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Progress of World's Fair Work at Chicago.

Since our last issue the work which we predicted in regard to legislation affecting the World's Fair at Chicago and the action of the directors has been fulfilled. The city council adopted the bill offered by the directors with slight modifications, the state legislature met in special session and passed a bill waiving the state's rights and making appropriation for the improvement of parks as requested by the Board of Directors. All this work met and still is meeting the opposition of the politician and the real estate shark, but it cannot cripple the well laid plans of the superb Board of Directors, whose judgment is the sum of the intelligence and business sagacity of the most progressive city in the world, in this the end of the nineteenth century. The municipal and state sanction having been obtained, the committee upon buildings and grounds at once commenced surveying the proposed sites, and called to their aid Frederick Law Olmsted, the landscape architect. His report upon the Jackson Park site was not altogether favorable and may lead to some slight changes in that plan, but the difficulties he pointed out should be overcome. In relation to the procuring of plans for the buildings, the laying out of grounds and the designing of buildings, the most comprehensive statement will probably be found to the sections relating thereto in the report of the committee on buildings and grounds of August 12, which are as follows:

Fourth. Your committee report in favor of the following organization for securing the prompt and satisfactory preparation of grounds and designs for and construction of buildings for the Exposition. That it be allowed to select, with the advice and consent of the Board of Directors, the following compact advisory staff:

- (1) A Consulting Architect.
- (2) A Consulting Landscape Engineer.
- (3) A Consulting Engineer on Construction.

It will be the duty of the Consulting Architect to assist your committee to carry out the various designs of the architects who may plan the buildings and to have such discretionary power as may seem expedient to your committee.

The Consulting Engineer on Grounds to have charge of laying out and beautifying all grounds.

The Consulting Engineer on Construction to be familiar with practical construction in its broadest sense.

The time for the planning and construction of the buildings is so short that the organization must be compact to be efficient and rapid in its work.

Your committee is not favorably impressed with any scheme or plan yet suggested for securing competitive designs for the various buildings.

The time is so short that it is the belief of your committee that better and quicker results can be obtained by intrusting your committee with power to proceed in accordance with the tenor of this report.

Your committee respectfully urges that as much of this report as is favorably received be approved at once, as a very large amount of work confronts our corporation.

DE WITT C. CREGIER.
E. T. JEFFERY.
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This report was unanimously adopted by the directory. The consulting architect and other experts recommended are selected and will probably be appointed before this is out of press. In advance we can heartily indorse the appointments, and congratulate the committee upon the firm stand they have taken against the various competition schemes that have been presented with more or less assurance for their consideration. If the committee's condemnation of competition schemes needed any defense with a profession that holds competitions to be an evil, and even in most cases unprofessional, the fact that only the best architects in the country should design the buildings, and absolutely none of those who have done the best work the cities of the United States exhibit would enter, would be sufficient to show the folly of such a course, let alone the time that would be wasted in the interval. The work

of those who have been selected for the positions of consulting architect, landscape architect and engineer on construction will be largely under the direction of the consulting architect, who will be in reality a supervising architect. The general plan and character of buildings will be outlined by him, and upon his recommendation other architects throughout the United States will be appointed to perform specified work. The entire course of this committee is commended by the public at large.

**Influence of
Architectural
Exhibitions
Upon the Art.**

A characteristic common to the three recent architectural exhibitions is the marked degree of refinement in the designs illustrated. The unlicensed freedom that has accompanied in America the breaking away from conventional styles has in this decade been fruitful of an amount of crudity and coarseness, and, it might in truth be said, of downright brutality that is infinitely harrowing to every well-ordered mind. Buildings, big and little, public and private, in each style whatsoever, have fallen under this baneful influence. We all know buildings and groups of buildings whose dreadful aspect we would walk blocks to avoid; buildings that inspire in the heart a devout wish that great Jove would intrust to our use the wielding of the seemingly aimless thunderbolt; buildings that have led us to fear that, whatever might become of organized society, anarchy was replacing what had been fondly called the principles of art. These exhibitions have done somewhat toward dispelling this gloomy foreboding and have brought visible proof that there remain yet seven thousand or less who have never bowed the knee to Baal or who, having followed after strange gods, have repented their idolatry and returned to a purer faith. We hope that it is to the attractiveness of the rendering that we are to ascribe some accepted compositions whose merits are not conspicuous, and which betray a lingering fondness for the flesh-pots of Egypt and the grace of the denuded pyramids. There are occasional examples of a too labored striving after the new and the picturesque — of a certain attitudinizing of the design, if we may so phrase it. But taken all in all there is a refreshing absence of brutality and a wholesome seeking for refinement that augur better times for architecture as an art, and we are little disposed to be severe on exceptions in view of the general merit.

**Conventions
of Ohio
and Michigan
Architects.**

The sixth annual meeting of the Association of Ohio Architects, which will be held at Toledo, August 21, will be exceedingly interesting and enjoyable. The principal work will be the revision of the constitution and by-laws and the reformation of the State Association into a chapter of the American Institute. After the convention work is finished the members will take steamer to the Put-in-Bay islands where they will meet the Michigan State Association of Architects. The assembling of the latter association is informal, but it may take occasion to hold a joint session with that of Ohio. The Michigan architects will return to Detroit by way of Toledo, accompanying their Ohio friends. Aside from the business necessity for as many members as possible of either association to be present, the attractions in the way of a few days rest from routine work should induce the architects throughout Michigan, as well as Ohio, to attend this meeting. Michigan architects will leave Detroit Friday morning for Put-in-Bay by steamer. Ohio architects who reach Toledo before 10 o'clock on Thursday morning will find quarters at 504 Superior street.

**A Guarantee
Bond Given
by Trades
Unions.**

While congratulating the carpenter contractors of Chicago upon their successful resistance to one of the most tyrannical and disreputable attempts to paralyze the building business, and the thorough discomfiture of the carpenters' union, we cannot but deprecate the lack of backbone so evident among the large mass of contractors in the building trades in New York. Instead of boldly saying that the methods of trades unions are barbarous and un-American, and refusing absolutely to recognize the existence of any such combination for unlawful purposes, deeming it better to go out of the business than be controlled by them, they have inch by inch given up ground to them that it will cost millions to regain, but that must be regained and independence of action obtained before they can hope to work undisturbed. The mason contractors of Chicago weakly yielded to the "beauties of arbitration" three years ago and are now governed by a union that allows of no infringement upon its assumed prerogative of absolute control. The carpenter contractors were also offered the "arbitration" bait, but, with perhaps a better understanding of what was meant, refused to place themselves in the position of arbitrating so broad a thing as personal freedom, which also involved a league against all labor outside of the union. By the most vigorous measures ever instituted by any association in the history of strikes, the city has been cleared of the crew of criminals that were paid by the union to attack the defenseless and the old, and only stopping short of murder for fear of a swift retribution and a hangman's rope. If strikes were so organized that only the striker and his immediate employer were interested or injured, and no damage to the unsympathetic workman, his employer or the general public were done, the outrages committed by unions might be tolerated and relief looked for in their mutual destruction, but a strike is never so circumscribed in its effect. A strike in New York at present will delay the completion of seventy schoolhouses and affect half a million innocent people. And the trades union has absolutely no excuse. No workman can point with pride to his union and say, "I receive higher wages through it," when its rules and practice destroy all freedom of action and exact by force what should only be won by skill. No union workman can be proud of an order that has force for its motto, hostility to all who do not join its ranks for its principle, and does not elevate him intellectually and cause him to depend upon increased skill rather than the strength of his organization for advancement. The laws of the land give unions all that they can ask in the way of liberty of action, and in return they are continually placing the business of the public in peril and the lives of individuals, whose only fault is that they desire to work for a living in their own way for those who may employ them, in jeopardy. It is time that the government stepped in and held unions accountable for their acts. No union should be allowed to organize or hold meetings, secret or otherwise, without depositing a good and sufficient bond, that could be sued against and collected from when sufficient evidence was established that the union was either directly or indirectly responsible for the damage done. If this were done workmen could recover for all time lost by strikes in other trades, and the unions, if they existed at all, would be controlled by responsible business men rather than by irresponsible agitators. Labor's antithesis, capital, should likewise be controlled, and combinations made a felony.

Death of Architect Albert C. Nash.

ARCHITECT ALBERT C. NASH, of Cincinnati, died at his residence on Walnut Hills, July 15, 1890, aged 64 years. Mr. Nash died in the fullness of years, honored and beloved by all who knew him. He was a close student and observer, and was, perhaps, the best posted man on scientific subjects of any one of his brethren in that city. He was peculiar in his habits, inasmuch as it has been his custom for years to work until about 3 o'clock in the morning and then, after taking a few hours' sleep, he would visit his building, and about noon each day would find him at his office. To the study of his plans he gave his personal attention and even in the preparation of his sketches he had a manner peculiar to himself, for he always made the preliminary sketches on paper that had been ruled by light blue lines into quarter inch squares, and this paper seldom saw the T square or the triangle, but would respond to the stroke of the architect's pencil and show forth the plan or the elevation or the perspective even that would nearly always meet the wishes of the owner.

From an architectural standpoint Mr. Nash was successful more in planning than in exterior or interior decoration. In his early architectural career he was led into what was then known as the Lake Shore Style, which certainly had nothing to recommend it but its name; like all diseases it had to run its course, and, fortunately for the profession, that course has been run, and those men who were its advocates a few decades ago are dying off, or, better still, are abandoning it for something better. If Mr. Nash had not got started on this unfortunate style, but instead had been rooted and grounded in the classics, he would have been one of the most powerful men of his times, for he seemed to have every faculty that fit men for those high positions that so many strive for and so few attain. He was a gentleman and a scholar. He was polite and warm-hearted, and being a ready speaker, he was always looked to to represent his brethren at any public gathering. He had a way of winning to himself all with whom he was thrown in contact. After nearly a quarter of a century of professional practice among us he passes away with his praise upon every lip. In those difficult positions that the architect is so often placed, i. e., as arbitrator between owner and builder, he carefully weighed all the facts and he had a judicial mind that enabled him to quickly and rightly arrive at a decision. When his mind was thus made up nothing could move him, and in truth his decisions were so carefully arrived at and so pleasantly rendered that they were always satisfactory and both parties felt that they had been justly dealt with.

Mr. Nash was the friend of the young architect, and more than one young man just starting on his professional career owes much to Mr. Nash because of timely advice, and of encouragement, and even of that more substantial commodity known as a "job," for he has been known to turn these over to young men when, for some cause or other, he could not or would not (for he has been known to refuse "jobs") execute the commissions offered to his charge.

Mr. Nash had the highest sense of personal honor and uprightness. He was the very soul of honor, and while requiring of the contractor a strict account of his stewardship, he ever accorded him his just dues. If the contractor was entitled to an "extra" he got it, but woe betide the contractor who endeavored to shirk his responsibilities, or who approached Mr. Nash with any proposition that had the appearance of a bribe in it. He held his own office force to a likewise strict account. He had, at one time, a superintendent who accepted a diamond stud from the contractors on a certain building (and this too after the building was completed) as a memento of his uniform kindness and impartiality, etc. Mr. Nash did not seem to understand how a superintendent could, conscientiously, accept a gift from those who should have been held to the letter of their contract, and so he at once discharged him.

While of late years, for reasons sufficient for himself, Mr. Nash seemed to lose interest in the Institute, yet he was an Institute man — believed in it and worked for it, and for many years was a member, and always a good one. For many years he was president of the Cincinnati Chapter, A. I. A., and was seldom so professionally busy as not to be able to attend to its duties; and was a good, firm and polite presiding officer; in short he had all those qualities that go to make a man in the fullest meaning of the word as the world understands it.

The architects of Cincinnati attended his funeral in a body, and President Samuel Hannaford appointed a committee who have reported the following memorial:

IN MEMORY OF A. C. NASH.

When A. C. Nash died the architectural profession lost a good man, and we who remain desire, the best we may, to record our testi-

mony of his worth, though the best we can do, or say, will be but a feeble testimony and will come far short of his high character.

Mr. Nash was a man of the highest integrity and honor, to do a mean or small thing was foreign to his nature; he had the highest idea not only of personal honor and uprightness, but also of professional etiquette, and no one can point to a single act of his whereby any discredit was brought upon the profession. He was always regarded as a leader among us, and his advice was not only sought but followed. To the young architect he was a true and good adviser. As arbitrator between owner and contractor he was rigid and exact, faithful to his client and just to the contractor, and his decisions were seldom appealed from. His extensive practice of more than twenty years in this city bears a record of fewest mistakes and of the greatest number of successful achievements.

In accordance, therefore, with the above sentiments, we record our heartfelt loss in the death of Mr. Nash and we recommend that this memorial be spread upon the minutes of our society and be published in the architectural journals and the daily press.

SAMUEL HANNAFORD,
JAS. W. McLAUGHLIN,
E. ANDERSON,
H. E. SITER,
CHAS. CRAPSEY,

Committee
Cincinnati
Chapter, A. I. A.

Views of an English Architect on Theater Construction.

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

PART I.

NOTWITHSTANDING the great advancement and improvements that have been made in buildings of this class in recent years, there is still much to be done to perfect the public buildings in which large numbers of people congregate, whether theaters, music halls, concert halls, or premises used for amusement, instruction or devotion.

Much has been done of late by the lessees and owners of London places of amusement to secure the safety and comfort of the public. New theaters and halls have risen to take the place of dangerous structures; old theaters have been rebuilt and remodeled; thousands of pounds have been spent by our managers to meet the requisitions of the late Board of Works and the London County Council; houses and lands adjoining their premises, mostly in our busiest thoroughfares, have been purchased at great outlay; staircases have been widened and additional exits provided to benefit a public knowing little or nothing of all that has been done for their security and their safety alone.

One cannot speak too highly of the managers for the steps they have taken in rebuilding, adding to or altering their premises, and in spending large sums of money, for which they see no corresponding return in their daily takings, but they have the consolation of knowing that the public will ever support the enterprising manager who can accommodate them in a building that has been rendered fit for their reception.

Not only have structural alterations been executed under the Metropolis Management and Building Act Amendment Act, but other important changes have been carried on voluntarily by the lessees. The advance of science has brought a valuable aid to them in the form of the electric light, which has been installed in many theaters and halls at considerable outlay. In some cases "power" has had to be specially provided and the scenery repainted to adapt it to the varied quality of the new light. The installation of the new fittings, both to auditorium and stage, and the extra nightly cost over and above that of gas, have all been additional expenses borne by lessees for the good of the public without any corresponding return.

Where electric light is used, we can now go to a theater without experiencing a feeling of suffocation. The risk of getting overheated and catching cold after by going into the night air, is avoided. Even a much more important object than this is attained — the reduction of fire risk. The old gas system was, and is, a bad one in every way. The proximity of gas, too often unprotected, to inflammable material, and the escape from the joints of the temporary pipes, which connect up the border and ground rows, are dangers that occur in the best supervised theaters. Where the electric light is used all this danger is avoided. Mr. John Hollingshead was the first to introduce the electric light in connection with theaters at the Gaiety. To Mr. D'Oyley Carte, however, we owe what may be considered the greatest benefit the theater-going public have experienced for many years, for he showed the practicability of lighting the entire auditorium and stage by electricity. What a deserved success Mr. Carte secured on the night of the private view at the Savoy can be well remembered, when all London assembled in the auditorium and on the stage and pronounced its favorable verdict. The majority of managers have

followed Mr. Carte's example, and it is now a common, would it were a universal, custom to light a theater throughout by electricity.

In dealing with places of public amusement, one should ever bear in mind that the one great object is to *prevent panic*. In order to do this, avoid fire risk, narrow passages, winding staircases, insufficient exits, crowded seating, and an unsuitable site.

Theaters, and all public buildings of this class, should be entirely fire resisting, having nothing in their construction that will readily ignite; by this means the ordinary methods of fire extinction, such as strict supervision and adequate appliances, will be found sufficient for the protection of the building. By giving careful consideration to the planning and disposition of the various parts and judicious choice of the materials for construction, a theater can, in spite of its being such a heavy fire risk, be made as safe as any other building, and the business of the house can be carried on with perfect security to both life and property.

The first thing, however, for the architect to learn is what is wanted in a theater and how a house should be arranged in every detail; until this is ascertained it is useless to try and plan a "safe" theater. It is a *sine qua non* that there must be a place for everything, and everything in its place; it is necessary to know what this everything is before the place for it can be provided, and it is only by becoming thoroughly acquainted with the *modus operandi* of "show" business that provision can be made to minimize and avoid the risks that follow. To become a successful theater architect one must almost qualify for a theatrical manager, or many of the minor details which create an easily worked and safe theater will be omitted in the plans.

Provide such means in planning a house so as to enable the audience and staff to get out of the building in the shortest possible time, at the slightest provocation; avoid all risks of panic. Panic has more victims than fire; many deaths occur where there is not a spark of fire in the building, and literally no danger whatever, this being in most cases due entirely to an ill-constructed and badly planned house, unfit for the reception of numbers of people. Precautions against panic are more necessary than precautions against fire. Create confidence in the audience and half the battle is won; show to them their safety is in their own hands, that everything possible has been done to secure it for them by erecting a building from which they can find their way out with ease, by using materials of fire-resisting qualities, by dividing the house into many risks, and by providing separate departments for all the trades and businesses of the house.

If the public were better acquainted with the means of getting out of places of amusement, there is no doubt they would feel safer when visiting them. A great number enter with the idea that they could never find their way out if they wanted; this is not to be wondered at considering what some of the entrances are, that the entrances are not always the exits, and the exits not always in nightly use. What are commonly labeled "emergency" doors are too often found locked and bolted; they are therefore worse than useless. Everything should be done to inspire the audience with the idea that they could save themselves without hurting others in case of accident. To do this they should know the house and be able to find their way about it easily. One knows from personal feelings that when one is in a theater for the first time, one never has that sensation of security that is felt in a theater where one knows every passage and staircase by being a frequent visitor. In fact, a feeling of being at home is desirable. Of course, it is impossible for everyone to learn the run of the house, but much could be done to assist them. I advocated, some years ago, a plan of the building on the programmes showing the exits; this, in some instances, has since been done. Under the Various Power Act the late Board of Works had notices put on the walls "Exit—this way out," a most desirable precaution, but in addition to this I would have every door marked with its distinctive name, such as "Cloak Room," "Offices," "Lavatory," "Saloon," as the case might be, with "No exit by this door" underneath. Such notices as "In case of need," "Exit in case of fire," "In case of panic," "Emergency," "Alarm exit" should never be seen; they only suggest the presence of danger, which should never be brought to the minds of the audience. Omit all reference to the possibility of fire or panic and create confidence in the audience. All notices there directing the audience should be painted directly on the walls, not on separate placards, which are apt to get removed or torn down. Large plans of the building should be displayed in conspicuous parts for the benefit of those who have not programmes; in the intervals between the acts, people would out of curiosity examine these and unconsciously be storing up knowledge which might afterward be the saving of their lives.

Above all, study to obtain simplicity and uniformity of design in the plan. Let both sides of the house be as similar as possible; where there is a pit entrance on one side let there be a corresponding one on the other, where there is a gallery staircase on the right let there be a similar staircase on the left. Place all entrances and exits where they can be easily found every time the house is open to the public and have them all used at every performance. All seats should be numbered and the house licensed to hold that number, and no more admitted, under penalty of heavy fines; then the gangways would be left unobstructed. Messrs. Barnum and Bailey have been the first to show us how much better the public like to book their cheaper seats in advance than to crush, push and fight with each other to be the first to pass the pay box. Until the manager is fined passages will continue to be blocked up and the weak-minded man will be found who is willing to part with a sixpence to the obliging attendant for a camp stool or loose chair for his own personal convenience but danger to his fellow visitors. The public themselves are greatly to blame for the way in which they enter places of amusement. They are, however, easily led, and it is a pity other managers do not follow the example of the managers of the Shaftsbury and Savoy and compel the adoption of the *queue* system. Then, many who cannot afford the dearer seats of the house would be able to visit the cheaper parts in comfort and safety.

