the stakes were exactly in the place that he placed them; and it might be that the contractor would have an interest in altering the same; stakes are sometimes accidentally displaced without the knowledge of the architect, or, indeed, anybody else, and are not always replaced where they should be; therefore, I would caution the young architect against being responsible for the laying out on the ground, either by himself or deputy. He must, of course, on the owner's behalf, see that it has been done correctly. Such questions as the laying out of a building are most likely to come up in small places. In cities—Chicago, for instance—no architect ever thinks of laying out a building on the ground. In fact, in cities the necessary data for finding the property line is a matter of local knowledge, usually private property; old surveyors have reference notes which have been the accumulation of years.

In the country, buildings are usually put up on plats of ground much larger than the buildings, and there is a space all around the building between it and the property line; but that is not usually so in the city, especially in the business district of a large city, there usually the building covers the whole of the lot. It is important, therefore, that the survey should give the plat correctly, and the architect should give and require from the surveyor employed, the following information. You should give the surveyor the legal description of the property (which you should procure from the owner) and request the surveyor to state whether that is the correct description or not; not infrequently will the description given in the deed vary somewhat from that given by the surveyor, though the difference is not usually essential; yet it is well to have the exact description, and in case of variation between the one you receive from the surveyor and the one you receive from the owner, then you should call the owner's attention to the fact. My experience is that the surveyor's description is most likely to be correct. Also have the surveyor give the legal description of the adjoining property. Also have the surveyor make a plat of the ground with all dimensions, notes and all data thereon; the heights and sizes of street sewers; the heights of outside and inside grades. Also widths of sidewalks, alley and streets, together with position, etc., of adjoining buildings, fences, etc. Make these lines on the ground and also the heights of inside grades. These marks must be made in a permanent manner, so that they will not be destroyed during the construction of the building.

After receiving the plat of survey from the surveyor, it is well to make this plat one of the sheets of drawings, which drawings should be numbered and enumerated in the specifications. See that the adjoining owners are notified to take care of their walls, if there be any such; especially is this true if your foundation is designed to go below those of the adjoining buildings already built. Acquaint yourself with the building laws in the locality where the building is located, and govern yourself accordingly.

Where you are building on the property line it is usually well, when practicable, to have party wall agreements, but it will not always be practicable to have this done. So long as you do not go as low, or at least any lower, than the adjoining building, no trouble need be apprehended; but if the adjoining building has been erected any length of time, it is probable you will have to go below it; the foundations of your building are usually called to go lower than those that have been up a number of years, and this leads to more or less discussion between owners. In European countries there are usually some laws regarding party walls which cover the conditions on which they must be built, and there may be in some American cities laws to this effect; but in this city, Chicago, there are no such laws; either owner can dig as far down into his property as he sees fit; this may undermine the foundations of the adjoining owner. The architect should see that due notice is given to the adjoining owner before he allows excavation to go to such a depth.

No definite advice can be given as to the methods of procedure; simply good business judgment, prudence and a desire to conciliate by giving way wherever practicable, and also showing that the essential will be required. Better give all the notice that is practicable, for the adjoining owner dislikes to have to underpin his foundation, and the more time that is given him to allow his feelings to subside the more likely is he to comply peacefully. It is better to have a party wall and have it spread equally on both sides; and this last fact makes it desirable where there are no buildings erected on the adjoining lot that a party wall agreement should be made; this will allow a better wall to be built—better for both and cheaper. Whatever depth of foundation is required, that depth is usually measured from the street grade, and the excavation to that depth should be seen to. The contractor is very liable to avoid going as deep as the plans call for; if he finds his work is not looked after, it is not likely to be done. After the putting in of the foundation has begun, it is difficult to tell just how much of it has been done right and how much, if any, done wrong.

Of course, the depth of the foundation will depend on the

nature of the soil, and this is largely a matter of local knowledge. The young architect cannot do better than to inspect, if it is practicable, all foundations being erected in that locality; by talking to the contractors there, and in short getting all the information he can. It is true in the same locality the differences are great; as in Chicago the soil runs all the way from rock to muck. In the case of the soil on which foundations are to rest being muck or running sand, it becomes necessary to put in foundations in short lengths at a time, by excavating lengths from fifteen to twenty-five feet, inclosing it with boarding so as to keep the soil out, and then filling up with the foundation, the lower course of which is usually, and better be, concrete.

It is very difficult to pass judgment on unknown foundations—that is, the soil below. Natural rock, for instance, is usually considered the very best foundation, yet the only serious settlement I have had in a building was when it was founded on natural rock. It was quite a long building, and one corner of it settled several feet. On examination it was found that the whole rock for quite a distance around had gone down. It was in a part of Tennessee where the rock was cavernous, and there was evidently empty spaces below, which let the rock down some two feet over a surface of about one hundred feet square.

The trouble usually with the brickwork in country places is that many of the bricks are under-burned, or what is called salmon brick. Not much trouble is now experienced in Chicago on this point, since they have greatly improved the method of manufacturing brick. Forty to fifty years ago the bricks were far inferior to what they are now; by the introduction of perpetual kilns and other improvements there are very few under-burned brick now in Chicago, and one source of anxiety to the architect has passed away.

Chicago is also largely favored in the way of rough stonework by having close at hand limestone in large quantities, and rock strata. It is not difficult to import brick at small prices for the country places that are on the line of the railroad; they can usually import brick cheaper than they can make it at their own places.

I have now said all I think it is proper to say to you on the subject; I have striven to give you such information as is not usually found in books. For the actual ordinary execution of the work there are several books on the subject which go into the matter in detail, such as Clarke's "Superintendence," Wightwick's "Hints to Young Architects," Johnson's "Engineering Contracts and Specifications," the latter of which is especially valuable on account of information regarding contracts, and to these and similar works I refer the young architect who wishes to complete his studies on such matters.

A RAMBLER.



IF I remember well, my last letter to THE INLAND ARCHITECT was written in Canada. It was colder than Greenland's icy shores, and I wrote it huddled up close to a scorching fire and had an overcoat on besides. That was not so long ago, either—don't seem to be over a week or so. Today I am writing this in Baltimore, one of the hottest places outside of Hades. I have shed all the clothing that the law will permit me to, and have absorbed enough iced lemonade to float a yacht. *Tempora* certainly does *mutantur*, and, I suppose, *nos mutantur in illis*, too.

It really seems too bad, though, that a fellow who could enjoy a nice time so well as I, has to mix things up in such an unenjoyable way. Why not go south in the winter and north in the summer? But no, business calls me north in the winter, and now compels me to broil and bake down here, where the thermometer will insist upon climbing up to the nineties.

Possibly it is the weather that makes me disagreeable and hard to please, but I certainly don't like Baltimore—that is, from an architectural point of view. Too much like Philadelphia. Like that latter place, Baltimore has some fine monuments, and a few good-looking houses, but the good impression made by them is entirely obliterated by the great number of monotonous streets—full of stereotyped repetitions, in the way of houses—that are its chief claim to a resemblance to the metropolis of Pennsylvania. I can go out here to pretty nearly any street intersection, and beforehand I know exactly what I will see. Looking in all four directions there is nothing but continuous rows of red-brick, three-storied houses, close up to the street; there are five white marble steps up to each respective door, and the door architrave, keystone and window sills are also of white marble, or of a whitish gray imitation stone.

True, some houses have a polished brass handrail superimposed upon the steps to help one in their ascent, but even this break-out

from the regular harmony seems to have hurt the good people's sense of the fitness of things, for they have all banded together, evidently, by some solemn compact or other, and each and every house, without any exception, has a brass lamp in the first floor front window, and upon that lamp is a red paper shade, of exactly the same color as the outside brick wall. This seems to be full compensation for the sin of the brass rail.



THE DOME.

The regular Baltimore street reminds me of the first perspective a youngster generally attempts.

There must surely be mighty slim picking for the architects here. All a man needs to do, when desirous of building a new house, is simply to cut off another slice from the common stock and stick it on to the end of an existing row—if he can find any end to them.

It is rather a mean trick—or at least a poor way to do—to ignore all the beauties of a place; the fine residences, the magnificent park, the monuments, all, and to write about only the in-artistic, the unattractive features of that place. There are beauties in Baltimore—particularly of the feminine persuasion—but then their con-

founder long rows of monotony completely overshadow them, in my mind, and when I think of the city and try and think pleasantly, those red walls and the five white marble steps spring uppermost, specter-like, and completely drive away any happier visions I would wish to conjure up for my memory to sweetly dwell upon.

Washington is simply delightful, a city one would most naturally select, of all cities, to dwell in, excepting for a couple of months in the summer. Even now the asphalted streets absorb, retain, and throw off the heat, when it ought to be cool, in a rather free and easy manner, not at all conducive to the continued good temper of one not used to the heat; but then there is so much shade, so many green spots, fountains, and fair maids in summery apparel, that one can really ignore the weather and thoroughly enjoy life, in spite of a crumpled-up collar and a damp brow.

No smoke, nor foul-smelling alleys to pass; no wild rush in the streets, nor slippery cobble-stones to break one's neck upon. Think of it, ye Chicagoans! True, there are bicycle scorches and Barbary, or barbarous, grinding-organs; but the police are arresting the former, and there is talk of Congress passing a bill making it a misdemeanor to grind one of the latter out of tune, or for any two organs to have the same tunes, which, using tariff lingo, will make it prohibitive to grind them at all.

You, I suppose, are more interested in matters architectural than in grinding organs. Well, there is no use writing to you about the Capitol, the Treasury, the White House, and all those well-worn structures; even if you never visited the District of Columbia, you probably have seen, I venture to say, perhaps thousands of photos, half-tone, zinc, lithograph, and other illustrations, murderous and otherwise, of all those buildings. I cannot describe sixteen and twenty-storied office buildings, either, for there are none. There are but few even six or seven-storied office or other commercial buildings; no need of them; nearly all of the people in Washington do business in the government buildings, rent free! and the stores are sort of overgrown village affairs, with "modern plate-glass store fronts" stuck onto ancient structures. The churches are numerous, but not many are beautiful; theaters numerous enough, too, but quite hideous. There are some really beautiful homes, and then there are the State institutions, the monumental departments, the monuments, the parks, the streets, their beauty, symmetry and cleanliness, trees, the odor of lilacs, well-dressed and well-fed leisurely people; why, one leaves Washington with a sad heart at having to do so, but with pleasant memories of it, and a sweet taste lingering about one as if—but, I'm no poet, so, what's the use of attempting a rhapsody in only poor prose!

One thing perhaps you never saw that I did the other night, the Capitol by moonlight. It is grand, a dream, as magnificent a sight as one could ask for. You forget all the mean, sneaky little things that daily occur in it, and you picture to yourself all the great men, the great deeds that those honored walls have gazed upon; you think of the sixty or more millions of people who bow in respectful submission to the laws emanating from within that pile—until they can have them repealed. There is something majestic, weird and awe-inspiring in that picture that I'll never forget, and that makes me feel as if I were committing a sacrilege in trying to transfer it to paper.

Then, another day I saw the Washington Monument just before

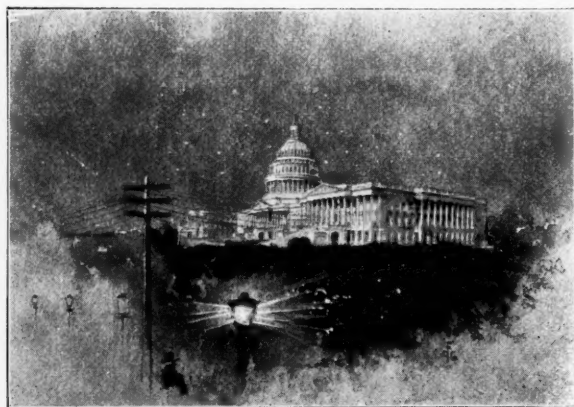
a great storm—almost a tornado, that played havoc with many signs and broke down some quite large trees—there was an inky black cloud rising in the southwest, and the old obelisk stood out against it in high relief, its rather murky paleness intensified into the whiteness of the driven snow.

Writing about the old Capitol I cannot help, being naturally a statistical fiend anyway, attempting to count up the several hundreds of efforts there have been made throughout the country to reproduce it. Almost as many, you will find, if you start out in the same calculation, as there have been attempts to improve upon poor Richardson's Pittsburg courthouse. And yet in spite of having that dome right at hand, to criticise and to improve upon, besides all the Old World domes that were levied upon for it, it still stands out preeminently *the* dome, and away ahead of anything of its kind in the country. Admitted that it has everything in its favor, surroundings, an enormous mass to grow up from and all that sort of thing, and taking everything into consideration, it can even then give a handicap and four points to any dome in this great (or is it *these* great?) United States.

The dome of the Congressional Library, within a stone's throw of the Capitol, is, to my mind, not nearly so happy in design. Of course, it has not such a pile to dominate as has the latter, and by rights should be subordinate to it, and there are precedents enough in the classics to justify its dwarfiness, but there is something so abortive about its general appearance that I often wish it were not there. This applies to the view one gets of it from almost any point excepting from the top of the front steps of the Capitol itself, from which point the building is seen in elevation, and the full value of the dome is obtained. From there it is really fine, most graceful in appearance and a fitting cap to the mass below it. But partially concealed as it is, excepting from that one point—and a fellow can't stay on the Capitol steps always—the building might be better off without it. That is from the exterior only. Inside it is really fine; in fact, taken as a whole, the library—perhaps minus the exterior of the dome—is the handsomest building the country has ever erected. It has certainly lavished the costliest of material upon it, and it has been applied by skillful hands. It is meet and fitting, too, that it should be so, for the original intent was to make it the greatest library on earth, and, Yankee-like, the country "got there." That building stands also as a sort of vindication of government work; we all know its checkered career as far as its architects and changes of architects are concerned, but in spite of all it has preserved an originality of purpose, a continuity of idea and design and a harmony, though passing through so many hands, that is rarely, if ever, equaled by any of our private work of the best class that can boast of one master, one architect and unlimited means.

The interior is chaste, though rich in ornament, the marbles well selected and the design well studied out. They are now at work upon the decorations that are in charge, I believe, of Mr. W. H. Low. Two things he has done there that I don't exactly approve of—I suppose he will immediately rectify the error when he hears that I am withholding my distinguished approval—he has overlaid the main entrance vestibule ceiling with gilt. The walls are white marble, the floor a delicate mosaic and the ceiling white and gold; the idea is good, but he got too much gold on, it lowers it and makes it too heavy in appearance for the walls to sustain. I would scratch off about eighty per cent and send it back to the Treasury for export purposes.

The same criticism applies to the main stairway hall. The walls are a pale slate gray marble, calling for some light tones in the ceiling, instead of which he has used rather heavy colors. Presumably the subjects chosen for illustration require a certain account of medium, but he ought to have changed the subjects or used a monochromatic scale. Many rooms, now finished, are gems of decorative art, others just begun give promise of being



CAPITOL BY MOONLIGHT ALONE.

beauties. Mr. Low is certainly not afraid of color, he is sometimes even daring, but is so thoroughly master of himself that no apprehension need exist in your minds but that as an entirety the decorations of our great library will be a fitting finishing off, an artistic climax to a work we ought all to be most proud of in all its details.

