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Second Convention A. I. A. at Washington.

The second convention of the American Institute of Architects, which meets at Washington October 22, will probably be smaller in attendance than meetings of the national association usually are, judging from the latest information; but the proceedings will have strong bearing upon the future policy of the association. First in importance will be the settlement of the question bearing upon the relations of members of chapters and of chapters to the Institute. In the work of preparing a constitution and by-laws for the new association there were of necessity many measures incorporated that only practical trial would show the wisdom of, and it is not strange that a few oversights will have to be corrected at this convention. This matter of membership is the most important of them. At the first meeting of the Executive Committee it was decided to amend the constitution, making it obligatory for the candidate for full membership in a chapter to be a member in good standing in the Institute. This amendment was voted upon by letter ballot, and it may be assumed that it was adopted. In anticipation of this, several of the state associations, in reorganizing into state chapters, have made two grades of membership, making only Fellows of the Institute full members. The work of reorganization has not been as well attended to as it should have been, as at this writing, after repeated circular letters from the secretary, out of some twenty-eight local associations and chapters but eight are reorganized and have sent copies of the new constitution to the secretary, with a request for a charter. A new form of charter has been prepared and, after receiving the signatures of the president and secretary, will be distributed to the chapters, as far as qualified, at the Washington meeting.

Matters of Importance before the Convention

Another matter of importance that should and undoubtedly will be discussed at the convention at Washington is that relating to a congress of architects during the World's Fair, as suggested in our last issue. This is a matter of national importance, and should not be lost sight of. An interview with one of the architects from abroad who recently visited this country, in attendance upon the meeting of the Iron and Steel Institute, showed that the interest of foreign architects in our work was great and general. The committee upon education will probably make a more or less stereotyped report, but this committee has it in its power to become the most useful of all the standing committees. The day of office education for draftsmen is practically past. It is almost impossible for a young man with no knowledge other than a slight talent for sketching and mathematics to obtain a situation in an office. Architectural departments in colleges are looked to to supply the ever increasing demand for skilled draftsmen, and these are almost entirely "out of the market." To become a thoroughly competent draftsman, a year or more of practice under the direction of a practicing architect upon actual work is, in our opinion, almost indispensable. After the draftsman has graduated he must have this before he is "first-class" in any sense of the word, and if he does not receive the office instruction until after he has passed through his college course he is apt to be hampered with mannerisms or an undue belief in his personal ability.

This is certainly a subject for thorough investigation and earnest thought and work on the part of the committee on education, which is composed of the best known architectural educators in the country. They should study not only how they may make their course of study more effective, but what is necessary outside of this to make the draftsman of more value to his employer.

Classification
Scheme for
the Columbian
Exposition.

World's Fair matters, as far as the planning of buildings is concerned, have not progressed materially since our last issue. The work of adopting a proper scheme of classification has occupied the attention of the United States commissioners, and until this matter is settled, the work of the committee on buildings and grounds cannot go beyond the mere study of the topographical features of the different sites, and a general preparation for the serious work that will come (with a rush) when the classification plan is completed, the size of the buildings required for each department decided upon, the amount of money to be expended on each, its permanent or temporary character established, and its location in regard to the three sites definitely chosen. In the settling of all these questions the utmost activity prevails, and it is now expected that this work will be completed so that the active work of planning may commence before the next meeting of the Executive Committee of the National Board of Commissioners on October 18. The divisions will next be settled upon, and some change may be made in regard to the departments, but this will show how the work of the committee on buildings and grounds must rest until these details of classification are officially settled.

Death of
An Old
St. Louis
Architect.

Architect Alexander Cameron died at his residence in St. Louis on August 3, in the sixty-first year of his age. Mr. Cameron was a native of Nova Scotia. He came to this country when about twenty-one years of age, and after spending ten years acquiring experience in various parts of New England, he came West and located in St. Louis where he has remained ever since. Many public and private buildings and residences in St. Louis and its surrounding towns in Missouri and Illinois, bear testimony to Mr. Cameron's skill and ability, and his name was a synonym for honesty and integrity. He held the position of government superintendent during the last four of the ten years consumed in the construction of the St. Louis Custom House, and completed that edifice. The last important work on which Mr. Cameron was engaged was the addition of four stories to the Equitable building in St. Louis, making it a ten-story structure. His son, Edward A. Cameron, who will be remembered as the superintendent, under the late H. H. Richardson, of the Marshall Field building and the Glessner and MacVeagh residences in Chicago, is his successor.

The Lesson
of the
Syracuse
Hotel Fire.

There should be very little humor to be found in a hotel fire where a quarter or half a million of dollars' worth of property is destroyed and a number of lives are lost, but that is the predominant feeling that is apt to pervade the architectural mind when reading the accounts of the burning of the six-story Leland hotel at Syracuse. "Most magnificent hotel in western New York"; "cost \$200,000"; but "the fire was discovered at 12:45 o'clock; in fifteen min-

utes the building was in flames from end to end, and before thirty minutes had elapsed, the walls had fallen, with the exception of the northeast corner." And then the veteran head of the family of hotel keepers is reported to have said, "the house was soundly built and considered fire-proof." Is there anything in this but the most ghastly kind of a joke, like the Jonah fish story? Like most hotels, it was probably built "by the yard." An architect was probably selected because he would do the work cheaper than some other. The materials selected were the best he could secure to cover the largest amount of space for the least money. The problem was how to design and plan a structure that would look well and still involve the lowest estimate of cost. If he had the temerity to suggest that a six-story building should be constructed of steel and fireproofed, he would have been dismissed as a highwayman or a lunatic, and if he suggested frequent fire-walls and wire lath, he was probably told that ropes, fire-alarms, and a coil of hose or two was much better and cheaper. And so the hotel was built and admired by a public that looks at the elegant finish and goes to sleep with its confidence resting on a rope, a fire-escape and a mercury fire-alarm. The proprietor of one of the largest hotels in Chicago has been heard to talk just as Mr. Leland is reported to: "Safe? Safer than the Auditorium; a fire is an impossibility." And yet the building is a fire-trap, so far as material is concerned, and it will remain a menace to the traveling public and the surrounding property until it is pulled down or goes up in smoke in half an hour. The country is full of such hotels, and will be until the government, which should guard the public in public buildings and conveyances as well as on the streets, steps in and establishes regulations that will compel hotel buildings to be completely fireproofed in construction. The older hotels were built before the use of steel and tile made it possible to build cheap and yet incombustible buildings; but now there is absolutely no excuse, and those who do build as the hotel at Syracuse was evidently built, should be held criminally responsible. The joke would then become so costly that its perpetration by parsimonious owners would be stopped.

Death of
Architect
E. T. Mix,
of Milwaukee.

An architect who has for many years occupied a prominent position in the profession in the west, and who enjoyed to a superlative degree the confidence and esteem of his confrères, Mr. E. Townsend Mix, of Milwaukee, died September 23, at Minneapolis. Mr. Mix' antecedents were shipmasters of New Haven, Connecticut. After studying for his profession in the east, he came west in 1852 and formed a partnership with Architect W. W. Boyington, of Chicago. In 1856 the construction of the Newhall house at Milwaukee called for his services as superintendent, and since that time Mr. Mix has been engaged there in the practice of his profession. Many of the best buildings were designed by him and remain monuments to his ability, among them being the Chamber of Commerce, the Milwaukee club house, soldiers' home and Plankinton house. For several years Mr. Mix has been afflicted with consumption, and most of his time has been spent at Minneapolis, hoping in the dry air of that inland city to escape its effects. Here he designed the Washburne residence and other residences, the Temple court, Guarantee and Loan office buildings and the Minneapolis and the St. Paul buildings for the *Globe*.

Views of an English Architect on Theater Construction.

BY ERNEST A. E. WOODROW, A. R. I. B. A.

PART IV.

MATERIALS.

The accepted significance of the term "fireproof" is an erroneous one. Materials that are incombustible are not therefore fireproof. Take for instance iron and stone, both recognized as fireproof substances, yet they are among the first materials to suffer under excessive heat or sudden changes of temperature. To show how mistaken some are in their ideas of the resisting qualities of material, I have known of lead being employed to cover a wooden floor as a protection from fire. Of all materials, lead in a fire is the most dreaded by a fireman. Their thick uniforms cannot withstand molten lead.

For such buildings as places of amusement, the foundations must be especially good, and all taken down to the same level as the foundations of the main walls of the building. The walls must be solid, of good, hard, well-burnt bricks, built in cement, and very thick, with all cross walls well bonded into the main walls. Wherever possible, use brickwork in preference to any other material. Every opening should be arched over, and the use of lintels, whether of wood or stone, discarded, and walls corbelled out to receive the fire resisting floors.

The floors of the various tiers should either be constructed of iron imbedded in concrete, or of timber in very large balks, of the hardest description, such as elm or oak, or a wood with qualities such as the Australian iron bark. Where wood is used it should be thoroughly protected from the action of fire by being thickly coated with gypsum or plaster of paris. The pit and stall floors should be of concrete covered with wood blocks for warmth and comfort; all the rooms behind the scenes should be similarly treated. The floors of corridors, passages and landings should be constructed of concrete supported upon brick arches, abutting against the brick walls. Never use iron joist where a brick arch can be turned.

Where iron is used to form the backbones of the constructions, it must be completely imbedded in cement concrete, with no face exposed to the fury of the flames. The concrete should be composed of the very best Portland cement, with the aggregate of calcined material, such as broken bricks or pottery, and where it is used for light partitions, of coke breeze. The staircase should be constructed of the same material or of some approved hard artificial stone or fire clay, with solid steps having a bearing both ends on brick walls. Avoid the use of stone. Captain Shaw remarks: "It yields to fire more rapidly than any other material; is the most dangerous of all materials, as at sudden changes of temperature it cracks, leaving a passage for smoke."

Iron is just as treacherous, owing to its loss of strength under great heat, and its liability to fracture. Anyone who has visited a site, after a big fire, where iron has been used largely in construction will have observed how the girders lay twisted and curled about like so much hoop iron, and columns bent over like half melted candles in an overheated room. By its contraction and expansion iron adds to the danger of fire, as frequently brickwork is pulled over by the ironwork, and walls which would have stood the fire unhurt are torn down. Where iron is used, it must be well bedded in cement, or fire clay; but even then avoid its use as much as possible.

Wood, when used in large balks, and of the harder sort, especially when protected with plaster, is preferable to naked ironwork. Wood is dangerous when used in thin slices. To again quote the greatest authority in these matters, Captain Shaw, "Wood will withstand a powerful dead heat upon its sides for an indefinite period without igniting, unless transverse sections of the fiber, such as knots, present itself to the action of the fire."

Plaster is a valuable fire resisting agent; it is light and resists fire for an indefinite period; it adapts itself to the entire enrichment and decoration of the auditorium, from ceiling and proscenium frame to circle fronts and private boxes.

In choosing materials for the construction of public buildings always give the preference to those that are already calcined and have undergone the action of great heat; these will not add fuel to the fire.

PREVENTION OF FIRES.

When a building has been planned and constructed so that it will in every way retard the spread of fire and panic, it should be considered how, if a fire breaks out in spite of all these precautions, it could be most effectually coped with.

Theaters or places of public amusement, from the nature of the business, and contents of the building, can never be *fireproof*, although

it has been shown how they can be made fire resisting in every detail; and how, should a fire break out, it can be localized and burn itself out in the department in which it originates. Every means, therefore, should be taken to extinguish fire, not only in theaters, but concert halls, assembly rooms, churches, chapels, or wherever the public meet together in large numbers. Water is the element to overcome fire; it is cheap and can be obtained easily in large quantities; if a small bucketful is at hand at the first outbreak of fire, much loss of life and property would be prevented, not only in public but also in private buildings. The destruction of property from the use of large volumes of water is frequently as great as from the fire itself. Fire is allowed to grow with such rapidity, through simple means of extinction not being at hand and used at the outbreak, that measures on a large scale have to be employed to overcome it, when it has grown to considerable magnitude. One bucket of water during the first few minutes is of more value than the most powerful steamer a quarter of an hour after. Bearing this in mind, the most valuable item in the fireman's appliances is the fire bucket; of these there should be an unsparing supply in every room, passage, corridor, staircase and division of the building, always kept full of water. More good can be done with these at first than with any amount of fire appliances after; they can be used by the most uninitiated with the same effect as the most skilled fireman. Buckets should be hung above the floor level to prevent the water being spilt, and so as to be easily seen; the positions in which they are placed should be conspicuous and the buckets made as attractive in appearance as possible, by being painted a bright color and labeled "fire buckets" in distinct lettering.

Should the fire not be subdued in its first stage, more stringent measures will become necessary. Hand pumps, chemical engines, corridor engines, must therefore be provided.

Hydrants on a rising main, and on the constant supply, should be mounted on every floor, in every section of the building, and on the roof, at a distance of not more than forty feet apart, with hose and nozzle "married" ready for immediate use. All the necessary tools, axes, spanners and implements should be arranged on the walls above, and there should be a cock from which to fill buckets fitted to every hydrant.

In every dressing room, and in several places on the stage, in addition to the numerous fire buckets, there should be kept blankets always damp, not too wet and heavy, to be easily thrown round a person whose dress may have accidentally ignited. It is well also to keep blankets in other parts of the house, wherever hydrants or buckets are placed.

All fire apparatus in public buildings should undergo a frequent periodical test as to their condition by the licensing or municipal authorities. The pattern of the appliances in every town should be that of the municipal brigade, so that the building and town appliances might be used on any hydrant.

I have already mentioned the desirability of outside balconies, escape ladders, and the free use of windows for access to the building by the brigade escapes, or egress of persons, when cut off from all other mode of escape.

It would seem almost needless to say that the water supply should be at such a pressure that the highest part of the building could be reached from any hydrant. In some districts the water pressure is totally insufficient to carry a jet to the height of an ordinary house, which in consequence would be gutted before the arrival of the engines. Where large water tanks are supplied at a sufficient height above the roof to give the necessary force, care must be taken that they are always full, otherwise they will act as another example of false security and be worse than if they never existed. Better no tanks at all than an empty tank, which was thought to be full till it was wanted, and then found to be empty. There is, however, a great drawback in the usefulness of these tanks; as the fire destroys the walls or roof on which they stand, they fall, and are a source of danger instead of a source of security and safety.

All the provisions for fire extinction lose their value without a trained fire-watch. The theatrical fireman, who is a fireman in no sense of the word, beyond wearing a fireman's uniform for the few hours the house is open, is a delusion and a snare, and would be better conspicuous by his absence. A sham is worse than nothing. This is no office for an amateur; trained firemen, whose nerve and skill have been tested again and again, are the men who should have charge of the safety of the thousands who crowd into popular places of resort. In a theater, during the performance, the fireman should never leave the stage, and at the same time there should be other firemen in the auditorium, if only to be seen by the audience, to inspire them with

a sense of confidence and protection. The fire-watch should be continuous by day and by night. Firemen should have no other duties than those of their calling, otherwise there will always be an excuse for appliances not being in working order. Picked men are the only men fit for such responsible positions as firemen to public buildings, men in whom every confidence can be placed, and who are not required to visit tell-tale clocks on their rounds, to let their employers know that they are equal to their duties. If you inspire a man with the belief that you know he does his work well, he will ever strive to do it better; but when once a man thinks that you do not trust him, then you may expect to have the work shirked.

It should be the duty of the fireman to keep everything in working order and ready for any emergency. Imagine a stage in the full swing of a crowded pantomime or spectacular show unguarded by a proper fire-watch! Should the alarm of fire occur without any recognized authority to subdue it, the confusion and noise among the nervous, excitable people employed on the stage would, even supposing the curtain to be down, cause alarm and panic among the audience. From such small cause as a cry of fire, a shriek or a scream from an excited person a panic and stampede may arise, followed by death, bodily injury, or at the very least destruction to the nervous system for life. Yet there are still many places of public amusement where no fire-watch exists, the water supply insufficient and the fire appliance imperfect.

There should always be telegraphic communication with the nearest municipal fire station, but too much reliance must not be placed on emergency fire alarms which are supposed to go off of themselves by the influence of the presence of the enemy, heat. These alarms are apt also to come into play when no danger exists and create unnecessary alarm, the very thing to be always guarded against.

All check-takers and attendants should wear uniform so as to be easily identified and the better able to manage and direct the public. These men should be instructed in the use of the fire appliances by the regular firemen, to act as assistants to them when required.

It would be as well, perhaps, to review some of the causes of the origin and spread of fires in public buildings, as it will greatly help in providing the remedy.