No theater should be allowed to remain open which is not constructed of fire-resisting material; the use of thin match boarding and canvas as partitions and divisions is still to be found in some places; where such is the case, how can any possibility of safety be entertained for either the building or those frequenting it. It is no good to patch up old wooden edifices with sheet iron and plugging and expect that the building will be rendered any safer. Where such places of entertainment exist they should be immediately closed, even if the cost is sustained by the public themselves. Better the destruction of fifty houses than the loss of one life.

Judgment in the choice of materials with which to construct the building requires such great care and study that too much importance cannot be placed upon this branch of the subject. The materials employed for the erection of places for the assembly of the public, whether for amusement, instruction or devotion must be in every sense of the words "the best of their several kinds." The scantlings or thicknesses must be far in excess of what would appear to be necessary for the actual and present work which they have to perform, so that they may resist any shock or pressure that may from any cause be brought to bear upon them. In short, a theater, or any building of public resort, must of necessity, in comparison with other buildings, be exceedingly costly. In this we refer only to structural parts, leaving out the decoration and fittings.

In dealing with buildings where human beings are packed, surely more care should be bestowed upon their construction than upon warehouses and factories. As long as there are cheap buildings, danger will be rife. Sometimes where a place of amusement is in a leading thoroughfare the ground floor is set aside for shops. One cannot express oneself too strongly against this; the reason it is done is, of course, to get the rent of the shops, swelling the receipts and thereby lessening the cost of the premises, but it robs the house of the very means of providing good entrances and exits which it would otherwise glory in. I say "glory in" advisedly, for every manager glories in his exits and will tell you he has better and more numerous exits than any other building in the town. Business or trade premises within the same block of buildings should never be allowed; it is only adding the risks of such trade to that of the theater or hall. The dangers accruing from the surrounding property are often as great as from a theater itself. In no case should persons be allowed to live or sleep, as is often done, in or about this class of building; it only increases the danger through the carelessness of the class of people who are likely to occupy the position of caretakers. The house should be left at night to a proper fire watch, not to persons who have been occupied in other callings all day and who, therefore, are in want of sleep at night.

In enlarging theaters and halls, adjacent premises are often taken in by knocking openings in party walls, perhaps for an extra scene dock or additional dressing rooms; the house next door is taken, and though never designed or built for the purposes of a public building it is brought into the same "risk." A building, or part of a building, not especially erected for "show" business should never be used for such purposes as it is nearly sure to be unfit for them.

PLANNING AND CONSTRUCTION.

The site.—In choosing a site for a theater, bear in mind that no house should be permitted to exist that is hemmed in on all sides,

with a narrow entrance as a frontage in a public thoroughfare. We too often thrust our places of amusement into cramped and crowded spaces, not caring as long as they are in the right quarter of the town for a paying concern. This, more frequently than not, is the first thought, and it is not considered if the site adapts itself to the requirements of a public building. True, it is difficult to obtain a building isolated on all four sides, and it is of course nonsense building a house where it will not pay, but never ought a place of public resort to be permitted where there are not wide streets running past three sides of the building, with the fourth side cut off from adjacent premises by a high party wall, many feet higher than the buildings on either side of it.

Party walls.—The most important points to be borne in mind in planning may be called the "party wall system"; have as many party walls in the building as possible, making thereby every division of the house a separate fire risk. Do not be content by merely dividing the stage from the auditorium, but isolate the work shops from the main building, the dressing rooms from the stage, the stage from the auditorium, the auditorium from the offices, cloak rooms, saloons, corridors, passages, etc. Divide each and every one of these and other sections of the house from all others, vertically, by strong brick walls, filling the openings with fire-resisting doors, made to close automatically and gradually and horizontally by fire-resisting floors; should a fire occur in any section it would be localized, and, if not extinguished, left to burn itself out where it originated, without danger to other parts of the building.

Workshops.—The position of the workshops should be such as to insure an entirely separate building, connected with the rest of the house by one opening only, which should be closed by a double fire-resisting door, a door which should on no account be allowed to be opened during the time of a performance. Should space permit, an open area should be left between the workshop and the theater proper, but where no area can be obtained, a thick brick party wall, passing through and above the roof, should divide the workshops from all other parts of the house. Provision should be made in the workshop section for paint room, carpenter's shop, property making room, and docks for scenery and property not in nightly use.

The painting gallery should be placed where a top studio light could be obtained, which lights should be protected from falling materials, timbers and sparks by strong wire guards. There is no special danger from scene painting, as is sometimes supposed; oil is not the medium employed, except when scenes are wanted for outdoor use to resist the weather, as in the cases of open air plays and scenic decorations such as used in exhibition grounds; but for all that, scene painting, as well as stage carpentering, is better done in a separate building.

The stage is too often used as a carpenter's shop, a custom which should never be allowed; the many dangers thus incurred need no pointing out, yet it is strange that seldom is a special room provided for the carpenter; this work in some houses used to be carried on over the auditorium ceiling, but, at any rate in London, this has been stopped. A special workshop for each trade should always be provided. The gasman, the electricians, the billposter, the needlewomen, the cleaners, should all have their respective rooms.

PART II.

Dressing rooms.—Many theaters still have dressing rooms not fit for pig sties; dark holes under the stage, overheated boxes, made of match boarded partitions, on flies or stage floor, devoid of ventilation and light, serve as rooms in which the artists have to prepare for their performance. Lately, attention has been called to unsanitary dressing rooms, and typhoid, whether from this or other cause, has carried off its victims in the persons of such well-known actors as Stone and Ward. From how many minor ills our actresses and actors suffer, through ill conditioned dressing rooms, can easily be imagined when one tells how an actor relates that while on tour he had dressed standing on two bricks to keep out of stagnant water that floated about the dressing room floor. It should be remembered that too often dressing rooms are overcrowded, and that the heat from the glaring gas lights over each looking glass where the actor "makes up," renders the room unfit for occupation. The remedy is in the hands of the architect, and is complete ventilation; not only should as much window space as possible be provided, but also inlets and outlets for fresh air at the floor and ceiling levels. One cannot depend upon the occupants of the room to open the windows; there is always someone who mistakes fresh air for a draught, or one who much prefers the risk of a sore throat or a bad head from breathing impure air, to the admittance of the fresh air. The "dressers"

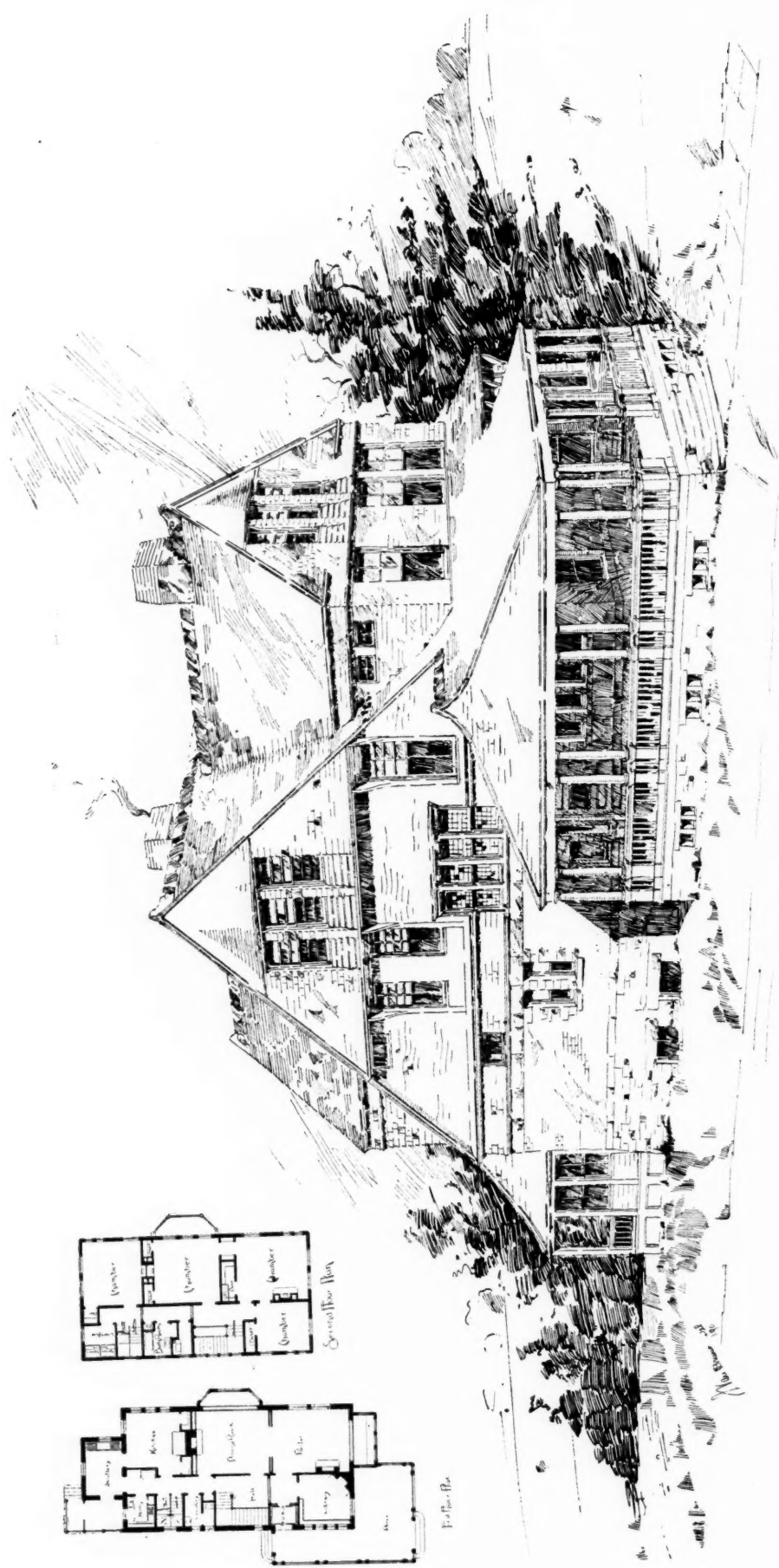
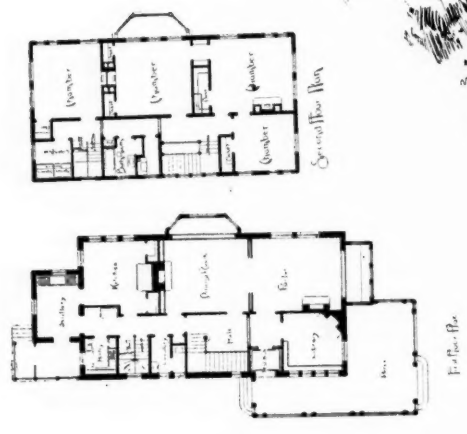
employed in theaters seem to share in the dislike of fresh air, and will not open windows, which they could do when performers are engaged upon the stage. From these reasons it can be easily understood that automatic ventilation must be provided. Every dressing room should have a separate washing basin for each performer, with water laid on waste pipe properly trapped; this would avoid the slopping about of water, and also encourage cleanliness among the poorer classes, who are engaged as supers and extras in such large numbers at many places of entertainment. Gas or electric light should be placed over each looking glass, otherwise the artists will provide candles for their own convenience, and add greatly to the risk of fire. It is the fault of the management if they do, for not giving sufficient light for the artists to "make up" by, and the stage manager would be the first to cry out if the performers appeared on the stage imperfectly made up for their parts. Dressing rooms might be with convenience placed to the right and left of the stage, on one side for men, and the other for women, each block separated horizontally and vertically from the stage and the rest of the building by brick walls and fire-resisting floors. There should be separate staircases, and direct exit into the street from each section; the construction throughout should be fire-resisting, no more wood being used than is actually necessary for the provision of dressers, drawers and hanging cupboards for the disposal of the costumes in constant use. For the stock of costumes a special wardrobe should be provided. There should be no fireplaces in dressing rooms, hot water or hot air should be used for heating purposes.

The stage.—It would be impossible in a short paper to describe the construction of the stage with its various traps, sliders, flies, wings, borders, rows, gridirons and machinery. The stage floor and sliders must of necessity be of wood, on which to set the scenes with ease; but much of the machinery might be well made in iron and answer the purpose much better than the present clumsy bridges and traps, in which no alteration or advance has been made for many a long day.

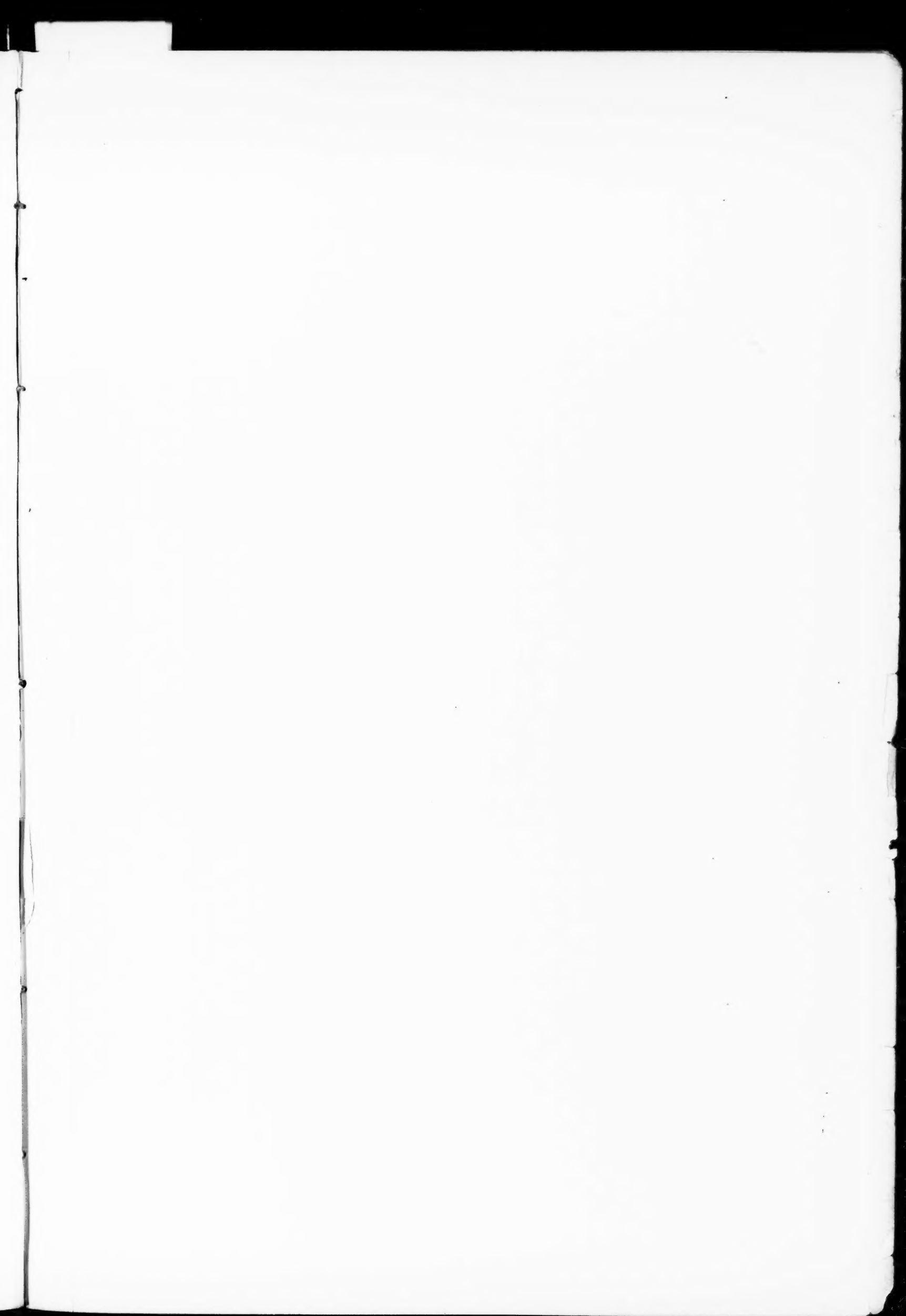
On a level with the stage there should be scene docks and property docks for the stowage of the scenes and properties in constant use; all other scenes and properties should be placed in the workshop section above described. The mezzanine and cellars below the stage should be used for the purpose of the machinery only, and on no account should rubbish and scenes be allowed to accumulate under the stage. Here, too often, the band room is situated, and other rooms run up by the stage carpenter after the building has left the hands of the architect; as a rule, the band have to pass through the mezzanine to enter the orchestra. There should be a separate passage to the orchestra so that the band need never approach the precincts of the stage or pass through the auditorium. Proper accommodation must be supplied for band, bandmaster, stage manager, firemen, property master and all other sections of the staff employed behind the scenes.

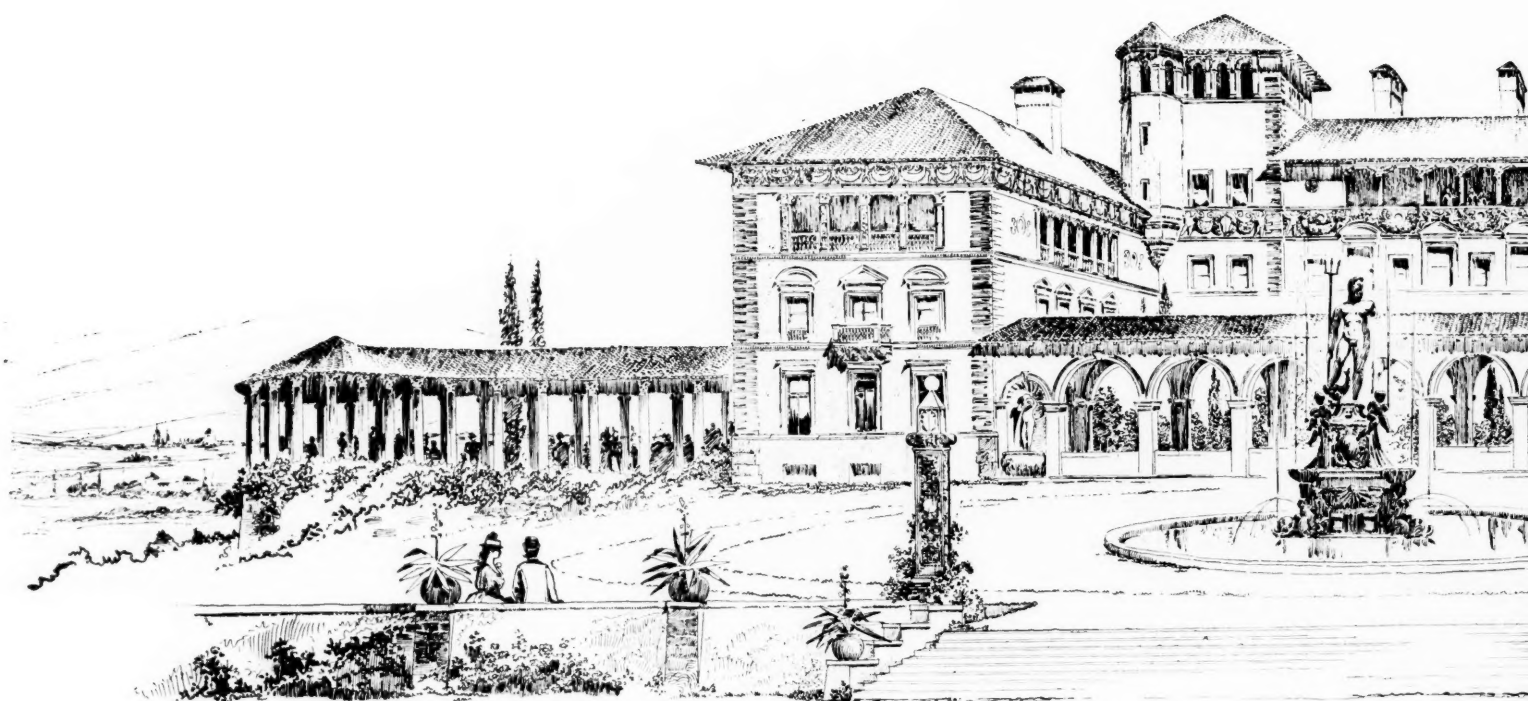
The gridiron above the stage must be made sufficiently strong to carry the weight of the cloths, etc. Cases have been known where it has given way under the weight of the scenery, and let everything down in dangerous confusion on to the stage. The construction of the gridiron, flies and fly rails should be of iron. Proper staircases should be provided to enable the flymen to escape in cases of danger, and direct exit into the street should not be forgotten for the stage men and any who may be employed on the stage.