A stranger in Washington was asking me the other day if there was a law compelling all sculptors, who immortalized our dead heroes in bronze, to use the same horse for a model, and I



I declare it does seem so when you make the tour of the monuments. I realize you cannot very well represent one horse standing on his head and the next squatting upon his haunches, merely for diversity sake; but occasionally one might be represented as plunging furiously or something and not with exactly the same thoroughbred curve to his neck and the off-foreleg also curved in a more or less thoroughbred way. The latest addition to the equestrians is General Hancock. It is the same old type and upon the same old stereotyped pedestal, a pleasing enough and well enough modeled figure taken singly, but no particular individuality to it to distinguish it from its many fellows—just another one of a pretty well-matched troop of cavalry. This statue was unveiled a few days ago, and at the ceremony I saw the President; he was looking well, I thought, for a man who has the cares and worries he has to carry upon his rather broad shoulders, not to mention the petty annoyances that go with the office that are calculated to drive a man to suicide or the insane asylum. The few days I was in Washington illustrated a few of them to me; the gaping, scrambling mob that presses around him when the poor man goes to church; men and their powerful friends clamoring for jobs; the squabbles among those who have jobs that he has to settle; little pitfalls prepared for him by the legislators that he has to avoid, the lack of disinterestedness on the part of friends—bah! who'd want to be the President? But what has the President to do with the monuments? I hope it will be many years before he will be a candidate for one. When I wandered away from the issue I was going to say that of them all the Thomas statue is the most pleasing to me. It is conspicuous from afar, for one thing, and can be seen to advantage near by. There is character to the man; action and character too, for that matter, to the horse—a most effective piece of work.

The monument of them all, mounted or a-foot, that I have the least use for is Greenhough's Washington, near the Capitol; the common folks, not understanding the allegory, call it the "naked man." Surely the father of our country had character enough and sufficient individuality and acted in enough stirring scenes to justify his being represented as himself, in any one of those many scenes, rather than to be forced out of his clothes and compelled to do duty as a very poor, meek-looking and flabby Roman!

I said above somewhere that there were many beautiful homes in Washington. I want to hedge on that statement and qualify it. There *are* beautiful places, well-kept lawns, porches covered with trailing ivy and all the accessories that enhance a house, but to say that these houses are beautiful architecturally is incorrect. Some of the simple old ones, the colonial mansions of our fathers, are good to look upon, but most of the pretentious fellows, the recent growth, lack design. Expensive and restless, joggy and minareted and all that, but no architecture, they come under the general head of carpenter's gothic, and in that respect bear a close resemblance to the palaces of San Francisco. You would expect that the cream of society, as you find it in Washington, endowed with wealth and considerable taste, would naturally turn to the best talent in the country when it wanted its homes designed, but it evidently didn't.

There have been long gaps between my visits here and there around the country, and I have kept no notes nor have I near at hand any groups of photos arranged in order as to locality, but just from memory, roughly speaking as it were, I would place the principal cities in about the following order when considering their merits and claims to precedence on account of their modern domestic architecture, not in quantity but quality: First, New York—I can't help it, dear Chicago, it hurts me, but honesty compels; then St. Louis, Chicago, Boston, Denver, Minneapolis, Seattle, and with San Francisco and Washington pretty well down the line.

The past few days I have spent sketching up the historic Potomac, roughing it in the hills, among the 'possums, and floating down in ante-bellum barges upon the much-locked Cumberland canal.

It is beautiful country, just too early for flies, mosquitoes and other pests, and is not yet too warm to be comfortable. Just "too sweetly delightful" as the dear girls would say.

Next week I intend spending some time, now that I am in this section of the country, visiting and sketching around Alexandria, Mount Vernon and other spots hallowed by memories and sacred to the nation. There I will find some real "old colonial," and, of course, the INLAND ARCHITECT will have the distinguished privilege of publishing some of these sketches—provided, always, that they be on Indian paper and in a limited edition only.

Speaking, or writing rather, about sketches starts me a-moralizing. Why is it, I ask myself, that when a fellow (other fellows, of course) acquire some name and fame, and incidentally a habit

of getting big prices for his work, he grows careless and what one might call "sloppy" in his drawing, contenting himself with a few, a very few, masterly dashes that may or may not fully convey part of the idea that it is the intention to illustrate; while in the early times he used to make drawings that were sure to illustrate all the idea, and so fully that it needed no explanatory charts to translate?

I have in mind just now one artist particularly, a young fellow, one of three or four who have deservedly earned fame as illustrators. He particularly shines as a depicter of society folk. His drawings that first attracted attention were careful, well-detailed affairs, that the longer you looked at the more pleasure you derived and the more you thought of his ability. Today he slashes off something that conveys a sort of general idea of the subject; that is, you catch his intention at first glance, but you mustn't study it or ever look at it again, for as sure as you live you'll get a face mixed up with the back of the head or the hat.

Another, a Frenchman, who has won great fame as a magazine illustrator, used to make a drawing that, to apply a popular test, looked just like a photograph (?). I'm not exactly adopting that standard test, but used to admire them for their truth to nature and detail. There was a scholarly, finished look to them that one seeks for and expects, but, alas! finds not in his drawings of today. These are of the most impressionable of the impressionist order. You pay your money and you get mighty little choice. The picture may be a wreck off the coast of Labrador, or it may represent President Cleveland opening the World's Fair, but you look down in the corner and recognize the familiar monogram, and then you say, "Oh, my, how lovely!"

Now, is it not very much so with architects? Do the men who have acquired fame give the buildings intrusted to them the study and care that the subjects merit, or even that they used to give in the earlier times? You may say that now these big guns have acquired such experience and are so proficient in the art that they can and are justified in scratching off just a few *impressionist* lines and then turning the matter over to an assistant to finish up, and that the master-eye will detect any misstep, error or lack in the final drawing in time to correct it before its transformation into "everlasting rock" or the "resisting steel." This, I think, is a false notion, for I believe that the man who has been successful and who has erected a large number of buildings that average up well in design, must have natural ability; it is not something that he stumbles into or can even attain by years. In his earlier days he used to strain every energy, study and work upon a subject—his future depended upon it—there was pride, ambition, everything to spur him on. Today he has not the same incentives. He must



THE CUMBERLAND CANAL.

recognize that he has outstripped his fellows in the race; he is more or less self-satisfied, and in all probability pretty well fed, with the results that that natural ability and talent of his is somewhat blunted. In fact, to keep up to the standard he has set for himself and to keep out of the rut that would be most natural for him to fall into of copying his earlier works, I maintain he has to work harder and make a greater mental effort than he used to in his youth. Further I maintain that to impress a building with his individuality he must needs "work it up" through every step, aye, even to the detailing and the very modeling of the ornaments, and not be satisfied with merely affixing his signature in the corner.

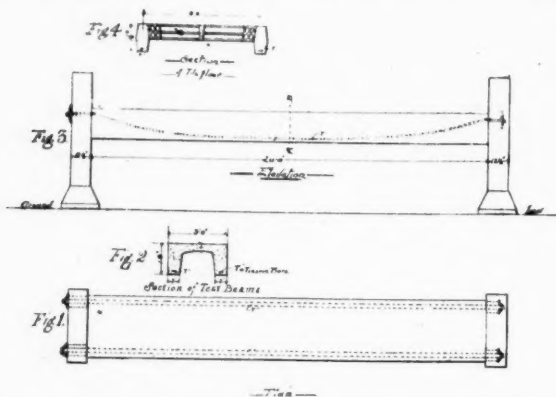
This is my humble opinion, and I may be wrong; heaven knows that I am often enough, and am always willing to acknowledge it, so would like to have someone of the men who enjoy a big practice express his views upon the matter, for my opinion is simply hazarded—never having been a big gun, you know.

Since sending off my very rambling "Ramblings" I have seen the Congressional Library from down the river and from up in the hills. I remember having made some disparaging remark about its dome, but since seeing it from those distances I am more impressed with the nobility and purity of the entire mass; so, as congressmen say after cussing a fellow-member, "I wish to withdraw anything derogatory I may have said about the gentleman," and further will even claim that today it stands forth the most architecturally beautiful public building in the country.

AN EXPERIMENT IN ECONOMIC FLOOR CONSTRUCTION.

MR. L. G. HALLBERG, a well-known Chicago architect, has recently been making investigations into a system of floor construction which was attempted twenty years ago, but never came into extensive use. It is based on the tensile strength of steel and the resistance of hard concrete to compression. He proposes to construct girders and floor beams of these materials, and to build them in the positions in which they are to be used, using a box centering and compacting the concrete around a flat steel bar, which is bent into the form of a catenary curve. At the center of the beam it is not more than $1\frac{1}{2}$ inches from the bottom, and rises toward each end nearly to the top, where it passes through cast-iron plates in the form of a loop, in which a round iron crossbar is inserted. He proposes not only to build the beams in position, but the floor as well, by a simultaneous operation, the latter to be either a flat concrete arch or a hollow tile arch. It is claimed that the reduction in the weight of steel will be much more in the first cost than the added cost of the concrete.

On Thursday, the 2d of the present month, a large number of Chicago architects, on invitation of Mr. Hallberg, examined some test beams that he had made on a vacant lot next to his residence on Huron street, where he explained the system as far as he had carried it out. There were two examples. The first consisted of two beams, sixteen feet between bearings and eighteen inches deep, made of concrete composed only of cinders and Portland cement, each being seven inches wide at the bottom and



slightly wider at the top. They were connected by a section of floor in the form of a concrete-segment arch, four inches thick at the crown, and the upper surface of the floor, including the width of the beams, was three feet wide. Each beam had a 3 by $\frac{1}{2}$ inch steel tension rod, with plates at each end. These beams were not tested. The second sample, of which we present an illustration in Figs. 1, 2 and 3, was of similar section, but twenty feet between bearings, and the concrete was composed of Portland cement, sand and fine broken stone. This was loaded with 30,000 pounds of pig iron, distributed so as to be heaviest in the center and diminishing in weight toward the bearings. The experiment was not carried farther, there being $7\frac{1}{2}$ tons of iron plus half the weight of the floor on each beam, and the deflection was said to be about $\frac{1}{4}$ inch. Calling the whole a section of floor the distributed load was 500 pounds per superficial foot, and had the beams been six feet from center the distributed load would have been about 250 pounds to the superficial foot.

At Fig. 4 is shown the section of a piece of flooring, drawn to the same scale, in which the beams are sixteen inches deep, eight inches wide, and six feet from center. The connecting floor supported by the beams is made of 8-inch hollow tiles. The outside tiles follow the direction of the beams, and the intermediate tiles are subjected to end pressure. A box is made for the lower half of each beam, the tiles are laid on a plank centering, so that the outside rows form the upper half of the beams, and the concrete is then filled in up to the top of the tiles, practically forming a skewback on each side of the flat arch. A solid tile key course is then driven down between the two end pressure tiles, compacting all the joints. The beams are tied across by anchors, with bent ends, laid in the joints between the tiles.

Mr. Hallberg intends to test the beams already made to the point of disruption and to build a section of floor similar to Fig. 4, which will also be tested to find its ultimate strength.

There are no formulæ for ascertaining the strength of these constructions, and extensive experiments will be necessary to demonstrate not only their feasibility, but their economy as well. They seem to show many advantages where coffered ceilings are desired, and it may be demonstrated that they can be used with advantage for flat ceilings. There is no doubt as to their fireproof qualities, for Portland cement concrete has been demonstrated to be equal to any other material in this respect, the only objection urged against it being on account of its great weight. This cannot be of much importance in the case of coffered ceilings as here shown. To make it successful much will depend upon the quality of the cement used, the composition of the concrete, and the care with which it is put in and tamped down. Absolute uniformity in these respects will be essential to its success as a constructive system.

THE SOUTHERN ASSOCIATION OF ARCHITECTS.

THE following letter has been addressed to all the former members of the Southern Chapter, A. I. A., and to others, and is self-explanatory:

DEAR SIR AND FELLOW,—Owing to the fact that, for various reasons assigned, there was not a quorum of members in attendance at the meeting of the Southern Chapter, at Richmond, Virginia, April 23, and it was deemed inexpedient to try to secure a quorum by telegraphing to absentees, it was decided that no business should be transacted, except to count the letter ballot recently taken, and to officially announce the result of that ballot, by circular letter and through the *Southern Architect*.

No responses were received from one-fifth of the members, some of whom have not been cooperating with the Chapter in any way. Of the votes cast, ninety-five per cent were in favor of maintaining an organization among the architects in the southern states, and slightly over two-thirds were in favor of changing the name to the "Southern Association of Architects" and obtaining a state charter, and that open competitions should be unprofessional, and about three-fourths were in favor of having honorary contributing members, and a fund for employing counsel to defend members in their rights before the courts of the country, and changing the time of meeting to late in the autumn, leaving a decided majority of all the members, whether active or otherwise, in favor of each proposition submitted.

It is the sense of a large majority of the members of the organization, that we are not tearing away from the A. I. A., but that a change of name is desirable and a state charter is necessary for the proper government of our organization; and beyond this, it is desirable to still be a chapter of the A. I. A., and to retain its charter, but under the new name, just as in the case of the Boston Society of Architects. The two charters would give greater strength, and at the same time would be no ground for disagreement.

This contemplated change, as above set forth, was induced by the fact that the by-laws of the A. I. A., as recently changed, conflict with the proper working and best interest of the organization, inasmuch as applicants for membership are being received from our territory into the A. I. A. without the indorsement, approval, or even knowledge of this organization, while this organization is denied the right to elect and enroll new members until approved by the A. I. A., besides a number of other regulations that are interfering with the objects of this organization.

It is sincerely hoped that the A. I. A. can see its way clear to modify its by-laws regarding the twenty-five-mile clause, the concurrent action on membership, increase of membership fee to \$10, and annual dues to \$10 in the Chapter, and that interference on the part of its Board of Directors shall cease regarding questions of policy of the Chapters, and of actions in private practice of the members of the Chapters, wherein their (the A. I. A.) constitution and by-laws are silent; for then there would be perfect harmony, and this organization would flourish as it did formerly. But of course it must remain with the A. I. A. to say what the relationship shall be.

So far as competitions are concerned, it is the sense of the members of the organization that open, irregular competitions shall be considered unprofessional, but does not necessarily condemn select competitions, conducted on such methods as are legitimate, and that will make awards according to merit.

Owing to the great territory covered by this association, it would seem to be desirable to have a number of smaller city or state organizations, instead of one so large, but when the full force of the truth is seen in the condition (and not a theory) that obtains, that there is not a single city, and only two states in the southern states that have A. I. A. members sufficient to form a Chapter, then it becomes very apparent that the organization covering the large territory is the proper one to foster.

It has been decided, and official notice is hereby given, that this organization shall be known in the future as the Southern Association of Architects, and that its constitution and by-laws shall be revised and made to conform to the spirit of the interrogatories voted upon in the letter ballot of March 3, 1896, which, with the charter, shall be submitted for ratification at the next annual meeting.