Bad arrangements and planning, not dividing the many departments and sections into individual and separate fire risks. Not adopting the party wall system.

Danger from contiguous and adjacent houses and property; the misuse of portions of the premises as living and sleeping apartments.

Bad and inappropriate materials; scamped or faulty construction.

Fire-places, foul and imperfect flues, want of ventilation, overheated materials, darkness, dirt and non-removal of rubbish, trade refuse, etc.

Smoking; use of matches, candles, lamps; faulty gas fittings; unprotected or foul gas-burners; imperfect installation of electric light; carelessness in moving scenery; use of fire-arms, fire-works and colored fires on the stage.

The want of proper fire appliances and fire-watch.

Carelessness among the many tradesmen employed in not carrying on the work in the shops provided for the purpose. Lightning; concentrated rays of the sun by means of lenses; spontaneous combustion, and incendiarism.

When theaters and other places of public amusement are worked on the cheap, there will be danger. It is shortsighted policy on the part of the management, for the public bestow their patronage on the houses where they know that their welfare is best looked after. Many bills have been before the parliament for additional powers of inspection of public buildings, but have up to the present all been thrown out.

I began these papers by showing how anxious the managers and lessees are to do all in their power to protect the public, but there are times in the year when many theaters and halls drift into the hands of strangers, such as ambitious amateurs or stage-struck society actors. These take up the management, and there exists no supervision or inspection to protect the people who visit the building from the results of their inexperience. It is to be hoped that it will not be long before every town has its official inspector of public places of entertainment, a man qualified by technical knowledge, who will not unduly interfere or impose unnecessary requisitions upon the management, or allow the public to be endangered by the omission of the smallest item in the way of precaution and protection.

Fresh dangers may arise from alterations made from time to time in public buildings, unknown to the licensing body, which only continual and professional inspection can determine and remedy. Where this inspection is organized the public will be permanently protected.

The inspector should be endowed with full power to enter upon any part of the premises at any time he may think fit. He should make his visits at the most unexpected times, before, after, or during a performance, in the daytime or even in the middle of the night, the necessity of which is shown by the fact that the fire at the Theatre de la Bourse, Brussels, which was burned down but a few days ago, broke out at such an unlikely hour as 3.30 in the morning. Reports should be handed in from time to time to the licensing authorities as to the condition in which the house is found, its mode of management, and as to any alterations that have been made. These reports should in fairness be accessible to the manager whose house is reported upon.

PREVENTION OF PANIC.

In the foregoing papers some few means have been shown that could be adopted to prevent panic in public buildings, yet even if everything advised and much more were done, still some unforeseen circumstance might arise to cause a stampede. Even such a slight thing as the extra pressure of gas through the footlights, causing the flame to appear above the glass flues, as occurred in a London theater last week, caused many to rise from their seats in a state of excitement. In such cases as these the public is alone to blame. Such a thing as death from panic should be unknown; yet in cases of fire it is difficult to make an excited crowd understand that their lives after all are in their own hands, and it is not the fire, but their own pushing, fighting and rushing towards a blocked up exit that will be the cause of their death.

Keep your seats is the only safe way to keep your lives. Many cases of panic have been averted through the presence of mind of the actor continuing his part, the manager coming to the footlights and assuring his audience of their safety, or the band striking up a familiar and lively tune.

Those who create panic among themselves should now and then be taught a lesson, and he would be a wise fireman who turned his hose onto them: they would soon return to their senses under such severe treatment. The managers are doing much to help the public, but the public must not forget to help themselves by using common sense.

It is after such disasters as at the Ring Theater, Vienna, and at Exeter, that everybody is alive to the defects in our public places of amusement. It is, however, as necessary in the times when no such excitement exists to be prepared and constantly on the watch as when the public mind is full of apprehension for their safety. During the past month or six weeks many minor accidents have happened, to some of which I have already drawn attention, which might have been as serious in their results as the Ring fire. Architect, manager, the municipal officials and public should all work together with this one object in view—AVOID PANIC.

(Concluded.)

Expression in Form.

THE above is the title of a literary competition by the Chicago Architectural Sketch Club, and the papers are given in the order mentioned by Architects Jenney and Silsbee, Mr. Root, the third member of the Adjudicating Committee, giving a place to but one, the vote of the committee being unanimous in the selection of "Jason" (Peter J. Stewart) as deserving of first place. The essays were limited to nine hundred words and all kept within that limit, the larger proportion being exceedingly brief, judging rightly that much effectiveness is gained in literary work by brevity, using well-composed sentences, as in drawing by few and bold lines. They are as follows, the names of the authors being given as far as known: (The envelopes containing the names of contestants are in the secretary's hands, and the secretary is East.)

SUBMITTED BY "JASON" (PETER J. STEWART).

Matter, in its myriad forms, bears the impress of mind. The elements of these are two: straight forms and curved forms. The one suggests inflexibility, directness of purpose that takes no account of opposition, and strength; the other suggests pliancy and beauty.

Full of vigor a blade of grass rises straight up out of the ground until it is exposed to the dew and heat, when, this necessity provided for, its upper part having less energy falls over, yet not limp, but in an elastic curve.

This illustration probably suggested the phrase founded on Hogarth's line of beauty, "Straight is the line of duty, curved is the line of beauty; do the one, the other will follow."

Curved lines do not necessarily imply weakness, as the case of a fish in nature and a circular column in art prove. The convex form of the fish, from head to tail, presents the least possible resistance to the water, and the circular column accommodates itself to a load and distributes the pressure with less loss of material than any other form.

But, in both instances, the yielding curve is united to strength and solidity.

A hurried glance at the different periods of the world's architecture discovers not only the motives, but something of the character of the people who builded.

The great temples and pyramids of Egypt, the sepulchers (a hill-side scooped out to receive them), guarded by colossal statues cut in the unhewn rock, tell of multitudes enslaved and of a ruling despotic race who adored power, power to make and to endure. Worshipping, they developed it in their contest with man and matter, wrestling even with Time, who has not yet overcome them and would not for ages if unassisted by man.

The form of their pyramids is the most lasting that could be devised—straight, severe, immovable.

The subtle intelligence of the Greek impressed itself on his architecture with singular individuality. Knowing that to yield was to avoid friction and decay, he combined that quality and endurance with such skill as to be unapproachable in the grace of the one, while he rivals Egypt in the other.

A Grecian philosopher, baffled in his search for a definition of beauty, said, "Difficult are the beautiful."

The Greeks united strength and pliancy, and all men say, "Beautiful!" As forms they are beautiful, as adapted to their position still more beautiful, and as expressing the emotions of their author's mind, which meaning could probably only be understood by a compeer, they are immortal.

The secret of their art seems to lie in their mastery of detail. Their moldings are based on conic sections. The optical illusion that caused the long straight line of a column or cornice to appear concave, they corrected by another, the entasis, that made it appear straight. Such refinement of detail resulted in work as near perfection as man can accomplish.

The Roman was a man of another spirit. His dominion was over the present, strong and beneficent, but utilitarian. The works that best bespeak his mind are the vast aqueducts, viaducts and bridges, admirable in their fitness to their end. He was the first to use the arch extensively. The strength, solidity and magnitude in his higher efforts are generally more impressive than the detail, which was an adaptation of Grecian work always below the model save perhaps in the temple of Jupiter Stator in Rome, where the Corinthian capital has a free and more easy feeling than its model in Athens.

He had the form, but less of the spirit of high art. His moldings were based on the circle and consequently have less variety of contour and light and shade.

Gothic architects, moved by a devotional spirit, designed for the glorification of God and not of man, like the Greeks. They put their whole mental energy into it and designed noble buildings whose every form is full of symbolical meaning.

The Renaissance, at first infusing its own buoyant spirit into the lapsed classical forms, seems to have degenerated into a competition to galvanize one style after another with a view to prettiness.

Modern architecture is in an embryo state in this country, and what it will be depends on the development of the character of the people; for as is the man so is his work.

SUBMITTED BY "HENRY." (C. BRYANT SCHAEFER).

In all arts there are two fundamental principles. They are the idea and the means—the means through which the idea finds expression. In architecture form, proportion and color are the mediums for conveying the sentiments of the work in which they are incorporated. While the medium is less essential than the soul of the work, they both require the same studied attention. There may be more than one way of expressing the same idea, but different emotions cannot be expressed in the same manner.

Take a leaf with a sharp and pointed outline and another with a rounded shape. Their functions are the same, but the individuality they express is different. This same individuality can be expressed by means of scratches under each leaf. Although nameless they express the same sentiments as the leaves. That there is little or no sympathy between one leaf and the scratch under another leaf is self-evident. And this will also prove that there is nothing, however insignificant, that does not have the property of some thought or idea. As every form expresses something, it must follow that not only can disagreeable sentiments be expressed, but that a bad design, in the poor association and expression of its ideas, will for all time stand as a monument to the unworthy and poorly handled thoughts of the designer. And a designer creates as he thinks. His own individuality unconsciously becomes incorporated in his work. Indeed this cannot be otherwise, for no sentiment can be well expressed that has not been first experienced. The beauties we admire in Greek forms are the expression of Greek character. When the poetry of their earlier religion became debased by the adoption of Asiatic superstitions the architecture of Greece entered upon its decline. When the great moral impulse of the middle ages passed away, Gothic architecture fell apart.

Sentiment in art is the expression of a desire. To appropriate the architectural forms of the past with their feelings in which we no longer sympathize, is like borrowing a mask to hold before a mind of emptiness.

The first duty of an architectural student is to study the external appearance of bodies, store the mind with shapes, forms and angles and learn the manner of arrangement, the harmonious disposition of parts and the pertinent combining of particular things. This is done by acquiring a knowledge of past creations with their causes and results and a clear perception of modern requirements and the possibilities of materials. Associated with this work should be the cultivation of the expression or artistic sensibilities. This can not only be done by a study of the beautiful in architecture, but by practice in

all the arts. Sketching from nature, music, poetry, all will broaden and strengthen the mind.

Let us look at the means of expression a little more closely, and study an example. While the form should express some sentiment, it must still be consistent within itself; the laws of structural necessity and utility must not be violated. A hollow globe with a hole in its upper surface might be used for a vase, but it would be inappropriate and inexpressive. It would have nothing to show its intended use, neither would it show any of the expected conveniences necessary to create a sympathy between this form and the idea it should express. That this thing was made to hold something and to hold it conveniently the form must show. When the designer has accomplished this, he will find he has a body, a base for its support and a rim to guard the opening; perhaps also handles by which to carry it. A little too much attention to one or the other of these features, a little neglect of any of them will spoil, because in the first instance members are incorporated that are excessive; in the second they are insufficient. The bulk or mass should determine the character of each little embellishment. Classic form should be supported by classic detail and Gothic by Gothic, not because it is a decree of fashion, but because it is a law of nature. The full curved molding will always express its luxury, the attenuated form its severity. Although it is disastrous to place contrary emotions on an equal footing in a design, yet it is often necessary and right to use them as accessories.

While working on the structure of his design, the artist will have solved this question: What idea should this vase express? Is it made to contain a burden and to help in a work of toil? Does the broad and open mouth suggest the holding of a useful and freely handled liquid, or does the narrow neck guard a contents of precious substance? It may be a vase for a park in which to grow flowers and foliage, or it may be the dainty ornament on an exquisite's table supporting in its slender form a single rose. The contents may be held forth lavishly, or they may be sealed up only to be acquired by the spilling forth of that which is within, like joy that holds out a hand to everyone, or like long hidden sorrow cast forth again beyond restraint. This vase may hold tears—tears, once wept, never to be returned to the fountain; or there may be ashes within the urn, treasured like memories and becoming more dear with advancing time; it may guard an offering of repentance, of hope, of love, despair or anguish set upon an altar among rising incense. Can you master the forms that express all this as the Greeks have done?

SUBMITTED BY "PESSIMIST, JR."

Many volumes of our municipal libraries contain exhaustive discourses on this subject, and not a few of the architects have rare old books in which the "expression in form" of architecture in ancient and middle ages is elaborated to such a degree that the average draftsman would rather work regular hours on Saturdays than worry through the heavy, not to mention unnecessary grammatical expressions of the author, a very good authority, but of some forgotten era. Granted that there is enough of that in stock to meet all demands, I will air my views on the age of steel.

After a recapitulation of recent publications, together with what I have observed in execution, I am pained to acknowledge that the object of some architects has been to frustrate and eliminate any information in the architecture of the exterior that would lead to the discovery of the purpose for which the building or object was intended and erected.

It is possible for an architect to express in the general contour, assemblage of parts and detail, distribution of ornament, if any, in a dwelling, stables, etc., a cathedral, parish and rectory, or chapel, club house, theater, railway station, refectory, lighthouse, warehouse, municipal and state buildings, schools, academies and colleges, and the infinite number of subjects pertaining to his profession that are conducive to shelter and recreation for man and beast, by his knowledge of architecture and ability to construct an edifice which, when completed, will be a silent expression of its intended destination.

This can only be accomplished when each subject is separate and apart from others.

To include an office building, hotel, theater, stores, etc., under one roof, has recently been attempted in different cities, but these structures are more to be considered the feat of engineering and construction, with the architecture applied to cover up the steel frame work.

In striving to please such fastidious requirements as these the architect would naturally incorporate in his design for the exterior a very pronounced feeling of dignity and repose, which would be in keeping with the theater and hotel, but would be almost too severe a treatment for the portion designated for office purposes, as less wall space and more light and air are demanded.

We are surrounded by the most successful office buildings in the world, and from the emphasis of the inviting entrances, projecting bays, large openings and piers, though large enough—thanks to our engineers—are invariably out of proportion to the size of the building or openings. These are requirements necessitated by the limit and price of land, and architects have unanimously suggested the sky? Churches, theological clubs and places for worship can be executed to express their destination in legitimate styles of architecture so forcibly on the laity, that the man with the hat and the heathen Chinese are the first impression.

But recent productions show too plainly a tendency to perversion in ecclesiastical architecture, the source of which can be traced direct to the designer, in making the first studies from a railway station far projecting timber roof, with masonry walls one story high, heavy buttresses; this makes a very picturesque drawing, but how incongruous.

Can there be anything pleasanter in the line of an architect's duties than designing a home that would express at a glance the

purpose for which it was constructed? Considering the interesting and instructive features, I think not; but some of our most expensive homes are so lonely that husbands prefer the clubs to their dismal aspect.

The horse and cow are proverbially of a man's household, but I see no good reason for confounding antique customs with your modern houses simply to be in harmony with the finish and furniture. In this case the house and barn are under one roof, the entrance to both often through the basement of the house but sometimes through an improvised alley. Windows invariably high up, narrow and short, "just enough of an opening to make a dark line," says the designing villain. To the uninitiated in the arts, the destiny of this structure would be an asylum for the blind.

There is consolation in the fact that the honest architect is not guilty of such abortions, and that it is confined to a few who are striving to be original without regard to legitimate styles.

In the cities where ground is worth several thousand dollars per front foot, a building is designed and planned to return a certain per centum on the investment in rents. The architect calls into service the "little I beam," iron column, and fireproof tile, and usually the expectations of the owners are fully appreciated. Usually a large and imposing entrance is provided to the elevators and stairs, and this is the mark of distinction between a commercial office building and a factory. From outward appearance the signs on the window-glass of the former would express its destination perhaps better than the form.

While thus deliberating I have confined myself to a man's home, his place of business and his church, and have arrived at the conclusion that it is in direct variance with political economy to confine oneself strictly to the laws of architecture for selfish reasons, when our client has a large sum of money at stake (in mercantile buildings), and I will stick to this when my shingle fans the breezes, damme if I don't.

SUBMITTED BY "BRETHREN, LET US HOPE."

Is expression in form a necessity in good architecture; or, should the general design of a building express the relation it bears to the work it accomplishes? This has already been discussed by men, and able men, in the architectural profession, as well as in many others in which form holds, or is supposed to hold, a prominent place in regard to its artistic worth—some of these members of the architectural profession holding that it is not necessary for a building to express what goes on inside its walls, to be architecturally good—that what good building requires is either picturesqueness or dignity; while others argue all good work should express its *use* at sight; but beyond this use it would be impossible, in many cases, to carry expression unless the picturesqueness or dignity of the design were sacrificed. Take for example "the home of an artist by the sea." The home of a man of taste and refinement; *one*—how scarce they are—who knows what is good and what is bad, who finds pleasure in studying the good, trying to overlook the bad; for such a man there should be little doubt in the mind of his architect what kind of a house would please him best, and what would express *to the stranger*, as near as possible, the occupation of its inmate.