The stage should be divided from the auditorium by a thick, solid brick proscenium wall, which wall should go between the orchestra and the mezzanine and be arched over the opening, passing through and for some height, not less than 3 feet 6 inches above the highest part of the roofs of stage and auditorium. There need only be one opening in this wall in addition to the large or proscenium opening, namely, one pass door from the stage to the front for the acting manager. This opening should be protected on both sides of the walls by fire-resisting, self-closing doors. The stage should undoubtedly be cut off from the auditorium by some sort of fire-resisting or smoke-proof curtain. The failure of some of the iron curtains used on the continent and in America has shown that they are not always to be relied on, and it is not so long ago that one stuck in a London house and the audience had to depart without seeing the play. Thin iron curtains are really useless to retard fire, although for a time they would keep back the smoke and allow the auditorium to be cleared. Asbestos curtains have been advocated and seem far more fire-resisting in character than the iron curtains generally adopted. A thick cloth or curtain of such material as used for firemen's uniforms is of far more service than is imagined, if it were formed to run in iron grooves fixed to the proscenium wall, to lift bodily up to the gridiron level, made bag-shaped of double thickness with a small space



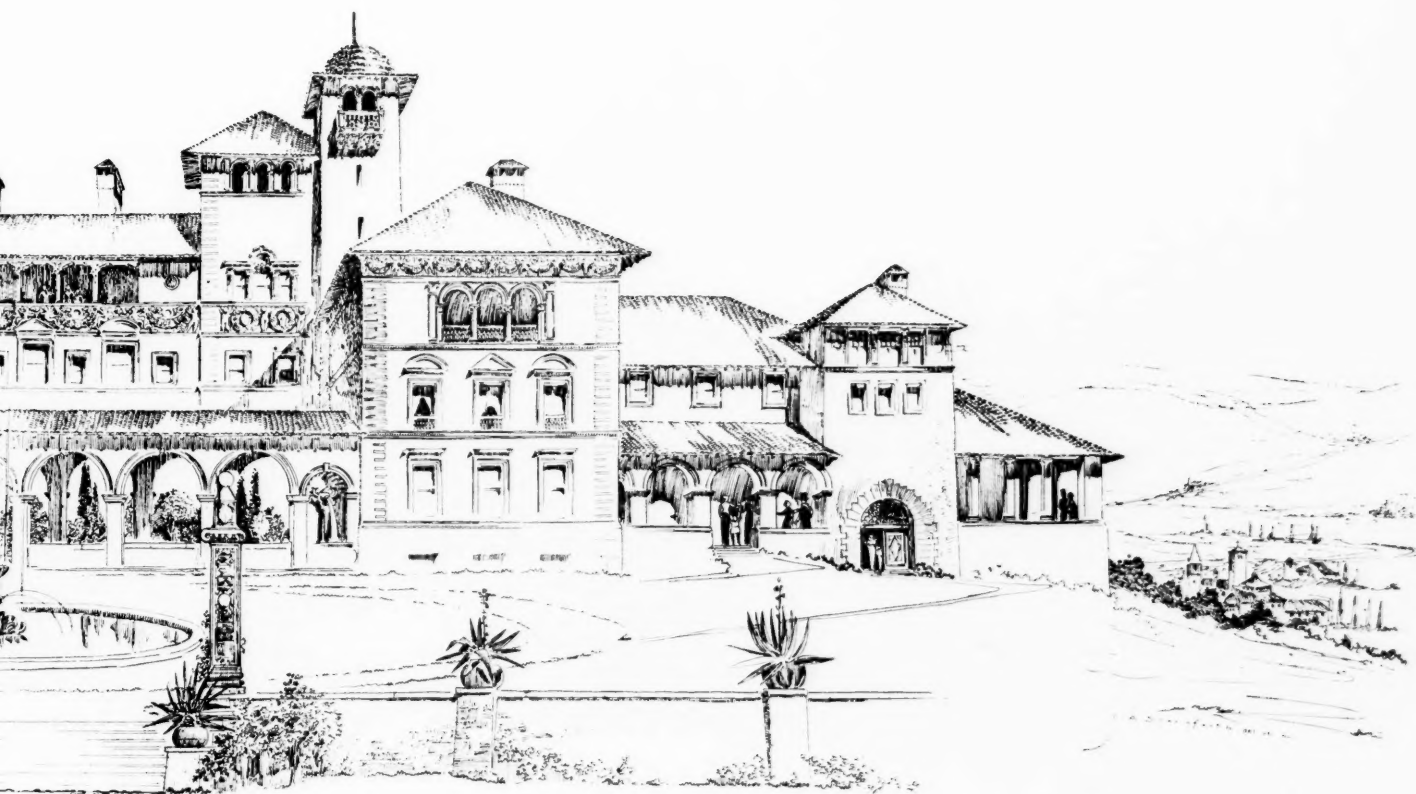
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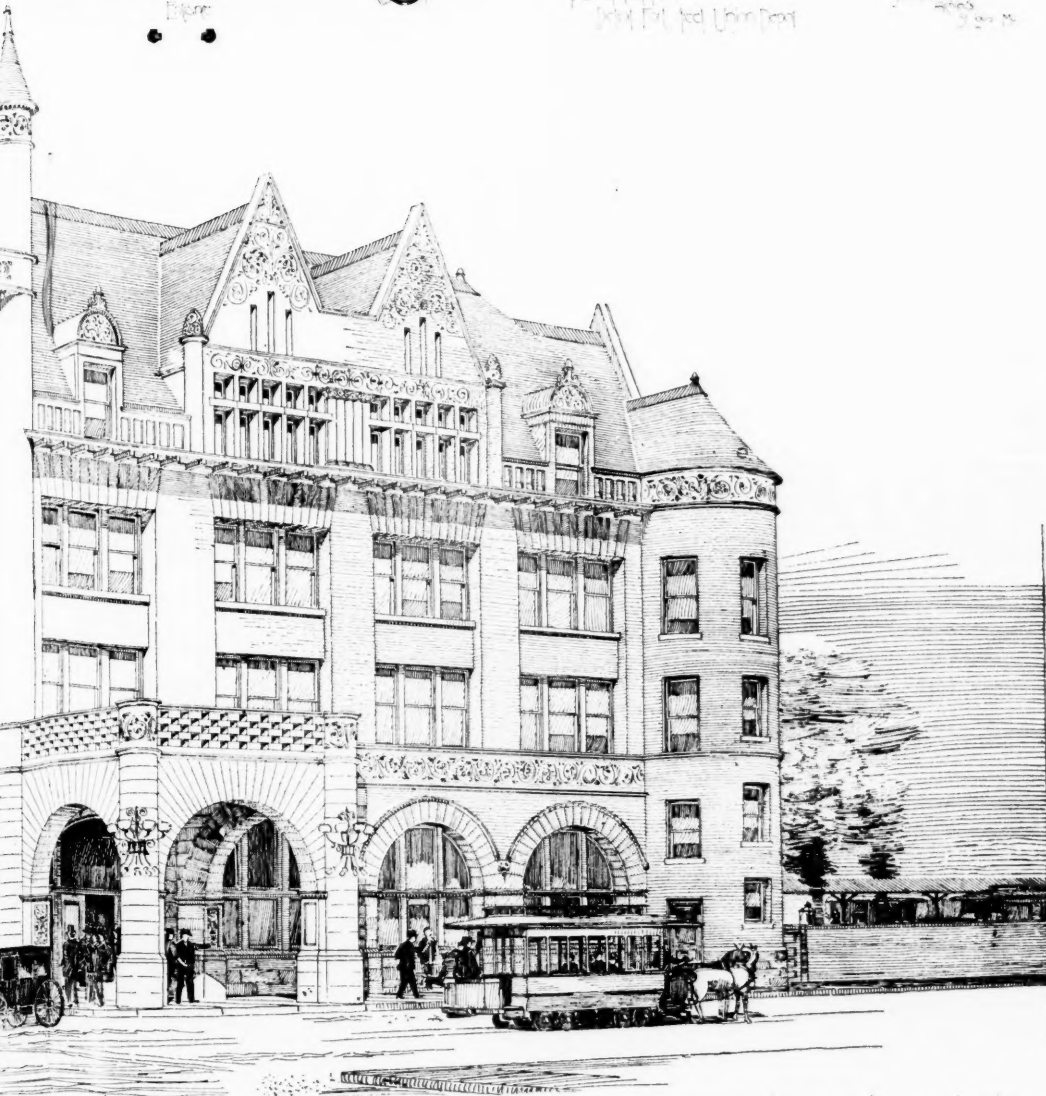
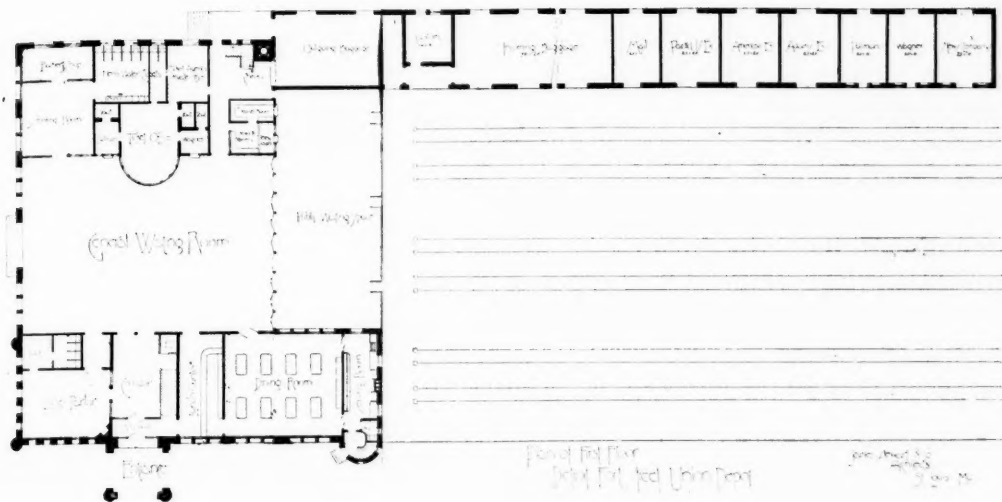
DESIGN FOR A HOTEL IN ARIZONA
OR PUEBLO OR ANY OTHER SUIT-
ABLE PLACE (BEING A CHATEAU-
EN-ESPAGNE)
JVLIVS A. SCHWEINFURTH ARCHT. BOSTON







FORT STREET UNION DEPOT,
JAMES STEWART & CO., ARCHITECTS.



James Stewart & Co Architects
St. Louis Mo

DEPOT, DETROIT, MICHIGAN.

Co., ARCHITECTS, ST. LOUIS, MO.

of those who have been selected for the positions of consulting architect, landscape architect and engineer on construction will be largely under the direction of the consulting architect, who will be in reality a supervising architect. The general plan and character of buildings will be outlined by him, and upon his recommendation other architects throughout the United States will be appointed to perform specified work. The entire course of this committee is commended by the public at large.

**Influence of
Architectural
Exhibitions
Upon the Art.**

A characteristic common to the three recent architectural exhibitions is the marked degree of refinement in the designs illustrated. The unlicensed freedom that has accompanied in America the breaking away from conventional styles has in this decade been fruitful of an amount of crudity and coarseness, and, it might in truth be said, of downright brutality that is infinitely harrowing to every well-ordered mind. Buildings, big and little, public and private, in each style whatsoever, have fallen under this baneful influence. We all know buildings and groups of buildings whose dreadful aspect we would walk blocks to avoid; buildings that inspire in the heart a devout wish that great Jove would intrust to our use the wielding of the seemingly aimless thunderbolt; buildings that have led us to fear that, whatever might become of organized society, anarchy was replacing what had been fondly called the principles of art. These exhibitions have done somewhat toward dispelling this gloomy foreboding and have brought visible proof that there remain yet seven thousand or less who have never bowed the knee to Baal or who, having followed after strange gods, have repented their idolatry and returned to a purer faith. We hope that it is to the attractiveness of the rendering that we are to ascribe some accepted compositions whose merits are not conspicuous, and which betray a lingering fondness for the flesh-pots of Egypt and the grace of the denuded pyramids. There are occasional examples of a too labored striving after the new and the picturesque—of a certain attitudinizing of the design, if we may so phrase it. But taken all in all there is a refreshing absence of brutality and a wholesome seeking for refinement that augur better times for architecture as an art, and we are little disposed to be severe on exceptions in view of the general merit.

**Conventions
of Ohio
and Michigan
Architects.**

The sixth annual meeting of the Association of Ohio Architects, which will be held at Toledo, August 21, will be exceedingly interesting and enjoyable. The principal work will be the revision of the constitution and by-laws and the reformation of the State Association into a chapter of the American Institute. After the convention work is finished the members will take steamer to the Put-in-Bay islands where they will meet the Michigan State Association of Architects. The assembling of the latter association is informal, but it may take occasion to hold a joint session with that of Ohio. The Michigan architects will return to Detroit by way of Toledo, accompanying their Ohio friends. Aside from the business necessity for as many members as possible of either association to be present, the attractions in the way of a few days rest from routine work should induce the architects throughout Michigan, as well as Ohio, to attend this meeting. Michigan architects will leave Detroit Friday morning for Put-in-Bay by steamer. Ohio architects who reach Toledo before 10 o'clock on Thursday morning will find quarters at 504 Superior street.

**A Guarantee
Bond Given
by Trades
Unions.**

While congratulating the carpenter contractors of Chicago upon their successful resistance to one of the most tyrannical and disreputable attempts to paralyze the building business, and the thorough discomfiture of the carpenters' union, we cannot but deprecate the lack of backbone so evident among the large mass of contractors in the building trades in New York. Instead of boldly saying that the methods of trades unions are barbarous and un-American, and refusing absolutely to recognize the existence of any such combination for unlawful purposes, deeming it better to go out of the business than be controlled by them, they have inch by inch given up ground to them that it will cost millions to regain, but that must be regained and independence of action obtained before they can hope to work undisturbed. The mason contractors of Chicago weakly yielded to the "beauties of arbitration" three years ago and are now governed by a union that allows of no infringement upon its assumed prerogative of absolute control. The carpenter contractors were also offered the "arbitration" bait, but, with perhaps a better understanding of what was meant, refused to place themselves in the position of arbitrating so broad a thing as personal freedom, which also involved a league against all labor outside of the union. By the most vigorous measures ever instituted by any association in the history of strikes, the city has been cleared of the crew of criminals that were paid by the union to attack the defenseless and the old, and only stopping short of murder for fear of a swift retribution and a hangman's rope. If strikes were so organized that only the striker and his immediate employer were interested or injured, and no damage to the unsympathetic workman, his employer or the general public were done, the outrages committed by unions might be tolerated and relief looked for in their mutual destruction, but a strike is never so circumscribed in its effect. A strike in New York at present will delay the completion of seventy schoolhouses and affect half a million innocent people. And the trades union has absolutely no excuse. No workman can point with pride to his union and say, "I receive higher wages through it," when its rules and practice destroy all freedom of action and exact by force what should only be won by skill. No union workman can be proud of an order that has force for its motto, hostility to all who do not join its ranks for its principle, and does not elevate him intellectually and cause him to depend upon increased skill rather than the strength of his organization for advancement. The laws of the land give unions all that they can ask in the way of liberty of action, and in return they are continually placing the business of the public in peril and the lives of individuals, whose only fault is that they desire to work for a living in their own way for those who may employ them, in jeopardy. It is time that the government stepped in and held unions accountable for their acts. No union should be allowed to organize or hold meetings, secret or otherwise, without depositing a good and sufficient bond, that could be sued against and collected from when sufficient evidence was established that the union was either directly or indirectly responsible for the damage done. If this were done workmen could recover for all time lost by strikes in other trades, and the unions, if they existed at all, would be controlled by responsible business men rather than by irresponsible agitators. Labor's antithesis, capital, should likewise be controlled, and combinations made a felony.

Death of Architect Albert C. Nash.

ARCHITECT ALBERT C. NASH, of Cincinnati, died at his residence on Walnut Hills, July 15, 1890, aged 64 years. Mr. Nash died in the fullness of years, honored and beloved by all who knew him. He was a close student and observer, and was, perhaps, the best posted man on scientific subjects of any one of his brethren in that city. He was peculiar in his habits, inasmuch as it has been his custom for years to work until about 3 o'clock in the morning and then, after taking a few hours' sleep, he would visit his building, and about noon each day would find him at his office. To the study of his plans he gave his personal attention and even in the preparation of his sketches he had a manner peculiar to himself, for he always made the preliminary sketches on paper that had been ruled by light blue lines into quarter inch squares, and this paper seldom saw the T square or the triangle, but would respond to the stroke of the architect's pencil and show forth the plan or the elevation or the perspective even that would nearly always meet the wishes of the owner.

From an architectural standpoint Mr. Nash was successful more in planning than in exterior or interior decoration. In his early architectural career he was led into what was then known as the Lake Shore Style, which certainly had nothing to recommend it but its name; like all diseases it had to run its course, and, fortunately for the profession, that course has been run, and those men who were its advocates a few decades ago are dying off, or, better still, are abandoning it for something better. If Mr. Nash had not got started on this unfortunate style, but instead had been rooted and grounded in the classics, he would have been one of the most powerful men of his times, for he seemed to have every faculty that fit men for those high positions that so many strive for and so few attain. He was a gentleman and a scholar. He was polite and warm-hearted, and being a ready speaker, he was always looked to to represent his brethren at any public gathering. He had a way of winning to himself all with whom he was thrown in contact. After nearly a quarter of a century of professional practice among us he passes away with his praise upon every lip. In those difficult positions that the architect is so often placed, i. e., as arbitrator between owner and builder, he carefully weighed all the facts and he had a judicial mind that enabled him to quickly and rightly arrive at a decision. When his mind was thus made up nothing could move him, and in truth his decisions were so carefully arrived at and so pleasantly rendered that they were always satisfactory and both parties felt that they had been justly dealt with.