By virtue of the fact that no meeting for election of officers and directors was held under the by-laws of the Southern Chapter, the present officers and directors will hold over until their successors are chosen.

W. P. TINSLEY, Secretary and Treasurer.
M. J. DIMMOCK, President. Lynchburg, Va., May 13, 1896.

NEW PUBLICATIONS.

WE have received from the United States Department of Agriculture (Division of Forestry) Circulars Nos. 11, 12 and 13, Circular No. 12 being of special interest to architects, since it gives the result of experiments on "Southern pine." We quote the following from it as being contrary to the generally received ideas on the subject:

From the preceding table it would appear that large timbers, when symmetrically cut (i. e., with the center of the log as center of the beam), develop as beams practically the same strength as the average of the small pieces that may be cut from them, and sometimes even higher values, the explanation being that, cut in this manner, the extreme fibers which are tested in a beam come to lie in that part of the tree which, as a rule, contains the strongest timber.

To quote more than this would take up too much space, and we refer our readers to the circular itself for further information.

SYNONYMS, ANTONYMS, AND PREPOSITIONS.—A new volume on "Synonyms, Antonyms, and Prepositions" will shortly be issued by the Funk & Wagnalls Publication House. This has been prepared with great care by the Rev. James C. Fernald, editor of the Department of Synonyms in the Funk & Wagnall Standard Dictionary. The editor has carefully discriminated the chief synonyms of the English language, some 6,000 or 7,000 in number, by the same method that has won so much approval in the Standard Dictionary. Taking one word in each group as the basis of comparison, Mr. Fernald defines this clearly and then he proceeds to show how the other words agree with or differ from it, thus the whole group is held to one fixed point. The treatment is in popular and readable style. The book also contains a large number of Antonyms as well as Prepositions, and its closing pages are devoted to Questions and Examples of service to both teacher and student.

The type, brevier, is pleasing to the eye and the key-words at the top of each page enhance the value of the book for purposes of ready reference.

LETTERING FOR DRAFTSMEN, ENGINEERS AND STUDENTS: A Practical System of Freehand Lettering for Working Drawings. By S. C. Reinhardt. D. Van Nostrand & Co., publishers, New York.

There are any number of books on "lettering" on the market, of more or less value; most of them devote themselves principally to ornamental lettering. This book differs from them in treating altogether of plain lettering, or as it is termed here, "One-Stroke Lettering." If there is one thing more wasteful than another, it

is putting ornamental lettering on construction drawings; the drawings go into the hands of workmen who do not appreciate the ornament and do not always comprehend the meaning. For working drawings, none other than the plainest lettering should ever be used, without any shaded lines or variation in thickness. All lines should be moderately heavy in order to be readily photographed, since nearly all our copies are now made by photography. This book inculcates this useful lesson, and if it successfully does so, it has well justified its publication.

OUR ILLUSTRATIONS.

Design for Church. E. G. W. Dietrich, architect.
Design for Residence. E. G. W. Dietrich, architect.
Residence for R. M. Zug, E. C. Van Leyen, architect.
Residence for F. P. Hall. E. G. W. Dietrich, architect.
An Adobe at Trinidad, Colorado, J. B. Fisher, del., Chicago.
Old Sparhawk House, Kittery, Maine. Built 1742. Frank C. Adams, del.

Residence for Charles A. Chidsey, Detroit, Michigan. E. C. Van Leyen, architect.

Exterior Details from the Sparhawk House. Measured and drawn by Frank C. Adams; also, Interior Details.

Old Colonial Details from Portsmouth, New Hampshire; also, Chippendale Chairs. Measured and drawn by Frank C. Adams.

Competitive Design for a Country Club, Second Year Architectural Class of Art Institute, Chicago. Submitted by Fred G. Mueller.

Photogravure Plate: Semi-detached Houses for Architect Donaldson, Detroit, Michigan. Donaldson & Meier, architects.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure Edition.

Mouat Flats, Detroit, Michigan. Mason & Rice, architects.
Engine House No. 18, Detroit, Michigan. Mason & Rice, architects.

Union Trust Building, Detroit, Michigan. Donaldson & Meier, architects.

Police Station, Belle Isle Park, Michigan. Mason & Rice, architects, Detroit.

Residence of William Livingston, Jr., Detroit, Michigan. Mason & Rice, architects.

Detail of Entrance, Masonic Temple, Detroit, Michigan. Mason & Rice, architects.

Front View, Office Building of Hiram Walker & Sons, Walkerville, Ontario. Mason & Rice, architects, Detroit.

MOSAICS.

ARTICLES of incorporation were filed in the recorder's office at Washington, D. C., on March 14, for the Association of American Draftsmen. W. T. Jones, Sidney I. Besselièvre, George P. Frothingham, W. T. Powell, A. M. P. Maschmeyer and Arthur B. Cassidy are the incorporators. One purpose is to discourage the employment of foreign labor in their department where equally satisfactory American draftsmen can be obtained. They also propose to help secure the careful, practical and technical training of all American draftsmen.

In a neat and somewhat unique card William J. Dodd and Arthur Cobb, of Louisville, Kentucky, announce that they are now associated as architects. Mr. Dodd was a draftsman in the office of W. L. B. Jenney, of Chicago, some twenty years ago, when that gentleman conducted a form of "atelier" in which so many young men who have since made national reputations as architects first learned the rudiments of the profession. Mr. Dodd has practiced in Louisville for many years, being the author of much of the best work in that city; recently, however, had exclusive charge of the designing department of the late firm of Maury & Dodd. Recognizing the desirability of supplementing his work by that of an expert construction engineer, he has made an alliance with Mr. Cobb, who, to a theoretical education, has added years of training and experience in the construction of some of the most prominent buildings in the country.

BUILDING OUTLOOK.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, July 10, 1896.]

A careful and impartial observer of the course of trade must feel assured of the existence of a strong foundation in our business relations. The leading thought for three or four years with each individual, firm and corporation has been to cut down outlays, increase incomes and lessen the cost of force per unit and increase the production per unit of force expended. This process has been going on assiduously. Liquidation has been taking place, and at the same time an expansion of productive capacity which seems out of keeping with the general restriction going on. The process has not been without its advantages, but they have not yet reached the surface. During the past month prices have weakened and production has been restricted in many lines. Even in building operations the rush has partly subsided. Building material of all kinds has been uniform in price, as a rule, throughout the season. Capital is ready to flow in in large volume, but a more conservative disposition has arisen within a month or two and enterprises that were planned for midsummer initiation will be delayed. It seems strange from one point of view that mere questions of governmental policy should restrict commercial and industrial enterprise, but such appears to be the fact and tendency.

During the half-year just closed a fair, and, on the whole, a satisfactory volume of business has been done. The American loves to rush, to work at

high pressure, to expand and pile up business. To have to measure and control his speed, to have to watch the absorbing capacity of the market, is distasteful, but the business of 1896 has been conducted in this way. The production of goods has been enormous; building operations, as shown by totals, exhibit a wonderful aggregate. We ought, it would appear, to be satisfied, but having made calculations for heavier pressure, we are discontented at the lessened rate of speed.

There is reason for caution and occasion for the utmost prudence. The fundamental conditions are all in our favor. The masses of the people sometimes, but never twice in succession, make a mistake. Vital issues are now before the country. As a people we are in a transition era. The masses have faith in possibilities and results to be reached which the fewer who are in the forefront of political and financial councils may not have, but the outcome will be all right.

SYNOPSIS OF BUILDING NEWS.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Chicago, Ill.—Architects Cowles & Ohrenstein: For Messrs. Hirsch & Obermann, at Kokomo, Indiana, a four-story and basement tin plate factory, 68 by 142 feet in size; to be constructed of common brick, have the necessary machinery, engine, boiler pumps, dynamo, etc.

Architect Henry P. Beiler: For P. Simon, alterations and additions to three-story and basement building at 495 Dearborn avenue; will put in all new quarter-sawn oak finish, the best of modern plumbing, gas and electric fixtures, steam heating and hot-water circulation, Wilkes heater in basement, electric light, laundry fixtures, electric bells, speaking tubes; cost \$9,000. For Frederick Becker, at southeast corner of Oak street and La Salle avenue, alterations of two-story building; all modern improvements; cost \$3,000.

Architect D. Mahaffey: For Rev. G. Snyder, remodeling building at 279 Seminary avenue into three-story modern flat; will put in all modern sanitary improvements, oak interior finish, mantels, sideboards, gas fixtures, bells, speaking tubes, furnaces, etc. For A. F. Rieberg, at 82 to 86 West Forty-eighth street, a three-story and basement store and flat building, 60 by 70 feet in size; to be of buff Bedford stone front, have gravel roof, oak and Georgia pine interior finish, mantels and sideboards, gas fixtures, electric wiring, bells, speaking tubes, steam heating, etc.

Architect Niels Buck: For Frank Strohehn, a three-story flat building, 88 by 25 feet in size; to be built at Graceland avenue near Southport avenue, it will be of buff Bedford stone front, have interior finished in quartered oak and Georgia pine, sideboards, mantels, the best of open nickel-plated sanitary plumbing, gas and electric fixtures, furnaces, etc. Also two-story, basement and attic frame residence, 24 by 46 feet in size, at the corner of Tule and Ashland avenues; stone basement, hardwood finish, mantels and sideboards, the open plumbing, gas fixtures, hot-water heating. Also two two-story frame houses on Grace street near Robey; brick basements, oak and Georgia pine interior finish, mantels, sideboards, gas, laundry tubs, etc.

Architects Lapointe & Hickok: For Rev. Bourdeau, a two-story parochial residence, at St. George, Illinois; it will be constructed of pressed brick on four sides, have quarter-sawn oak interior finish, mantels, sideboards and consoles, gas fixtures, laundry fixtures, the best of open nickel-plated plumbing, electric bells, speaking tubes, furnace, etc. For C. B. Holborn, a three-story store and flat building, 25 by 100 feet in size; to be erected at 126 Colorado avenue; to be of buff Bedford stone front, have oak and Georgia pine finish, the modern plumbing, gas fixtures, mantels, sideboards, etc.

Architect Theodor Lewandowski: For Charles Weber, a two-story, basement and attic residence, 28 by 54 feet in size; to be erected at Junior terrace, Buena Park; it will be of stone and pressed brick, with tile roof, have hardwood interior finish, mantels, sideboards and consoles, gas and electric fixtures, furnace, etc.

Architect John P. Hettinger: For G. F. Shuster, a four-story and basement flat building, 27 by 70 feet in size; to be erected at Oak street near Lake Shore Drive; the front will be of handsome design in Raindrop stone, the interior to be finished in oak and have all the modern conveniences, electric wiring and steam heating. For Mrs. F. Meyer, on Mohawk street near Garfield boulevard, a two-story flat building of pressed brick and stone front, modern improvements, furnaces, etc.

Architects Dwen & White: For John Q. Adams, a two-story, basement and attic frame residence, 30 by 40 feet in size; to be erected at Wheaton, Illinois; it will have a stone basement, hardwood interior finish, mantels, sideboards, consoles, gas and electric fixtures, laundry fixtures, hot-water heating. Also made plans for additions and alterations to residence on Thirty-third street; will put in the modern plumbing, gas and electric fixtures, oak interior finish, mantels, etc.

Architect A. Sandegren: For Frank Gustafson, a four-story and basement apartment house, 28 by 80 feet in size; to be erected at 4553 Oakwald avenue; it will be of buff Bedford stone front, have interior finished in oak, birch, maple and sycamore, the best of modern open plumbing, mantels and sideboards, gas and electric fixtures, etc. For S. Morris, at 198 Twelfth street, a three-story and basement flat building, 25 by 70 feet in size; to be of pressed brick, trimmed with buff Bedford stone, have quarter-sawn oak finish, mantels, gas fixtures, electric bells, speaking tubes, furnaces.

Architect A. Zimmerman: For Mrs. Fuchs, a three-story store and flat building, 130 by 200 feet in size; to be erected at 459 East Division street; to be of pressed brick and stone, have Georgia pine finish, mantels, sideboards, gas and electric fixtures, heating, etc.

Architects Huehl & Schmid: For Peter Hogan, at 136 North State street, a three-story and basement flat building, 25 by 70 feet in size; to be of buff Bedford stone front, have oak interior finish, mantels, sideboards, gas and electric fixtures, electric bells, speaking tubes, cement basement, steam heating, etc. For Henry Bartling, on Beacon street near Wilson avenue, Sheridan Park, Ravenswood, a two-story flat building, 25 by 68 feet in size; to have a buff Bedford stone front, hardwood finish, mantels, sideboards, the best of modern open plumbing, electric wiring, steam heating, etc.

Architects Franklin P. Burnham & Co.: Made plans for a two-story school, 40 by 50 feet in size; to be erected at Wilmette; to be of pressed brick and stone, have Georgia pine finish, gas fixtures, heating, etc. For John McFarland, a two-story frame residence, 31 by 37 feet in size; to be erected at Winetka; brick basement, hardwood finish, mantels, sideboards, modern plumbing, hot-water heating, etc. For Charles Eastman, at Evanston, remodeling residence, new plumbing, heating, etc.

Architect H. B. Wheelock: For Hunt Brothers, at 17 Milwaukee avenue, a seven-story warehouse, 40 by 110 feet in size; to be of pressed brick, with Bedford stone trimmings; mill construction; have the necessary plumbing, steam heating, elevators, electric lights, etc.

Architect J. M. Hoskins: For Timothy Higgins, a two-story flat building, 24 by 60 feet in size; to be built at 450 Troy street; to be of granite, brick front, have Southern pine finish all through, modern plumbing, gas fixtures, etc.

Architects Fowler & Wright: For Mrs. Minnie M. Miller, a two-story, basement and attic residence, 25 by 53 feet in size; to be erected at Sixty-sixth street and Woodlawn avenue; it will be of pressed brick with buff Bedford stone trimmings, have hardwood finish, the best of modern plumbing, gas and electric fixtures, mantels, furnace, etc.

Architect Howard Van Doren Shaw: For J. H. Campbell, a two-story, basement and attic residence, 35 by 45 feet in size; to be erected at Beverly; it will be of pressed brick one story, and above of frame, have interior finished in quarter-sawn oak, mantels, sideboards, consoles, gas and electric fixtures, hot-water heating, etc. For Mrs. Paine, a two-story, basement and attic resi-

dence, 30 by 45 feet in size; to be erected at Dixon, Illinois; to be of frame with stone basement, have quarter-sawn oak finish, the modern open sanitary plumbing, gas and electric fixtures, bells, speaking tubes, laundry fixtures and driers, hot-water heating, etc. For M. Hosking, a two-story, basement and attic residence, 25 by 50 feet in size; to be erected at Calumet, Michigan; to be of frame with stone basement, have hardwood interior finish, mantels, sideboards, electric fixtures, furnace.

Architects Brompton & Lawson: Making plans for five two-story, basement and attic residences, 24 by 50 feet each; to be erected at Sunnyside avenue, near Perry street, for H. C. Wood; they will be of frame on brick and stone basements, have interiors finished in quarter-sawn oak, the modern open plumbing, gas fixtures, ranges and fireplaces, mantels and sideboards, laundry fixtures, etc.