But again, suppose the house was to be built for a man who had no refinement or taste, had been used to associate with the lower class of people, but had, by the sudden death of a rich relative in the "old country," become possessor of a fortune and straightway decided to build him a house; would an architect then try to build in keeping with the nature of his client? We would see in such a case a building, more than likely, of large dimensions, the man wanting to show the size of his pocketbook, in which no thought had been taken to produce good lines and a general feeling of seclusion and refinement which would appeal to the artistic qualities of a more sensitive nature than his. This course would not only hurt the architect in charge of his plans, but the owner would remain in the same state or position he occupied before, where if he built picturesquely, or, perhaps, still better in his case, with dignity of form, even if he did not like it himself at first, he would naturally become educated up to the artistic standard laid down in his "lodgings." Supposing that we have now proved that expression in form should not be sought after when it would in any way spoil the composition outside of the use to which the building is to be subjected. Supposing this to be true, can we prove that the former is correct and necessary to all good building, architecturally considered—that is, is expression in form necessary?

Let us first ask ourselves, is good planning necessary to the artistically complete *building*? not parts of the building, but the whole structure; the façade of a house may be very beautiful, but it is only a part. I once heard quite a lengthy discussion on that topic, and although it is an exceedingly hard thing to prove, I think every member of that party who discussed it finally came to the conclusion that it was necessary; that if a man saw a good piece of exterior work and then was shown through the interior, if it turned out bad he could not get over a feeling of what might have been and a lowering in his mind of the general worth of the building; although the interior had nothing to do with the exterior, he could not get over the feeling that a man who could not do better interior work than that could not possibly be perfect on exterior work—although before seeing the plan he thought the façade, which was but a part of the building, perfect.

Now, whether the plan of a building is good or not must be decided by whether it fulfills the duties required of it in the best manner, and to the best advantage that could be gotten out of the situation. This a professional man is able to tell and admire, if it happens to be good, at first glance, and the average client is not far behind him, and equally ready, in his absence, if not in his presence, to point out the bad. In such a case would not the perfect plan always lend form to the building?

This expression would, however, be most readily interpreted by those who inhabited the same land or lived in the same locality, as

different climates and different pursuits in life would of necessity require different arrangement and style of building. If such a phenomenal thing should happen that all men would work for expression in form, would it not also bring about a great change for the better in one detail? The Greek had but one form for his temple, which he carried to perfection, but what a chance he had for the display of refined and elegant detail, which he evidently considered as important as the massing of his building. How many buildings have we here which would stand the criticisms put to his work?

SUBMITTED BY "X. Y. Z."

Expression in form, I think, is the most important feature of any object, design or illustration, no matter what it may be; if the form of any given object, or the design or illustration of the same is not good and true to nature, or if it be disfigured in any way, it is certainly not an object of beauty or admiration to the observer, if not one of disgust or contempt.

In architecture, I think, form is the principal feature, especially on the exterior of a building which is to be erected in a large city, where it is almost impossible to preserve color any length of time. Color has no doubt a great deal to do with its appearance, but not nearly so much as form. A model of any building showing all its features in detail, I think, is the best illustration that can be given of the same, because there is no chance to make mistakes in judging or criticising it, as the whole is shown just as it will be when it is finished.

We also judge the appearance of the most if not all things by their shape and form, a great deal more than we do by their color.

SUBMITTED BY "Z., JR."

The feelings of a talented and cultivated mind, such as noted artists possess, are expressed in the style or form of their work, and if presented to us in proper form we experience those same feelings as did the artist or composer when he designed or composed his work, that we now hear or see hold.

This work may be expressed in various forms, such as voice, music, architecture, etc. It may also be rendered in proper and improper style or form, producing either, or both pleasant and unpleasant effects. The pleasing will be full of deep feeling, refined, superb in detail, properly delicate, and the proper expression in its proper place; while others seem so cold and stiff, without a touch of feeling, and may sometimes be termed vulgar. Then we have the different expressions in the church, dwelling, business block, armory, jail, monument, tomb, etc. Each one confers upon us some feeling, either of comfort, strength, noble deeds, sorry, etc. To introduce these feelings into its proper structure is a study of "Expression in Form."

THE ADJUDICATING COMMITTEE'S REPORT.

The Adjudicating Committee, at the meeting, October 7, submitted the following letters as their report and criticism upon the competition:

Mr. W. R. Gibb, Secretary:

I note your request that the reports be signed by all three judges. Whenever heretofore such has not been the case, it was due to the absence of one of them from the city for a period beyond the time when it was thought necessary to return the designs.

In this case—essay, "Expression in Form"—each of the judges will make his own individual report, which each will forward to you.

We are not sure, however, that this is as you wish it. Perhaps you prefer that the three judges should all agree upon one report. If so, kindly return the several reports to Mr. Root, and we will agree upon a single report.

I have the honor to present the following: I am in receipt of six essays, signed: "Jason," "Henry," "Pessimist, Jr.," "Brethren, Let us Hope," "X. Y. Z.," "Z., Jr."

I place "Jason" first. His essay shows a knowledge of the subject, is well treated and is what I judge that those giving the subject intended. His illustrations are well selected and are entirely architectural.

For the second place I select "Henry." He has treated the subject somewhat differently, particularly in his illustrations. His ideas are good and well expressed.

For the third place I select "Pessimist, Jr." He has decided opinions that I think are usually correct, and he certainly has a strong expression of how he will treat the case when he is in practice for himself.

I place "Brethren, Let Us Hope," as fourth in the list. The essay shows thought and correct ideas.

"X. Y. Z." and "Z., Jr." I place last, not because they modestly chose the last letters of the alphabet for their motto, nor because they are much the shortest of the essays, but because they have given less study to the subject than the others. The ideas are, however, correct, and if they had but devoted more time to the subject they might have taken a higher place in the list.

Respectfully submitted,

W. L. B. JENNEY.

J. L. SILSBEE.

I concur in above report.

Mr. W. R. Gibb, Secretary:

After reading over the various papers submitted in competition for the Sketch Club, and written upon the general question of "Expression in Form," I beg herewith to submit to you my criticisms upon them.

Beginning with "Pessimist, Jr." It seems to me that he has viewed the subject in too general a way. The questions raised by him relate generally to architecture in its various expressions, but is not confined simply to matters of form, reference being had to general

massing and light and shade, whether involved in fenestration or in other matters.

As I understand it, "Expression in Form" is intended to mean form as opposed to color or to light and shade, as all art expression has these three elements, whether that art be music or poetry, painting or architecture. These different elements enter less into some than into other arts, as, for instance, the matter of color in sculpture, etc. What I conceive, therefore, to be intended was the differentiation of form in architecture from the other elements of its complete expression. For this reason I do not conceive that "Pessimist, Jr." has realized the essence of the question, although his article exhibits considerable knowledge and discernment, and a latent capacity for a certain power of caustic expression.

Second. "Brethren, Let Us Hope," places great stress on the expressiveness of a design of the functions of the building, and even of the character of its occupants, and then proceeds to question if a good design may be based upon a bad plan. Here again, it seems to me, the subject is debated in too general a manner and without placing sufficient accent upon "form," pure and simple. The questions he raises are very pertinent and of great importance, and if frankly accepted would lead to a very much more wholesome condition than architecture at present generally obtains. It is certainly true that before architecture can ever attain vital expression, the building must be viewed by the architect as an organism, having within its elements as vital functions, as well defined and as consistent with themselves as any of the organisms created by nature.

The crime in design of inconsistency within itself is great, primarily because of this fact: that it is a sin against the nature of things, which can never be in any sense successful. Architectural styles, so-called, exist and are recognized solely to the extent in which they move and are manifested by natural laws, or in violating these become monstrosities. These architectural sins against nature have never been able to maintain themselves longer than the short and worthless life of their inventors. The primary study of nature, therefore, will be frequently found advantageous over the mere study of architectural tradition unilluminated by such study.

Third. "Jason" confines himself to "form," as I understand it, much more closely; and his paper I think you will find suggestive and instructive. His observations are in the main very pertinent, and to this paper I am inclined to give first place. It seems to me that if "Jason" will read the discourses of Violet le Duc upon the development of Gothic architecture, the very lucid chapters given to this subject will convince him that Gothic architecture was not evolved solely in a purely devotional spirit. This conception of Gothic architecture has done much to destroy its vital study by the moderns.

Fourth. "Z." As stated above, I do not conceive that "form" is intended to be discussed in its widest aspects, especially if the word be used as signifying the various avenues through which arts like music, poetry, etc., manifest themselves. Style and form seem to be somewhat confused in this paper, and this is a great mistake. Form is the underlying motive of intellectual expression, which lies at the foundation of all architectural styles; and one phase of form may underlie many architectural styles, as, whether lines be straight or curved, whether moldings be conic sections or be described with a compass, etc.

As noted above, a man studying all architectural styles in general should constantly bear in mind this fundamental element of form, out of which they have grown, which exists outside of them, and would be as vitally existent if these architectural styles had never been developed. To observe in architectural styles the underlying forms, coupled with the social, religious, mercantile and military conditions out of which they grew, is to comprehend them. Observing them merely as set down in the books is to have no understanding of them. There is a small work on architecture, written by Mr. Garbett, in which occurs a very suggestive and delightful discussion of questions of form as related to architecture and other arts, which it would be well to read.

Fifth. "X. Y. Z." is right in saying that architecture depends for successful expression more upon form than upon any other one element; but the great, highly emotional and elemental value of color must not be forgotten. If any one of you has chanced to see the ruins of the Acropolis, or has seen Mr. Church's magnificent painting of them, or has even been fortunate enough to see an old piece of Pentellic marble, he will bear witness to the fact that much of the charm of the Parthenon must have come from its wonderfully luminous and delicate color. In more familiar cases, one has only to recall the glow of light falling upon some old red sandstone cliff to understand that under conditions favorable to its expression color in architecture may be as potent as a chord of music.

"X. Y. Z.'s" observations on models of buildings are in the main just, although it must be borne in mind that the model itself fails to convey the sense of scale, except as relative between various parts, and can in the nature of the case make no allowance for the effects of fore-shortening, which is so great in urban architecture.

Sixth. "Henry" makes very good use of the Greek vase, which has frequently served as text in this direction, and the study of which can never be carried too far. In the cultivation of sensitiveness to form, the Greek vase stands only second to the human figure. Undoubtedly the Greek vase obtained its form from close observation of the human figure, as did all Greek work of beauty. Many of its lines can be comprehended only as one recognizes their analogue in certain expressions of flexure, of roundness or of muscular development in the nude figure. The vase possesses the rare advantage that it is the first art product derived from the figure, and yet at the same time applied to practical use, so that in it are united in very close relationship two operations of the native human mind; first, observation developing into the recognition of beauty, and second, the intellectual process by which means are adapted to practical ends.

I would like to call attention at this point to two other conditions which have, or should have, strong influence upon the character of forms employed in architecture. One is involved in the process of manufacture; the other is the character of material. In a sense these two conditions are one. Perhaps I may illustrate this best in the familiar case of cast as against wrought iron. Anyone who has watched an artist working in metals will know that at a certain point, by one blow of the hammer at the right instant, a bar or a leaf will have attained to a certain crispness of expression, the destruction of which demands, on the part of the worker, considerable effort. Beyond a point where this crispness is attained, all pleasure in the work must have ceased, and the rest of the operation is merely labor, and labor expended to wrong ends. It has no analogue in work produced by casting where the sole successful result is secured in reproducing the original model from which the casting has grown. Generally speaking, the statement will hold that if a given ornament or form is good in one material to the extent of being best, it will be bad in another material to the extent of being less good. Some analogues may hold through several materials, as for instance, modeling in papier-maché may have something in sympathy with casting in metal, or a carving in clay may have something in touch with carving in wood; but even here the superior tenuity of wood fiber will indicate certain advantages of expression denied to clay, and the superior toughness of papier-maché and the greater hardness of iron would suggest certain typical forms for each here. No one may legitimately use through all materials certain specific forms, although underlying all of these forms as applied to different materials may be certain elemental conditions, as the piquant or vigorous sentiment evoked by straight lines and acute angles or straight lines and right or obtuse angles. And again, when by the use of certain circular or other curved forms sentiments of fluency and grace or of large openness and nobility of expression may be produced.

In an informal criticism of this sort, nothing but a mere suggestion can be made, but I think you will all find in making your own designs, which I trust you will always do, that there lies at the bottom of this whole subject a wealth of suggestiveness which, put into actual practice, cannot fail to be of great value.

A Model Building Law.

AT the recent convention of the National Association of Fire Engineers, at Detroit, an essay upon the general subject of fire prevention, under a number of heads, was read by Mr. Henry A. Goetz, of New Albany, Indiana. Sections B, C and D of Mr. Goetz's paper are given as directly bearing upon the proposed draft of a building law that should tend to limit the annual destruction by fires. They are as follows:

(B.) Which is the best economy, to continue building as now done, and trust to the fire department; or put up better buildings, that will not destroy each other, but will burn out individually?

The general public is not aware that eleven fires alone destroyed over 30 millions during 1889. Just think of it, eleven fires costing on an average near 3 millions each. We destroy over 110 millions worth of property each year; we spend near 40 millions for managing a system of insurance tax; 30 millions are needed for the fire departments, our whole fire tax being near 190 millions. Estimating our population at 64 millions this fire tax amounts to \$3 per head for every man, woman and child in the United States. One half of this sum at least is the price we are paying for ignorance, carelessness and crime; the other half we cannot help, for fires have occurred for ages and will continue to occur, notwithstanding all precautions to prevent them; but it is a lamentable fact that our people have grown more careless than those of any other nation, and that the means for preventing fires have not by any means kept pace with those for its extinguishment. Take up the report of a representative department, that of New York, and in 1866 the ratio of fires to buildings was fig. 1 to 80, and in 1889 it has risen by uneven steps to fig. 1 to 40. While the number of buildings increased 80 per cent and the population 120 per cent the outbreaks of fire increased in number 250 per cent. The Insurance Commissioner of Massachusetts, in his report, estimates that full 90 per cent of all fires were preventable. These figures indicate very plainly that it is better buildings and increased precautions we need rather than improved apparatus or additional firemen.

At a public meeting in Boston, Inspector Damrell said: The subject of prevention supersedes that of extinguishment, and that we must build so as to confine the fires in the places where they started; if you wish to avert conflagrations separate the risks by fire walls so that fires can be confined. Prevent the erection of a building which when a fire starts in it will not only destroy itself, but lay waste the property of its neighbors.

At the same meeting the fire commissioners expressed the opinion that it was not additions to the fire department or improved apparatus that was wanted, so much as better buildings that were able to resist fire. In fact it is now being accepted as law by the insurance experts and those who are intimately concerned, that it is only by the most careful inspection and improved methods of building that we can ever hope to reduce the fire waste of this country.

The walls of all warehouses, stores, factories and buildings intended to contain merchandise, machinery or humanity should be of the most substantial construction. The joists, girders, posts and interior framework should be so constructed that the entire contents might be burned and destroyed without danger to the inclosing walls. If the architect could be prevailed upon to design his building so it could safely cremate its own contents, then it would be impossible for any fire to spread to any serious extent, and the conflagration

hazard could be wiped out of existence. The eleven fires of last year would have been impossible and immeasurably less would have been the danger to life and property.

When it is borne in mind that falling walls are of frequent occurrence and that when one building gives way the one standing next to it usually falls also, and when it is considered that this flimsy method of construction as now practiced furnishes all the most favorable conditions for a conflagration, the wonder is that each city is not in turn destroyed block for block.

It is a high tribute to the efficiency of the American firemen that conflagrations are not of more frequent occurrence, and with no small amount of pride can we assert that the American firemen are head and shoulders above those of any other nation, and while the firemen are doing all that it is possible to do, nevertheless it is much the best economy to prevent fires rather than trust to our ability to extinguish them.

(C.) *Should firemen take an active part in urging that better methods of construction be adopted? And in what way can they do this best? Is it policy for the National Association to undertake to frame a model building law?*

For the last few years the loss of life at fires averaged near five hundred yearly, and we can call to mind many brave and fearless firemen who are among that number. Hardly had our last convention closed, when Major Hughes was called home by telegram to mourn the loss of five men who were buried under falling walls. Following soon after this came Philadelphia with one dead and several injured; at Lynn another lost his life; then the big fire at Boston took away four at one time. This list could be kept up indefinitely, but we will close with the most fearful of all, Indianapolis, twelve being killed at once and many others injured.