Mr. Nash was the friend of the young architect, and more than one young man just starting on his professional career owes much to Mr. Nash because of timely advice, and of encouragement, and even of that more substantial commodity known as a "job," for he has been known to turn these over to young men when, for some cause or other, he could not or would not (for he has been known to refuse "jobs") execute the commissions offered to his charge.

Mr. Nash had the highest sense of personal honor and uprightness. He was the very soul of honor, and while requiring of the contractor a strict account of his stewardship, he ever accorded him his just dues. If the contractor was entitled to an "extra" he got it, but woe betide the contractor who endeavored to shirk his responsibilities, or who approached Mr. Nash with any proposition that had the appearance of a bribe in it. He held his own office force to a likewise strict account. He had, at one time, a superintendent who accepted a diamond stud from the contractors on a certain building (and this too after the building was completed) as a memento of his uniform kindness and impartiality, etc. Mr. Nash did not seem to understand how a superintendent could, conscientiously, accept a gift from those who should have been held to the letter of their contract, and so he at once discharged him.

While of late years, for reasons sufficient for himself, Mr. Nash seemed to lose interest in the Institute, yet he was an Institute man—believed in it and worked for it, and for many years was a member, and always a good one. For many years he was president of the Cincinnati Chapter, A. I. A., and was seldom so professionally busy as not to be able to attend to its duties; and was a good, firm and polite presiding officer; in short he had all those qualities that go to make a man in the fullest meaning of the word as the world understands it.

The architects of Cincinnati attended his funeral in a body, and President Samuel Hannaford appointed a committee who have reported the following memorial:

IN MEMORY OF A. C. NASH.

When A. C. Nash died the architectural profession lost a good man, and we who remain desire, the best we may, to record our testi-

mony of his worth, though the best we can do, or say, will be but a feeble testimony and will come far short of his high character.

Mr. Nash was a man of the highest integrity and honor, to do a mean or small thing was foreign to his nature; he had the highest idea not only of personal honor and uprightness, but also of professional etiquette, and no one can point to a single act of his whereby any discredit was brought upon the profession. He was always regarded as a leader among us, and his advice was not only sought but followed. To the young architect he was a true and good adviser. As arbitrator between owner and contractor he was rigid and exact, faithful to his client and just to the contractor, and his decisions were seldom appealed from. His extensive practice of more than twenty years in this city bears a record of fewest mistakes and of the greatest number of successful achievements.

In accordance, therefore, with the above sentiments, we record our heartfelt loss in the death of Mr. Nash and we recommend that this memorial be spread upon the minutes of our society and be published in the architectural journals and the daily press.

SAMUEL HANNAFORD,	Committee Cincinnati Chapter, A. I. A.
JAS. W. McLAUGHLIN,	
E. ANDERSON,	
H. E. SITER,	
CHAS. CRAPSEY,	

Views of an English Architect on Theater Construction.

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

PART I.

NOTWITHSTANDING the great advancement and improvements that have been made in buildings of this class in recent years, there is still much to be done to perfect the public buildings in which large numbers of people congregate, whether theaters, music halls, concert halls, or premises used for amusement, instruction or devotion.

Much has been done of late by the lessees and owners of London places of amusement to secure the safety and comfort of the public. New theaters and halls have risen to take the place of dangerous structures; old theaters have been rebuilt and remodeled; thousands of pounds have been spent by our managers to meet the requisitions of the late Board of Works and the London County Council; houses and lands adjoining their premises, mostly in our busiest thoroughfares, have been purchased at great outlay; staircases have been widened and additional exits provided to benefit a public knowing little or nothing of all that has been done for their security and their safety alone.

One cannot speak too highly of the managers for the steps they have taken in rebuilding, adding to or altering their premises, and in spending large sums of money, for which they see no corresponding return in their daily takings, but they have the consolation of knowing that the public will ever support the enterprising manager who can accommodate them in a building that has been rendered fit for their reception.

Not only have structural alterations been executed under the Metropolis Management and Building Act Amendment Act, but other important changes have been carried on voluntarily by the lessees. The advance of science has brought a valuable aid to them in the form of the electric light, which has been installed in many theaters and halls at considerable outlay. In some cases "power" has had to be specially provided and the scenery repainted to adapt it to the varied quality of the new light. The installation of the new fittings, both to auditorium and stage, and the extra nightly cost over and above that of gas, have all been additional expenses borne by lessees for the good of the public without any corresponding return.

Where electric light is used, we can now go to a theater without experiencing a feeling of suffocation. The risk of getting overheated and catching cold after by going into the night air, is avoided. Even a much more important object than this is attained—the reduction of fire risk. The old gas system was, and is, a bad one in every way. The proximity of gas, too often unprotected, to inflammable material, and the escape from the joints of the temporary pipes, which connect up the border and ground rows, are dangers that occur in the best supervised theaters. Where the electric light is used all this danger is avoided. Mr. John Hollingshead was the first to introduce the electric light in connection with theaters at the Gaiety. To Mr. D'Oyley Carte, however, we owe what may be considered the greatest benefit the theater-going public have experienced for many years, for he showed the practicability of lighting the entire auditorium and stage by electricity. What a deserved success Mr. Carte secured on the night of the private view at the Savoy can be well remembered, when all London assembled in the auditorium and on the stage and pronounced its favorable verdict. The majority of managers have

followed Mr. Carte's example, and it is now a common, would it were a universal, custom to light a theater throughout by electricity.

In dealing with places of public amusement, one should ever bear in mind that the one great object is to *prevent panic*. In order to do this, avoid fire risk, narrow passages, winding staircases, insufficient exits, crowded seating, and an unsuitable site.

Theaters, and all public buildings of this class, should be entirely fire resisting, having nothing in their construction that will readily ignite; by this means the ordinary methods of fire extinction, such as strict supervision and adequate appliances, will be found sufficient for the protection of the building. By giving careful consideration to the planning and disposition of the various parts and judicious choice of the materials for construction, a theater can, in spite of its being such a heavy fire risk, be made as safe as any other building, and the business of the house can be carried on with perfect security to both life and property.

The first thing, however, for the architect to learn is what is wanted in a theater and how a house should be arranged in every detail; until this is ascertained it is useless to try and plan a "safe" theater. It is a *sine qua non* that there must be a place for everything, and everything in its place; it is necessary to know what this everything is before the place for it can be provided, and it is only by becoming thoroughly acquainted with the *modus operandi* of "show" business that provision can be made to minimize and avoid the risks that follow. To become a successful theater architect one must almost qualify for a theatrical manager, or many of the minor details which create an easily worked and safe theater will be omitted in the plans.

Provide such means in planning a house so as to enable the audience and staff to get out of the building in the shortest possible time, at the slightest provocation; avoid all risks of panic. Panic has more victims than fire; many deaths occur where there is not a spark of fire in the building, and literally no danger whatever, this being in most cases due entirely to an ill-constructed and badly planned house, unfit for the reception of numbers of people. Precautions against panic are more necessary than precautions against fire. Create confidence in the audience and half the battle is won; show to them their safety is in their own hands, that everything possible has been done to secure it for them by erecting a building from which they can find their way out with ease, by using materials of fire-resisting qualities, by dividing the house into many risks, and by providing separate departments for all the trades and businesses of the house.

If the public were better acquainted with the means of getting out of places of amusement, there is no doubt they would feel safer when visiting them. A great number enter with the idea that they could never find their way out if they wanted; this is not to be wondered at considering what some of the entrances are, that the entrances are not always the exits, and the exits not always in nightly use. What are commonly labeled "emergency" doors are too often found locked and bolted; they are therefore worse than useless. Everything should be done to inspire the audience with the idea that they could save themselves without hurting others in case of accident. To do this they should know the house and be able to find their way about it easily. One knows from personal feelings that when one is in a theater for the first time, one never has that sensation of security that is felt in a theater where one knows every passage and staircase by being a frequent visitor. In fact, a feeling of being at home is desirable. Of course, it is impossible for everyone to learn the run of the house, but much could be done to assist them. I advocated, some years ago, a plan of the building on the programmes showing the exits; this, in some instances, has since been done. Under the Various Power Act the late Board of Works had notices put on the walls "Exit—this way out," a most desirable precaution, but in addition to this I would have every door marked with its distinctive name, such as "Cloak Room," "Offices," "Lavatory," "Saloon," as the case might be, with "No exit by this door" underneath. Such notices as "In case of need," "Exit in case of fire," "In case of panic," "Emergency," "Alarm exit" should never be seen; they only suggest the presence of danger, which should never be brought to the minds of the audience. Omit all reference to the possibility of fire or panic and create confidence in the audience. All notices there directing the audience should be painted directly on the walls, not on separate placards, which are apt to get removed or torn down. Large plans of the building should be displayed in conspicuous parts for the benefit of those who have not programmes; in the intervals between the acts, people would out of curiosity examine these and unconsciously be storing up knowledge which might afterward be the saving of their lives.

Above all, study to obtain simplicity and uniformity of design in the plan. Let both sides of the house be as similar as possible; where there is a pit entrance on one side let there be a corresponding one on the other, where there is a gallery staircase on the right let there be a similar staircase on the left. Place all entrances and exits where they can be easily found every time the house is open to the public and have them all used at every performance. All seats should be numbered and the house licensed to hold that number, and no more admitted, under penalty of heavy fines; then the gangways would be left unobstructed. Messrs. Barnum and Bailey have been the first to show us how much better the public like to book their cheaper seats in advance than to crush, push and fight with each other to be the first to pass the pay box. Until the manager is fined passages will continue to be blocked up and the weak-minded man will be found who is willing to part with a sixpence to the obliging attendant for a camp stool or loose chair for his own personal convenience but danger to his fellow visitors. The public themselves are greatly to blame for the way in which they enter places of amusement. They are, however, easily led, and it is a pity other managers do not follow the example of the managers of the Shaftsbury and Savoy and compel the adoption of the *queue* system. Then, many who cannot afford the dearer seats of the house would be able to visit the cheaper parts in comfort and safety.

No theater should be allowed to remain open which is not constructed of fire-resisting material; the use of thin match boarding and canvas as partitions and divisions is still to be found in some places; where such is the case, how can any possibility of safety be entertained for either the building or those frequenting it. It is no good to patch up old wooden edifices with sheet iron and plugging and expect that the building will be rendered any safer. Where such places of entertainment exist they should be immediately closed, even if the cost is sustained by the public themselves. Better the destruction of fifty houses than the loss of one life.

Judgment in the choice of materials with which to construct the building requires such great care and study that too much importance cannot be placed upon this branch of the subject. The materials employed for the erection of places for the assembly of the public, whether for amusement, instruction or devotion must be in every sense of the words "the best of their several kinds." The scantlings or thicknesses must be far in excess of what would appear to be necessary for the actual and present work which they have to perform, so that they may resist any shock or pressure that may from any cause be brought to bear upon them. In short, a theater, or any building of public resort, must of necessity, in comparison with other buildings, be exceedingly costly. In this we refer only to structural parts, leaving out the decoration and fittings.

In dealing with buildings where human beings are packed, surely more care should be bestowed upon their construction than upon warehouses and factories. As long as there are cheap buildings, danger will be rife. Sometimes where a place of amusement is in a leading thoroughfare the ground floor is set aside for shops. One cannot express oneself too strongly against this; the reason it is done is, of course, to get the rent of the shops, swelling the receipts and thereby lessening the cost of the premises, but it robs the house of the very means of providing good entrances and exits which it would otherwise glory in. I say "glory in" advisedly, for every manager glories in his exits and will tell you he has better and more numerous exits than any other building in the town. Business or trade premises within the same block of buildings should never be allowed; it is only adding the risks of such trade to that of the theater or hall. The dangers accruing from the surrounding property are often as great as from a theater itself. In no case should persons be allowed to live or sleep, as is often done, in or about this class of building; it only increases the danger through the carelessness of the class of people who are likely to occupy the position of caretakers. The house should be left at night to a proper fire watch, not to persons who have been occupied in other callings all day and who, therefore, are in want of sleep at night.

In enlarging theaters and halls, adjacent premises are often taken in by knocking openings in party walls, perhaps for an extra scene dock or additional dressing rooms; the house next door is taken, and though never designed or built for the purposes of a public building it is brought into the same "risk." A building, or part of a building, not especially erected for "show" business should never be used for such purposes as it is nearly sure to be unfit for them.

PLANNING AND CONSTRUCTION.

The site.—In choosing a site for a theater, bear in mind that no house should be permitted to exist that is hemmed in on all sides,

with a narrow entrance as a frontage in a public thoroughfare. We too often thrust our places of amusement into cramped and crowded spaces, not caring as long as they are in the right quarter of the town for a paying concern. This, more frequently than not, is the first thought, and it is not considered if the site adapts itself to the requirements of a public building. True, it is difficult to obtain a building isolated on all four sides, and it is of course nonsense building a house where it will not pay, but never ought a place of public resort to be permitted where there are not wide streets running past three sides of the building, with the fourth side cut off from adjacent premises by a high party wall, many feet higher than the buildings on either side of it.

Party walls.—The most important points to be borne in mind in planning may be called the "party wall system"; have as many party walls in the building as possible, making thereby every division of the house a separate fire risk. Do not be content by merely dividing the stage from the auditorium, but isolate the work shops from the main building, the dressing rooms from the stage, the stage from the auditorium, the auditorium from the offices, cloak rooms, saloons, corridors, passages, etc. Divide each and every one of these and other sections of the house from all others, vertically, by strong brick walls, filling the openings with fire-resisting doors, made to close automatically and gradually and horizontally by fire-resisting floors; should a fire occur in any section it would be localized, and, if not extinguished, left to burn itself out where it originated, without danger to other parts of the building.

Workshops.—The position of the workshops should be such as to insure an entirely separate building, connected with the rest of the house by one opening only, which should be closed by a double fire-resisting door, a door which should on no account be allowed to be opened during the time of a performance. Should space permit, an open area should be left between the workshop and the theater proper, but where no area can be obtained, a thick brick party wall, passing through and above the roof, should divide the workshops from all other parts of the house. Provision should be made in the workshop section for paint room, carpenter's shop, property making room, and docks for scenery and property not in nightly use.

The painting gallery should be placed where a top studio light could be obtained, which lights should be protected from falling materials, timbers and sparks by strong wire guards. There is no special danger from scene painting, as is sometimes supposed; oil is not the medium employed, except when scenes are wanted for outdoor use to resist the weather, as in the cases of open air plays and scenic decorations such as used in exhibition grounds; but for all that, scene painting, as well as stage carpentering, is better done in a separate building.

The stage is too often used as a carpenter's shop, a custom which should never be allowed; the many dangers thus incurred need no pointing out, yet it is strange that seldom is a special room provided for the carpenter; this work in some houses used to be carried on over the auditorium ceiling, but, at any rate in London, this has been stopped. A special workshop for each trade should always be provided. The gasman, the electricians, the billposter, the needlewomen, the cleaners, should all have their respective rooms.

PART II.

Dressing rooms.—Many theaters still have dressing rooms not fit for pig styes; dark holes under the stage, overheated boxes, made of match boarded partitions, on flies or stage floor, devoid of ventilation and light, serve as rooms in which the artists have to prepare for their performance. Lately, attention has been called to unsanitary dressing rooms, and typhoid, whether from this or other cause, has carried off its victims in the persons of such well-known actors as Stone and Ward. From how many minor ills our actresses and actors suffer, through ill conditioned dressing rooms, can easily be imagined when one tells how an actor relates that while on tour he had dressed standing on two bricks to keep out of stagnant water that floated about the dressing room floor. It should be remembered that too often dressing rooms are overcrowded, and that the heat from the glaring gas lights over each looking glass where the actor "makes up," renders the room unfit for occupation. The remedy is in the hands of the architect, and is complete ventilation; not only should as much window space as possible be provided, but also inlets and outlets for fresh air at the floor and ceiling levels. One cannot depend upon the occupants of the room to open the windows; there is always someone who mistakes fresh air for a draught, or one who much prefers the risk of a sore throat or a bad head from breathing impure air, to the admittance of the fresh air. The "dressers"

employed in theaters seem to share in the dislike of fresh air, and will not open windows, which they could do when performers are engaged upon the stage. From these reasons it can be easily understood that automatic ventilation must be provided. Every dressing room should have a separate washing basin for each performer, with water laid on waste pipe properly trapped; this would avoid the slopping about of water, and also encourage cleanliness among the poorer classes, who are engaged as supers and extras in such large numbers at many places of entertainment. Gas or electric light should be placed over each looking glass, otherwise the artists will provide candles for their own convenience, and add greatly to the risk of fire. It is the fault of the management if they do, for not giving sufficient light for the artists to "make up" by, and the stage manager would be the first to cry out if the performers appeared on the stage imperfectly made up for their parts. Dressing rooms might be with convenience placed to the right and left of the stage, on one side for men, and the other for women, each block separated horizontally and vertically from the stage and the rest of the building by brick walls and fire-resisting floors. There should be separate staircases, and direct exit into the street from each section; the construction throughout should be fire-resisting, no more wood being used than is actually necessary for the provision of dressers, drawers and hanging cupboards for the disposal of the costumes in constant use. For the stock of costumes a special wardrobe should be provided. There should be no fireplaces in dressing rooms, hot water or hot air should be used for heating purposes.

The stage.—It would be impossible in a short paper to describe the construction of the stage with its various traps, sliders, flies, wings, borders, rows, gridirons and machinery. The stage floor and sliders must of necessity be of wood, on which to set the scenes with ease; but much of the machinery might be well made in iron and answer the purpose much better than the present clumsy bridges and traps, in which no alteration or advance has been made for many a long day.

On a level with the stage there should be scene docks and property docks for the stowage of the scenes and properties in constant use; all other scenes and properties should be placed in the workshop section above described. The mezzanine and cellars below the stage should be used for the purpose of the machinery only, and on no account should rubbish and scenes be allowed to accumulate under the stage. Here, too often, the band room is situated, and other rooms run up by the stage carpenter after the building has left the hands of the architect; as a rule, the band have to pass through the mezzanine to enter the orchestra. There should be a separate passage to the orchestra so that the band need never approach the precincts of the stage or pass through the auditorium. Proper accommodation must be supplied for band, bandmaster, stage manager, firemen, property master and all other sections of the staff employed behind the scenes.

The gridiron above the stage must be made sufficiently strong to carry the weight of the cloths, etc. Cases have been known where it has given way under the weight of the scenery, and let everything down in dangerous confusion on to the stage. The construction of the gridiron, flies and fly rails should be of iron. Proper staircases should be provided to enable the flymen to escape in cases of danger, and direct exit into the street should not be forgotten for the stage men and any who may be employed on the stage.

The stage should be divided from the auditorium by a thick, solid brick proscenium wall, which wall should go between the orchestra and the mezzanine and be arched over the opening, passing through and for some height, not less than 3 feet 6 inches above the highest part of the roofs of stage and auditorium. There need only be one opening in this wall in addition to the large or proscenium opening, namely, one pass door from the stage to the front for the acting manager. This opening should be protected on both sides of the walls by fire-resisting, self-closing doors. The stage should undoubtedly be cut off from the auditorium by some sort of fire-resisting or smoke-proof curtain. The failure of some of the iron curtains used on the continent and in America has shown that they are not always to be relied on, and it is not so long ago that one stuck in a London house and the audience had to depart without seeing the play. Thin iron curtains are really useless to retard fire, although for a time they would keep back the smoke and allow the auditorium to be cleared. Asbestos curtains have been advocated and seem far more fire-resisting in character than the iron curtains generally adopted. A thick cloth or curtain of such material as used for firemen's uniforms is of far more service than is imagined, if it were formed to run in iron grooves fixed to the proscenium wall, to lift bodily up to the gridiron level, made bag-shaped of double thickness with a small space

between each cloth and kept just damp inside by a spray of water trickling down every time the curtain is lowered. A cheap form of smoke-proof curtain, as good, perhaps, as any iron one, could be fitted to many a theater that has now no division between the stage and auditorium. Water curtains have been proposed, but as these could not be periodically tested on account of the destruction of property that would ensue they cannot be recommended. Whatever is adopted must be in constant use, for anything designed to act only in case of need or in the outbreak of fire is liable to be found wanting at the very moment it is needed. The fire curtain must be used nightly and between every act, to insure its being in working order and to let the audience know that it exists, helping thereby to strengthen that confidence of safety which is the cure of all fear and panic; for an emergency curtain coming down unexpectedly would be but the signal for a stampede.