Architect A. F. Hussander: For G. Burghart, a three story flat building, 22 by 56 feet in size; to be erected at Sheffield avenue near Grace; the front will be of buff Bedford stone, the interior to be finished in quarter-sawn oak, have the best of modern plumbing, gas fixtures, mantels, furnaces, etc. Also making plans for three-story flat building, 29 by 76 feet in size; to be erected at Sheridan Road near Leland avenue; to be of blue Bedford stone front, have interior finished in mahogany, birch, oak and maple, special mantels and sideboards, gas and electric fixtures, gas ranges and fireplaces, laundry fixtures, etc.

Architects R. T. Newberry: For M. E. Updike, a four-story store and flat building, 75 by 100 feet in size; to be erected at 4740 to 4744 Madison avenue; to be of pressed brick and stone front, hardwood finish, mantels and sideboards, gas and electric fixtures, steam heating, electric lights, gas ranges, etc.

Architect J. J. Egan: Made plans for a four-story addition to Mercy Hospital, at Calumet avenue and Twenty-sixth street; size 45 by 130 feet; to be of pressed brick and stone, have hardwood finish, the best of modern sanitary improvements and ventilation, elevators, marble work, electric light, steam heating, etc.

Architect C. E. Brush: Finished making drawings and will commence putting in the foundations at once for the four-story and basement apartment house at One Hundred and Fifteenth street, for James A. McLane; it will be 60 by 100 feet, of pressed brick with buff Bedford stone trimmings, tile roof, have hardwood finish, gas and electric fixtures, the best of modern plumbing, electric light, steam heating, etc.

Architect Richard E. Schmidt: For R. Baker, a two-story, basement and attic residence; to be erected at Bryn Mawr; to be of frame with stone basement, have oak finish, the best of sanitary plumbing, gas fixtures, etc. For H. R. Kent, a two-story, basement and attic residence; to be erected at Bryn Mawr; frame, stone basement, hardwood finish, gas and electric fixtures, hot water heating, etc.

Architect L. G. Hallberg: For Peter Nelson, a three-story and basement flat building, 25 by 60 feet in size; to be built at Melrose street, near Halsted; it will be of buff Bedford stone front, have oak and Georgia pine finish, mantels and sideboards, gas and electric fixtures, ranges and fireplaces. Also made plans for the three-story and basement apartment house, 52 by 70 feet in size; to be erected at Paulina street, north of Tuttle avenue, for the Bethany Home estate; the front will be of buff pressed brick with Bedford stone trimmings; the interior to be finished in quartered oak, have the best of open sanitary plumbing, gas fixtures, fireplaces and ranges, laundry fixtures, furnaces. Also made plans for a three-story flat building, 47 by 80 feet in size; to be erected at Ashland avenue, near Winnemac avenue; to be of pressed brick and stone front, have hardwood interior finish, the modern sanitary improvements, mantels and sideboards, gas and electric fixtures, heating, etc.

For Ogden, Sheldon & Co., a three-story livery stable, 100 by 100 feet in size; to be erected at Indiana street, east of St. Clair street; to be of pressed brick and stone front, have plumbing, etc. For John Erickson, a three-story and basement flat building, 52 by 70 feet in size; to be erected at Wilson avenue, near Ashland avenue; to be of buff Bedford stone front, have interior finished in quarter-sawn oak, the modern open plumbing, gas and electric fixtures, mantels, sideboards, gas ranges and fireplaces, cement work, steam heating, etc. For M. J. Lissberger, a three-story store and flat building, 123 feet front and 48 feet deep; to be erected at the southwest corner of Thirty-first and Fox streets; it will be of pressed brick and stone, have galvanized iron bays and cornice, Georgia pine interior finish, the modern open plumbing, mantels and sideboards, marble wainscoting, steam heating, electric wiring.

Architects Handy & Cady: For E. M. Fuller, a two story store and office building, 80 by 91 feet in size; to be erected at Madison, Wisconsin; it will be of pressed brick with terra cotta trimmings, have hardwood finish, marble wainscoting, tile floors, steam heating, electric light, etc. Also making plans for a handsome two-story, attic and basement residence, 46 by 64 feet in size; to be erected at Lincoln, Illinois; it will be of brick with tile roof, have hardwood interior, mantels and sideboards, gas and electric fixtures, gas ranges and fireplaces, heating, etc.

Architect F. W. Beall: For Mr. R. H. Catlett, a fine colonial residence, 47 by 48 feet in size; two story, basement and attic; to be erected at Staunton, Virginia; the first story will be of stone and the rest frame, have elegant hardwood interior finish, mantels, sideboards and consoles, the best of modern plumbing, leaded glass, laundry fixtures, cement floor, marble wainscoting, tile bathrooms, hot-water heating.

Architects Hallstrom & Ockerlund: For Mrs. C. G. Johnson, a four-story and basement flat building, 25 by 60 feet in size; to be erected at 207 Sedgwick street; it will be of pressed brick and stone trimmings, have Georgia pine interior finish, gas fixtures, modern open plumbing, steam heating, etc.

Architects Marble & Demoney: For Mrs. C. H. Solomon, a three-story residence, 26 by 75 feet in size; to be erected at Washington boulevard; it will be of Raindrop stone front with copper bays and cornice, have interior finished in mahogany, birch and quarter-sawn oak, the best of open nickel-plated plumbing special mantels, sideboards and consoles, gas and electric chandeliers, electric bells, speaking tubes, electric light, etc. For John Michael, a three-story store and flat building, 25 by 100 feet in size; to be erected at 326 West Madison street; to be of terra cotta and pressed brick, have Georgia pine finish, the modern sanitary improvements, gas fixtures, steam heating, electric light, etc.

Architect F. D. Hyde: For L. B. Ruka, a two-story, basement and attic residence, 32 by 48 feet in size; to be erected at Boscobel, Wisconsin; to be of frame with stone basement, have hardwood finish, mantels, sideboards, consoles, hot-water heating, the best of sanitary improvements, etc.

Architect Dwight H. Perkins: For F. C. Brown, a two-story, basement and attic residence, 30 by 50 feet in size; to be erected at Highland Park; it will be a combination of brick and frame, have elegant hardwood interior finish, gas and electric fixtures, mantels, sideboards and consoles, tile bathrooms, etc.

Architect C. M. Palmer: For Daniel Daffin, a four-story and basement apartment house, 50 by 80 feet in size; to be erected at Forty-fifth street east of Grand boulevard; it will be of buff Bedford stone front, have interior finished in oak and Georgia pine, the best of modern plumbing, gas and electric fixtures, electric light, steam heating, etc.

Architect M. R. Carpenter: For Charles Raiser, a three-story and basement flat building, 28 by 80 feet in size; to be erected at 500 Seminary avenue; to be of pressed brick and stone front, have hardwood finish, mantels, sideboards, gas fixtures, etc. For Mr. Ure, a two-story frame house, 22 by 48 feet in size; to be built at North Hermitage avenue near Lawrence avenue; to have a tile basement, oak finish, mantels, gas fixtures, etc.

Architect G. C. Nimmons: For Mrs. M. J. Todd, a two-story, basement and attic residence, 32 by 50 feet in size; to be built at Bluffton, Indiana; to be of frame with stone basement have hardwood finish, all open plumbing, furnace, etc. For Mrs. J. McCormick, a two-story residence, 35 by 50 feet in size; to be built at Bluffton; frame, stone basement, hardwood finish, mantels, etc. For Mrs. M. Porter, a three-story apartment house, 100 by 63 feet in size; to be erected at 495 to 501 Belden avenue; to be of pressed brick and stone front, have all improvements.

Architect J. H. Wagner: For S. J. Sliffeld, an eight-story factory, 40 by 90 feet in size; to be erected at Clinton street between Monroe and Adams streets; to be of pressed brick and stone front, mill construction, have elevators, the necessary plumbing, steam heating, electric light, etc.

Architect George Beaumont: For McConnell Brothers, a four-story and basement apartment house, 100 by 116 feet in size; to be erected at Lake avenue near Thirty-ninth street; it will be of stone and pressed brick, have hardwood interior finish, all open sanitary improvements, gas and electric fixtures, gas ranges and fireplaces, laundry fixtures, steam heating, electric light, marble and tile work, etc.

Architect Jules De Horvath: For J. P. Atwater, an eight-story apartment house, 100 by 120 feet in size; to be erected at the corner of Chicago avenue and Rush street; the first story will be of rock-faced buff Bedford stone and above this will be of buff brick with stone trimmings, the interior to be finished in hardwoods, marble wainscoting, tile floors, mosaic floor for entrance, the best of modern plumbing, gas and electric fixtures, steam heating, elevators, etc.

Architect J. A. Miller: For Jacob Koch, a three story and basement flat building, 25 by 60 feet in size; to be built at Oakdale avenue near Racine; to be of pressed brick and stone front, have hardwood finish, mantels, gas fixtures, steam heat, etc.

Architect Paul Gerhardt: For O. Arzbacker, a two-story residence, 35 by 48 feet in size; to be erected at Malden street, near Leland, Ravenswood; frame, brick basement, plumbing, furnace, etc.

Architects Gatterdam & King: For James Bennett, a two-story frame residence, 25 by 56 feet in size; to be built at Irving Park; brick basement, hardwood finish, mantels, gas fixtures, furnace.

Cleveland, Ohio.—Architects Coburn, Barnum, Benes & Hubbell, New England Building, have the following work: For the Western Reserve Historical Society a new \$50,000 pressed brick and terra cotta building, to be located on Euclid avenue near Wade Park; three stories high, with basement, steel and fireproof construction, tile roof, skylight, steam heat, plumbing, gas and electric light, mosaic and marble work, hardwood, mantels and grates, shelving, stained and ornamental glass and interior decorating. For the First Presbyterian Church, a parish house, to be known as the "Goodrich House," located at the southeast corner of Bond and St. Clair streets; pressed brick and terra cotta, gravel roof, plate and ornamental glass, steam and electric light plants with boilers, steel and mill construction, mosaic and marble work, plumbing, gymnasium apparatus, shower baths, grates and mantels, hardwood, interior decorating, skylights, ventilating; the mason work, terra cotta and steel work is contracted for; the building will be three stories high and will cost \$50,000. For Mr. Ben Patterson they have let contracts for the mason and carpenter work of a modern frame residence, to be built at the corner of Wade Park and Ansel avenues, to cost \$10,000. For the Standard Oil Company they are making extensive alterations in the company's building on Euclid avenue, remodeling it into a modern office building with rapid passenger elevator service and electric lights.

Architect H. J. Harks, New England Building, reports as follows: A six-story brick factory building on Michigan street, steam heat, plumbing; cost \$15,000. At Lorain, Ohio, a brick church, 50 by 90 feet; slate roof, plumbing, stained glass, steam heat, decorating; cost \$16,000. For St. Vincent's church, a four-story hospital building, to be known as St. Vincent's Hospital, 36 by 64 feet; brick, gravel roof, steam heat, plumbing, electric lights, decorating, painting; cost \$11,000. At Rockport, Ohio, a stone church, 50 by 105 feet; slate roof, furnace heat, plumbing, stained glass; cost \$12,000.

Architects Steffens & Seales, 416 New England Building, report the following: For the Pearl Street Savings and Loan Company, a banking office, apartment and lodge building, 50 by 120 feet, four stories high, at the corner of Pearl street and Clark avenue; pressed brick, gravel roof, plumbing, steam heat, electric lights bank fittings, elevator; cost \$40,000. For the Library Board, a branch public library at the corner of Clark avenue and Joseph street; one story, 4,000 square feet floor; steam heat, electric lights, shelving; cost \$10,000. For Mr. H. C. Stall, at Bellevue Ohio, a modern brick and stone residence, 72 by 80 feet; slate roof, hardwood, grates and mantels, plumbing, steam; cost \$20,000.

Denver, Colo.—Architects Mareau & Norton: For M. G. Turck, three-story apartment building, brick; size 50 by 100 feet; cost \$24,000. For Colorado Realty Company, two-and-one-half-story dwelling, stone; size 32 by 55 feet; cost \$12,000. For Colorado Realty Company, two-and-one-half-story dwelling, brick; size 32 by 50 feet; cost \$9,000. For Benedict Building Company, two-story dwelling, brick; size 26 by 39 feet; cost \$5,000.

Architect William Cowe: For Dr. T. J. Gallaher, two-story dwelling, brick; size 40 by 40 feet; cost \$10,000.

Architect W. E. Fisher: For D. A. Bancroft, two-story dwelling, brick; size 28 by 44 feet; cost \$5,000.

Architect Kerchoff: For M. Cowenhaven, one-story store, brick; size 50 by 125 feet; cost \$5,000. For H. C. Chapin, two-story dwelling, brick and stone; size 27 by 58 feet; cost \$5,000.

Detroit, Mich.—Architect R. E. Raseman: For Detroit White Lead Works, four brick buildings, at Milwaukee avenue and D. G. H. & M. R. R. crossing; to be three stories high; sizes, 47 by 150 feet, 82 by 150 feet, 41 by 150 feet and 41 by 126 feet; cost \$60,000. For C. W. H. Potter, two-story brick store, on Barclay street, near John R.; cost \$5,000.

Architects Malcombson & Higginbotham: For Board of Education, five two-story school buildings, ranging from twelve to eight rooms; to be built of brick; cost \$150,000. For Opera House, Ypsilanti, Michigan, three-story brick opera house building, on Congress street, Ypsilanti, Michigan; cost \$14,000. For J. B. Ford, Wyandotte, Michigan, two-story frame house, on Biddle avenue; cost \$9,000. For Detroit Soap Works, four-story brick addition to factory, corner of Dix and Twenty-fourth streets; cost \$5,000. For Scovel Memorial Chapel, brick building with slate roof, corner Grand River avenue and Twenty-fourth street; cost \$15,000.

Architects Mason & Rice: For Frank Walker, two-story brick and stone residence, on Jefferson avenue, near Jos. Campau avenue; size 60 by 80 feet; cost \$100,000.

Architects Rogers & Macfarland: For Mrs. John Owen, two story brick colonial residence, on Jefferson avenue, opposite Owen Park; size 50 by 50 feet; cost \$25,000. For Edward H. Parker, two-story frame residence, corner Jefferson and Maxwell avenues; size 56 by 62 feet; cost \$13,000.

Architects Donaldson & Meier: For Wayne County Savings Bank, remodeling building from Masonic Temple to office building; cost \$75,000. For Tarry Melchers, two-and-one-half-story frame residence, on corner Jefferson avenue and Seyburn; cost \$5,000.

Architects E. A. Walshe & Sou: For Philip Christa, three-story apartment house, corner Seventeenth street and Fort street West; cost \$10,000.

Architect W. S. Jay: For Calnon, Hubbard & Goodall, two-story brick apartments, corner Hancock and Lincoln avenues; size 50 by 120 feet; cost \$15,000. For Latimer Building Company, six-story office building, on Lafayette, near Griswold street.

Architects Nettleton, Kahn & Trowbridge: For Bethany Presbyterian Society, stone church building, on Champlain street, near Seyburn avenue; size 60 by 90 feet; cost \$13,000.