It is certainly a sad commentary on our methods of building to know that the collapse of a single post, or the falling of a few joists should cause the whole building to fall. Should we, then, as firemen, stand back and say nothing? Is it not our duty to cry out and call upon our government, both state and national, to correct these evils in building? Take up the building ordinances of all the larger cities, and you will find no two of them alike; uniformity is a term unknown. Examine more closely and you will discover many paragraphs to be unnecessary or so ambiguous as to be misunderstood.

It is a strange commentary on the intelligence of this great nation that not a single state in the Union has a comprehensive building law, classified to meet the varying wants of its different cities. Not a single city in this country has an ordinance that can be considered perfect, or nearly so. That of Louisville, just passed, is said by architects and builders to be impracticable, even using names and terms unknown to the trade. The mayor of Boston has just appointed a committee for the purpose of revising an admittedly bad and patched-up ordinance. In New York state a bill was recently introduced at Albany providing for the appointment of a commission of three experts to draft suitable laws for the construction of buildings in the state. This bill fell through, possibly because the average statesman did not appreciate its importance. New York City has had a commission at work for months revising and correcting the law, and intended to have the amendment passed by the last legislature, but the underwriters found some room for improvement, and succeeded in delaying its passage until next winter. St. Paul, Minneapolis, Baltimore, Philadelphia and Memphis are at work seeking to improve their laws; all this work showing conclusively, and admitting, the defects now existing.

This subject of improved methods of building should receive our most earnest and careful deliberation, for it concerns the financial welfare of this country, the personal safety of ourselves and the life and property of those who are so unfortunate as to occupy these badly constructed buildings during a fire.

There are other national bodies who should be as deeply interested as ourselves, and we have every reason to believe they are, namely, the American Institute of Architects, the National Association of Builders, the National Board of Underwriters, and the National Association of Building Inspectors. It does not seem improper, therefore, for this association to ask the coöperation of the national bodies mentioned for the purpose of framing a "model building ordinance." Such a model, framed and promulgated under their combined coöperation, would be eagerly adopted by all cities, and would have a wonderful effect in improving our present methods of building.

This association should be the first to take some action in the matter. Nothing we could do would be more commendable. Nothing we could do would be of such importance. Nothing we could do would be considered a greater blessing. Nothing we could do would bring us into more favorable prominence than to be the prime movers toward getting a uniform and model building ordinance framed and adopted.

(D.) *Will it cause the public to adopt better methods of building if the chiefs, in making their reports, would adopt the plan of reporting, in addition to the total loss, also the probable loss that would have occurred if the building in which the fire originated had been built with adequate fire walls or in a proper manner?*

The people generally seem to think that a great fire or conflagration is an act of God, and find consolation in insurance, forgetting that insurance companies merely distribute the burden on the multitude with about forty per cent added to pay dividends and expenses. The people generally are not aware that the greater the fire waste the greater the tax on the people. Insurance is now considered a legitimate and necessary expense, and anyone is counted as negligent indeed who meets with a loss by fire and is not insured against such a loss. Insurance, therefore, is a tax, amounting at the present time to near one per cent on all our taxables. A reduction of this tax is an

important matter and lies wholly in the hands of the people, and can be brought about only by greater care in preventing fire and by better methods of building. The mutual insurance companies have demonstrated beyond a doubt that it pays to put up better buildings and protective apparatus. From actual results we find that the rate on a textile mill was formerly two and one-half per cent, while the rate last year was only one-fourth per cent. The president of a prominent stock company asserts that his company would make good money at one-third the present rates if fires could be confined in the buildings in which they originated.

Losses by fire from interior causes seem unpreventable, but those from exposure, that is where fire extends to adjoining property, can be prevented by the erection of better buildings, having substantial fire walls.

The *Chronicle* fire tables show a loss from exposure during 1889, amounting to \$50,000,000, the total loss from all causes being \$125,000,000; sixty per cent, therefore, representing the loss from all causes and forty per cent that from exposure alone.

After any great fire there is usually considerable criticism floating in the air condemning the management at a fire, and the firemen generally get the blame if anyone is hurt by falling walls. Did you ever hear anyone ask or inquire during a fire about the details of construction, and how it might be improved? Did anyone ask for the name of the architect, the builder and the owner? Is the architect censured for permitting his judgment as to safety to be overcome by the economical ideas of the owner? Is the builder ever called to account or brought before a jury for putting up such a flimsy death-trap? Is the owner ever summoned before a judge to answer for the damage caused to adjacent property through his negligence, or to answer for the victims that were burned and scorched? No; none of these are at fault. It is the chief; it is the firemen that get all the blame. I need only refer to the newspapers for evidence. This way of criticising matters should be changed, and it can be done.

One chief in his report says, "Had the walls of the building been sufficiently strong the fire would have been confined to that building alone, and the loss would not have been more than one-third what it really was." Another says, "If the walls would have remained standing the loss would have been very much less." Another says, "The walls fell early, exposing much property that lay next to it." Now this is entirely too lenient with the owner, and much stronger language should have been used, giving the figures of the total loss and also of the preventable one. We have become so accustomed to walls falling that we take it as a matter of course and not to be helped. This habit our builders have of making thin party walls do double service and of propping up these buildings against each other, will not do. Compel owners to build so that a structure will stand alone should those adjacent be removed. Compel builders to put up a building so that the entire interior of the same could burn out without damage to the exterior walls.

Draw out these facts especially in your reports, with a view of educating and instructing the people, and there will certainly be a public opinion aroused that will correct these evils and make it a crime against the safety of the public for anyone to build these thin, weak and unsafe party walls. Methods of anchoring should be corrected, for at the present if the joist fall the anchors cannot free themselves and therefore the wall is pulled down. You must explain in your reports what made the walls fall and insist on some method of anchoring joist being used so that falling joist shall free their anchorage and leave the walls standing, remembering all the while that nothing in existence can resist a fire so well or so long as a standing brick wall.

Ohio Chapter American Institute of Architects.



THE reorganization of the state association into a Chapter of the Institute has been accomplished, with fifty-two members in good standing. The examination of new candidates is the same as that prescribed by the Institute constitution.

The following circular letter has been issued to each member:
OHIO CHAPTER AMERICAN INSTITUTE OF ARCHITECTS.

OFFICE OF THE SECRETARY,
AKRON, Ohio, October 12, 1890.

DEAR SIR,—I take pleasure in announcing that the result of our recent ballot has been

unanimous in favor of reorganization as the Ohio Chapter of the American Institute of Architects.

Application has been made for a charter, which we expect to receive at or prior to the next annual convention of the American Institute of Architects, which will be held in Washington, District of Columbia, on Wednesday, October 22.

As it is very important that action should be taken at the earliest possible opportunity to ratify the result of this ballot, effect reorganization and attend to business pertaining thereto, it is the desire of the Executive Committee to hold our initial Chapter meeting while at Washington, thus avoiding the necessity of calling a special meeting for this purpose, and it is hoped that there will be a large attendance of the Ohio Chapter at the convention.

It has been suggested that Ohio members stop at the same hotel, if convenient, while in attendance at said convention. Therefore, if members will at once notify the secretary of their intention to attend, the number of their party, whether accompanied by ladies or not, and the accommodations desired, arrangements will be made for special rates at some first-class hotel, and due notice given.

The Executive Committee desires to inform all members that, according to the revised constitution, the official year of the Chapter will begin and end with January 1, and that the fiscal year will begin and end with same date.

Accompanying this are copies of the revised constitution and by-laws, list of members, blank applications for membership, schedules, etc., and it is hoped that each member will endeavor to increase our numbers by securing the application of some professional brother in honorable practice yet without the pale of our influence.

GEORGE W. KRAMER, Secretary.

Institute Convention at Washington.

IN advance of the regular programme of proceedings of the coming annual convention of the American Institute of Architects, at Washington, the secretary has issued a circular letter of information mainly directed toward securing a full attendance of members, and through this object placing at their command reduced railroad rates and special cars. The circular is as follows:

AMERICAN INSTITUTE OF ARCHITECTS.

OFFICE OF THE SECRETARY,
THE ROOKERY, CHICAGO, October 10, 1890.

DEAR SIR,—The convention of the American Institute of Architects to be held in Washington, Wednesday, October 22, should be of such general interest to the profession as to call out a full attendance of Fellows of the Institute.

Arrangements have been made with the New England, Central, Southern and Western Passenger Associations, representing the Trunk lines in the United States, by which members attending the convention are entitled to a one and one-third rate.

A first-class ticket should be purchased through to Washington, the purchaser being particular to state to the ticket agent that he will attend the Institute convention, and asking for a certificate. This certificate will be signed by the secretary of the association at the convention, and upon its presentation to the ticket agent a return ticket will be issued at one-third fare. If a through ticket cannot be purchased to Washington, a ticket should be purchased to the most convenient point where such can be obtained, and a through ticket and certificate secured there.

Architects west and south of Cincinnati will observe the following:

In order that members may travel in company, the roads mentioned in the following time table have been selected:

TRAIN SCHEDULE.

Leave Minneapolis.....	C. M. & St. P.....	6:10 P. M., Monday, October 20.
Leave St. Paul.....	C. M. & St. P.....	6:40 P. M., Monday, October 20.
Arrive Chicago.....	C. M. & St. P.....	7:00 A. M., Tuesday, October 21.
Leave Omaha.....	C. B. & Q.....	4:30 P. M., Monday, October 20.
Arrive Chicago.....	C. B. & Q.....	8:00 A. M., Tuesday, October 21.
Leave Denver.....	C. B. & Q.....	9:30 P. M., Sunday, October 19.
Arrive Chicago.....	C. B. & Q.....	8:00 A. M., Tuesday, October 21.
Leave Denver.....	Santa Fé.....	10:05 P. M., Sunday, October 19.
Arrive Chicago.....	Santa Fé.....	7:25 A. M., Tuesday, October 21.
Leave Denver.....	U. P.....	8:30 P. M., Sunday, October 19.
Arrive St. Louis.....	Mo. Pac.....	6:40 A. M., Tuesday, October 21.
Leave Chicago.....	"Big Four".....	9:10 A. M., Tuesday, October 21.
Arrive Cincinnati.....	"Big Four".....	6:14 P. M., Tuesday, October 21.
Leave Cincinnati.....	C. & O.....	6:30 P. M., Tuesday, October 21.
Arrive Washington.....	C. & O.....	7:35 P. M., Wednesday, October 22.
Leave St. Louis.....	"Big Four".....	8:05 A. M., Tuesday, October 21.
Arrive Cincinnati.....	"Big Four".....	6:14 P. M., Tuesday, October 21.

Connects with Chicago train at Indianapolis.

Leave Peoria, Ill.....	"Big Four".....	7:05 A. M., Tuesday, October 21.
Arrive Cincinnati.....	"Big Four".....	6:14 P. M., Tuesday, October 21.

Connects with Chicago and St. Louis train at Indianapolis.

Leave Chicago.....	B. & O.....	10:10 A. M. and 2:55 P. M.
Arrive Washington.....	B. & O.....	10:38 A. M. and 3:03 P. M.

By taking these roads either from the terminals mentioned or the intermediate points, where warranted by the numbers, special cars will be provided eastward and returning. Notification of an intention to attend the convention should be immediately forwarded to the secretary.

As previously stated, the Arlington House has been selected as general headquarters. Because of the general crowded condition of the city at this time, members are requested to send application to that hotel for rooms in advance.

The board of directors will hold a meeting on Tuesday, October 21, at which matters of importance, including the election of Fellows, etc., will be transacted.

All reports of committees and Chapters, and notice of all papers to be read or documents to be presented, should be in the hands of the secretary a week before the convention.

An order of exercises will be issued. JOHN W. ROOT, Secretary A. I. A.

The plan suggested by the time table is to secure, as far as possible, the special privilege of members traveling together. The St. Paul road from the northwest will issue tickets to Chicago, and the time of arrival will give ample time to change cars to the "Big Four." From Chicago, two roads have been selected. The Baltimore & Ohio will take those who wish to go direct in the shortest possible time. Those who wish to enjoy the ride and see some of the most superb scenery this country affords, will take the "Big Four" via Cincinnati. At that city transfer will be made to the Chesapeake & Ohio; arriving at St. Louis, members from the West will also take the "Big Four" to Cincinnati, and those south of that city will also make it the objective point. If the time table and circular is carefully studied and carried out, a special train of many cars can carry western members to and from the convention and prove a social feature that cannot be equaled. On the return trip, it is hinted that a stop at Old Point Comfort and the Natural Bridge is a probability. The secretary should, as far as possible, be notified of intention to be present and the route preferred.

A Trades Union Demand on English Architects.

RECENTLY the Council of the Royal Institute of British Architects received deputations from the London United Building Trades Committee, and the London Trades Council, respecting the question of sub-contracting in the building trades. The particular purpose of the interview was to urge upon architects, through their representative body, the desirability of inserting in their conditions of contract the three following stipulations, viz: (1) That the contractor shall not be allowed to sub-let any portion of the work; (2) that all labor employed by the contractor shall be of the best quality; and (3) that the contractor shall not pay less than the recognized or trade-union rate of wages, and shall observe all recognized rules or customs as to working hours. The results of this interview have been very carefully and critically dealt with by Mr. Edwin T. Hall, in the last issue of the R. I. B. A. *Journal*, and for the benefit of its many readers among the general public who seldom look at purely technical journals, and are still more unlikely to read the transactions of a society like the R. I. B. A., the *British Architect* makes as clear and brief a synopsis, under the head of "Architects

and Sub-contracting," as the importance and technicality of the subject will allow, and which is reproduced because of the similarity of conditions and sentiment among architects of this country.

"The first demand made from the architects by the deputations to the R. I. B. A. Council was that they shall not permit contractors to sub-let any part of their work. Mr. Hall, in his article, analyses this demand very carefully, taking each part of the work which is usually, or sometimes (as the case may be) sub-let, viz: (1) The excavator; (2) bricklayer; (3) mason; (4) slater; (5) carpenter and joiner; (6) engineer and iron founder; (7) plumber; (8) hot water or steam heating; (9) gasfitter; (10) electric lighting; (11) bell-fitter; (12) plasterer; (13) painter; (14) glazier; (15) carver. The reasons why most of this work is sub-let, Mr. Hall clearly shows, are by no means entirely those of greed on the part of the chief contractor, nor is he of opinion that the work must necessarily suffer in consequence. The fact of the matter is that this custom has arisen more from the great convenience of the thing than anything else, and the evil of it creeps in where the architect is not sufficiently concerned in the quality of his work, or sufficiently competent to judge what is wanted, to see that only those sub-contractors are employed whose names are a warranty of good materials and workmanship. Almost every architect of any repute whatever specifies by name what firms are to supply such things as fireplaces, mantelpieces, gas or electric light fittings, ornamental plaster work, water-closets, etc. Decorative work, too, is generally sub-let under the architect's special direction, as also the carved work. The matter of masons' work is, in a sense, a more debatable question. It will be remembered that there was a strong protest entered by the London masons against the stone for the Imperial Institute being dressed at the quarries. Mr. Hall's remarks on this point, are, in our opinion, quite conclusive. 'As architects,' he says, 'we can condemn only the inferior craftsman and his workmanship. I believe all the stone for the Spanish Place Church was worked in the country by the quarry-owners. Is it inferior to work done in London by our masons?' This is really the only question the architect has to consider, especially when he knows for a fact that the country masons who dress the stone are proportionately as well paid as their London brethren. 'We cannot,' contends Mr. Hall, 'accept as reasonable, either that the country qualified mason should be paid the same as the London mason—which would be very unjust to the London mason, who has to pay so much more for everything—or that all the stone used in London should be worked in London, in order to give more work to the London mason at the expense of his country fellow-workmen.' As to the allegation that for quarry-worked stone inferior material is used, Mr. Hall asks: 'What are the dry probabilities? Stone before it goes onto the rails is worth a few pence per foot; but delivered on a job in London, it is worth double or treble. To set aside a soft or unsuitable block in the quarry yard means no loss; it will come in for some purpose. To set it aside on a London job means at least the loss of the freight to London, and the carting to and from the building. I fear the temptation would be stronger in the case where there was most to lose. Again, the quarry owner, by his contract, has to satisfy his employer and the architect. Is it more likely he would put work to a bad stone, and pay its freight to London with the risk that the whole would be rejected when it got there, or that he would exercise great discrimination in selecting good stone?' And does not the question of the waste material got rid of in the dressing process count for something in the cost of freightage in a large contract? Then again as to the case of sub-letting the stone work—labor and material—the same argument applies as in the case of the excavation work. The sub-contractor generally makes a specialty of the work, and provides the extensive plant and facilities required accordingly. Mr. Hall mentions by name, in connection with stonework, Messrs. George Smith & Co., whose 'facilities for moving and working stone are so much greater than all but the largest contractors, that they can do stonework cheaper than the chief contractors under whom they work, without attempting to cut down wages.'