Everything in and about a theater, to be of any good, must be in constant use. Automatic water sprays and appliances that depend upon the solder melting when a certain heat is attained, and all such like arrangements, cannot be condemned too strongly; the system is altogether wrong; you depend upon the existence of the very danger you are trying to overcome, to set the remedy at work; on the other hand, should the required temperature be attained through the heat of the gas on the stage, the solder would melt and the stage be soured in a few minutes. Where automatic appliances are provided, people are apt to put such reliance in them that they ignore the ordinary precautions and become careless in their false security. From time to time the scenery should be coated with some of the various solutions recommended by our chemists; it is useless to do it once and then believe that the material coated or painted will never burn; wood-work, canvas and draperies require to be constantly treated with this coating.

Gas and lighting.—No precaution should be left untried to mitigate the dangers arising on the stage, for it is here we have to contend with the great risk. The use of the electric light has reduced the danger more than any other step that has yet been taken, but there are still hundreds of houses where an immense amount of gas is used nightly, too often in a careless manner, as the pipes are being constantly connected and disconnected during the performance; small escapes occur near naked lights which makes one wonder that accidents happen as seldom as they do. All gas lights must be protected by wire guards throughout the whole house, and an arrangement should also be used whereby the gas is automatically shut off when connections and disconnections are being made on the stage to the various battens, ground rows, etc. Where colored mediums are used, they should be of glass, not cotton material drawn tightly round the battens close to the gas, such as are often to be seen in ill-regulated theaters and halls.

The gas or electric light should be under the control of an expert with a sufficient staff of assistants. This man, during the whole time the house is open, should be stationed at the indicating plate fixed on one side of the stage near the curtain, on which plate every cock should be distinctly labeled, naming the section of the lighting system it governs, so that no error can possibly be made and the lights lowered or put out in the wrong part of the house. A mistake like this, slight in itself, might lead to dire consequences. It takes little to start a panic; once started it is hard to stop, and prevention is better than cure. Where gas is used, the lighting up should be left entirely to the gas man; the electric spark should be used and no matches or naked lights allowed. "The flash" system should be applied to all battens and hanging lights, avoiding the use of flaring spirits on cotton or wabbling cane among the inflammable sky borders.

Gas meters should be placed in a specially prepared and ventilated vault; the supply pipes should be of hard metal, left visible, and coated to prevent corrosion. There should be a stop cock on the main in the street near the stage door, at which entrance the key should be kept to cut off the gas from the house in case of fire. Separate meters should be fixed for each section of the house and the gas supply made distinct, and where frequented by the public, a dual system of supply should exist. In the parts of the house filled by the rougher classes, the lights should be incased, placed out of reach, or locked up; in all cases the tap should be *secret*; tampering with gas fittings is one of the most prolific sources of producing fire. There should be no jointed brackets or swinging pendants; every fitting should be fixed rigidly or protected by wire guards.

Sun burners are preferable to gaseliers, as they greatly assist the ventilation of the house by the up draught they create, carrying off the majority of the vitiated and heated air through the shaft provided

for that purpose. Sun burners should be periodically cleansed and accumulated carbon removed; this also applies to all other gas fittings; a foul gas burner may at any time drop a spark on inflammable materials in dressing rooms or elsewhere.

Although the electric light is so much better than gas for lighting public buildings, it is not without its attending dangers. Recently it was reported at the Royal Opera House, Madrid, that an unusual stir was noticed on the stage, and the stage manager requested the audience to disperse, as an accident had occurred in the electric lighting machinery which made it impossible to go on with the performance. Much excitement and alarm is said to have been created behind the scenes among the employés, for two of their number had been injured by the electric wires. The fireman, however, was able to restore order and avert a panic. Electric lighting has its perils, but safety depends, as with gas, on having everything in proper order. Danger from fire arises from overcharged wires, where the current is sufficiently powerful to burn through the insulating material and fuse the wires. It was not long ago that the papers announced "A Theater Panic Averted," and describe that at the "Comedie Française" smoke arose during the performance at the footlights through overheated electric wires. This might have caused a serious panic. The electric wires in a public building should be installed in such a manner that they may easily be attended to when required by the staff and yet be out of reach of the public.

It is advisable not to depend entirely upon the gas or the electric system of lighting. In case of fire, too often the gas has to be turned off before the audience have a chance of leaving the building, in order that the escaping gas may not feed the flames. Darkness adds to the fearful horrors of panic, and all chance of escape perishes. The electric light is sometimes apt to fail, perhaps only for a moment, from such accidents as an overheated bearing, a broken belt, or other unforeseen cause. Although it may leave the house in darkness but for a few minutes, panic will prevail. To avoid all this, oil lamps should be placed about the building in all sections, in "front" and "behind." These lamps should, like the notices on the walls, indicate the direction of the exits with white lettering on red glass ground. They should be fed with oil, not spirit, and be lit before the admittance of the audience.

Provision for plenty of window space should be made in all parts; this would enable the use of artificial light being discontinued during the day, avoiding one of the great risks in such buildings, as the careless handling of lamps, candles and matches. Many are in the habit after striking a match of throwing down the semi-burnt incandescent end. Firemen say that this is the origin of a large number of fires. Carelessness over small matters such as this, leads to much loss of life and property.

It is a great blunder to make a place of public resort dark. In a house flooded by day with as much light as our varying climate will allow, the women whose duty it is to clean the "front" of the house would not have the opportunities of scamping their work, as they now do. Darkness means the accumulation of dirt and rubbish in all odd corners, ready to flare up on coming in contact with the slightest spark. A theater or hall, for everybody's comfort and safety should be kept clean, but as long as it is a dark hole it will be dirty and dangerous. Dirt, rubbish and trade refuse should be taken right off the premises every day before the performance. The habit of smoking in a theater, especially behind the scenes, should never be permitted, for fear some thoughtless person should throw down the end of a lighted cigar or cigarette. Smoking should not be allowed in "front," except where the house is specially prepared for it by having no inflammable material about on the floors or seats, or elsewhere. Windows have a still greater advantage, as they afford means of escape by reaching the outer air onto balconies or ladders, and they, therefore, should never be barred up, but left free to open. Loss of life in fires has frequently occurred through inability on the part of the firemen to obtain access through barred windows.

Roof.—There should be access from any one part of the roof to any other, with escape ladders leading to the ground. This is of the greatest value to the firemen. The construction of the roofs throughout should be of iron imbedded in concrete, finished on outside with asphalt or other weather-resisting material. It has been found with wooden roofs over the stage, that the excessive heat and constant changes of temperature to which the roof is subject, desiccates the trusses and rafters, and converts them into something little better than touch wood. For this reason the gridiron floor should be of iron. Parapet walls should divide each "risk" in a similar manner to all party wall structures.

(To be continued.)

Architectural Designing on a Logical Basis.*

THE relation of architecture to the exact sciences is far from being clearly defined. Combining, as it necessarily does, the elements of a science with those of an art, it has been looked upon askance, on the one hand as indefinite in its methods, on the other as occasionally too mechanical in its results.

As far as construction is concerned, graphical statics and formulas supply all needs with sufficient exactness; for architectural construction seldom reaches the inspirational stage, and when such an event occurs the assistance of an engineer is usually solicited.

But construction is not, apart from its necessary adequacy, the most important part of architecture, which is to be regarded for its æsthetic qualities. The objection can justly be made, that it is assumed that the inspiration of genius and the vague, intangible, æsthetic sense disarm all criticism. Æsthetic, curiously enough, however, is defined as "pertaining to the science of beauty," and science means certain knowledge; therefore it would seem that the principal thing desired in architectural study should be the certain knowledge of beauty.

The completeness of this knowledge is frequently questioned, and it is presumed that there is no fixed standard and no fixed set of laws by which beauty can be determined or gauged; a freedom from bondage, an erratic liberty of expression, being its prerogative by a sort of divine right, and essential to many of its forms. Yet upon observation there seems to be a very close relation between beauty and utility, between the pleasing thing and the necessary thing, and whatever is given to one at the expense of the other appears to injure both.

It is a perfectly easy matter to attempt to beautify at the expense of constructive expression, and just along this line lie most of the errors of æsthetic taste; but it is a very difficult matter to construct well at the expense of artistic expression, since the influence of the force of gravity alone requires an organic method, and a set of forms, masses and lines, which will be found more pleasurable to the eye in proportion as they more nearly perform their exact duty.

Whether this is from hereditary perception of instability, or from the tendency of like to attract like—man, a highly developed organism, being appealed to most strongly by the organic quality in his environment—is a subject for mental philosophy; that the fact exists is undeniable.

It follows, then, that there are two methods of making a building ugly; first, by a lack of development of its organic qualities, that is, by crude and inefficient expression of its constructive requirements, and, secondly, by the addition of non-essential forms, so-called artistic accessories, contrary to those requirements.

Conversely, there are two methods of making a building beautiful; by the fullest and most subtle development of constructive requirements, and by the application of forms which accentuate the organic qualities of the work.

Taking this for granted—and, certainly, but slight objection can be made to the general statement—the basis of all design must necessarily be a thorough sense of constructive requirements in order to possess the knowledge of the proper points to accentuate; and this should be, not a perception of a number of petty details, of minor threatening weaknesses, but a pervading sense of the great law governing all building, the law of gravitation.

The first necessity, then, is stability; which means that all main lines, except those of metal, must be horizontal or perpendicular, and that the bottom must not be incapable of supporting the top. This latter necessity has a marked influence upon the disposition and the size of openings, and creates the general rule that voids are preferably placed over voids and solids over solids.

The position of the center of gravity, real or apparent, creates the desire for more solids in proportion to openings at the lower part of the building than at the upper, and the consequent increase in number of openings in the upper part; and the same desire makes the two sides of a building of the same general density, preventing the weighting of one side more than the other.

This wish for apparent balance is the reason for symmetry, which is, practically, corresponding density on either side of a central axis, and which occasions, to a great degree, the planning of buildings on axes, and the subsequent balancing of the masses of the façade. As far as construction is concerned, this need of lateral balance is imaginary; but it is the first and only important departure of the æsthetic requirement from the constructive one, and has as its basis the feeling that all masses are most stable when equally distributed upon a horizontal plane.

Theoretically this is true, so that the artistic sense, in this case at least, seems to require more rigid adherence to the theoretical law of solids than does the constructive necessity; a rather suggestive fact to those who claim that art is irrational in its methods.

The wall, and columns carrying a lintel or a wall, are the simplest of constructive units, and are the antecedents of all early architectural forms until the arch makes its appearance.

To the wall, as it is built in horizontal courses, is applied the horizontal scheme of lines; to the column and its associate, the pier, the perpendicular scheme. In each the æsthetic method accents the constructional precedent; in one, by the use of accented jointings and by molded string-courses, cornices, etc.; in the other, by flutings and panels.

The horizontal lines carried through a façade are influenced in their relation to one another in size and distance apart by two desires: first, to make the lower part of a building seem stronger

than the upper; secondly, to divide organic portions of the building one from another.

The first influence is felt in the grading of horizontal joints, so that the larger and wider stones are below, and the interval between the joints decreases toward the top, and, as in the use of more numerous openings as the wall ascends, there is produced a graded tone, a tone of comparative strength, expressed by a gradual shading toward the top of the building. The same result is obtained, frequently, by changing the texture of the stone, as, for instance, when rock or splitface is used in the first story, and ashlar above. The American custom of having the first story of buildings of a different and stronger material than is the rest of the façade is a logical result of the same reasoning.

The same diminution of tone appears in the scale of moldings as they ascend in position. There is, however, a prevalent idea, caused by the fusing of forms by distance, that all ornament near the eye should be smaller than that far from it; but while this may be perfectly true of the finish of detail, the breadth of treatment and interval of repeat and of decorative scheme should be greater at the base of a building than at its top.

The second desire affects the importance of the base, belt and cornice moldings.

It is usual, and has become an unchallenged custom, to consider a strong base and a strong cornice as essential features in an architectural design, and constructional derivations are constantly stated for both; but there seems to be little understanding of the æsthetic reason for the disposition and relative size of bands of moldings. This reason is, that each organic portion of a building should be defined at its boundaries, and these bands or belts are treated as so many borders confining parts of the building, and separating each part from its neighbor.

The scale of these borders depends upon the quantity of space confined within their parallel lines, and upon the importance of the change from one portion of the building to another; for instance, the base course and the cornice confine between them the entire mass of the façade, and are made, relatively, the strongest borders.

The lower belt courses are apt to confine higher masses of wall than the upper, and are consequently larger.

The entablature has its divisions of epistyle, frieze and cornice, defined by much smaller borders, as those divisions are secondary and of minor importance.

When portions of the same plane are divided to express organic parts, such as the different stories, etc., the belts have comparatively little width or projection; but when change of plane or change of form of the solid occurs, the moldings and decoration become at once more important and more insistent in emphasizing the change. For instance, the cap is inserted where the cylinder of the column changes to the plane surface of the epistyle, and the richness of bed-molding and soffit where the plane of the cornice breaks forward from the plane of the frieze. This is true of all changes from one geometric solid to another, whether in Classic, Gothic or Mohammedan architecture—the more fundamental the change, the firmer and richer become the division lines of molding defining the point of demarkation.

With the advent of the arch appears a new series of subjects for consideration, first of which is the fact that all arch lines must maintain their integrity throughout, and must be unworried by other lines impinging upon them. Secondly, the arch must be sufficiently weighted both at crown and at haunches, the æsthetic desire here, as is frequently found elsewhere, warning of constructive danger before it becomes actual.

The introduction of the curves of arches also brings up the question of the similarity of quality in detail on a façade; that is, that there should be an equality of strength expressed throughout, and not in one place a low flat arch with great thrust and little resistance, and in another a tall pointed arch with wedge-like obstinacy.

If such change of quantity of force were to be made, it should be disposed in such a way as to insure an equilibrium of forces; the whole façade should seem to be in equipoise, not with one portion weaker than another.

The same is to be said of the relative scale of detail, whether it is in openings, moldings or curving.

Wherever the planes of a solid change at a more obtuse angle than 135° , the change needs to be defined by moldings, etc.

Wherever geometric solids terminate in a point, it should be accented by some sort of finial; in fact, an exaggeration of visually uncertain constructive facts is one of the chief motives of architectural detail. This is demonstrated by the use of vaulting ribs, rosettes at intersections, triglyphs, gutters, crockets, finials, etc.

There is an axiom in attacking architectural design from a logical standpoint, that whatever quantity of material and consequent inertia is sacrificed, it is made up in vigor of constructive expression.

When the sturdy quality of the Doric is supplanted by the lighter and more graceful Ionic, the flutes of the column become deeper, the horizontal lines of the entablature draw closer together and become more frequent. When the vigorous columns of the Romanesque are multiplied, clustered, it is because the openings in the wall are becoming larger; and, at length, when the Gothic becomes an organism of masses in equilibrium, each pier, column, rib and arch has its purpose written upon it by insistent lines drawn in the direction of its resisting force.

But the inertia of horizontal masses is injured by being shot through with the nervous vigor of perpendicular supports, and the energy of ascending columns and piers is dulled by the heavy long lines of inert masses. Architecture is not a stuff with warp and woof; it needs a dominant motive, for otherwise the æsthetic sense suspects instability. To it exact equilibrium is uncertain equilibrium,

* "An attempt to reduce Architectural Designing to a Logical Basis." By C. Howard Walker, Instructor in Design in the Massachusetts Institute of Technology, in *Technology Quarterly* for May, 1890.

and it prefers the certainty of dominant horizontal or perpendicular lines to the plaid of conflicting forces. Above all, a building is an organism of which each part should perform its function, not only actually but manifestly, and architectural design should be devoted to denoting unmistakably how each function is performed.

Disguise is affectation. Frank exposition of construction is alone commendable, giving logical quality to design; and it is soon apparent that the æsthetic desire, once recognizing this fact, will suggest the most satisfactory construction, while at the same time it satisfies itself.

Three Notable Architectural Exhibitions.

THREE notable exhibitions of architectural drawings, water colors and photographs have been held this past season in Philadelphia, Boston and Cincinnati under the auspices of the architectural clubs of the respective cities. Much might properly be said in detail of the exhibitions; but a study of the illustrated catalogues suggests some comments of a general bearing. Of course it is in a sense true that these exhibitions perform for those who visit them, and these catalogues for those who study them, much the same function that is performed by the illustrations in the various architectural journals. But there is a wide difference on one very vital point. It is the sphere of the professional journal to give to its readers, not only the best buildings of this and other times and countries, but also to keep him informed on current work, whether by way of important buildings erected or of designs submitted in important competitions. Only one in touch with the conduct of a professional journal knows how much editing is involved in the rejection of unworthy designs offered for publication; yet it is still true that, for very evident reasons, the journals are not in position to apply to published work the same rigid standard of excellence that is applied to candidature for admission to an exhibition. Thus while it should be possible to trace in the files of the journals the substantial progress of architectural work, there will creep in some absurdities and incongruities illustrative of prevailing modes or passing fads. On the contrary and most happily, the catalogues of the respective exhibitions place within reach of all members of the architectural profession a selected and sifted body of work, measurably free from vicious faults, of work which has successfully passed the aggressive scrutiny of a non-commercial, disinterested committee chosen from the most intelligent practitioners to be found in the several localities. We find, in fact, what we should rightly anticipate, that the catalogues exhibit work of a far higher degree of excellence than the average of the journals. To those who wish to see what real progress is being made in the development of American types from local conditions at the hands of the best workers, we hardly know an equally good presentation wherein are set forth realized works and aspirations for buildings for many uses. A conscientious comparison of these catalogues with the average work executed and published cannot fail to be provocative of beneficial results. Why this conspicuously persistent omission of types so much in vogue? Why this choice of the types selected? Are there no fruitful lessons here for the student of American work?

Damages for Delay in Furnishing Materials.

A FREQUENT source of annoyance and consequent pecuniary damage, in the erection of buildings, is the failure of subcontractors to furnish materials when called for by the contractor. Of course there is a legal remedy for damages occasioned by such delays, but through the somewhat prevalent laxity in drafting contracts, the damages recoverable are not always adequate.