Architect M. L. Smith & Son: For John H. Fry, three story double brick residence, on east side of Pitcher, near Second avenue; cost \$10,000. For Rev. D. D. MacLaurin, two-and-one-half-story brick residence, on Medbury avenue, near Brush street; cost \$7,000.

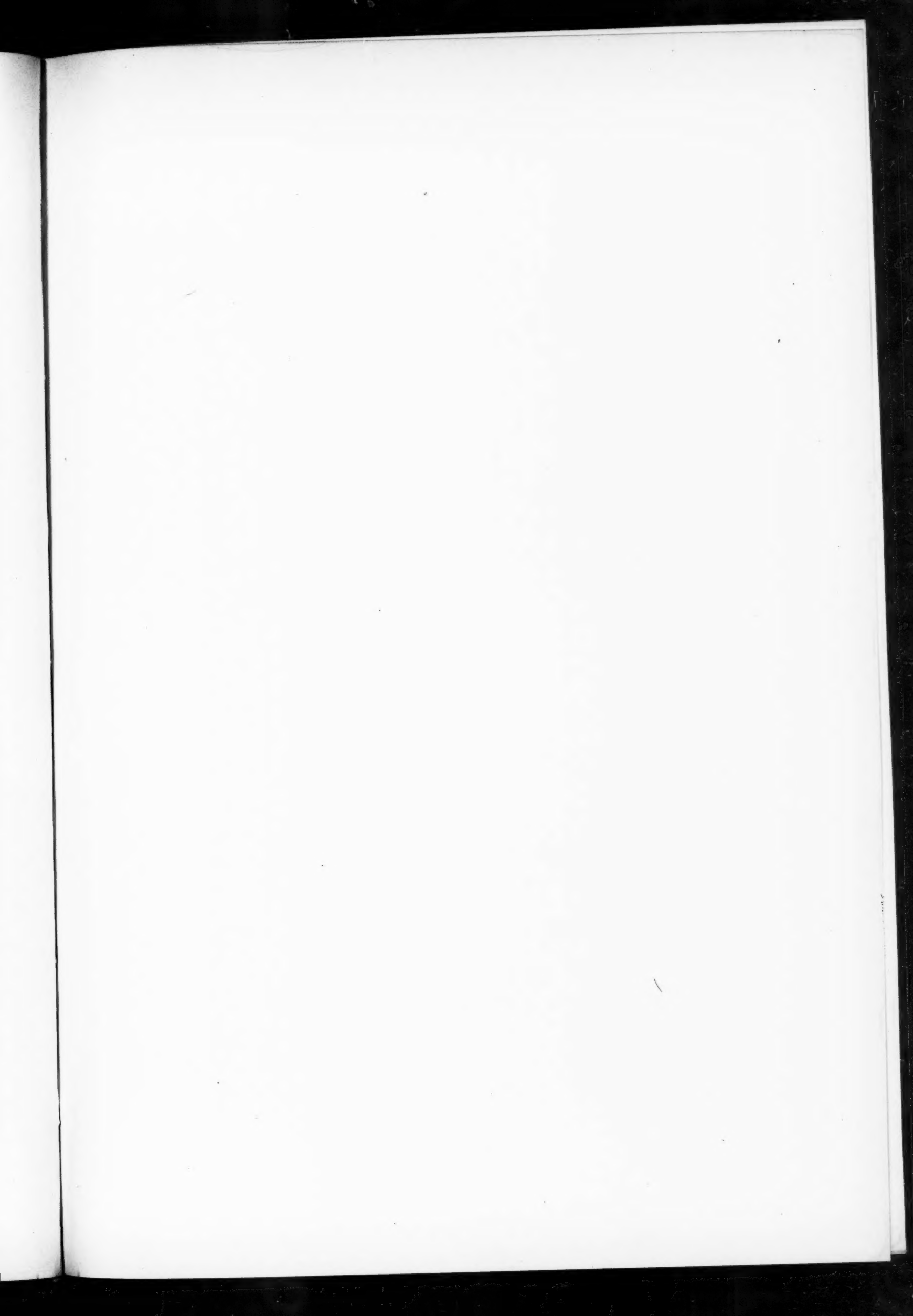
Architect Joseph E. Mills: For C. H. Reeves, two two-story brick residences, at Plymouth, Indiana; cost \$7,000.

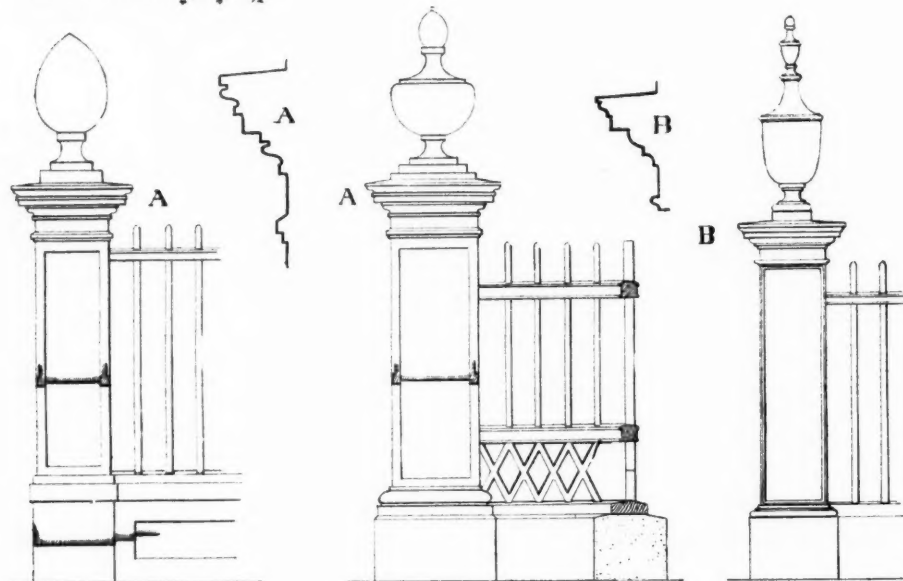
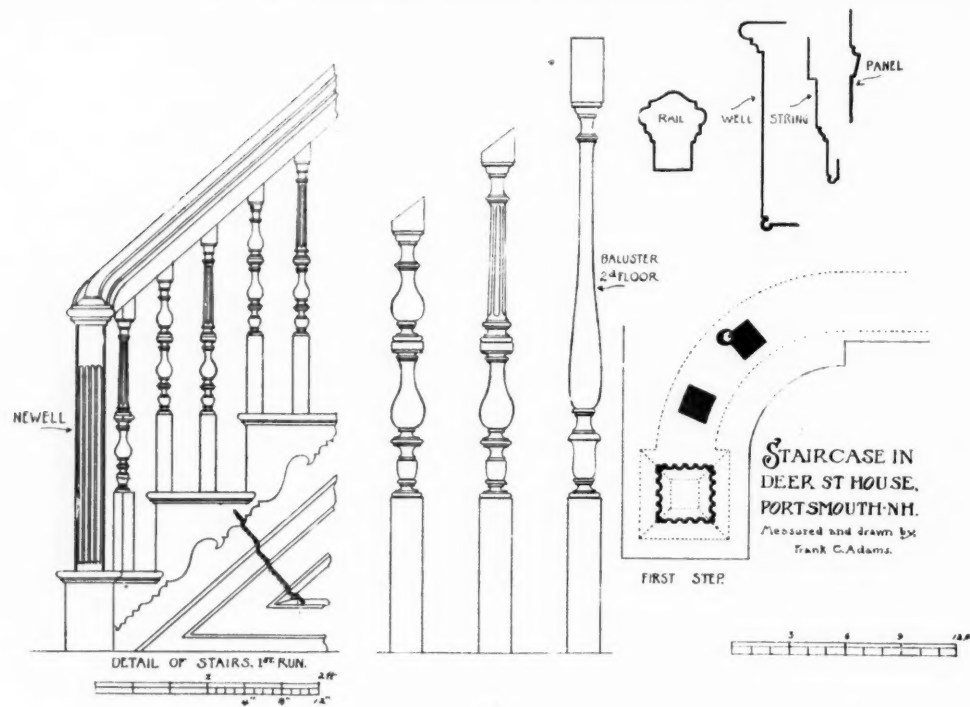
Architect Joseph G. Kastler: For Frontier Iron Works, four story brick addition, corner Chene and Atwater streets; cost \$7,000. For Bishop John Foley, Roman Catholic Parish School, corner Piquette avenue; to be two stories high and of brick; size 60 by 130 feet; cost \$15,000.

Architect Peter Dederichs: For St. Joseph Roman Catholic Parish, three-story brick parish residence, to be built on corner Jay and Orleans streets; cost \$12,500.

Architect E. C. Van Leyen: For William C. Hensler, two-story frame residence, on Field avenue, near Waterloo; size 36 by 56 feet; cost \$5,000. For National Amusement Company, grand stand, corner Woodward and Monterey avenues, to seat 10,000; size 120 by 400 feet; cost \$5,000. For Police Commission, three-story brick and stone station, corner Hunt and Dubois streets; size 68 by 70 feet; cost \$22,000.

Architects Spier & Rohus: For Frank H. Bamlet, two-and-one-half-story frame residence, corner Woodward and Englewood avenues; cost \$8,000.



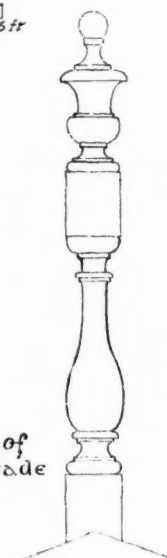


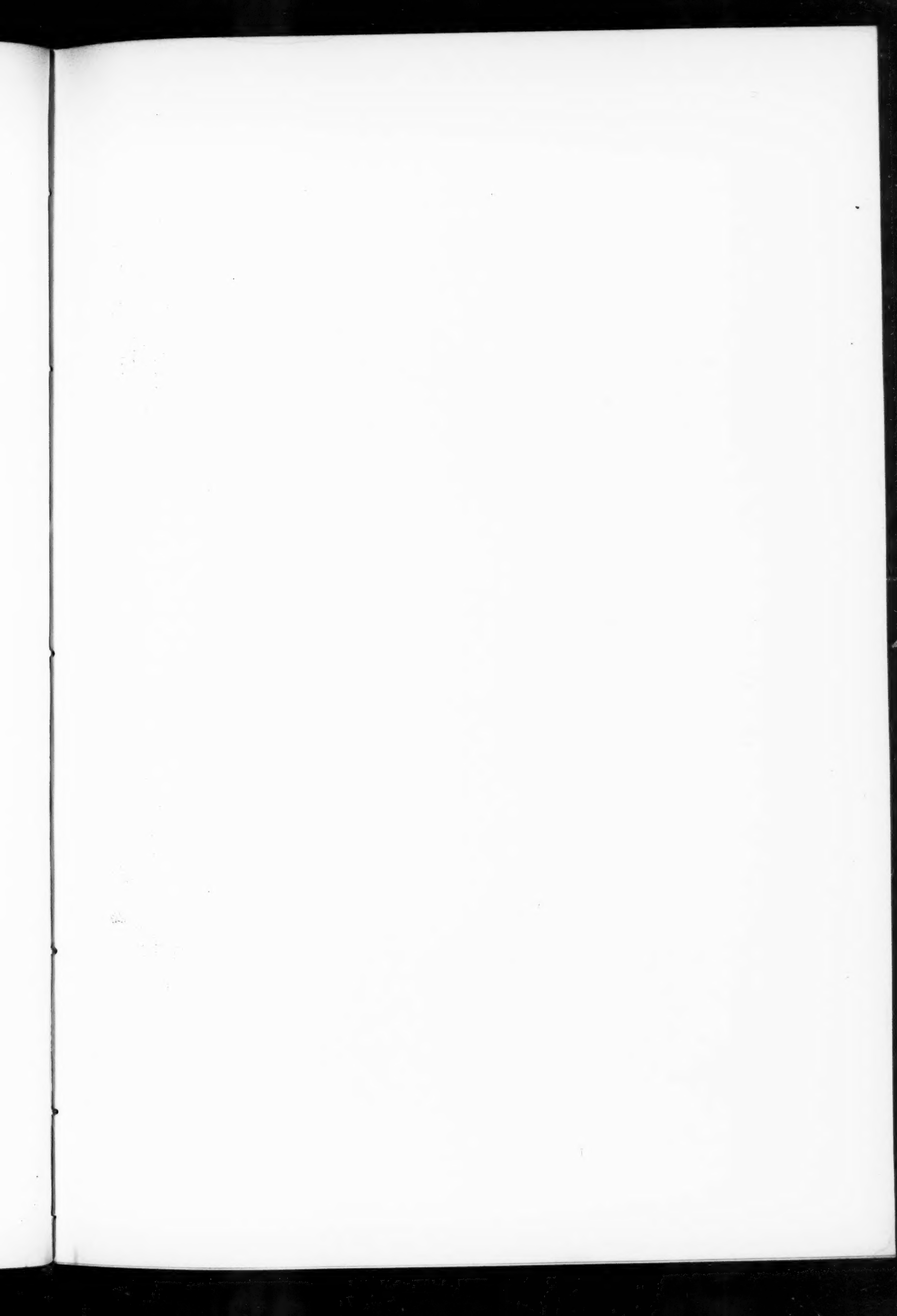
DETAILS OF COLONIAL FENCE POSTS FROM PORTSMOUTH NEW HAMPSHIRE,
Measured & Drawn by Frank C. Adams, Boston.