"So far as we have understood the objections raised against the sub-letting of builders' work, they seem to have been founded rather on trades unionist ideas than a fair knowledge as to whether its abandonment would be likely to improve the quality of such work. Now, for the architect the one important question is that the materials and workmanship put into his building shall be of the quality specified. How far does sub-contracting interfere with the requirements of good building? We are quite of Mr. Hall's opinion that, 'given an honorable contractor, there is no reason in the nature of things why work done under him should be less well done through sub-contracting than by means of day laborers.' But that sub-contractors are by no means always honorably dealt with by contractors, and that there is often great delay in the delivery of materials on to a job, and much friction caused by the number of sub-contractors and their workmen, goes without saying. Whilst, therefore, we think with Mr. Hall that the prospect of dispensing with sub-contracting in respect of many trades is practically impossible, yet we are far from considering the system an unmixed blessing. We do not see how architects could with any real advantage to their clients or their work veto the sub-contracting system. Their endeavor, it seems to us, should rather lie in the direction of seeing that the 'Heads of Conditions,' issued by the R. I. B. A. for guidance as to the formulating of contracts, are more definitely accepted and carried out. They cover, as Mr. Hall takes care in his article to point out, practically all the evils complained of in sub-contracting; for instance, Clause 4 stipulates that 'the contractors are not to sub-let the works or any part thereof without the consent in writing of the architect.' This to all intents and purposes should reduce the evils of sub-contracting to a minimum, providing the architects are in any real sense competent practitioners. Clause 3 provides that 'all materials and workmanship' must be 'the best of their respective kinds'; this settles the question raised

in the second proposition brought forward by the deputations to the R. I. B. A. Council.

"As to the question of inadequate wages and long hours, we cannot accept the trade-union principle that the incompetent artisan shall be paid the same wages as the skilled one. And in the building trades it is of the utmost importance that none but thoroughly competent workmen should undertake skilled labor. If contractors employed none but competent men the rule might apply, but can it be honestly said that such is the case, and if not why should good and inferior work be paid for exactly at the same rate? 'Labor of the best quality,' says Mr. Hall, 'will always command the best wages.' It ought to be so, but according to the trades unionists the best is no better in point of pecuniary value than the worst, which is about as absurd an idea as to imagine a handsome four-year-old thoroughbred horse to be of no more value than the aged, broken-down living skeleton about to be slaughtered in the knacker's yard! * * *

The St. Clair River Tunnel.

THE longest river tunnel in the world, and one of the most daring pieces of engineering ever attempted in this country, was completed at Port Huron, Michigan, August 25. The work engaged over six hundred men for thirteen months, and was built under the supervision of the Canadian Government for the Grand Trunk Railway of Canada. The length of the tunnel, which is twenty feet in diameter, from the beginning of one approach to the end of the opposite, is 28,000 feet, 6,000 of which are wholly underground, with 2,310 feet under the river, 2,390 feet under Michigan land, and 2,160 under Canadian. It is entirely a unique construction, built exclusively of iron, without a stone or brick in it, being simply an iron tube made of plates, 6,000 feet long and 20 feet in diameter, perfectly round and water tight, as dry as a street in summer time, lighted by electric light, ventilated by air engines, and kept at the right temperature with steam pipes.

The plates on the front end are made with an edge, and to the rear end are fastened the hydraulic jacks. Projecting over and fastened to the rim of the rear end is a steel cylinder, called the tail-piece. Inside this tail-piece the rings of the tunnel-lining are riveted together, and as the shield advances the tail-piece is drawn from behind the lining, and against the edge of the last ring the jack works, shoving the machine ahead with a slow but simply irresistible force. A row of twenty-four jacks was used, each one with a pushing capacity of 125 tons. Consequently, when the water was turned on, this monster cylinder plowed slowly into the earth under 3,000 tons pressure, or a weight of 6,000,000 pounds. It was simply irresistible, and cut boulders square in two. Inside this shield twenty-two men worked. The clay was cut with sharp instruments from the front end as far as the edge, and passed back to the mule cars. By this process the men were at all times free from any danger of cave-in. The back end of the shield has air-tight doors, which could be closed on a moment's notice in case water should be struck.

The plates which form the tunnel are of such curvature and length that thirteen of them, with a key-piece, form the 20-foot circle. They are about 18 inches wide, and weigh 1,050 pounds each. The ends and sides of the segments are turned up, each one is bolted to its neighbor, making the tunnel practically one piece. Each ring, when completed, weighs 14,150 pounds, and the 3,800 of them have used 53,770,000 pounds of the best iron known. Those for the Michigan end were made in Detroit, and those for the other side in Canada.

This simple method of plowing into the clay and digging it out, handling it with cars and derricks, as in all excavations, was used until the 2,310-foot section was reached. Here the water began to pour in. This emergency had been anticipated, and compressed air was turned on, a solid brick wall eight feet thick having been built across the tunnel, 2,000 feet from the opening.

Through great tubes four immense engines pumped air into a tank, and thence into the air-tight section of the tunnel until the pressure was twenty pounds to the square inch. It proved to be a deadly process, and three men died in quick succession. The horses drawing the cars died after two days' service. Finally the laborers were put under medical examination, and only one in ten was found who could work under such an unnatural atmosphere, but mules were found to thrive on it. With this pressure the water and quicksand were driven ahead, and the work went on as rapidly as before. Passing through the temporary wall of masonry was an engine-boiler with doors at each end. The mules hauled the cars into this; the door on the inner end was closed; a man on the outside let out the air from boiler and opened the outside door, and the mule and car came out into the natural air.

Occasionally a rift in the clay would be struck, and the water in the big river would boil up like a geyser. If the pressure reached forty-five pounds, the men would drop dead, simply crushed. A man with his hand on a valve watches the gauge constantly and regulates the pressure. When the air is released from the boiler-lock it sounds like the roar of a dozen engines or a gas well.

The greatest depth of the tunnel under ground is eighty-five feet, and it comes within fifteen feet of the river bottom at one point. Sir Joseph Hobson, the engineer in charge of the work, is a Canadian by birth, and is a member of the Institute of Civil Engineers of England, of the American Society of Civil Engineers and also of the Canadian Society of Civil Engineers. The machinery necessary to the construction covered several acres, including a complete electric light plant, machine shop, air engines and pumping stations, hoisting engines and boilers, a steam-heating apparatus and many other contrivances.

The Willard Architectural Commission Models.

Editors *Inland Architect* :

NEW YORK, September 10, 1890.

Many of your readers will be glad to know that on Sunday, September 7, the steamer *La Champagne*, from Havre, brought to this port the large models (one-twentieth full size) of the Parthenon, and the main façade of Notre Dame de Paris, to be followed later by the other façades of that splendid example of French mediæval work, as well as by models of the temple of Karnak, the Pantheon, the Arch of Constantine, St. Trophime, etc.

The Parthenon and Notre Dame will be set in place in the Great Hall of the Metropolitan Museum of Art as soon as the articulation of the multitude of their various parts has been achieved by the accomplished formatore, Mons. Jolly, who accompanies them with an assistant. Mons. Jolly did the work in Paris under the constant supervision of the celebrated archaeologist and architect, Mons. Chipiez, and the restorations shown in the model of the Parthenon embraces the latest results of the latter's profound study of the subject.

N. LE BRUN, President.

A. J. BLOOR, Secretary.

EMLEN T. LITTELL.

New Publications.

BRICKMAKING AND BURNING. T. A. Randall & Co., Publishers, Indianapolis, Indiana. Price \$2.50.

This is a handsomely bound and valuable work, being a practical treatise on brickmaking and burning, and the management and use of different kinds of clays and kilns for burning brick, with a supplement for new beginners in that work, and hints to bricklayers and builders. The author, J. W. Cray, Sr., is a successful brickmaker of many years' experience, and in this book has given in a plain, practical way his views and experiences in all the details of the work. The book is a veritable storehouse of knowledge on the subject, and should find a place in the library of every worker of clay. There is also much in the book of interest to architects and builders.

THE STEEL SQUARE AND ITS USES. Part II, by Fred T. Hodson; published by the Industrial Publishing Company, New York. Price \$1.00.

It is not every man who can tell what he knows entertainingly, and fewer still that have anything to tell worth knowing, if they could. This author is in the category of those who can tell what they know and have something to tell really worth knowing, and capable of doing it in a masterly manner, *vide* his many practical books on building mechanics, which are models of simplicity and conciseness. Part II indicates plainly that it is a necessary sequel of Part I, which met with such a hearty reception from the mechanics of the country that the publisher was able to dispose of over 150,000 copies in an unprecedented short time. It is safe to say the author will lose none of his enviable reputation by the writing of this latest book, nor does one need to be the son of a prophet to foresee as large a sale of Part II as there was of its predecessor, since it would be difficult to conceive of an ambitious mechanic who would be willing to forego the possession of such a book as this, which contains information almost as indispensable to him as the knowledge of his trade.

Mosaics.

It is notable that the *British Architect* selects four of the thirty-four illustrations in the catalogue of the Boston Architectural Exhibition for reproduction, chosen as "the best indications perhaps of quality we could have chosen amongst the Gothic, Old Colonial, Romanesque and Italian." The subjects are "An Entrance, Erie," by Green & Wicks, architects; "Sibiry, New London," by Shepley, Rutan & Coolidge, architects; "An Entrance, Philadelphia," by W. Eyre, Jr., architect, and "House at Swampscott," by Ed. T. Hapgood, architect. Regarding these, the journal says: "The little house at Swampscott is quiet and simple in effect, and compares favorably with the many outrageous designs which are built up from a study (or perversion) of the old colonial wooden houses. The little Gothic door-way (Mr. Eyre) is a quaint and interesting feature in what appears a somewhat coarse and unattractive frontage, while the library and other entrance doorways show with what ability Romanesque and classical types have been adapted."

THE current (October 4th) issue of *Architecture and Building*, of New York, is devoted to the study of schoolhouse architecture from both the point of view of the teacher and the architect. The issue contains twenty-one different designs by architects who have achieved distinction in designing buildings for school purposes. The editorials embrace the subjects of modern schoolhouse design, damp courses in schoolhouses and reference notes to technical matters, and the subjects referred to in the general text are, "The Growth of School Architecture in the United States," by Hon. Andrew S. Draper; "Ventilation by Windows and Fireplaces," by Hon. William T. Harris, Commissioner of Education of the United States; "The History and Development of the New York Trades' Schools," by Col. Richard T. Auchmuty; "Fireproof Stair Construction in Schools," "Present Methods of Sanitation in Public Schools," "The Heating and Ventilation of Schools." A brief review of the work done by the United States Bureau of Education, with a list of monographs on topics of educational interest, and "A Visit to the New York Public Schools," by one of the editorial staff, describing technically the details of construction adopted in the new buildings now being erected.

Our Illustrations.

Bresler Block, Bay City, Mich. D. P. Clark, architect.
 Masonic Temple, Richmond, Va. Jackson C. Gott, architect,
 Baltimore, Md.
 Stable for Mrs. Philip Fresenius, New Haven, Conn. C. H.
 Stilson, architect.
 First M. E. Church, South Birmingham, Ala. Weary & Kramer,
 architects, Akron, Ohio.
 Sketch for Dining Room Interior in a house in Cleveland, Ohio.
 J. A. Schweinfurth, architect, Boston, Mass.
 Residence at West Toronto Junction, Ontario, for Mrs. H. F.
 D'Eye. Ashton Pentecost, designer and delineator, Chicago.
 Cincinnati Architectural Club, competition. Pen and ink render-
 ing of the Sinton Residence, Cincinnati. First place, John Zettel;
 second place, Arthur Stedman.
 Municipal Courts Building, Detroit, Mich. Hess & Raseman,
 architects. This building was erected to accommodate the police
 courts and clerical offices in the first floor. Second floor contains
 offices for the poor commission, and the third those for the recorder's
 or criminal courts. Basement is utilized for the prisoners' detention
 rooms, police room and prisoners' cells, also the heating apparatus and
 fuel rooms. The building is heated and ventilated by the "blower
 system." Material, red brick and Newport brown and Portage Entry
 red sandstone. Cost, \$60,000.

PHOTOGRAPHURE PLATES.

(Issued only to subscribers for the Photographure edition.)

Assembly Church, Baltimore, Md.
 Residence of Senator Sawyer, Washington, D. C.
 Chicago Cold Storage Exchange. Adler & Sullivan, architects.
 Fleming Building, Washington, D. C. Jas. T. Windrim, architect.
 From residence of Mr. Chaffin, Washington, D. C. H. L. Page,
 architect.
 Stable for Mr. Ross Winans, Baltimore, Md. Wyatt & Sperry,
 architects.
 Residence for Mr. H. H. Reese, Evanston, Ill. Beman & Par-
 mentier, architects, Chicago.
 Residence of Mr. C. P. Mitchell, Evanston, Ill. Raeder, Coffin
 & Crocker, architects, Chicago.
 Phelps Association Building, New Haven, Conn. McKim, Mead
 & White, architects, New York.
 Entrance to "The Shoreham" Apartment House, Washington,
 D. C. Hubert, Pirsson & Hoddick, architects, New York.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT,
 CHICAGO, Ill., October 10, 1890.

Advices from many commercial and manufacturing centers indicate that a
 general improvement in the volume and character of business for this month is
 at hand. Except among jobbers of certain products there is no surplus goods or
 material. A pretty even balance has been maintained between production and
 consumption. Builders and contractors report great activity in cities and towns.
 A great deal of fall work is on hand and much new work yet remains untouched.
 From various quarters word is received that winter inside work will be more
 abundant than usual. Material of all kinds is in abundant but not excessive
 supply. Lumber, both Northern and Southern, has been in good supply and at
 reasonable prices. Saw and planing mills have had but little idle time during
 the regular season. Brick manufacturers have been remarkably busy all season
 and as a rule have dictated prices, the demand for face brick generally exceeding
 the supply. Iron and steel makers, and manufacturers of nails, sheet iron, wire
 and hardware, heavy and light, have had a remarkably good season, but compe-
 tition has kept prices at a lower point than many appreciated. Bridge, car,
 locomotive, and ship and boat builders have all been kept quite busy, and at this
 time much winter contract work is being placed. Healthful trade conditions
 exist throughout the country. The monetary stringency is a thing of the past.
 Business men feel secure against depressions. The productive capacity of the
 country is growing rapidly, but it is not fair to say that the expansion is too
 rapid. Capital is seeking investment in all manner of productive enterprises
 and in all sections of the country. Credit is not shaken by serious commercial
 failures. Banking facilities are being extended into the newer sections. Rail-
 road work is projected in new localities and it now seems probable that next
 year's mileage would be considerably in excess of this. The West and North-
 west is gaining in wealth and population relatively faster than other sections,
 and for the coming year a host of new and important enterprises are in con-
 templation. The effect of the late revision of the tariff may be toward a slight
 depression in some lines until its true character is better understood, but this
 effect will not be prolonged.

Synopsis of Building News.

Allegheny, Pa.—The First Presbyterian Church is having plans pre-
 pared for a new church to cost about \$52,000. The new building is to be of stone.
Chicago, Ill.—Architect Clinton J. Warren: For McElroy & Keeney, pre-
 paring plans for fifteen three-story residences, to be erected on Ellis avenue;
 they will have stone fronts, steam heat and all the improvements; cost
 \$150,000. For L. J. McCormick, made plans for remodeling building at 84 to 86
 La Salle street; will put on a new front of brown brick and terra-cotta, also add
 three new stories, the first two stories to be of ornamental iron and plate
 glass; will put in two elevators, steam heat, electric light, new plumbing,
 marble wainscoting, tiled floors, steel beams and columns, fireproof vaults,
 etc.; cost will be \$100,000. For A. F. Links, planning a four-story apartment house,
 size 100 by 125 feet, to cost \$50,000, to be erected corner of Twenty-third street
 and Wabash avenue; it will have pressed brick and stone front, steam heat, ele-
 vators, electric light, etc. For William Keogh, made plans for a three-story resi-
 dence, on Drexel boulevard, near Forty-third street, to have a Raindrop brown
 stone front, with granite columns, etc.; cost \$20,000. He is also preparing
 plans for remodeling the Beauvivre Hotel; it will be entirely renovated at a cost
 of about \$200,000.
 Architects Ostling Brothers: For Charles T. Messenger, making plans for five
 two-story dwellings, to have stone fronts, furnaces and the modern improve-

ments; cost \$30,000; to be erected on Evanston avenue, near Wellington. For
 Jacob Dolson, a three-story store and flat building, on Wentworth avenue, near
 Fifty-first street; cost \$10,000. For C. J. Blomstrom, corner of Forty-second
 street and Ellis avenue, a four-story apartment building, to have a Bedford
 stone front, elevator, steam heat, etc.; cost \$50,000.