The fundamental element of a contract is mutuality, and not only must the minds of the parties be in unison as to what is to be done, but the damages recoverable must be such as the parties to the contract might in the exercise of ordinary judgment expect would result from a breach thereof. As an illustration, suppose a watch to be sold upon a guaranty that it is a correct time-keeper. Relying upon that representation the buyer times himself by it to meet a railroad train. As a result of defects in the watch, if he misses his train and thereby loses a business appointment which results in financial loss to him, although such loss, in a broad view of the case, may seem to have resulted directly from the breach of warranty of the watch, no one would for a moment contend that such loss could be recovered under that warranty. That conclusion is arrived at as a matter of common sense, but as a matter of law it arises under the rule that no damages can be recovered which are not, or should not have been within the contemplation of the parties when making the contract. And so with damages for delay in furnishing building materials. They often arise from sources which were not anticipated when the contract was made, and so, not being reasonably expected, nor expressly provided for, cannot be recovered. Take as an example a contract for sash and window frames contracted to be delivered at a certain place upon a specified date. The failure to deliver such materials frequently causes a material delay in the completion of a building. If the building under construction is for rent it not infrequently happens that as a direct result of such default there is a loss of rents which it would seem should be charged to the defaulting contractor. It would seem that any intelligent material-man would be legally presumed to know that such damages would be consequential to his default. But such is not the fact. In order to charge such damages upon the defaulting material-man it must be shown that the material-man not only knew that the building was being constructed for rent, but he must be further charged with actual knowledge of the fact that such building was rented for occupancy at the time specified and that his default would entail that loss upon him.

The inequitable application of this rule is felt when the contractor himself has engaged to complete the building, without reservation, by a certain time. Upon him the damages of this delay may be charged, as he is presumed to contract with reference to all the facts and circumstances which may arise out of his contract or the subject of it. The reason for this is that he knows, or should know, that failure to complete a building prevents the use of it, and the inability to use it causes some one a loss. On the other hand the contractor for materials to be used in the building, unless specially charged with special liability, contracts with reference to the fact that the materials he engages to furnish may be purchased on the market, and the only damage, if any, which is contemplated under a general contract with him is the difference between the price at which he agrees to furnish the materials and the price which the contractor is obliged to pay for them if compelled to buy them elsewhere. It not infrequently happens that this measure of damages is inadequate for the contractor, as there are times when the state of the market with reference to various materials is such that after default by the subcontractor he cannot secure them in time to complete his contract without incurring consequential damages which, under the rules of law, he cannot charge back upon the contractor whose breach has entailed loss upon him.

In view of these facts the prudent contractor will draw his contract with material-men so that those damages which are liable to fall upon him may be charged to their proper source and not rest on his innocent pockets. This may always be done by expressly providing that those special damages, specifying them, which might result from a fault in the contract shall fall upon the subcontractor to the extent which the contractor is called upon to pay. Without such special provision no special damages will fall beyond the general contractor.

Edinburgh Architectural Association.

THE annual general meeting of the Edinburgh Architectural Association was held May 29 in the Architectural Hall, 42 George street, Edinburgh, Scotland, Professor G. Baldwin Brown, president, in the chair. After the ballot for new members, and other preliminary business, Secretary T. Fairbairn read the report of the council on the past session, in which pleasure was expressed that they were now able to advance the higher aims of the association by publishing their "Transactions." It had long been regretted that the visits of the association to historical buildings remained unrecorded in a detailed permanent form, especially as many members had compiled, at great trouble to themselves, much valuable information, difficult to procure, and inaccessible to the great majority of the profession. It was hoped that in course of time the issues might become more numerous. Meanwhile, they were confined to historical papers, and to accounts of ancient building. During the session twenty-seven new members had been admitted, the number on the roll being now 273. The report further recorded the thanks of the association for various gifts they had received during the past session.

A. Dodds Fairbairn, C. A., next submitted the balance-sheet for the past session, which showed an excess of revenue over expenditure of £28 16s 6d, the balance in hand being now £192 6s 2d.

R. M. Cameron read his report on the library. Hippolyte J. Blanc submitted his reports of the Work-Class and Sketch-Book Committees, in the last of which an early issue of a new volume of the Sketch-Book was promised. All these reports were adopted by the meeting, and the prizes in the work-class were awarded.

The election of office bearers for the ensuing session was next proceeded with, the most important being:

President, John Kinross; past-president, Professor G. Baldwin Brown; vice-presidents, Archibald Macpherson and W. W. Robertson; honorary secretary, T. Fairbairn; honorary treasurer, J. Johnston, C. A.; honorary librarian, R. M. Cameron. Members of Council—J. Wallace, H. F. Kerr, D. W. Stevenson, R. S. A., J. McLachlan, D. MacGibbon and G. S. Aitken. The following are the Conveners of Committees, viz: Sketch-Book, Mr. Blanc; Publication, Mr. Aitken; Work-Class, John Watson; and Auditors, J. H. Tod, C. A., and M. A. Dodds Fairbairn, C. A.

The retiring president, Professor G. Baldwin Brown, then delivered his address, his subject being "The New Town of Edinburgh." Referring to the present position of the architectural profession in Scotland, he said questions of the organization of architects and of the architectural education of students were under discussion, and it was to be hoped that the outcome would be a closer union among members of the profession for the furtherance of common aims as well as improvements in the methods of art education. It would be premature to enter upon any detailed discussion of prospective arrangements, and accordingly a subject had been chosen for the address which had at once general historical importance, and also more immediate interest for members of the profession in Edinburgh. Mr. Brown then considered the "New Town of Edinburgh," both in itself as presenting standard examples of a particular style of architecture, and also in the relation to the general course of development through which cities had in all ages passed. After reviewing the characteristics of the old and new towns of Edinburgh in the light of historical parallels, the president said that the history of modern improvements in Edinburgh was not one which it was possible to look upon with unmixed satisfaction, for at almost every step there was evidence of narrowness of view or of interested motives influencing bodies or persons engaged in the common work. Parts had been shifted many times; sometimes the town council had been the attacking party, while at other times it had stood up to defend the city against individual lawlessness, or the aggressions of private or public corporations. For example, one of

the fears of land in Charlotte Square early in the century had tried to deviate from the plan given by Robert Adam, and was defeated in an action at law brought by the town council, while on the other hand this very body had in 1772 been sued by the fears of the new town to prevent their building on the land south of Princes street. The building of the houses at the corner of the North Bridge and Princes street, unsuccessfully resisted by Lord Cockburn and others, was another case in point, while at the present moment the town council was manfully resisting some schemes of a railway company which if carried on would inflict irreparable injury on certain parts of the city. In spite of these drawbacks, however, the new town of Edinburgh had got itself built, and had remained, considering all things, fairly well preserved. It was well, however, to remember that the negligence of a single generation of citizens might result in the injury or extinction of priceless architectural treasures, and the consequent degradation of the common civil life.

At the close of the paper some views were shown by the limelight, including photographs from old plans and drawings, facilities for the taking of which had been kindly granted by the city architect.

Legal Notes.

SUFFICIENCY OF PETITION FOR MECHANIC'S LIEN.

Under the California statute it is sufficient to maintain a mechanic's lien to show in the petition that the materials were furnished a contractor and his assignee without setting forth the several amounts furnished to each. *Harmon vs. San Francisco & S. K. R'y Co.*, Supreme Court of California, 23 Pac. Rep., 1024.

INJURY OF SERVANT FROM DEFECTIVE APPLIANCES.

Where a servant caused the injury of a fellow servant by means of defective appliances furnished for the common use of both, and the condition of which was known to the employer, the employer will be liable for the damage thus caused. *Burns vs. Ocean S. S. Co.*, Supreme Court of Georgia, 11 S. E. Rep., 493.

NOTICE UNDER MECHANIC'S LIEN LAW.

To entitle one to the benefit of the mechanic's lien law of Pennsylvania, he must give notice of his intention to file a lien under the provision of the law to the owner, or reputed owner, of the property, or his agent, at the time of furnishing the materials or performing the work. *Appeal of Stoner*, Supreme Court of Pennsylvania, 19 At. Rep., 949.

MECHANIC'S LIEN NOT DEFEATED BY AGREEMENT AS TO PAYMENT.

In a suit to foreclose a mechanic's lien the defendant claimed that the contractor was to receive certain town lots in payment. The evidence failed to show that the material-man who is seeking to foreclose the lien ever agreed to accept anything but cash for his materials, and he is therefore entitled to his lien. *Morris vs. Willetts*, Supreme Court of Nebraska, 45 N. W. Rep., 784.

FORECLOSURE OF MECHANIC'S LIEN.

While the Georgia statute requires the claimant to show compliance with his contract in order to enforce his lien, such compliance need not appear of record in the lien as filed. There is no statutory intimation that material-men are not to have a lien as well when they take personal security as when they do not. *Ford vs. Wilson*, Supreme Court of Georgia, 11 S. E. Rep., 559.

FAILURE TO DELIVER MATERIALS CONTRACTED FOR.

Failure to deliver materials for the completion of a building within a reasonable time, no time being specified for their delivery, entitled the owner of the building to recover damages to the extent of a reasonable rental value of the building during the time its completion was delayed by such failure to deliver goods. *Scribner vs. Jacobs*, Supreme Court of New York, 9 N. Y. Supp., 856.

AFFIDAVIT IN CASE OF MECHANIC'S LIEN.

An affidavit under the mechanic's lien law of Florida that describes the property upon which the lien is claimed, as a steam sawmill located at a town or place called "Emerson," on the S. F. & W. R. R., fourteen miles south of Live Oak, Suwannee county, Florida, is sufficient, no lien being claimed on the land. *Emerson vs. Gainey*, Supreme Court of Florida, 7 S. Rep., 526.

SUFFICIENCY OF AFFIDAVIT FOR MECHANIC'S LIEN.

It is sufficient in an affidavit for a mechanic's lien if there appear enough in the description to enable a party familiar with the locality to identify the premises intended to be described with reasonable certainty, to the exclusion of others. *Northwestern Cement & Concrete Pavement Company vs. Norwegian Danish Evangelical Lutheran Augsburg Seminary*, Supreme Court of Minnesota, 45 N. W. Rep., 868.

HUSBAND AS AGENT OF WIFE.

Certain plumbing having been contracted for by a husband for his wife's house, and it being disputed that he acted by his wife's authority, it is competent to show that she talked with the man doing the work and expressed approval of the same, the Minnesota statute making her knowledge and consent evidence of his authority. *McCarthy vs. Caldwell*, Supreme Court of Minnesota, 45 N. W. Rep., 723.

KNOWLEDGE OF OWNER REQUIRED TO SUSTAIN MECHANIC'S LIEN.

Where a person other than the owner of land purchases material or employs labor in the erection of a building on such land, it is necessary that the notice for the lien should show, not merely that such other person is the owner of the land, but it must appear that such building or improvement was placed on such land with the knowledge of the actual owner. *Allen vs. Rowe*, Supreme Court of Oregon, 23 Pac. Rep., 901.

DAMAGES FOR BREACH OF PERSONAL SERVICES CONTRACT.

Where a person enters into a definite contract to render to another, and to no one else, personal services of such a nature that their loss to the employer and acquisition by another would cause injury not to be compensated for in damages, a breach of the contract in leaving the employer and contracting with a rival may be restrained by injunction. *Metropolitan Exhibition Company vs. Ward*, Supreme Court of New York, 9 N. Y. Supp., 779.

LIMITING LIABILITY OF CARRIER.

A railroad company cannot by a limitation in its bill of lading escape the common law liability of a carrier for damages resulting from its negligence, and if such a clause is inserted in the bill of lading and accepted by the shipper it will not be sustained unless it clearly appears that such limitation was accepted upon an express and valuable consideration. *Chicago & N. W. R'y Co. vs. Chapman*, 24 N. E. Rep., 417. Supreme Court of Illinois.

SUB-CONTRACTOR'S LIENS.

Under laws N. Y. 1885, c. 342, Sec. 1, providing that the owner shall not be liable to pay, by reason of liens filed, "a greater sum than the price stipulated and agreed upon to be paid in such contract and remaining unpaid at the time of filing such lien, or, in case there is no contract, than the amount of the value of such labor and material then remaining unpaid," the premises are not liable to liens filed after work has been abandoned by a contractor who has received in full installments due according to the contract, whether or not the cost of completing the work would be less than the balance of the contract price, there being no provision for the completion of the work by the owner, nor any understanding that he should proceed with it. *Larkin vs. McMullin*, Court of Appeals of New York, 24 N. E. Rep., 447.

CONSTRUCTION OF PENALTY CLAUSE IN BUILDING CONTRACT.

The rule is that if damages result from the performance or omission of acts which are certain or can be determined by evidence, the sum which is stipulated in a contract to be paid in the event of the failure to perform such acts will be considered as a penalty and will not be enforced, but where such acts or omissions occasioning damage, produce a result which cannot be measured by a pecuniary standard, such stipulated sum will be considered in the law of liquidated damages and will be enforced. The provision in a building contract that the contractor shall pay the stipulated sum per day after a certain date if he fails to complete the building at the time designated, is in the nature of a penalty and not liquidated damages. *Brennan vs. Clark*, Supreme Court of Nebraska, 45 N. W. Rep., 472.

Association Notes.

AMERICAN INSTITUTE OF ARCHITECTS.

The third meeting of the Executive Committee will be held at New York, August 18, at which matters will be transacted toward preparing for the annual convention. There have been a number of new members accepted by ballot during the year. The following circular was issued with the last ballot:

OFFICE OF THE SECRETARY,
THE ROOKERY, CHICAGO, July 22, 1890.

DEAR SIR,—Please return the inclosed ballot at your earliest convenience, so that it may be opened at the next meeting of the Executive Committee, which will be held in about two weeks.

The Executive Committee desires to inform all Fellows of the Institute that as (by the Constitution and By-Laws) all officers hold over till January 1, the fiscal year of the Institute will begin and end with this date. The payment of dues to the treasurer will be made accordingly.

The Executive Committee desires to call the attention of each Fellow of the Institute to the great importance of this year and of the coming convention upon the Institute's welfare.

Several Chapters of the Institute and local associations of the Western Association have failed to report to the secretary as to their reorganization under the Constitution and By-Laws. Such reorganization should at once take place, and full report made to the secretary. Another subject of greater importance is the reports from each Chapter to the next convention, which should be of the fullest description and should be in the hands of the secretary at least a week before the convention. Such reports are essential to the maintenance and growth of interest in the Institute.

It was to the secretary, as to other Fellows, a source of great regret that Chapter and Association reports did not appear with the published reports of the last convention.

Although acted upon by the Institute (pages 72 and 73 Proceedings), the original reports themselves did not reach the secretary's hands, and he has been unable to obtain them.

By an oversight the name of Professor Osborne, of Cornell University, Ithaca, New York, was not placed upon list of Committee on Education. Professor Osborne is a member of this committee and should have been so published.

JOHN W. ROOT, Secretary A. I. A.

Our Illustrations.

Design for a hotel. Julius A. Schweinfurth, architect, Boston.
Residence for Mr. George A. Fowler, Kansas City, Mo. A. Van Brunt, architect.

Houses on Landon Court for Thomas Swobe, Esq., Omaha, Neb. Walker & Best, architects, Boston and Omaha.

Sketch "At Chinon, France," by John F. Jackson, Buffalo, N. Y.
Residences for Professor E. O. Excell, Chicago. Osborne J. Pierce, architect.

Fort Street Union Depot, Detroit, Mich. James Stewart & Co., architects, St. Louis, Mo. Material is to be red brick and stone. The building will be 138 feet on Third street and 125 on Fort. It will be built slow burning construction (iron columns and girders) with heavy wooden beams, about 6 feet centers, upon which will be laid a heavy shiplapped planking, and upon this the finished floor. The waiting rooms, restaurant and vestibule will have a white marble floor and the waiting room will be wainscoted with white marble to a

height of 8 feet. The waiting room will be 30 feet in height, and over the smaller rooms, ticket office, etc., a mezzanine story will be placed, giving space for offices and a railroad men's clubrooms. The upper portion of building will be used for offices. The emigrants' waiting room is in the basement as are also the engine and boiler rooms. The work of tearing down the old buildings upon the lot is now in progress, and work upon the foundations will be commenced as soon as the ground is cleared.

The roads interested in the depot are the Wabash, Flint & Pere Marquette, Canadian Pacific, and Detroit, Lansing & Northern.

PHOTOGRAPHURE PLATES.

(Issued only to subscribers for the Photographure edition.)

The Chittenden Library of Yale University, New Haven, Conn.; J. C. Cady & Co., architects, New York.

The Cloister, New Haven, Conn.; H. Edwards Ficken, architect, New York.

Residence of William Erastus Collins, Hartford, Conn.; William R. Emerson, architect, Boston.

Hotel Ontario, Salt Lake City, Utah; Adler & Sullivan, architects, Chicago.

Residence of Dr. S. E. Solly, Colorado Springs; Varian & Sterner, architects, Denver, Col.

"The Temple," now erecting on Monroe and La Salle streets, Chicago, under the auspices of the Woman's Christian Temperance Union; Burnham & Root, architects. The front of the building will be 192 feet in length on La Salle street and fourteen stories high. There will be four circular turrets 20 feet in diameter, extending up ten stories and then surmounted by a high-pitched roof for two stories. The building will be of steel construction and absolutely fireproof. The exterior will be of a pinkish brown granite for two stories, with cinnamon colored brick set in brown mortar above. A feature is a court differing in plan from any other in the city. It is 30 feet deep by 69 feet wide, extending from the top of the first story to the top of the building. There is also a court on the south and an alley 30 feet wide. No offices, except four on each floor, are lighted from the court. The interior will be handsomely finished in marble and mosaic. The main entrance on La Salle street will be the widest in the city and leads to a rotunda in which there will be eight elevators, forming an ellipse. To the top of the skylight over this entrance will be a height of 196 feet from the pavement. The building will be occupied by a bank, offices and society rooms. The old foundations, which were put in at a cost of about \$50,000 for Marshall Field, will be torn out, being useless for the present style of architecture. The Temple will cost \$1,000,000 or more. The contract for the whole work has been taken by the George A. Fuller Company.

Building for the Kelsey Oriental Bath Company, Philadelphia, Pa; Wilson Eyre, Jr., architect.

Personal.

ARCHITECTS DAVES & HALBERT, of Schenectady, New York, have opened an office in that city and would be pleased to receive catalogues and office samples from manufacturers of building materials.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, ILL., August 10, 1890.

A favorable condition of things exists in financial, manufacturing, commercial and building trade circles. There has been no slowing up in new work and new enterprises, and no occasion for any restriction of enterprise. Margins, though not at all gratifying, are sufficient to attract fully as much capital as can safely enter into activity. Manufacturers throughout the country are running full time, or overtime. Commercial men all speak with confidence of the results of the first half-year's dealing, and of the prospects for the last half of 1890. Railroad builders have been pushing work moderately, but scores of schemes are being carefully nursed for future attention. Building activity has been general in all sections, and when the figures of 1890 are added up it will be found that this has been an exceptional year. The most encouraging and satisfactory work in the building line has been done in the smaller cities and towns throughout the country. The manufacturers of building material are crowded with contracts for material to be furnished during the next five months. The lumber manufacturers and dealers are doing a heavy business. Competition is keen, but failures are few. The iron makers have had seven good months and expect five better ones. Their mills and furnaces have been kept busy, and according to the very recently published figures in the trade there is not a three weeks' supply of crude iron in the country. Great engineering enterprises are springing up and capital is not lagging far behind them.

Business is being done upon a legitimate and safe basis, and opportunities for new enterprises are multiplying. Great work is being done in the far West and in the South, and enterprise in the East is showing itself capable of greater work than it has yet accomplished. The currency has been increased to the extent of \$70,000,000 during the past year, and it is figured out that the increase during the next twelve months will run from \$100,000,000 to \$120,000,000. There is an intimate relationship between an abundant supply of money and prosperity, and there certainly should be no reason for complaint during the next twelve months as to stringency. The money lenders are always prepared to take advantage of the necessities of borrowers, but while the government pursues its bond-buying policy in a liberal way, the possibility of Wall street cornering the country is remote. The prospects for the fall are very favorable indeed. Loud complaints come from the farming communities, as to high prices for what they buy and low prices for what they have to sell; and one of the outcomes of this condition of things is the growth of organization among the farming interests for the amelioration of their condition. The industries generally are thriving and capital is edging its way into every one of them.