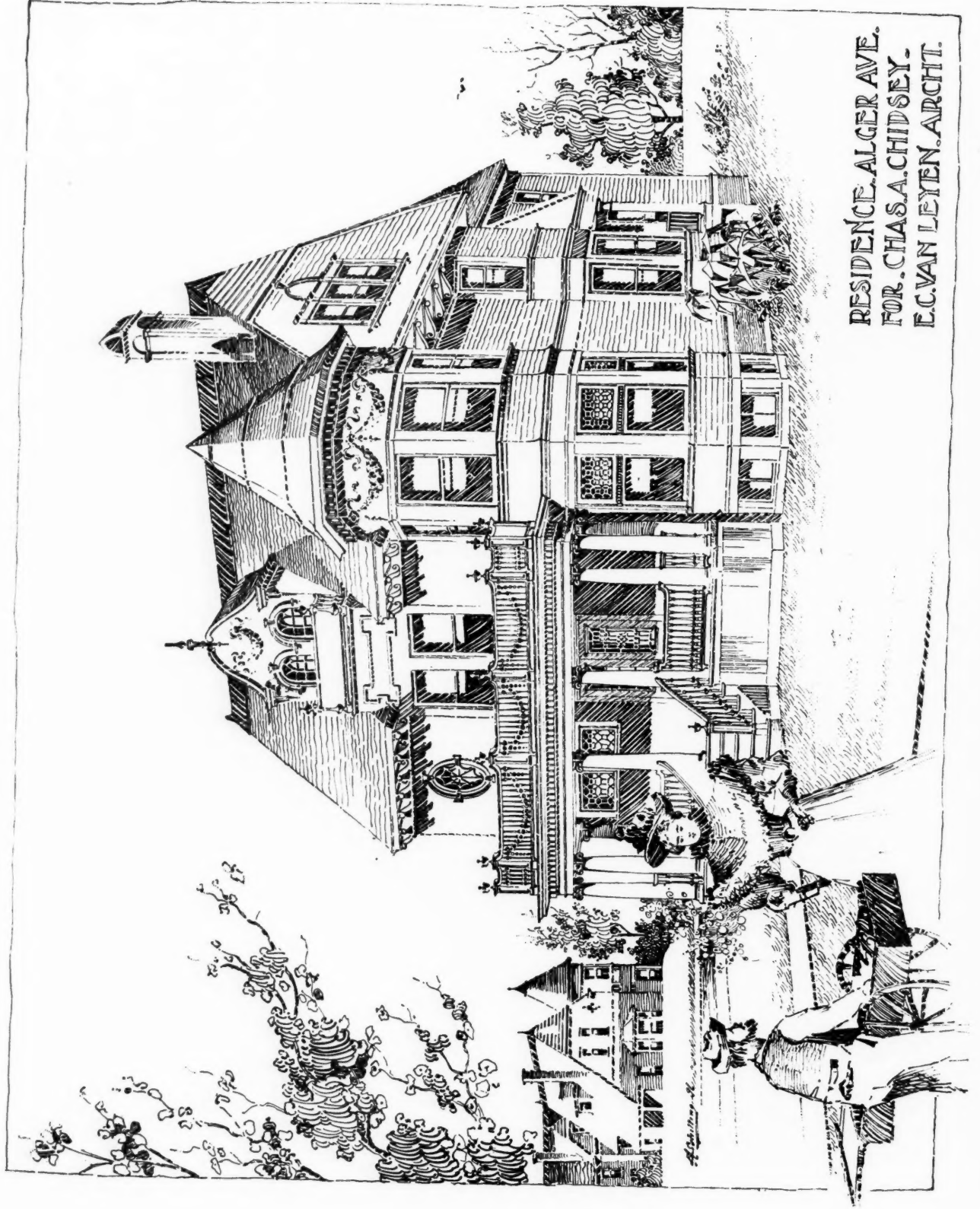
SCALE
3 6 9 12 in. 2 3 4 5 6 ft

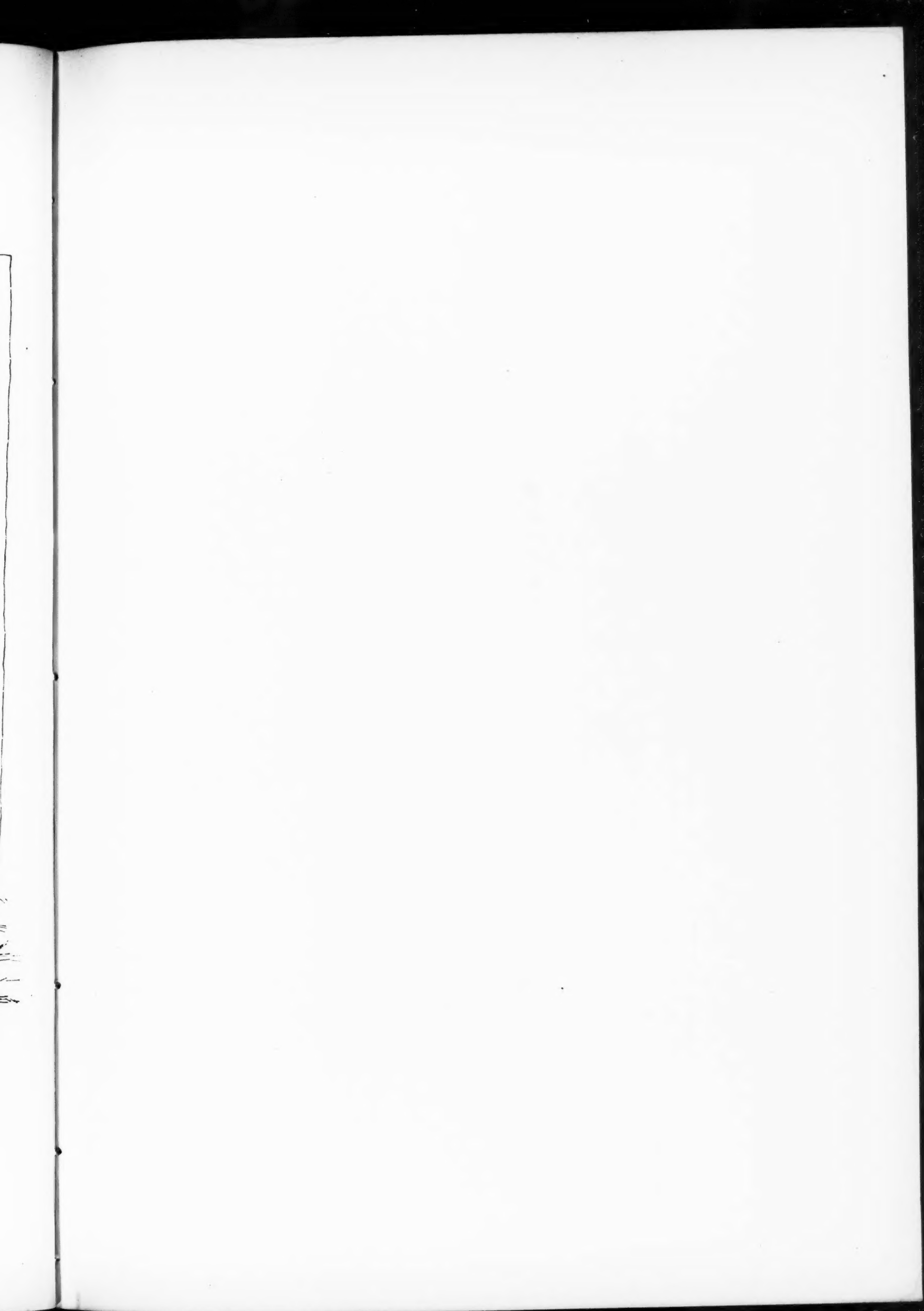


Corner post of Roof Balustrade



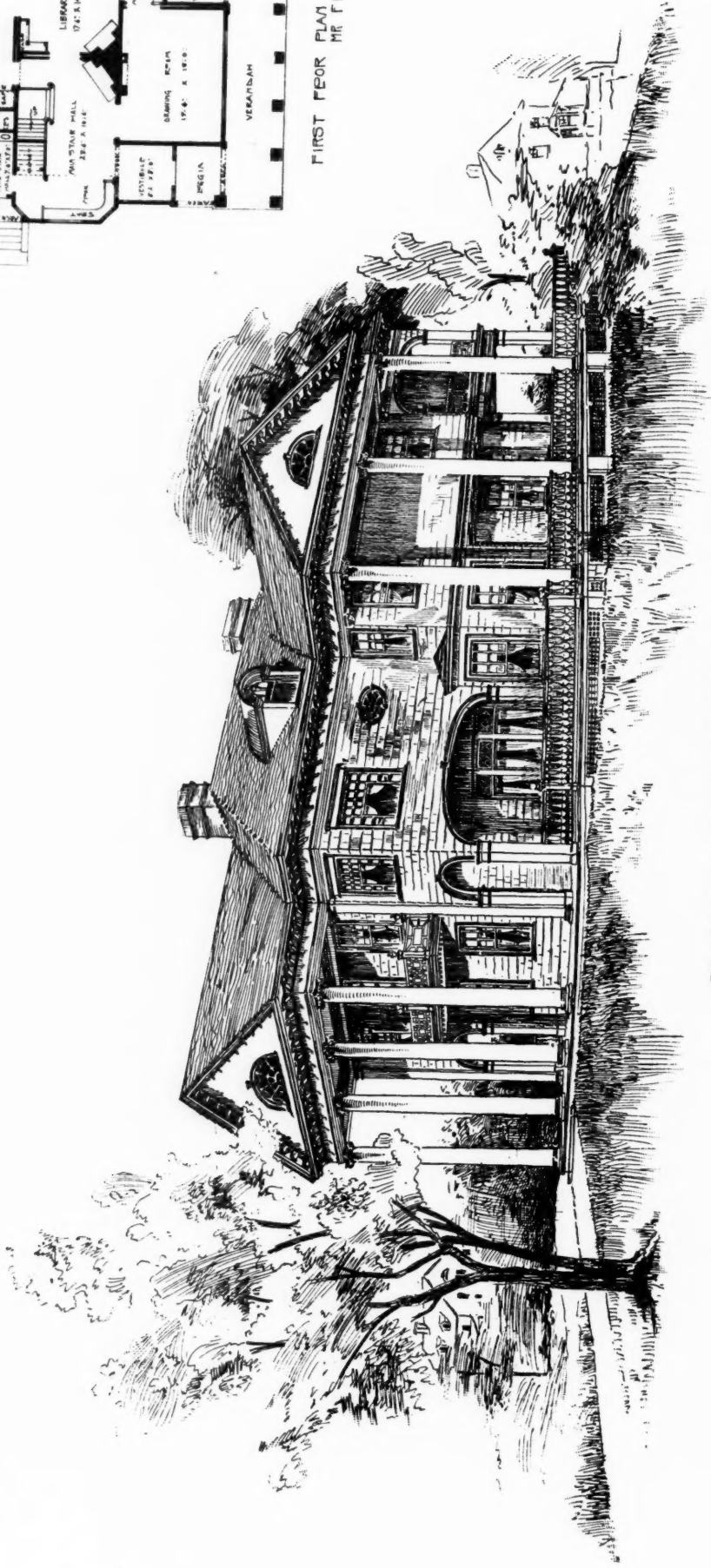




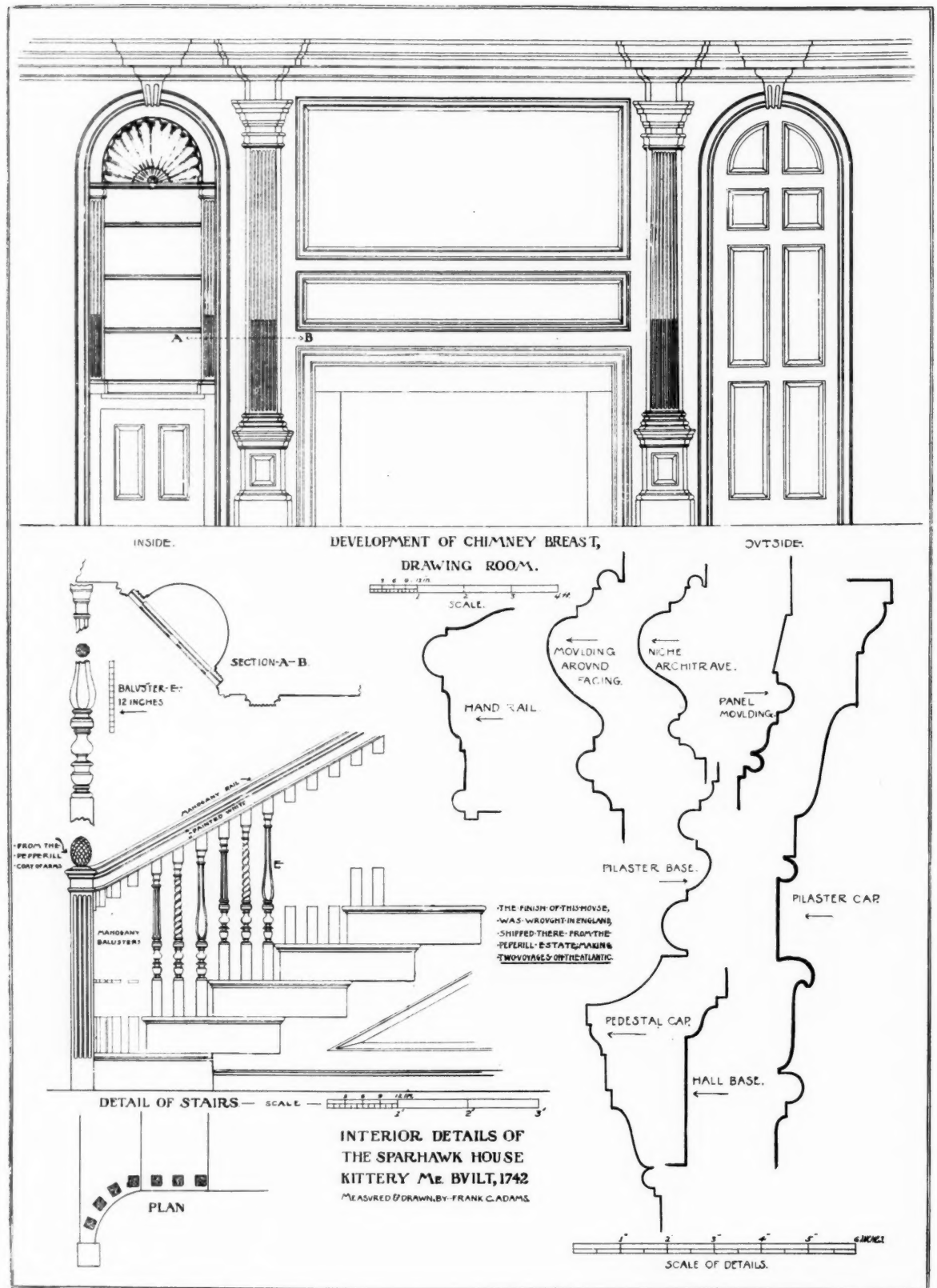




FIRST FLOOR PLAN OF MR. F. P. HALL'S HOUSE



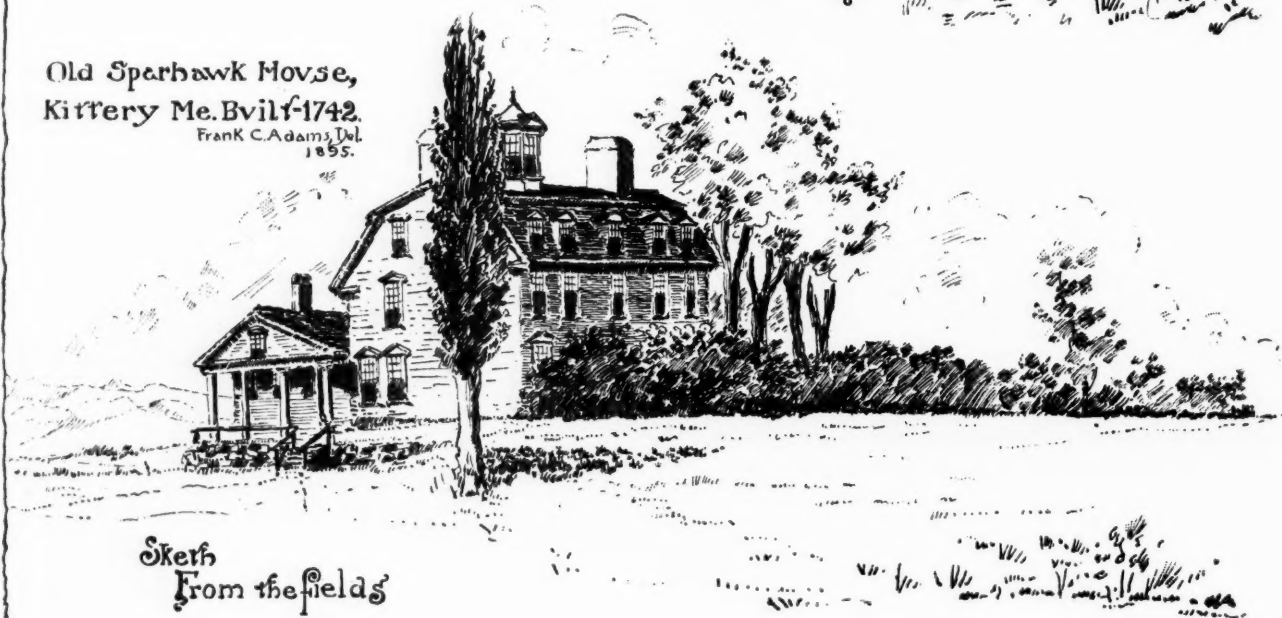
Residence for Mr. F. P. Hall.
E. C. W. D. 1897.
Architect.