Architect Thomas Hawkes: For the Price Flavoring Company, a six-story
 office and manufacturing building, on the southwest corner of Illinois and Cass
 street; it will have a front of Indiana pressed brick, with blue Bedford stone
 trimmings, elevators, steam heat; cost \$45,000.

Architect D. A. La Pointe: For Kenney & Brady, four two-story flats, on
 Walnut street, near Sacramento avenue; cost \$20,000. For George A. Bliss, a
 two-story flat building, on Roscoe street. For Charles F. Swigart, a three-story
 flat building, of Anderson pressed brick and stone, hot water heating, etc.; cost
 \$20,000. For Capt. J. L. Beckworth, on the southeast corner of Sacramento
 avenue and Carroll street, seven two-story stores and flats; cost \$16,000.

Architects Ruehl & Hildinger: For H. Rohn, a two-story blue Bedford stone
 front residence, on Seeley avenue; cost \$9,000. For A. Esch, on California
 avenue near Ogden, a two-story stone front residence; cost \$8,000. For F. Erd-
 mann, a two-story flat building of buff Bedford stone front; cost \$7,000; on Oak-
 ley avenue. For William Ruehl Brewing Company, a five-story ice machine house,
 cost \$55,000; also planning a malt house and remodeling of storage and fer-
 menting rooms. For A. Goldberg, planning a five-story warehouse to be built
 corner of Clinton and Wilson streets, to have steam heat, elevator, etc.; cost
 \$20,000. For J. Battermann, a two-story residence, on Ashland avenue, of Bed-
 ford stone, etc.; cost \$8,000. For C. Naumann, a three-story flat building;
 cost \$9,000. For A. Nathan, a four-story store and flat building of buff Bedford
 stone front; cost \$8,500.

Architect S. S. Beman: For the Pullman Palace Car Company, a two-story
 repair shop 500 feet square; cost \$250,000; to be built at Pullman. For W. W.
 Kimball, letting contracts for residence to be erected corner of Eighteenth street
 and Prairie avenue; cost \$100,000. For G. M. Peck, at Elgin, a two-story resi-
 dence, frame, etc.; cost \$10,000. For George E. Roberts, at Fort Dodge, Iowa,
 a two-story frame residence.

Architect Robert Rae: For J. W. Stanwood, at Eggleston, a two-story resi-
 dence, of granite basement and first story and above of slate, in the gothic style;
 to have steam heat and all the improvements; cost \$20,000; making plans. For
 Charles Follansbee, on Forty-fifth street near Berkley avenue, a two-story flat
 building, of Bedford stone front and sides, copper bays, steam heat, etc.; to cost
 \$20,000. For George A. Otis, on Oakwald avenue and Forty-third street, a two-
 story residence; cost \$10,000. For John Rogers, at La Porte, Indiana, a frame
 summer residence; cost \$5,000. For Martin Turner, at Englewood, two resi-
 dences, of pressed brick and stone; cost \$10,000. For F. M. Avery, at Edgewater,
 a two-story frame and stone residence; cost \$7,000. For Frank Thacker, on
 Forty-fifth street and Greenwood avenue, two frame and stone residences, to have
 steam heat and all the improvements; cost \$30,000.

Architect A. L. Schellenger: For Jerry Sullivan, a three-story residence at
 3241 Prairie avenue; cost \$15,000.

Architects Lutken & Thisslew: For M. Knudson, a three-story store and flat
 building, on Western avenue near Division street, of Anderson pressed brick and
 Bedford stone front; cost \$8,000. For M. Holm, on northeast corner of Erie
 and Bickerdike streets, a three-story flat building; cost \$7,000. Also planning a
 four-story store and flat building, to be erected on Milwaukee avenue, to be of
 Anderson pressed brick; cost \$9,000.

Architect August Bessler: For John Krapf, at Fifty-seventh and Halstead
 streets, a three-story store and flat building, of St. Louis pressed brick and Bed-
 ford stone; cost \$18,000. For Wm. A. Popp, at 723 Larrabee street, a three-story
 store and flat building, to have stone front; cost \$10,000. For A. C. Blaurock, at
 Maywood, a two-story frame residence, want gas machine, etc.

Architect C. C. Miller: For W. J. Wilson, planning a five-story store build-
 ing, to be erected on Canal street opposite the Union Depot. It will have a front
 of 100 feet, by 150 feet deep. The front will be of cut stone, iron and glass; it
 will be of mill construction, have steam heat elevators, electric light, fire
 escapes, etc.; cost \$100,000.

Architects Bell & Swift are preparing plans for the Campbell Park Presby-
 terian Church; it will be 60 by 85 feet in size, of pressed brick and stone, with
 accommodations for a congregation of about seven hundred; the cost will be
 about \$20,000.

Architect Perley Hale: For J. C. & J. Beifeld, on Bowen avenue near Grand
 boulevard, planning a block of five stone front residences, to have furnaces and
 all modern conveniences; cost \$35,000. Also getting out plans for a block of
 twenty-two three-story stores and flats, to be erected on Halsted street from Fifty-
 sixth to Fifty-seventh streets. They will have stone fronts, the modern sanitary
 arrangements and cost about \$160,000.

Architect Charles S. Frost: Making plans for chapel to be erected on But-
 terfield street near Thirty-ninth, for the Presbyterian Church. It will take the
 place of the old original Railroad Mission Chapel on State street. It will be con-
 structed of rock-faced stone; cost about \$30,000. He also made plans for a
 two-story library and hall building, size 50 by 76 feet, to be erected at Wheaton,
 Illinois, for J. Q. Adams. For the North-Western Railway Company, Dixon,
 Illinois, a station 25 by 80 feet in size, with express building 25 by 40, to be built
 of pressed brick and stone with slate and copper, platform, sheds, etc. For the
 Illinois Central Railway and North-Western jointly, a station 22 by 102, of pressed
 brick and stone, at Freeport, Illinois.

Architect John Duncan: For Howard & Berwin, on Thirty-first street and
 Groveland Park avenue, a seven-story and basement apartment building, 100 by
 110 feet in size, of granite for first two stories and above of pink Kasota stone,
 with towers and roof of red slate. It will be strictly fireproof, with marble
 entrance hall and vestibules, steam heat, two elevators, electric light, gas ranges,
 etc. A café will also be located in the building; the cost will be about \$250,000.
 He has also commenced work on a store building; cost \$50,000; on the corner of
 Polk and Clark streets.

Architect E. R. Krause: For Harry Rubens, on La Salle avenue, north of
 Carl street, a six-story apartment building; cost \$43,000; the front will be
 of Anderson Roman brick, with terra-cotta and stone; will have hard wood
 interior, steam heat, elevator, gas ranges, electric light, etc. He is getting
 out plans for a five-story store and flat building, to be of pressed brick and
 stone with copper bays, etc.; cost \$40,000.

Architect D. S. Pentecost: For Howard & Berwin, corner of Morgan and
 Jackson streets, a three-story apartment building, of Anderson pressed brick and
 Bedford stone; cost \$75,000. He has also just finished plans for a block of
 three-story and cellar stores and flats, to be built on Kedzie avenue and Fill-
 more street; they will have St. Louis pressed brick and stone front; cost \$45,000.

Architect L. G. Hallberg: For R. A. Meiswinkel, on corner of Belmont
 avenue and Clark street, a four-story store and flat building, 110 by 106; to be
 of pressed brick and stone; cost \$100,000.

Architects Howe & Shelton: Making plans for a six-story apartment build-
 ing, 120 by 120; cost \$100,000; to be of pressed brick and brown stone, with
 copper bays, marble and mosaic work, elevators, steam heat, electric light, etc.

Architect J. L. Merriam: For J. N. Cuning, a four-story store and flat build-
 ing, corner of Adams street and Center avenue; cost \$50,000.

Architect F. B. Townsend: For W. Campbell, on Thirty-fifth street and
 Calumet avenue, a block of stores and flats; cost \$50,000. For F. M. Chapman,
 five dwellings, stone fronts, furnaces, etc.; cost \$20,000. For C. W. Lobdell, two
 residences; to have Bedford stone fronts; cost \$16,000.

Cincinnati, O.—Reported by Lawrence Mendenhall. The buzz of the
 playful mosquito is heard no more in the land for a season, but busy con-
 tractors present their bills just the same. They are like insurance agents, not to be
 killed off, but not always paid properly for the risk they run from employing
 sometimes irresponsible sub-contractors in order to secure a contract within the
 bounds of the owner's limit. A good, honest contractor will never overcharge
 for first-class work, and owners will find (like I did) that the best are not
 always the cheapest. A large shop does not necessarily denote superiority,
 but the first question to be asked should be "are you a mechanic," and let the
 answer, if affirmative, be proven by the work.

Contractors are hurrying their work toward completion, for the indications
 are that we will have an early winter.

The competitive designs for the Odd Fellows' Temple were exposed to
 public view a few days ago, but at this writing the successful one is unknown.
 There were ten designs submitted, all showing careful study, the majority of
 course being from Cincinnati. The problem in design was how to preserve

the idea of a temple in grappling with the question of revenue from stores and offices. Space was reasonably well utilized in all the designs, although one or two I think showed a little lack of familiarity with the requirements of lodge rooms. One design was quite Rhenish in its treatment, but the prevailing style was Romanesque. The cost was to be about \$225,000. It is not my intention to criticize or enter into a detailed description, for that is entirely out of my province, to say nothing of the effect produced by stepping upon corns. However, let these words act as a soothing balm, viz: that everyone can't be first, and that in defeat there is sometimes a victory.

Mr. William Martin Aiken has taken unto himself a new rib, so to speak, and by this time the osseous addition has become thoroughly a part of himself. The new firm now reads Aiken & Ketchum (Mr. E. H.), the last named being an architect well known throughout Indiana and Ohio. I know that fellow members of the craft will join this journal in wishing them *deancomp succs.* The combination embodies no new idea, for we are all Aiken to Ketchum whenever possible.

Architect S. S. Godley has prepared plans for a residence for George B. Tebbis, of Harrison, Ohio; materials, brick, slate roof, pine finish, wood mantels, stained glass, etc.; cost, \$8,000. Also, for James Heron (city), a residence; materials, pressed brick, slate roof, bells, plumbing, gas fixtures, wood mantels, stained glass, etc.; cost \$7,500.

Samuel Hannaford & Sons report for Edgar A. Belden, Esq., Hamilton, a frame house of ten rooms, to have slate roof, pine finish, plumbing, gas, electric bells, stained glass, wood mantels, etc. For the Cincinnati Wire Nail Company, a frame factory, 500 feet long, one story high; at Anderson, Indiana. For W. S. Dyer, 167 Race street, a residence; material, brick, slate roof, furnace, hardwood, mantels, stained glass, etc. For George Kinsey, Grand Hotel (city), residence; materials, frame, brick and stone; slow burning construction, tile roof, stained glass, hardwood, mantels, plumbing, etc.

W. W. Franklin reports for C. W. Baker, Esq., a stone stable, complete in all its details; cost \$5,000. For Messrs. Lowenburg & Bruen, Burnet House (city); materials, pressed brick, pine finish, stained glass, plumbing, hardwood, mantels, electric bells; cost \$10,000.

Architect John H. Boll reports for Ludlow, Kentucky, a twelve-room school house; materials, brick, stone; slate roof, furnace, blackboards, desks, etc. Address School Board. Cost \$25,000. For John Ray, a residence; materials, frame, shingle; slate roof, pine finish, plumbing, gas, mantels; cost \$5,000.

Architect Adam J. Bast reports for Messrs. Roth, Meyer & Co. a pork-house; materials, brick; hydraulic elevator, tin roof, etc.; cost \$6,000. Also, for Henry Muhlhauer, Esq., a flat building; materials, brick; pine finish, mantels, blinds, elevators, etc.; cost unknown.

Architect H. E. Siter has prepared plans for a large carriage factory to be erected at Miamisburg, Ohio, for the Enterprise Carriage Company of Cincinnati; size 350 by 53 feet, brick, and to be four stories high; cost \$40,000. For J. B. Samuelson, a residence; materials, frame; slate roof, furnace, mantels, blinds, stained glass, etc.; cost \$5,000.

Architect G. W. Drach reports for Dr. A. Schwagmeyer, a residence; materials, brick; pine finish, mantels, furnace, slate roof, stained glass, etc.; cost \$8,000.

Cleveland, Ohio.—Building here is looking up, better than for the last two months.

Architects Cudell & Richardson: For the Lamson Sessions Co., alterations to office and works, size 30 by 50 feet; cost \$5,000. Contractors, Brooks Building Company.

Architects Bacon & Smith: For L. M. Sigter, a two and one-half story brick house, 39 by 44 feet; cost \$4,000.

Architect John Eisenman: For Dr. H. K. and B. M. Cushing, a three-story brick warehouse, size 38 by 70 feet; cost \$10,000.

Architects Lehman & Schmitt: For the Smith estate per Robert Blee, Jr., a two-story tenement building, brick, size 31 by 90 feet; cost \$12,500.

Architect J. N. Richardson: For the W. S. Tyler Wire Works, a four-story brick factory, size 40 by 240 feet; cost \$20,000.

Architect Geo. F. Hammond: For A. C. O. Smith, a two-story frame dwelling, size 36 by 39 feet; cost \$9,000. Contractors, Clark Bros.

Architects Cramer & Fugman: For John Meyer, a two-story frame dwelling; cost \$5,000. Contractor, Jos. Marguardt.

Architect W. R. Budgler: For the Grace M. E. Church Society, a small frame church, size 50 by 50 feet; cost \$5,300. Contractors, Hodges Bros.

Architects Shengle & Preston: For Geo. W. Richardson, a two-story frame dwelling, size 36 by 40 feet; cost \$5,000. Contractor, C. A. Preston.

Architects Coburn & Barnum: For Dr. Isaac N. Himes, alterations and additions to residence, size 15 by 21 feet; cost \$4,500. Contractor, Mr. Ludhorst.

Architects Hardway & Williams: For Williams Bros., a three-story brick warehouse, size 40 by 80 feet; cost \$4,500. Contractors, Gill Bros.

The Martin Barris Company will erect a two-story frame office building, 30 by 146; cost \$4,000. Contractor, C. A. Preston.

12 permits for brick and stone residences..... \$ 76,005

326 " " wood and frame "..... 334,528

128 " " alterations "..... 51,479

\$462,012

Denver, Colo.—Architects Balcomb & Rice: For Messrs. Flower & Patterson, a brick and stone residence; cost \$19,500. For The Irondale Land and Improvement Company at Irondale, a hotel building, size 75 by 100 feet, brick and stone; cost \$12,000.

G. R. Grippett will erect a two-story dwelling; cost \$25,000.

The Barber Asphalt Paving Company have plans for a one-story frame engine house, 40 by 40 feet; cost \$10,000.

Mr. H. Counter will build a two-story brick store and office building, 50 by 50 feet; cost \$7,000.

A committee has been appointed to inquire into the feasibility of erecting a large convention building or auditorium, something similar to the one in Chicago. The proposed new building would form quarters for all the exchanges and Chamber of Commerce, with a large hall for national conventions, cost to be in the neighborhood of \$1,500,000.

Detroit, Mich.—Architects John Scott & Co. (formerly Scott, Kamper & Scott), have prepared plans for a three-story brick dwelling, 39 by 96; cost \$13,000; W. H. Hollands & Son, builders.

Architects A. C. Varney & Co.: Two-story double brick dwelling, 38 by 60; cost \$6,000. Also a two-story brick dwelling, 20 by 60, for W. W. Hannan; cost \$5,000. Also a two-story brick dwelling, for John Alley, 26 by 60; cost \$5,000. Also a two-story double brick dwelling, 44 by 57, for C. M. Davidson; cost \$8,000. Also three two-story double brick dwellings, 36 by 50, for James M. Spaulding; cost \$12,000.

Architect Peter Dederichs, Jr., has plans for a block of five two-story brick dwellings, for Theo. Govenfield; \$20,000. Also a \$25,000 brewery, for the Exposition Brewing Company, to be 40 by 102, with malt house.