Synopsis of Building News.

Anniston, Ala.—Architects Chisom & Green: For Messrs. Smith Bros., of Sylacauga, Ala., two-story brick building, gravel roof, size 100 by 100 feet; cost \$10,000. For A. B. Lovejoy, a two-story brick residence, 50 by 100 feet; cost \$5,000. For the Sylacauga bank, a two-story brick building, slate roof, size 23 by 79 feet; cost \$5,000. For L. Lamar, at Selma, Ala., a two-story frame residence; cost \$10,000. For the Piedmont Bank Company, a two-story bank, brick, tin roof, size 25 by 100 feet; cost \$6,000.

Chicago, Ill.—Architect F. R. Schock reports a two-story residence on Forrestville avenue, near Forty-eighth street, for O. F. Lindman. It will have a stone front, hot water heating, stained, plate and beveled glass, etc., and cost \$12,000. For J. J. Lindman, on Kimbark avenue, near Forty-eighth street, a two-story basement and attic residence, stone front, hot water heating, etc.; to cost \$7,000. For A. Quinn, a two-story basement and attic residence, at Austin, frame, stone basement, hot water heating, bathrooms, closets, mantels, etc.; to cost \$7,500. For J. J. McAuley, a two-story frame dwelling at Austin, frame, stone basement, furnace, bathroom, etc.; cost \$4,000. For M. Robertson, at Austin, a two-story frame dwelling, with stone basement, furnace, etc.; to cost \$3,200.

Architects Snyder & Nothnagel: For M. A. Richardson Company, a five-story warehouse, to be built corner of Washington and Curtis streets, pressed brick and stone front; steam heat, elevator, etc.; cost \$40,000; making plans. The same architects are letting contracts for a six-story apartment building to be built on Michigan avenue, near Thirtieth street, for W. L. Blood; the first story and basement will be of buff Bedford stone, with ornamental pressed brick above, copper bays and cornices; will put in steam heat, elevator, electric light, etc.; the cost will be \$160,000.

Architect R. T. Newberry: For Gen. Walter C. Newberry, a four-story and basement malt house, to cost \$40,000; making plans. Also taking bids for a five-story warehouse to be built at 141 to 143 Ontario street for the same owner; the front to be of Tiffany pressed brick and terra-cotta; cost about \$20,000.

Architect C. E. Quiner: For Brown & Lindquist, two three-story and basement flat buildings on southwest corner of Ellis avenue and Forty-fourth place; buff Bedford stone fronts, with galvanized iron bays, bathrooms, closets, mantels, laundry driers and fuel gas arrangements; cost \$22,000.

Architect F. B. Townsend: For F. B. Ogden, a two-story residence on Nicollet avenue, to have stone front, stained, beveled and plate glass, furnace and modern improvements; cost \$5,000. For Mrs. Statman a two-story frame dwelling at Argyle Park; stone basement, furnace, etc.; to cost \$4,500.

Architect J. E. O. Pridmore: For William Jones, a three-story store and flat building on Forty-third street; Bedford stone first story and Tiffany pressed brick with copper bays above; cost \$25,000. For Oliver Nelson a three-story residence on Prairie Avenue near Thirty-sixth street. To have a front of Duntath Variegated stone, and cost \$10,000. For Hamilton Robinson, working on plans for an Indian bungalow residence to be erected at Glencoe.

Architects Griesser & Maritzen: Preparing plans for the Illinois Brewing Company's plant. Main building seven stories, 245 by 105 feet in size; to be of steel construction and fireproof; have grain elevator, ice machine, etc.; the cost will be about \$300,000. The same architects are making plans for an entirely new plant for Lebanon, Kentucky. To be of fireproof construction and have a capacity of fifty thousand barrels; cost \$150,000. They are also getting out plans for a brewery plant, malt house, etc., of fifty thousand barrels capacity; to cost \$150,000; to be erected at Evansville, Ind. For the Texas Brewing Company: they are working on plans for a very fine brewery plant to be erected at Fort Worth. The main building will be six stories, with a frontage of 200 feet by 100 feet deep and 120 high. It will be designed like a fort and will have a handsome front with a tower 150 feet high. The construction will be of steel and strictly fireproof; the cost will be \$250,000. They are also planning an eighty thousand bushel elevator for the Schoenhoffen Brewing Company. For the Bartholomae-Roesing Company, a four-story warehouse, size 100 by 60 feet; to be of steel construction and have Indiana pressed brick and stone front, with handsome tower on the corner; the cost will be \$70,000.

Architect Julius H. Huber: For August Gross, making plans for a three-story store and flat building, to be built on Wells street near North avenue, of St. Louis pressed brick and Bedford stone. For F. H. Remier, a four-story flat building corner of Pearson and Rush streets, of Bedford stone, to have steam heat, gas stoves, ranges and fireplaces, bathrooms, closets, tile mantels, etc.; cost \$25,000. Also preparing plans for a four-story store and flat building to be built on Wentworth avenue, near Thirty-first street, to have a front of St. Louis pressed brick and Bedford stone; cost \$15,000.

Architect C. S. Corwin: For J. F. Stephens, letting contracts on a four-story store and flat building, to be erected at 415 West Madison street, to have a Tiffany pressed brick front with terra-cotta and copper bay and trimmings; cost \$15,000. Architect Theodor Lewandowski: For the Charles T. Ogren Brewing Company, making plans for a five-story brewery to be erected on Shober street near Division; to be of Indiana pressed brick and Lemont stone, and cost \$40,000. For Ignatz Kushinski, a three-story flat building at 137 Augusta street, of Tiffany pressed brick and Connecticut brownstone, to cost \$7,500. For John P. Brod, a three-story flat building at 128 Fry street; St. Louis pressed brick and stone. For H. R. Wazko, a four-story flat building corner of Dickson and Blanche streets; St. Louis pressed brick and Prentiss brownstone; cost \$12,000. For Herman Peters, a two-story dwelling at 91 Keenon street, of St. Louis pressed brick and Euclid stone. For St. Bonifacius Parish, corner of Noble and Cornell streets, a church basement, 44 by 125 feet, of Indiana pressed brick and stone.

Architect G. Isaacson is letting contracts for St. Paul's Norwegian Evangelical church, to be erected on North avenue, between Leavitt and Shober streets; it will be built of St. Louis pressed brick and Bedford stone; have steam heat, pews, etc., and cost \$25,000. Architects Patton & Fisher: For W. A. Dunshee, preparing plans for a six-story apartment building, to be erected on Oakwood boulevard, east of Vincennes avenue, to be of granite first story and pressed brick and terra-cotta above; steam heat, elevators, marble wainscoting, etc.; cost \$60,000. They are also preparing plans for the college chapel to be erected at Beloit, Wisconsin, to be constructed of granite with sandstone trimmings; have hardwood interior, stained glass, etc.; cost \$30,000.

Architects Ostling Brothers: For R. S. Elder, preparing plans for a two-story apartment building to be erected on Oakdale avenue near Evanston avenue; Rockfaced stone front, stained, plate and beveled glass, steam heat, hardwood finish, tiled floors, etc.; cost \$30,000. Architect H. T. Kley is preparing plans for a fine two-story residence, to have stone front, hot water heating, stained, plate and beveled glass, slate roof, etc., and cost \$20,000.

Architects Thiel & Lang: For Schlitt Brewing Company, planning a four-story store to be erected corner of Rockwell street and North avenue; St. Louis pressed brick and stone; cost \$10,000. Architect Gregory Vigeant is getting out plans for a two-story residence to be erected on Hawthorn place near the Lake Shore Drive; to be of stone all round, have hot water heating, and cost \$20,000.

Architects Lutken & Thisslew are making plans for three residences, to be erected on Ewing place near Wicker park; two will have Portage stone fronts and one will be buff Bedford; will put in steam heat and all the improvements; cost about \$25,000.

Architect E. H. Turnock: For Miss Mary Hartney, Fortieth and State streets, stores and flats, 50 by 94 feet, three stories, pressed brick, stone trimming and sheet metal bays, German pine finish; cost \$10,000. For Mr. Chas. Jung, Evanston, Illinois, residence, two-story and stone basement; hardwood interior, hot water heating; cost \$6,000. Also residence for M. L. Raftree, West Hinsdale, two-story and stone basement; furnace heat; cost \$3,500. Also flats for Mr. Reynolds, Fiftieth street and Wabash, two-story and basement; Bedford stone front, German pine finish; cost \$4,500. Frame church at Irving Park, to seat 500, class rooms, library, pastor's study, furnace heat; cost \$5,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall.

The carpenters' strike, which was on when my last letter was written, has gone down into history. By August 1 the firms will all be working nine hours per day with ten hours' pay. We are all familiar with the fable of the grasshopper which danced all summer, thinking about nothing except the pleasures of the present. When winter came it realized too late how foolish it had been, and at last from starvation it dies, and departs for that bourn from which no grasshopper ever returns, and the rasping of its wings is heard no more (for a season). I sincerely trust that there will be no suffering among the carpenters, but how will the loss of nearly \$78,000 be met? I admire a fight for principle, but common sense is a first-class commodity to own and keep on hand. While the carpenters effected a compromise, yet I think that the same end could have been attained with far less loss. The strike presents lessons that are well to learn, namely, first, capital is bound to respect labor's rights; second, labor should be careful to guard their rights, and use judgment and justice in their assertion; third, that *right* makes might, and *not* the boycott, or stubbornness.

Messrs. Samuel Hannaford & Sons have moved into new quarters in the Hulbert Building, Sixth and Vine. They have taken the entire upper floor, 58 by 90 feet, and have light on each side. It is an immense improvement over their old office, and with increased conveniences, increased business is sure to follow. Architectural circles were grieved last month (July) over the death of one of their oldest and most respected professional brothers, Mr. A. C. Nash. Quiet modesty was a most prominent trait in Mr. Nash's character, and drew to him many friends. His ability as an architect could not be questioned, and Cincinnati, as well as other cities, contains many buildings which will stand as monuments of his genius. *Requiescat in pace*, and with love may we add "*memoria in eterna*."

Architect Edwin Anderson reports the following: For J. B. Coats, Bloomington, Illinois, a carriage factory; materials, brick, steam elevator, tin roof, etc.; size 100 by 125. For D. G. Andre, Esq., Connersville, Indiana, a society hall, an addition to Andre's Opera House; write to architect. For G. M. Roe, Esq., a frame residence with pine finish, slate roof, blinds, mantels, etc.

Architect S. S. Godley reports as follows: For Charles Fleischman, Esq., Plum & Perry (office), Cincinnati, a brick residence remodeled; materials: brick, furnaces, stained glass, mantels, slate roof, hardwood, blinds, etc.; cost \$8,000. Also for the same party, a brick and frame stable; to cost \$6,500. For Cincinnati Omnibus Co., a brick stable, 100 by 100, two stories high. Complete stable fittings; cost \$10,000. For J. S. Moffatt, Troy, Tenn., a store; materials: stock brick, tin roof, counters, office fittings; cost \$6,000. Rebuilding a part of the tannery belonging to Cincinnati Oak Leather Co. The buildings will be of brick, with framed shed, 50 by 50 and 100 by 100 respectively. Machinery will be needed; cost \$10,000. Additions to the brick schoolhouse at the town of Cleves, Ohio. Blackboards and desks will be needed; cost \$5,000.

Architect J. W. McLaughlin reports: For Mr. John Rettig, a residence. Materials: brick, tiling, furnaces, hardwood finish, stained glass, gas, etc.; cost \$6,000.

Architect W. W. Franklin reports: For Thos. M. Worcester, care of Bromwell Manufacturing Co., City, a residence. Materials: brick, furnaces, slate, stained glass, pine finish, mantels, inside blinds, etc.; cost \$8,000.

Wm. Martin Aiken reports: For Miami University, Oxford, Ohio, a laboratory. Materials: brick, stone trimmings, steam heat, plate and stained glass, hardwood finish, etc.; cost \$12,000.

Architect A. O. Elzner reports: For Chas. H. Kellogg, Jr. (Third Nat. Bank), a residence. Materials: pressed brick, furnaces, plate and stained glass, hardwood finish, blinds, etc.; cost \$16,000. For Stern, Mayer & Co., Cincinnati, rebuilding store. Materials: stone, steam heat, elevators, tin roof, hardwood finish, vaults, etc.; cost \$30,000. For Rheinstrom Bros., City, a warehouse and distillery. Materials: brick, iron, steam heat, elevators, plumbing, composition roof, etc.; cost \$60,000. For Mr. Leopold Feiss, Esq., Cincinnati, a residence. Materials: pressed brick, furnaces, hardwood, dumb-waiters, electric bells, slate roof, etc.; cost \$14,000.

Architects Crapsey & Brown report as follows: For the M. E. Church at Morristown, Tenn., a dormitory and school; to cost \$25,000. For the Wesleyan College, Delaware, Ohio, another college building; cost \$15,000. For the Fostoria (Ohio) Presbyterian Church, a stone edifice with slate and tile roof; cost \$25,000. For the United Presbyterian Church, at Kenton, Ohio, a brick and stone edifice with slate roof; cost \$9,000.

Architect Henry E. Siter reports: For Jos. Block, Esq., a residence. Materials: brick, slate roof, hardwood finish, plumbing, mantels, stained glass, etc.; cost \$10,000. Mr. Siter is also completing the plans and superintending the addition to the St. Nicholas Hotel.

Cleveland, Ohio.—Architect B. F. VanDevelde: For Max Cohen, a three-story store and apartment building, brick; size 46 by 76 feet; cost \$9,000. For Bishop Rich Gilmore, two-story dwelling; size 28 by 62 feet; cost \$8,000.

Architect G. H. Hammond: For the Bethel Union, a two-story brick addition; cost \$5,100.

Architect J. T. Watterson: For the Otis Iron and Steel Co., a one-story brick addition; size 100 by 83 feet; cost \$4,000. For the Paige Car Wheel Co., a one-story brick and stone works; size 53 by 143 feet; cost \$5,000.

Architect A. M. Smith: For O. D. Meyer, a two-story dwelling, brick and stone; size 37 by 70 feet; cost \$15,000. For Dr. D. H. Berkwith, a two-story frame dwelling; size 39 by 54 feet; cost \$6,000.

Architects Cudell & Richardson: For the Little Sisters of the Poor, a four-story home, brick and stone; cost \$35,000.

Architect C. F. Schweinfurth: For the University Training School, a three-story school, brick and stone; size 50 by 56 feet; cost \$40,000.

Architect S. R. Badgley: For the Presbyterian Church, a one-story brick and stone church; size 24 by 70 feet; cost \$6,000.

Architect A. Mitermiller: For the Hungarian Hall Co., a two-story hall and stores, brick and stone; size 50 by 120 feet; cost \$15,500.

Architects Coburn & Barnum: For John D. Rockefeller, two two-story frame dwellings; size 42 by 81 feet each; cost \$22,000.

Architects names not reported: For Frederick Hoffner, a three-story store and dwelling, brick and stone; size 22 by 67 feet; cost \$5,000. For L. M. Southern, a two-story frame dwelling, size 27 by 44 feet; cost \$4,800. For Everhart Manufacturing Co., a two-story shop, brick and stone; size 48 by 88 feet; cost \$5,000. For the Cleveland Rolling Mill Co., a one-story machine and boiler shop, brick and stone; size 48 by 98 feet; cost \$5,000. For the Walker Manufacturing Co., brick and stone shops, cost \$90,000.

110	Permits issued during July, 1890.	Alterations.....	\$ 83,663
261	" " " " " "	Wooden.....	263,516
19	" " " " " "	Brick and stone.....	226,900
390	" " " " " "	Total.....	\$ 574,109

It is rather dull about the architects' offices as to new work; but there is great activity outside and mills and crafts are pushed.

Council Bluffs, Iowa.—Architects F. M. Ellis & Co. have prepared plans for a Methodist church; brick and granite, slate roof; cost \$50,000.

Dayton, Ohio.—Architects Williams & Otter have plans for a new school-house, to be erected at Gettysburg, Ohio.

Denver, Colo.—The trustees of the Christian Church have let contract for foundations of their new church, to cost, completed, \$50,000.

Architect Roeschlaub: For W. B. Palmer, a brick residence, with stone trimmings; interior to be finished in hardwood; cost \$14,460; contractors, John Monat Lumber Company.

Architects Varian & Sterner: For the Union Depot, a \$30,000 addition to depot. For Dr. A. K. Morris, a stone and brick business block, to cost \$20,000.

Detroit, Mich.—Architects Malcomson & Higginbotham: For the Central Church of Christ, a one-story brick and stone church, with slate roof, size 50 by 125 feet; cost \$25,000. For the Hotel Benedict, a six-story addition, brick, size 60 by 80 feet; cost \$25,000.

Architects Donaldson & Meier: For the Brush estate, a three-story brick store, tin roof, size 23 by 110 feet; cost \$18,000.

Architects M. L. Smith & Sons: For J. L. Hudson, a six-story brick store, tin roof, size 211 by 100 feet; cost \$200,000.

Architect A. Bloquelle: For S. Strelenger, a three-story brick brewery, size 44 by 55 feet; cost \$5,500. For Thos. Schick, a two-story brick dwelling, slate roof, size 32 by 63 feet; cost \$7,000.

Architects A. C. Varney & Co.: For Parke, Davis & Co., a three-story brick laboratory, tin roof, size 200 by 275 feet; cost \$55,000. For Mr. Sullivan, three two-story brick store and dwellings, size 50 by 76 feet; cost \$14,000. For Mrs. Lewis, a two-story double brick dwelling, slate roof, size 40 by 62 feet; cost \$7,000. For Mr. Evans, a two-story brick dwelling, slate roof, size 36 by 63 feet; cost \$7,400. Work is very dull here just at present, not having yet recovered from the set back caused by the strikes, although there is a great deal in prospect which will probably be commenced in the fall.

Findlay, Ohio.—The Coroy Brewing Company will erect an addition, to cost \$100,000.

Architect George Horn: For James Stackhouse, a four-story hotel, brick, size 60 by 200 feet; cost \$20,000.

Kansas City, Mo.—Architect H. Kemp has prepared plans for hotel and business block for Col. G. W. Warden. The building will be of brick, tin roof, and all modern improvements.

Kearney, Neb.—Architect J. Hodgson, Jr., of Omaha, Nebraska, has prepared plans for a hotel building to be erected by the Midland Hotel Company at a cost of \$100,000.

Minneapolis, Minn.—Building permits issued during July: George A. Cummings, three dwellings, \$6,000; Sarah K. Carr, double dwelling, \$5,000; Lowry Hill Chapel, church, \$14,000; Chicago, St. Paul, Minneapolis & Omaha Railway, round house, \$18,000; George Huhn, repairs, \$5,000; K. B. Finley, dwelling, \$5,000; Minneapolis Distilling Company, extra story to warehouse, \$10,000; Young Men's Christian Association, building, \$137,000; O. T. Brown, two dwellings, \$8,000; C. A. Whitney, dwelling, \$8,000; Minneapolis Industrial Exposition, alterations on building, \$10,000; J. T. Thurman, dwelling, \$7,500; Andrew McIsic, four dwellings, \$8,000; H. N. Avery, four dwellings, \$8,000; Jacob Stoft, brick store and dwelling, \$5,000; M. Hanson, dwelling, \$4,500; George M. McGregor, five dwellings, \$17,500; G. B. Coffin, three dwellings, \$7,500; Holy Trinity Church, addition, \$7,000; Elizabeth C. Dowdell, brick store and flats, \$20,000.