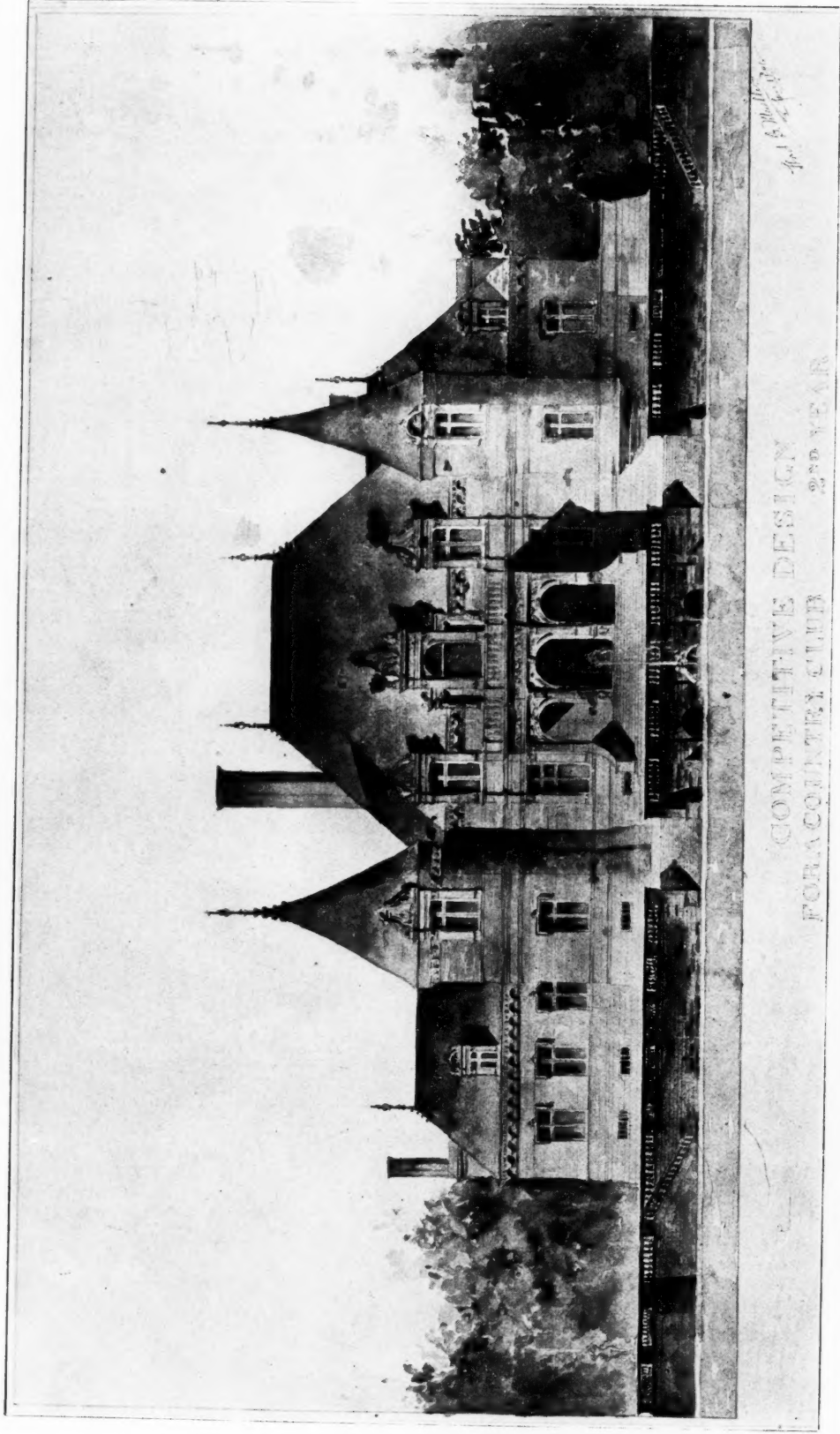
The Approach

Old Sparhawk House,
Kittery Me. Built 1742.
Frank C. Adams Del.
1895.



Sketch
From the field





DESIGN BY F. G. MUELLER, OF ARCHITECTURAL CLASS, ART INSTITUTE, CHICAGO.

GENERAL LIBRARY,
UNIV. OF MICH.
21 JUL 1896



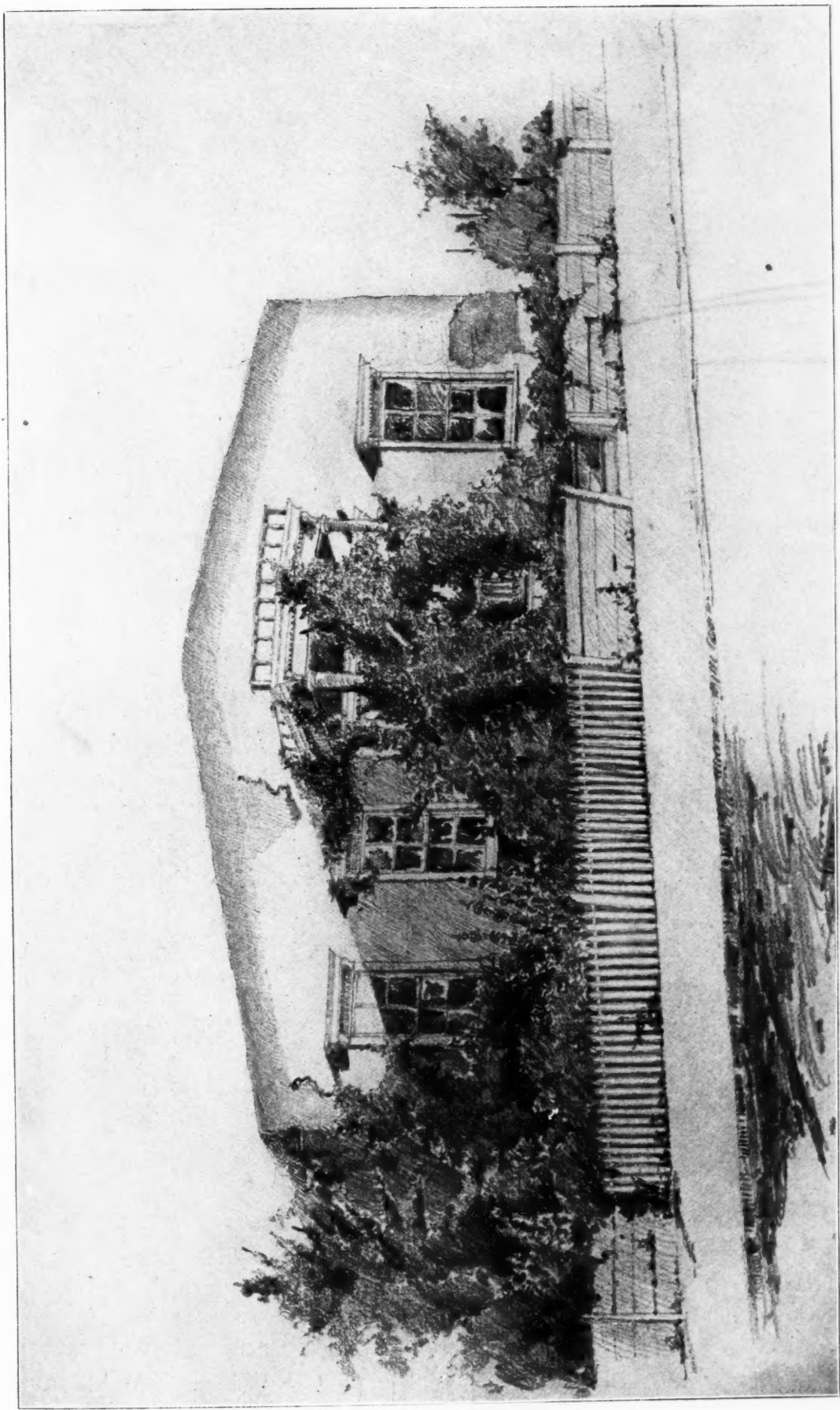
SEMI-DETACHED HOUSES FOR ARCHITECT DONALDSON, DETROIT, MICHIGAN.

DONALDSON & MEIER, ARCHITECTS.

INLAND ARCHITECT PRESS.

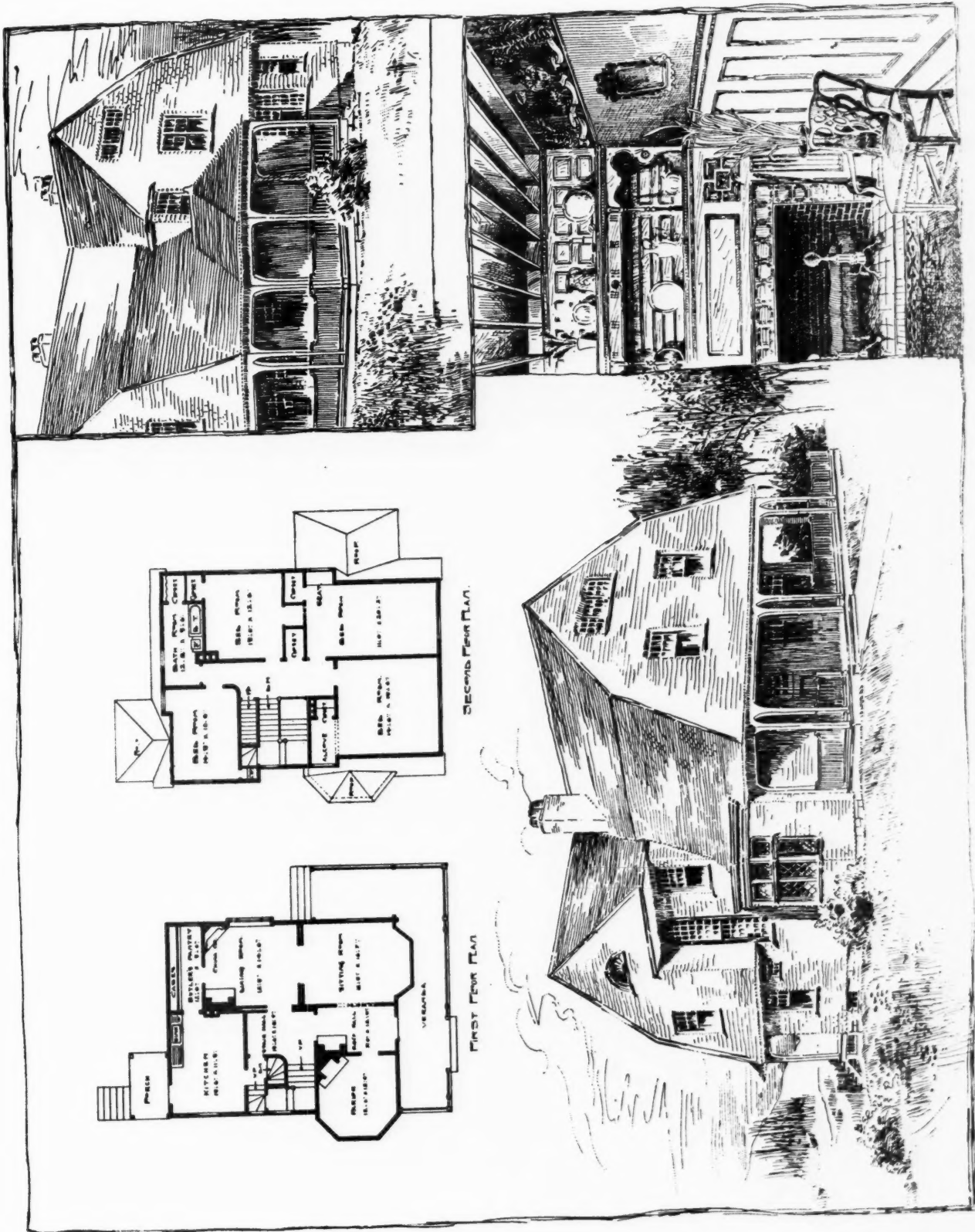
GENERAL DELIVERY
INLAND ARCHITECT PRESS
21 JUL 1896