Architects Donaldson & Meier have plans for a two-story double brick dwelling, 40 by 55; cost \$7,200. Also a four-story brick store and hotel, for Vinton & Co., 65 by 51; cost \$15,000.

Architects Edward C. Van Leyen & Jean A. Hackett (formerly Edward C. Van Leyen), have plans for a brick block of six three-story houses, 80 by 90; cost \$32,000.

Harry J. Rice is preparing plans for three two-story brick stores and dwellings, 60 by 60, for Robert Bell; cost \$10,000. Also two-story double brick dwellings, 36 by 48, for same; cost \$8,000.

Architect G. W. Lloyd has plans for a two-story brick dwelling, 44 by 80, for Michael Martz; cost \$13,000. Also six-story brick and stone stores, to be erected by David Whitney, Jr., 30 by 100; cost \$50,000.

Architects Malcomson & Higginbotham have plans for two two-story dwellings, 24 by 45, for Marcus & Lange; cost \$5,000.

Architect A. B. Cram has plans for four three-story brick dwellings, 77 by 73, for Henry Casen & Co.; cost \$25,000.

M. W. Scovel will build three two-story brick dwellings, 34 by 56, on Grand River avenue; cost \$12,000.

W. Reich will build for Boydel Bros. a five-story brick store, 53 by 138, on Champlain street; cost \$16,000.

Architect Jos. E. Mills has plans for a two-story brick and frame dwelling, 39 by 48, to be erected on Putnam avenue; cost \$6,000.

Dubuque, Iowa.—Architect F. D. Hyde: For George L. Torbert, a two-story and attic residence; size, 31 by 52 feet; brick and frame combination, slate roof; cost \$8,200. For Thomas Connolly, two-story and attic residence; size, 36 by 75 feet; brick and stone, slate roof; cost \$18,000.

Grand Rapids, Mich.—Architect W. G. Robinson: For the Calvary Baptist Church Society, a brick, veneered church; cost \$7,000; for L. K. Bishop, a two-story frame dwelling; cost \$4,500; also for C. C. Philbrick, a two-story frame dwelling, to cost about \$7,500; contracts not let.

Architects Mason & Rice, of Detroit: For Mrs. W. S. Hull, a five-story brick and frame residence; cost \$25,000.

Kansas City, Mo.—Architect J. C. Stewart: For the Rev. M. J. Dwyer, a two-story residence; size 40 by 55 ft.; cost \$7,000.

Architect F. Resch: For Kate Bradley, two-story residence, 21 by 42 feet; brick and stone; cost \$6,000.

Little Rock, Ark.—Architect Fred J. H. Rickon is preparing plans for James R. Miller for three brick houses; cost, \$15,000. For J. H. Harrod, a cottage on Twentieth street and Broadway; cost \$2,000.

Minneapolis, Minn.—C. A. Cummings will erect a two-story frame dwelling at a cost of \$6,000.

The Minneapolis Independent Exposition Association will build an addition to building; cost \$10,000.

The Lakewood Cemetery Association will erect a stone chapel; cost \$20,000. Mr. O. H. Brown has plans prepared for a two-story residence, frame; cost \$8,000.

Ogden, Utah.—Building is increasing rapidly here, and there is a good deal of work contemplated. Three new public school buildings will go up this year at an estimated cost of \$75,000.

Architect R. O. Wheeler & Co.: For Mr. A. Allen, a three-story hotel; size 33 by 55 feet; brick with stone trimmings; cost \$10,000; for the Boston Realty Company, a three-story store and office building; size 60 by 100 feet; brick and stone trimmings; steam; cost \$50,000; for J. E. Dooly, a double house; size 45 by 60 feet; brick and stone trimmings; cost \$9,000.

Pittsburgh, Pa.—Architect F. A. Sauer has prepared plans for a two-story brick residence for Mrs. Thomas W. Lindsay, to have all modern conveniences; contractor F. Selmette.

Architect McBride has plans for a brick and stone dwelling for Mr. Thomas Dalzell.

Mrs. Sarah A. Reed will erect a three-story apartment house; size 52 by 38 feet; brick with gravel roof; cost \$12,500.

Rochester, N. Y.—Architect Foster Warner is building for Mr. Wilson Soule a stone residence on East avenue; cost \$100,000; to be finished in hardwood cabinet work, heated by steam, thorough plumbing and ventilating work, complete electric service and lighting, dumb waiter, etc.

Architects Thomas and E. B. Nolan have designed for Mr. A. R. McKay, of Niagara Falls, a brick and frame residence; cost \$8,000; hardwood finish, tiling, etc. For Mr. T. H. Brown, of Scottsville, N. Y., a frame house; cost \$5,500.

Architects Jay Fay and O. W. Dryer have designed for Mr. A. Deveraux a brick and frame (shingles) residence to be built at Charleston, West Virginia; have steam heat; cost \$8,000. A brick and frame church for the Second Baptist Church of Rochester, to seat 500 people, furnace heat; cost \$8,000. For the North Baptist Church Society, a frame chapel; cost \$5,000. For Henry Bolter, at Brunswick, a stone and frame residence; cost \$7,000; hardwood finish.

Residence for E. C. Pierson to be built at Waterloo, New York, of stone and brick, in colonial style, heated by steam, cabinet finish interior, stained glass; cost \$15,000.

Architect W. Foster Kelly has made plans for a new French school on Pleasant street; to be of brick, three stories, hot water heating, gas lighting, slate roof; to be completely fitted up for school, hall and society purposes; cost \$30,000. Catholic church, at Lyons, New York; to be of stone and brick, 62 by 118, slate roof, stained glass windows, furnace heat, to have a new set of bells; cost \$20,000. Chapel on Rowe street; stone and frame; cost \$3,500. Addition to school No. 30, two stories and basement, 60 by 60, new roof over whole building; cost \$10,000. Dwelling house for Mr. Geo. Fields; cost \$6,000; hardwood finish in hall and dining room. A brick block on east Main street for Mr. Cooney; to be three stories high and contain stores and flats, stone trimmings, tin roof; cost \$7,000.

San Francisco, Cal.—Architect Samuel Newsom: For Mrs. M. A. Scott, a two-story residence; cost \$10,000.

Architect P. R. Schmidt: For A. W. Wilson, a two-story frame residence; cost \$14,000.

Architect A. Page Brown: For A. C. Hawes, a two-story dwelling; cost \$15,000. Contractors, Duffy Bros.

Seattle, Wash.—A \$15,000 asylum will be erected here by the "Sisters of the Good Shepherd." Plans have been prepared for a \$60,000 church for the Trinity congregation, to be erected at once.

Sioux City, Iowa.—J. W. Parker will erect a store and office building; cost \$13,000. Contractor, M. H. Ireland.

Springfield, Ill.—Architect Geo. H. Helmle: For Dr. Wm. Jayne, two-story brick and stone store building 20 by 50; cost \$3,500. For C. J. Ross, two-story frame dwelling 28 by 48; 8 rooms; cost \$3,000. For Mr. Armstrong, two-story frame dwelling 30 by 36; 7 rooms; cost \$3,000.

St. Louis, Mo.—St. Louis Real Estate and Investment Company will erect a seven-story office building; brick; estimated cost \$80,000.

Contractor J. D. Fitzgibbon is putting up a five-story brick store for S. Clubbs; cost \$5,000.

The African M. E. Church will erect a brick church at a cost of \$33,000; contractor, Dan Evans.

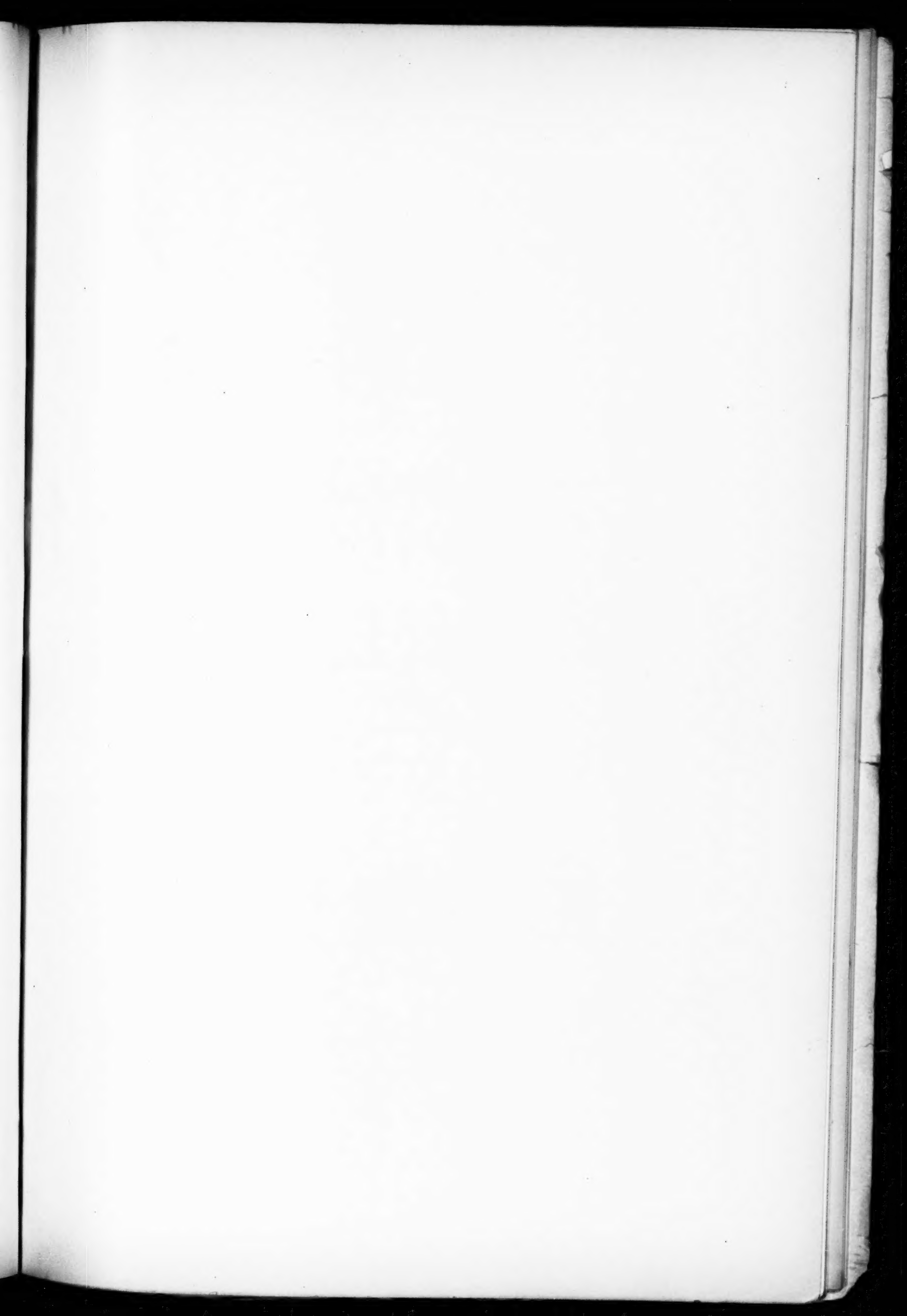
The St. Paul Episcopal Church have plans for a frame church; cost \$5,000. E. Peugnet will erect a two-story brick residence; cost \$10,000.

Goesse & Remmer, contractors: for Mrs. R. Jacoby, a three-story brick residence; cost \$12,000.

Topeka, Kan.—Architect Holland reports: Court house for Fairbury, Jefferson county, Neb.; cost \$60,000; to be cut stone building, 88 by 108 feet, with 114 feet tower surmounted by stone dome, treated throughout in the free Romanesque style. General plan that of a parallelogram; to have 4 main entrances, slate roof, all interior finish oak, and corridors to be tiled with Georgia marble tiling. Will be heated entirely by steam and arranged throughout with all modern conveniences. Foundations will go in this fall; bids for same will be received until October 21. Brick and stone, packing house for Messrs. Wolf; cost \$10,000; pressed brick front; two stories and basement, fitted with all modern conveniences adapted to buildings of that kind. Belleville College, (Belleville, Kan.); cost \$25,000; stone building, two stories and basement; tin shingle roof; finished throughout in modern style, and heated with steam.

Architect Seyman Davis reports: A Unitarian church to be erected at Lawrence, Kan., as soon as plans are completed; will be of frame, finished in colonial style and will cost \$12,000; a ladies' parlor, a dining room and kitchen are provided in the second story, and are of sufficient size to meet all requirements. Foundations for the University of Topeka are in, and plans in preparation for completion next spring; this is to be a stone building 275 feet long by 100 wide, with blue and white stone foundations; to have two towers, 90 feet and 140 feet high respectively; the latter will carry a water tank which is to supply entire building; building will be divided into compartments by means of fireproof walls extending from basement to roof; floors in each compartment sloping toward a drain pipe which, in case of fire, will carry to sewers all water thrown into building, thereby preventing the great damage done by water which is usual in such cases. Coöperative building, to be erected in Topeka, at a cost of \$200,000; will be 500 feet square with open court in center, and is intended to accommodate 80 families; will have four fronts rendered in the Spanish Renaissance style of architecture, and to be of four stories, with exception of the central portion of main front, which will be seven stories, and will contain dining rooms, kitchens, laundry, electric light plant, etc.; a stock company is now being formed and everything is being pushed to begin operations next spring.

Waltham, Mass.—Architect W. M. Bacon, of Boston: For M. E. Bouker, a frame dwelling; size 39 by 43 feet; cost \$8,000.