Omaha, Neb.—Work on the Streetsville school building will be commenced soon, and the building will be ready for occupancy by December.

Architect F. M. Ellis has prepared plans for a seven-flat building for Daniel Carriag; contractors, Hughes & Co. Also for J. L. Byers, a store and office building, to cost about \$40,000.

Pittsburgh, Pa.—Architect J. E. Obitz: For Mrs. Huntsman, a two-story brick house; cost \$5,500. For R. S. Frazier, a two-story brick dwelling, size 31 by 55 feet, slate roof; cost \$6,000.

Architect E. E. Miller: For H. J. Murdock, Jr., a two-story frame residence; also for the Christian Church at Mansfield, a \$5,000 frame church.

Architect A. Peebles: For the Oliver Iron & Steel Company, a two-story brick machine shop, size 243 by 84 feet, slate roof; cost \$65,000.

Architect J. W. Offerman: For Mr. Maloney, a three-story business building; estimated cost \$10,000.

Architect James T. Steen: For Dr. C. W. Stranahan, of Erie, Pennsylvania, a pressed brick residence with stone trimmings; all modern improvements; cost \$20,000.

Architects Longfellow, Alden & Harlow: For the Farmers' Deposit National Bank, a two-story bank, size 21 by 40 feet, stone, tile roof; cost \$19,400; contractors, A. & S. Wilson.

Architect George S. Orth: For E. M. Ferguson, a seven-story office and store building, size 98 by 85 feet, brick, with tin roof; cost \$149,900.

Portland, Ore.—Architect M. Howe: For the Union Depot, a large new depot; work to be commenced at once.

Contract for the new school building on Portland Heights has been let to G. W. Gordon; cost \$9,985.

A Chamber of Commerce building to cost from \$300,000 to \$500,000 is to be erected on the corner of Third and Stark streets. Plans have been submitted, but there is a difference of opinion as to whether a fireproof, slow-burning or non-fireproof building is what is wanted.

A new City Hall, to cost \$500,000, is mentioned as one of the improvements on which work is soon to begin.

Rochester, N. Y.—Thomas Nolan and E. B. Nolan are architects for a wine cellar for Mr. A. D. McBride, to be 150 by 30 feet; two stories, built of stone; "rough cast" plaster outside of first story, and to be fireproof, iron construction inside. It will contain 150,000 gallons of wine and will cost when completed about \$12,000. Roof will be of tile or tin. Also for a club house for the Delta Upsilon society, of Rochester; to be built on Strathallan Park; will be about 40 by 80 feet, and besides commodious and well arranged club accommodations, will contain several fine suites of rooms for bachelor apartments; to be built of stone, brick and shingles, and to cost about \$11,000; to be heated by steam or hot water. Also frame residence for Mr. J. P. Smith, to be built on Hawthorne Terrace; a special feature to be made of some fine pieces of stained glass; cost when complete \$7,500. Dwelling house for Mrs. Sarah J. Richards; to be built on Rutger street; to cost \$7,000. It will contain several nice pieces of cabinet work. Frame house on Argyle street, for Mr. George C. Cochrane; to cost \$6,000. Alterations and additions to the Rochester club house. Residence for Mr. George E. Hatch; to be of stone and shingles, heated by hot air furnace; cost \$6,000. Frame residence for A. J. Smith; to cost \$5,000. House for A. J. Hoyt; to cost \$4,000. Club house at Geneva, N. Y., for the Sigma Phi society; nearly complete; cost \$8,000. For the Rochester Power Company they are doing a seven-story building, 120 by 50 feet, of brick and stone and iron; to be used for manufacturing purposes, and will cost \$38,000. Also for the same company another seven-story building 100 by 50 feet, of stone, brick and iron; to be furnished with steam heat and power, sprinkler system for fire protection, fire escapes, iron stairs, gravel roof; will have two elevators; will be used for manufacturing purposes and will contain a thorough system of plumbing, drainage and heating for work-rooms and for dry kilns; will cost \$42,000. Also for the same company, alterations that will cost \$10,000, which consist of new plumbing, fire escapes, skylight, heating, sprinkler system, painting, etc.

Architect Wm. C. Walker has prepared plans for two houses, for Messrs. Elwanger & Barry; to be built on South avenue, of brick and frame, to have cabinet finish inside; cost about \$8,000. For Mr. A. Coombs a business block on Lyle avenue; to be three stories high, built of stone and brick; tin roof, galvanized iron cornice; cost \$6,500. For Mrs. Mary Taney, a five-story manufacturing building, to be built of brick and stone, tin roof, galvanized iron cornice; cost \$6,500. Also for Mr. Edward McKnight, a frame residence; to cost about \$4,500.

Architects Rogers, Sturges and Stern have prepared plans for a six-story block to be built on Hone street for Mr. G. L. Mackey; frontage of 104 feet and 110 feet deep, will be of brick and be used for manufacturing purposes; cost \$50,000; will have steam heating and freight elevators. Also for a brick and frame residence on North Goodman street, for Mr. L. L. Hone; will have first-class plumbing, steam heating, hardwood finish; to cost \$10,000. For a block of four residences for Joseph R. Otto; size 40 by 80 feet, two stories; cost \$7,000. For an Assembly Hall for the Berith Koelesh Society, to be used in connection with the Jewish Synagogue; will be of brick and stone; cost \$5,000. A frame barn for Gasson and Michalls; cost \$3,000. Grand Stand for the Rochester Base Ball Association. A frame block of one store and three flats, for Mr. B. Levin; to cost \$3,500.

Sioux City, Iowa.—Architect J. W. Martin is preparing plans for a \$60,000 residence for L. E. Skinner, also same for R. M. Wilbur.

Sioux Falls, Dak.—Architect W. L. Dow: For W. C. Hollister, a bank and office building, brick, tin roof; cost \$25,000.

St. Louis, Mo.—The Odd Fellows will erect a building at East St. Louis; to cost \$50,000. Mr. T. Neukom will erect a two-story brick dwelling; cost \$25,000, contractors Zwicki and Doerflinger.

Tacoma, Wash.—The Y. M. C. A. will erect a \$100,000 Association building. Work to be commenced in the fall.

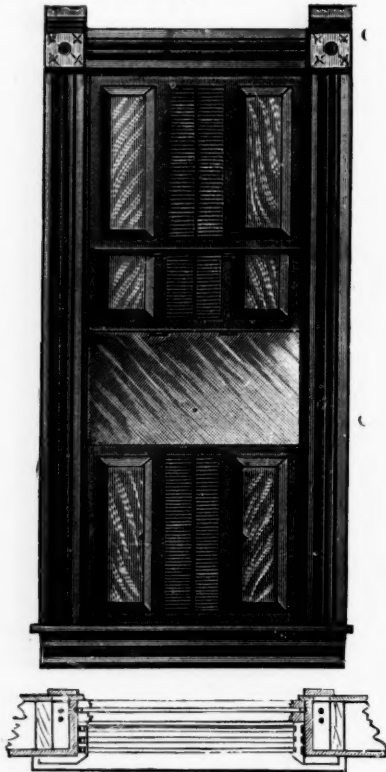
Architects Proctor & Dennis will receive proposals until the 28th of August for the erection of the stone and brick court house here.

Architects Holbertson & McIntosh have just completed plans for a \$250,000 Chamber of Commerce building to be erected here.

Trinidad, Col.—A First National Bank Building will be erected; to cost \$100,000. Also a new Union Depot Building; at a cost of \$50,000.

Poppert Sliding Blind.

Attention is called to the advertisement of the "Poppert Sliding Inside Blind," which makes its first appearance in THE INLAND ARCHITECT with this number. The inventor claims to have avoided defects that obtain with other similar blinds, and presents his as one simple in construction and at the same time neat and durable.



Instead of using springs for adjustment he uses counter-balancing weights, the same as ordinarily used for sash, and which allows each section to act independent of the other. The weight-cords run over glass journals which enable the cord to run without perceptible friction, so much so that a mere tip with the finger will set the section or sections moving. The weights are entirely inclosed between the blindway and the face of the frame, and the back of the blindway is grooved to allow for the travel of the weight. The manufacturer has an illustrated catalogue furnishing information and illustrations pertaining to a complete exposé of the merits of the blind, which may be had on application, and it should form a part of every progressive architect's literature. For his address see advertisement.

An Important Legal Decision.

Judge Blodgett, of the United States District Court for northern Illinois, has just rendered a decision in a patent case which is of interest to the building fraternity. In April, 1887, Leon H. Prentice was granted letters patent for a design for loop radiators, providing for their ornamentation by embossed or depressed figures. This patent was assigned to the Eclipse Manufacturing Company of Chicago, which, as is known, put the same on the market. Adkins & Son, also of Chicago, something like two years ago put an ornamented radiator loop, known as the "Ideal," on the market, said loop being manufactured by the Pierce Steam Heating Company of Buffalo, New York, for them. The Eclipse Company entered suit against them for infringement of the Prentice patent, and this decision is in finality of the hearing, the case having been in the court nearly two years. The decision derives its principal interest from the fact that nearly all the ornamental loop radiators are affected by the decree. The decree finds the defendants are infringers and directs an accounting

of profits and damages and "perpetually enjoins and restrains the defendants, * * each of them, their servants, agents, attorneys and workmen, each and every one of them, either directly or indirectly, from making, constructing, using or vending to others to be used, radiators containing or embodying the design described and claimed in said letters patent No. 17,270," granted to said Leon H. Prentice.

Trade Notes.

C. H. MITCHELL & Co., builders of the well-known patent lift safety elevator for hydraulic, steam, gas or hand power, are now comfortably domiciled in their own five-story brick building Nos. 363-365 South Clinton street, Chicago. While the patronage of the company has always been a matter of eminent satisfaction, its upward tendency is evidenced by the orders of the past month, which have made its trade the largest in the history of the house. The trade extends all over the West, South and Northwest and has a respectable inclination eastward. The company has issued a fine illustrated catalogue, which may be had on application.

MR. ERSKINE W. FISHER, of No. 18 Broadway, New York, importer of the celebrated Stettin ("Anchor" brand) Portland Cement, sends us a circular calling attention to the effect the McKinley Customs Administrative Bill has upon the Portland cement trade, increasing the duty on that article by about 15 cents per barrel after August 1, next. It is the duty of everybody using or dealing in Portland cement to urge the passage of a fair tariff bill. Mr. Fisher will be pleased to explain anything that may not seem perfectly clear, and invites correspondence.

The McKinley Customs Administrative Bill went into effect on August 1, and by restoring the duties upon packages, transportation charges, etc., will increase the cost of all Portland cements by about 15 cents (fifteen cents) per barrel.

It is to be hoped that a tariff bill will be passed shortly, levying a specific duty about equivalent to that now being paid. In the meantime, all contracts, prices and quotations are made, subject to any advance in duty, whether caused by direct or indirect legislation.

ERSKINE W. FISHER,
Welles Building, 18 Broadway, New York.

FOR heating workshops and large factory buildings, or for kiln drying and kindred uses of heat, the Buffalo Forge Company, of Buffalo, New York, have solved the problem of economy and effectiveness by a "hot-blast apparatus" which the company has been introducing to the public for the past few years. It has been the privilege of THE INLAND ARCHITECT to read a number of letters from users of the apparatus—parties whose establishments are of a magnitude to put it to a crucial test—and without exception, the verdict is that it excels direct steam, stove or furnace heating in effectiveness, and in a marked degree lowering the cost of such caloric comfort.

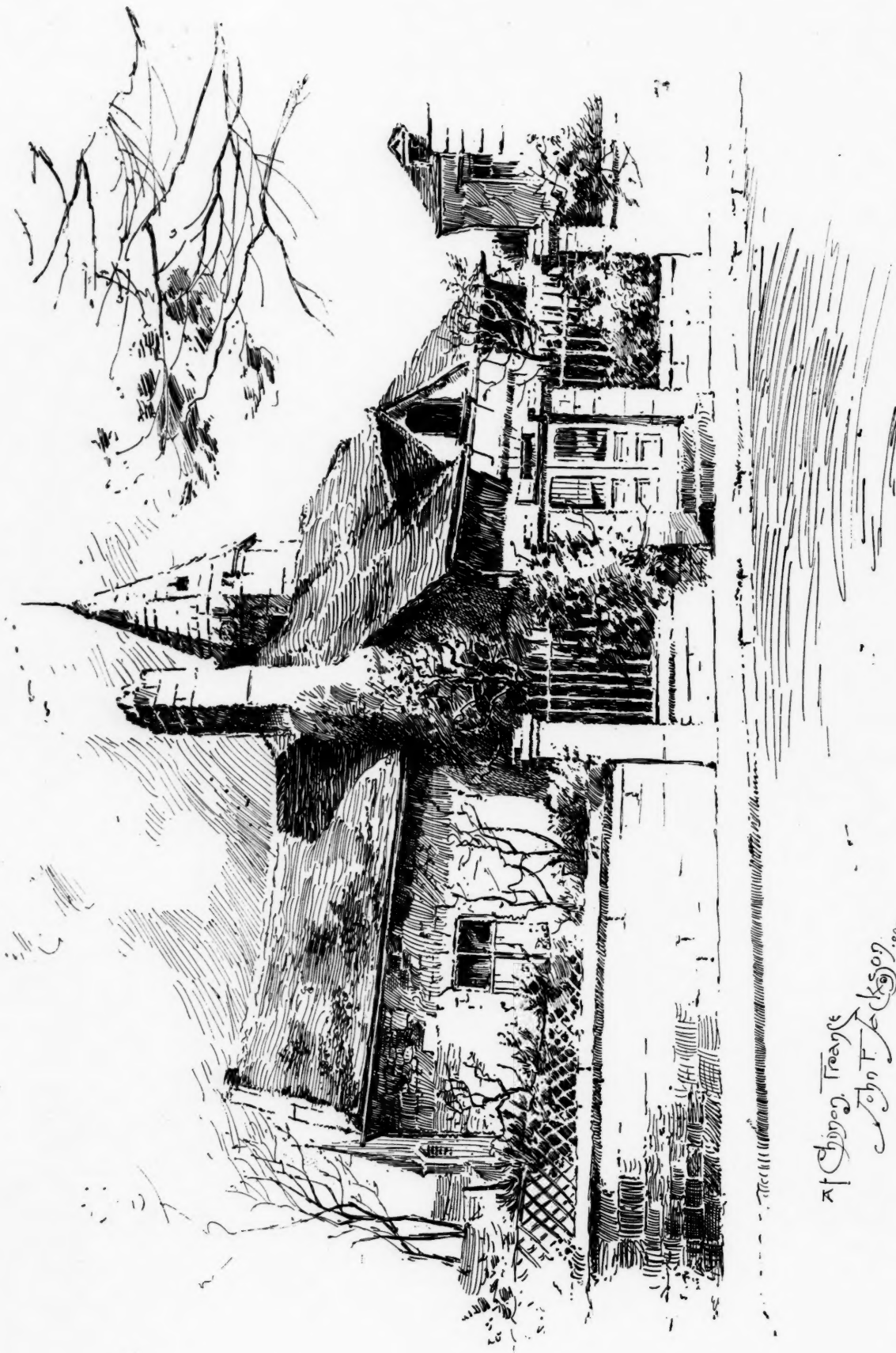
M. MAHONY, Troy, New York, manufacturer of the popular Mahony steam and hot water boilers, has issued a very neatly gotten up 76 page illustrated book affording full information in regard to the merits of this unique steam or hot water heating apparatus. Aside from its tables of its capacities and prices, there are nearly one hundred photogravure views of public buildings and dwellings scattered all over the country, in which these heaters are used with eminent satisfaction, judging from the testimonials accompanying them. It is to be borne in mind this boiler is extremely simple in design; consisting of a heavily corrugated cast-iron fire-pot of one piece and a cast-iron shell of one piece, the space between them forming the water and steam space. It is a direct draft boiler and made either as a surface or magazine self-feed burner. Having no joints to become leaky, nor complicated apparatus of any kind to bewilder the operator, always reliable and economical, it is not difficult to tell why the Mahony boiler has become one of the most prominent among the popular house-heaters of the day.

THE illustrated catalogue of "Perfection Padlocks" manufactured by the Ames Sword Company, of Chicopee, Massachusetts, has found its way to THE INLAND ARCHITECT table, and may be said to be *multum in parvo*. Certainly it makes a very interesting disclosure of what is being accomplished in the direction of staple locks. Think of it. A padlock not much larger than a kernel of corn, and yet a perfect, reliable lock, and so on, until you get up to a lock large and strong enough to fasten a prison door. And these made in solid brass, or bronze, or gold, or silver, or nickel plated. There are padlocks and padlocks, but it is evident perfection in them has been reached only by the Ames Sword Company.

THE Willer Manufacturing Company, of Milwaukee, has made THE INLAND ARCHITECT debtor for a copy of its architect's and builder's catalogue and pricelist. As a specimen of fine printing it is equal to the best that so far has come under observation. Its letterpress matter and engravings show an amount of intelligent and careful compilation worthy of universal emulation. No one can peruse its contents without feeling there is nothing more in the way of information to be desired. The book is a large quarto of 132 pages, bound in muslin and paper, illuminated on the title page by a chromo-lithograph on the cover of the late Emil Schandheim's residence in that city. The first portion of the book is devoted to the "Willer Inside Sliding Blinds," and the remainder chiefly to "stair work" and hardwood interior finishing products. Of the former, it is only necessary to recapitulate in a general way what the architectural profession know in a more extended and detailed way of the peculiarities of this popular window blind. Instead of being hung in folds or on hinges it is made to slide up and down like a sash and in sections of two, three, four or six, as occasion may require, each section acting independently of the other and held in place, at any point of the window, by an adjustable spring. The rolling slats of the blind are operated by a peculiar device which obviates the use of the unsightly wooden rod common to the ordinary slat blinds, and permits the slats to be removed and replaced with ease for the purpose of cleansing. In fact the entire blind is so constructed and adjustable to place that its removal for cleaning, in whole or in part, is a matter so simple that this quality alone could well account for its great popularity, and why, in the last four years, the output of the company has increased nearly a thousand per cent. That portion of the book set apart for the illustration and enumeration of the various hardwood products of the company is not only replete with valuable information, but from examples given of stair and hall work offers hints to the artist which are not likely to go unheeded. Of course, so large and expensive a book cannot be distributed gratuitously and promiscuously, but we learn it will be mailed free to all architects and builders who are inclined to utilize the products of the company, by sending 50c for the paper covered edition or 75c for the stiff cloth bound edition.

Railroad Note.

TRAVELERS and tourists contemplating a visit to the Pacific coast should bear in mind the Lake Superior, St. Paul & Union Pacific, a new passenger and freight line formed by the Chicago, St. Paul, Minneapolis & Omaha and Union Pacific railways. This line strikes about all the important far western towns and cities, i. e. of Nebraska, Montana, Idaho, Utah, Wyoming, Washington, Oregon and California, and reaches the coast several hours sooner than any other route. The accommodations are first-class in every respect and the fare as low as the lowest. Special excursion trains are run, leaving St. Paul and Minneapolis every Thursday morning. For fuller particulars address T. W. Teasdale, general passenger agent, St. Paul.



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