GENERAL DELIVERY
INLAND ARCHITECT PRESS
21 JUL 1896

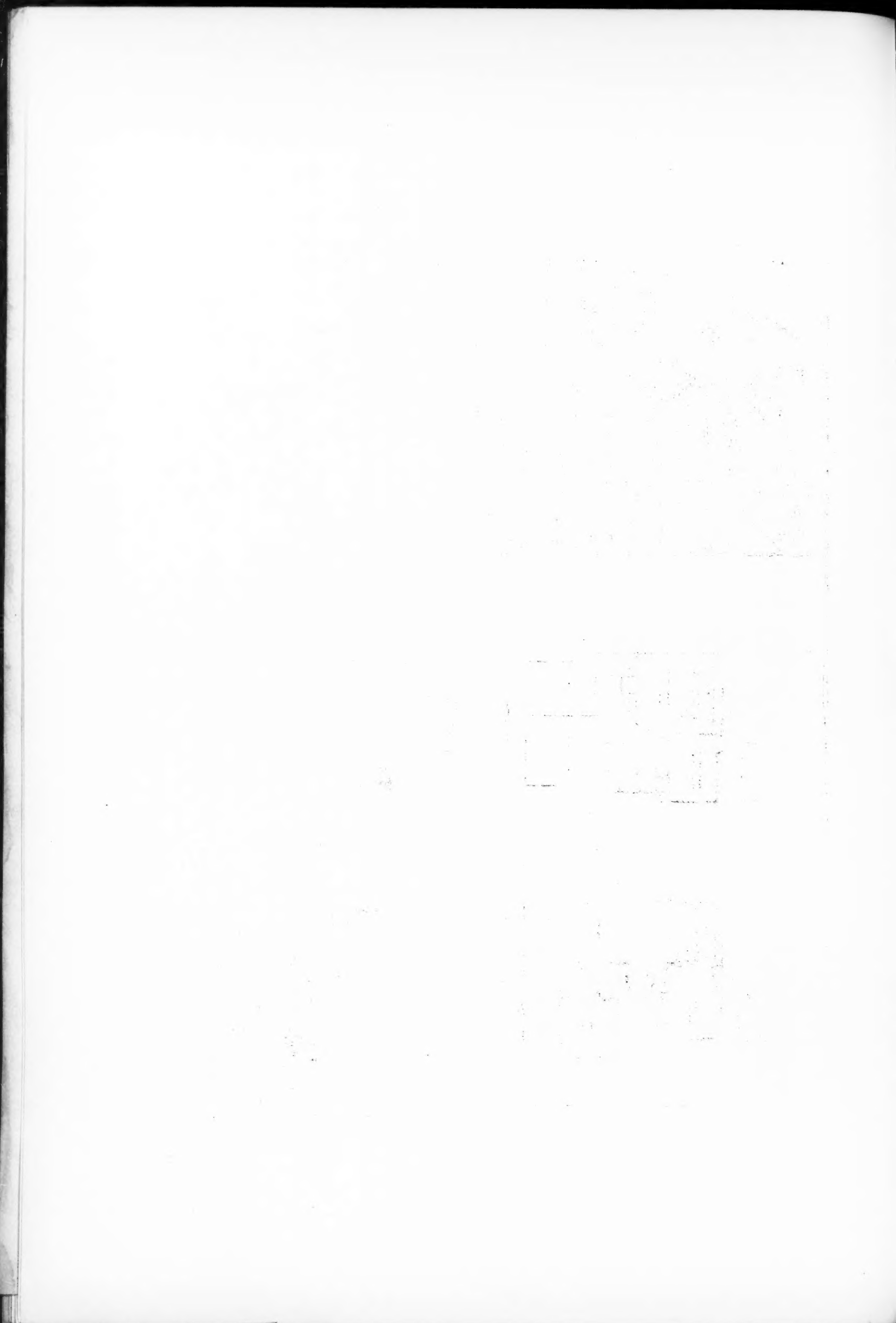


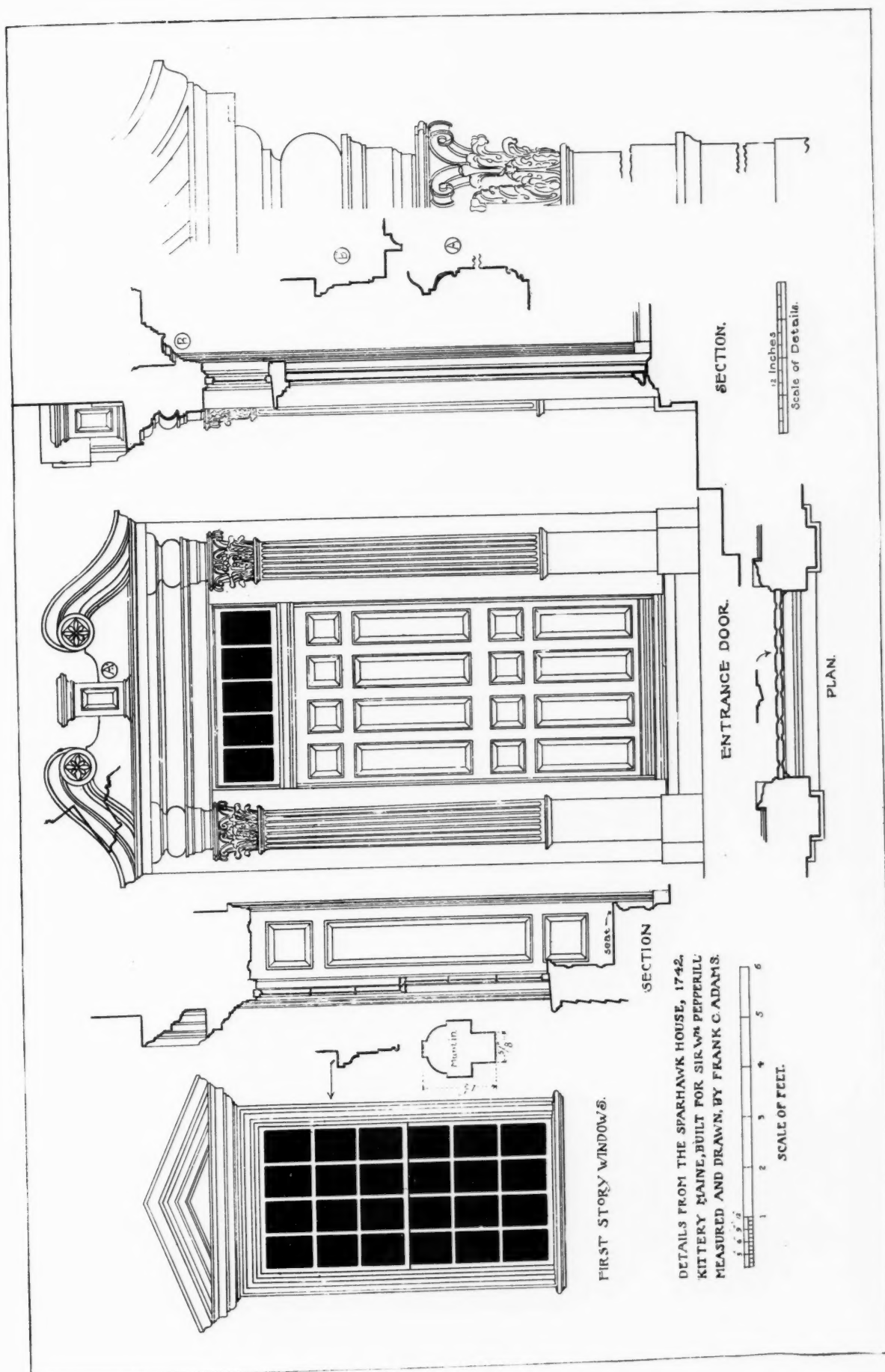
AN ADOBE, AT TRINIDAD, COLORADO.
J. B. FISHER, DEL., CHICAGO.



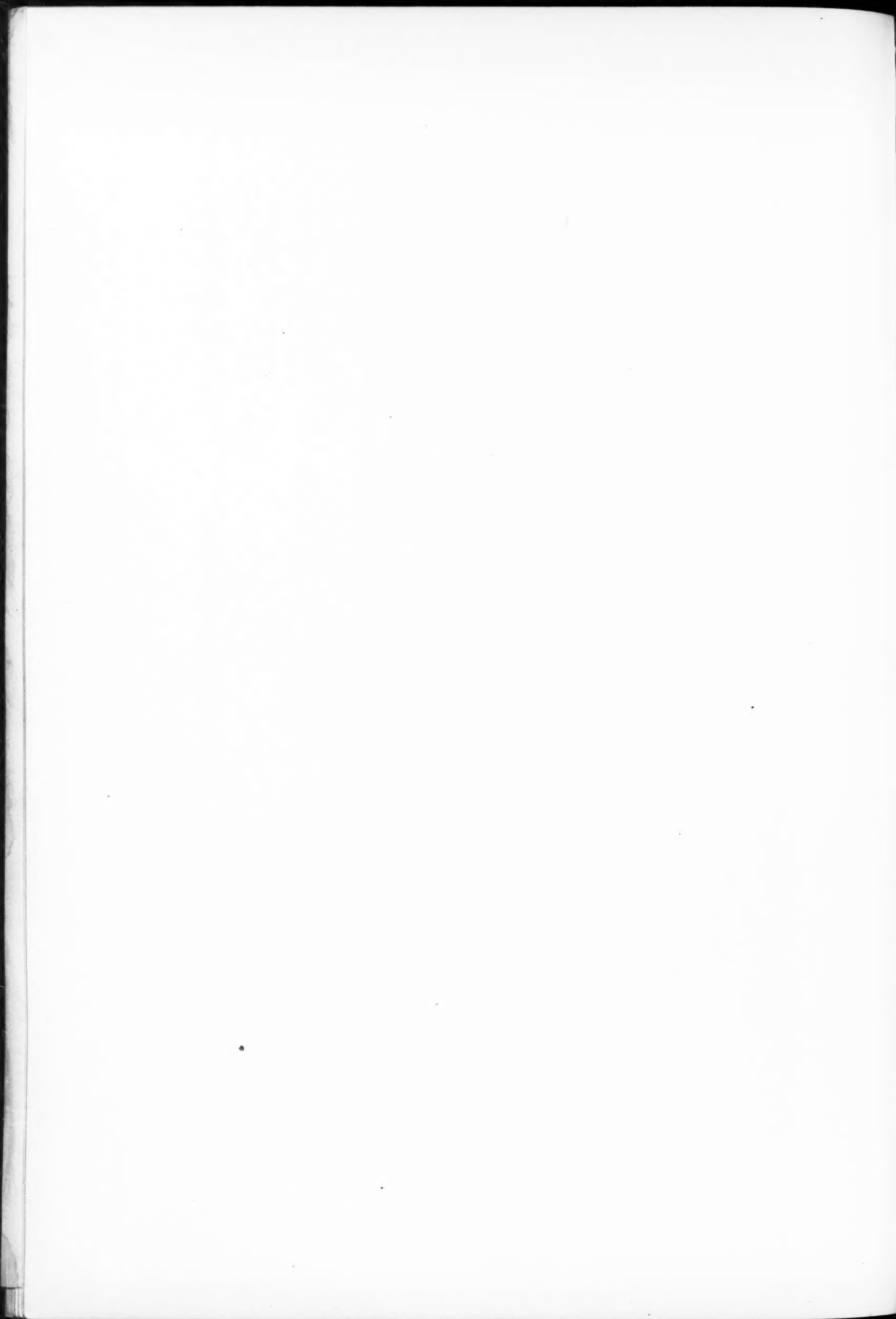


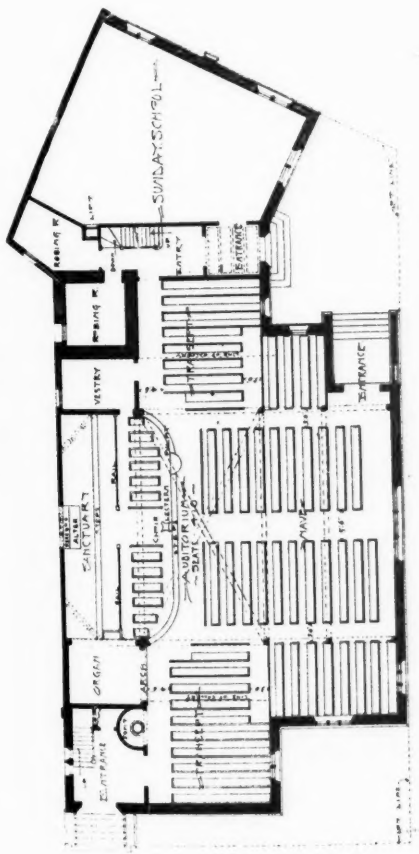
DESIGN FOR RESIDENCE.
E. G. W. DETRICH, ARCHITECT, NEW YORK.





DETAILS FROM THE SPARHAWK HOUSE, 1742,
KITTERY MAINE, BUILT FOR SIR W^m PEPPERELL
MEASURED AND DRAWN BY FRANK C. ADAMS.

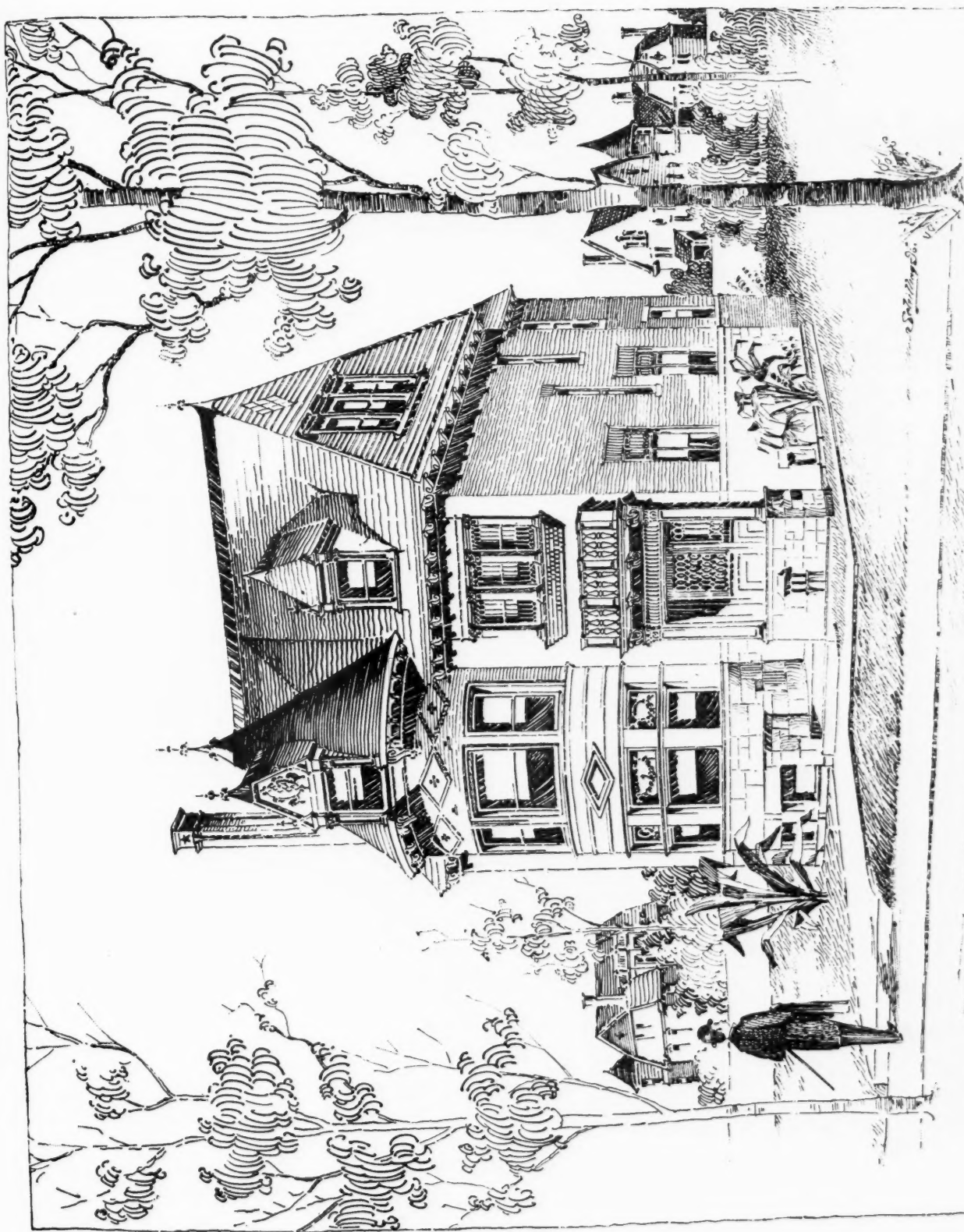




MAIN FLOOR PLAN SCALE 1/4\"/>

1894





RESIDENCE FOR MR R. M. ZUG.
E. C. VAN LEYEN, ARCHITECT.