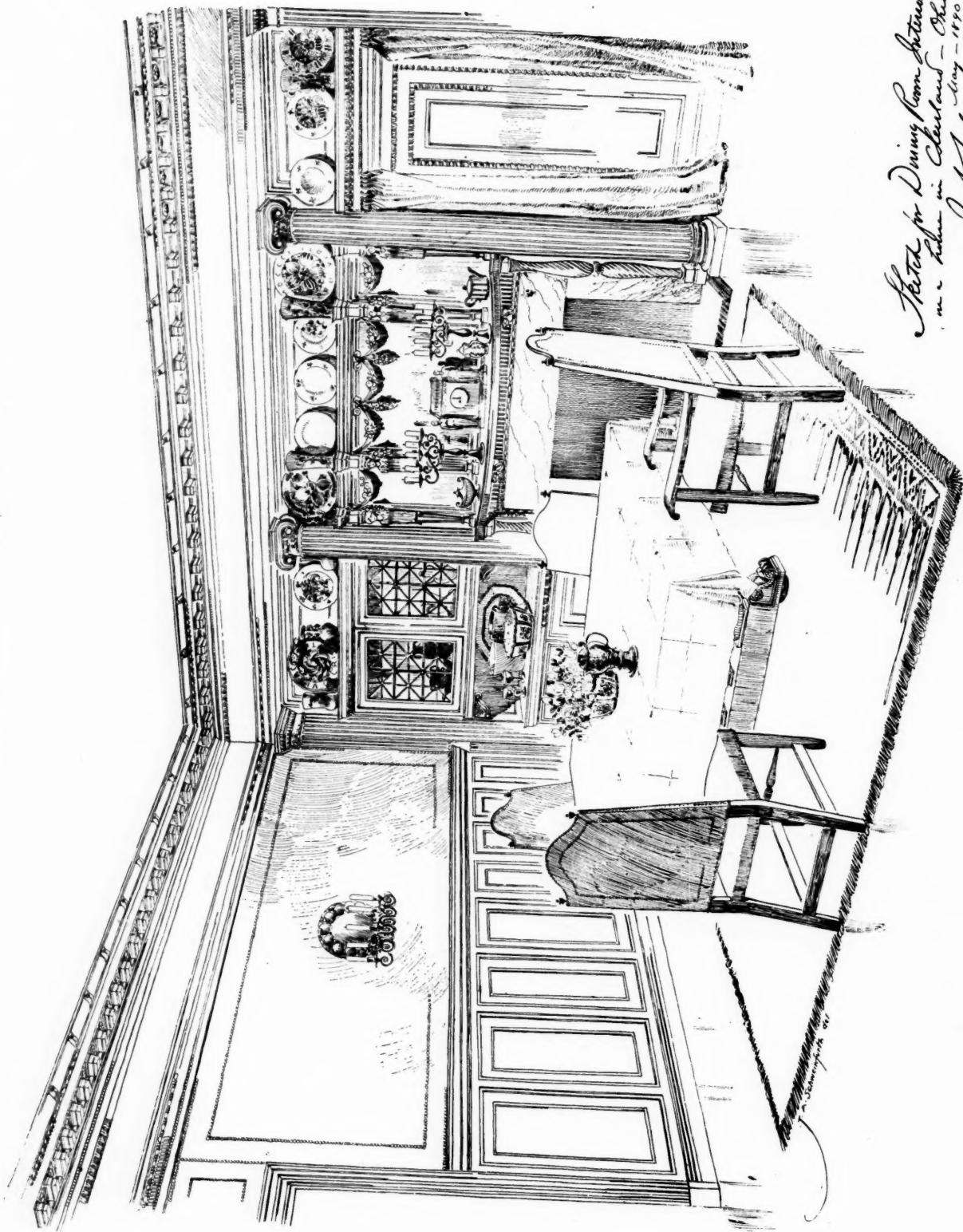




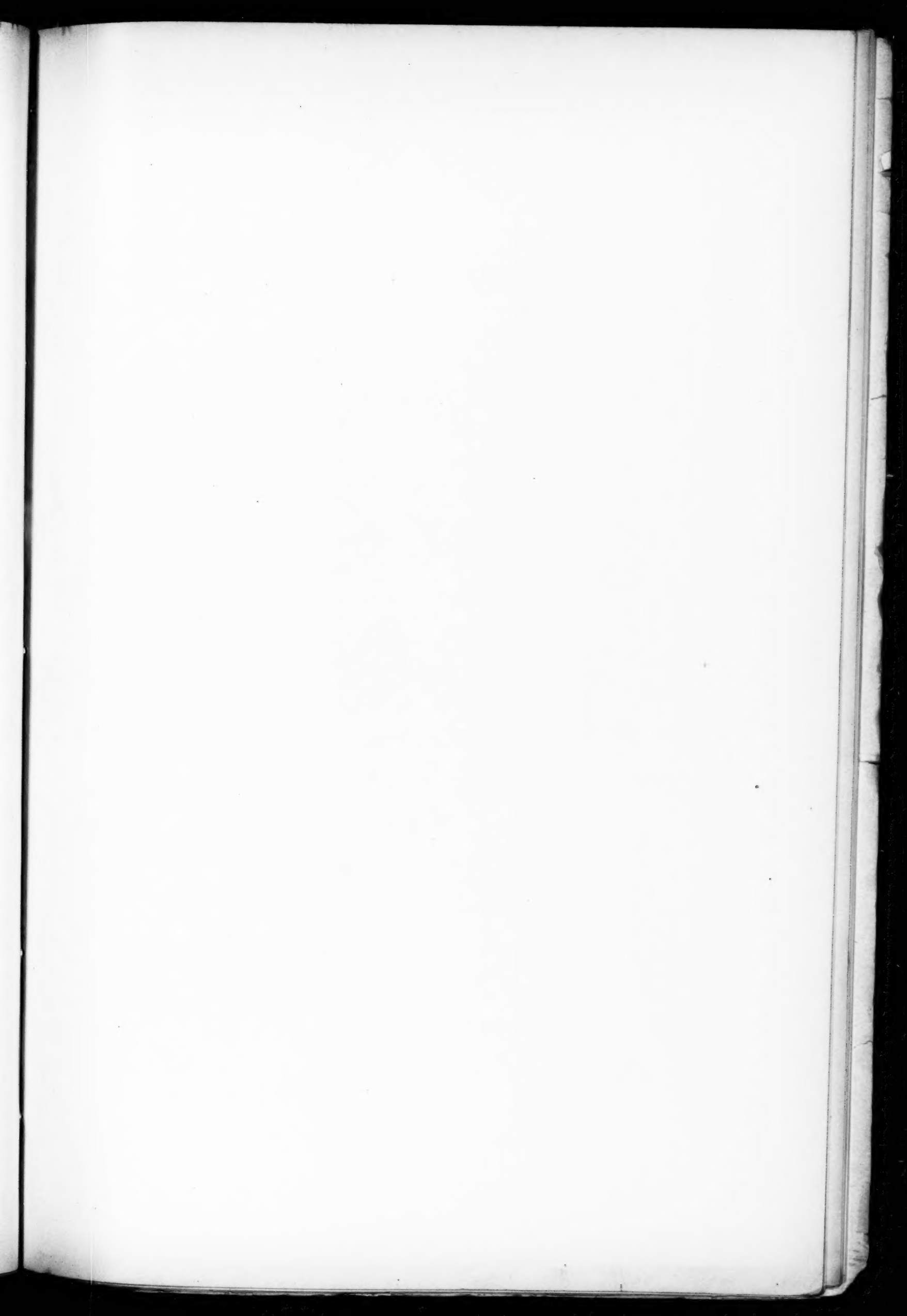
MASONIC TEMPLE RICHMOND, VA.

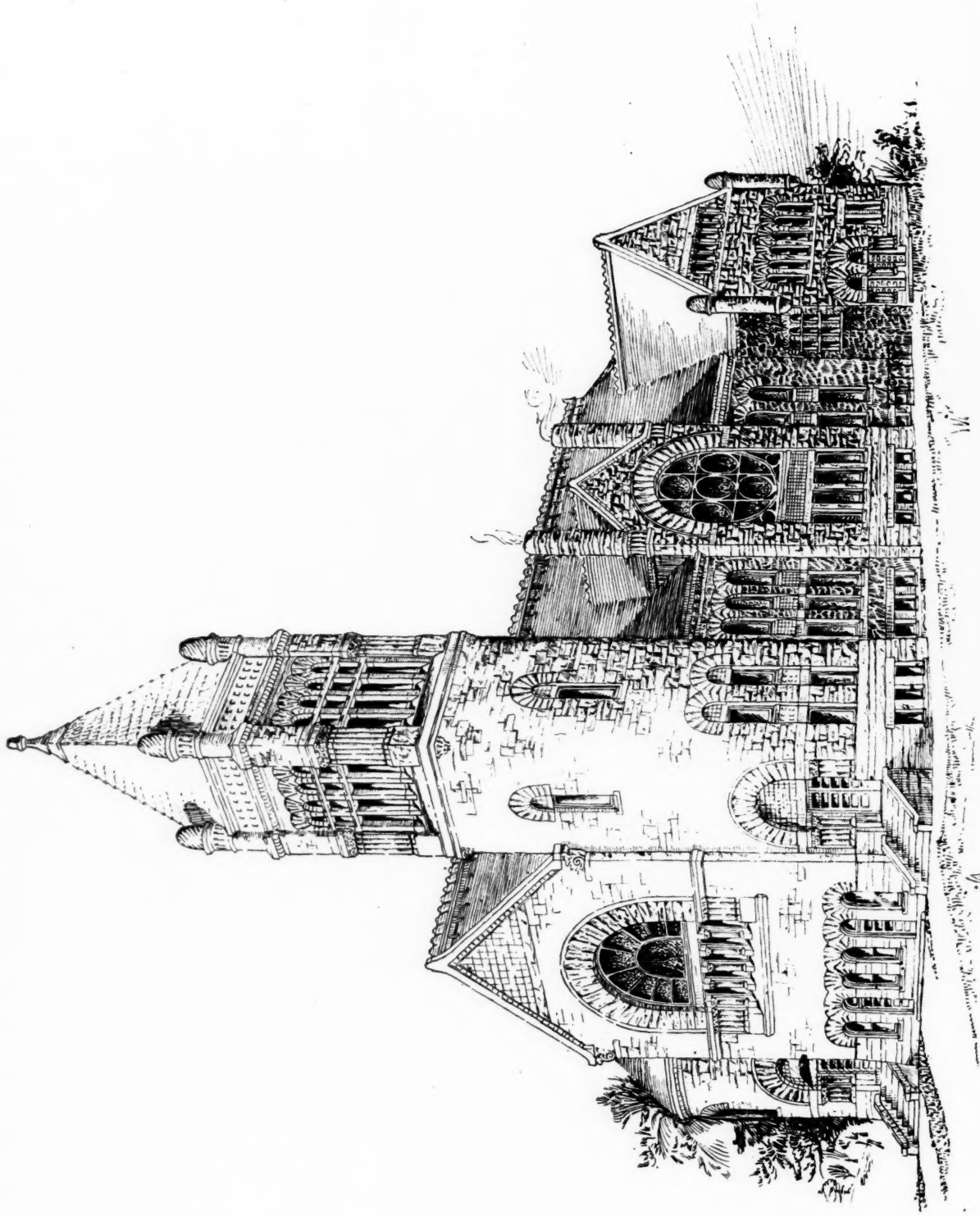
JACKSON & CO. ARCHT.
BALTIMORE, MD.
1889





Sketch for Dining Room Interior
in a house in Cleveland - Ohio.
May - 1890.
J. H. Johnson
Boston Mass.

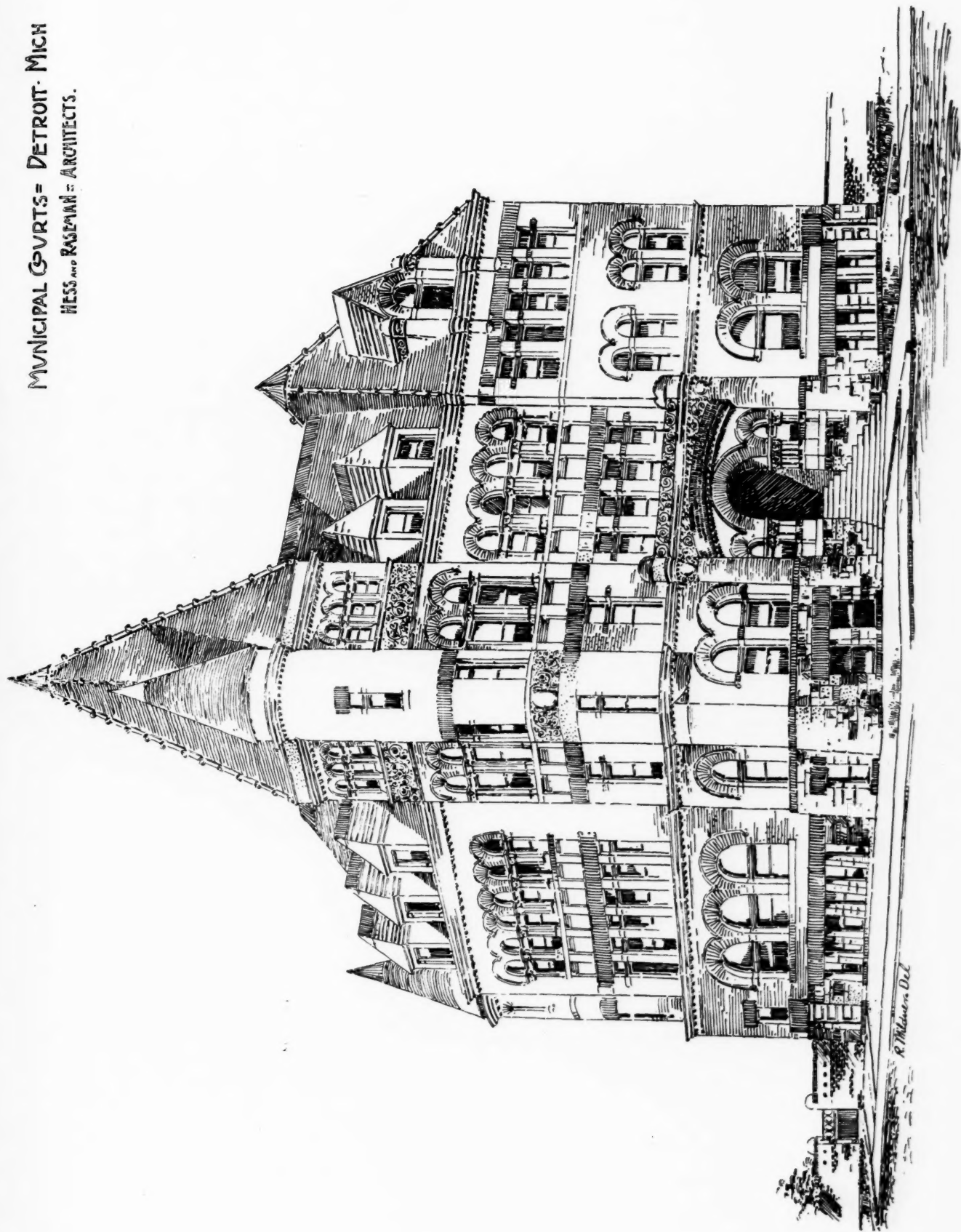


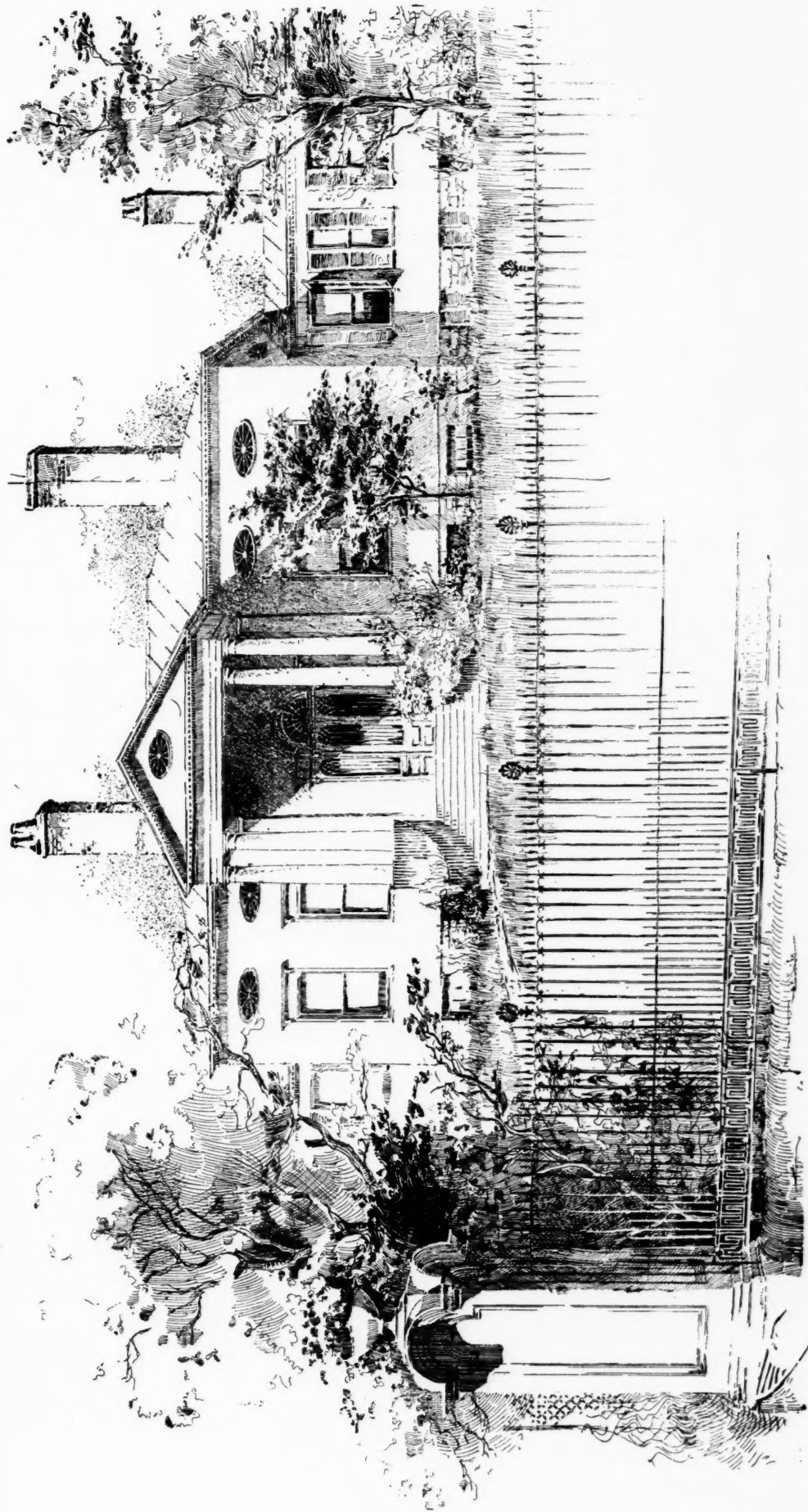


..FIRST A.E. CHURCH · SOUTH · BIRMINGHAM · ALA..

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MESS AND ROSEMAN - ARCHITECTS.





CINCINNATI ARCHITECTURAL CLUB COMPETITION. PEN AND INK RENDERING OF THE SINTON RESIDENCE, CINCINNATI.

FIRST PLACE, JOHN ZETTEL.



BRESLER BLOCK.
DAY CITY, MICH.
D. CLARK, ARCHT.