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TORONTO AND MONTREAL, CANADA, AUGUST, 1890.

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—THE—  
**CANADIAN ARCHITECT AND BUILDER,**

*A Monthly Journal of Modern Constructive Methods,*

(With a Weekly Intermediate Edition—The CANADIAN CONTRACT RECORD),

PUBLISHED ON THE THIRD SATURDAY IN EACH MONTH IN THE INTEREST OF  
ARCHITECTS, CIVIL AND SANITARY ENGINEERS, PLUMBERS,  
DECORATORS, BUILDERS, CONTRACTORS, AND MANU-  
FACTURERS OF AND DEALERS IN BUILDING  
MATERIALS AND APPLIANCES.**C. H. MORTIMER, Publisher,****14 King Street West, - TORONTO, CANADA.**

TEMPLE BUILDING, MONTREAL.

**SUBSCRIPTIONS.**

The CANADIAN ARCHITECT AND BUILDER will be mailed to any address in Canada or the United States for \$2.00 per year. The price to subscribers in foreign countries, is \$2.50. Subscriptions are payable in advance. The paper will be discontinued at expiration of term paid for, if so stipulated by the subscriber; but where no such understanding exists, it will be continued until instructions to discontinue are received and all arrearages are paid.

**ADVERTISEMENTS.**

Prices for advertising sent promptly on application. Orders for advertising should reach the office of publication not later than the 12th day of the month, and changes of advertisements not later than the 5th day of the month.

**EDITOR'S ANNOUNCEMENTS.**

Contributions of technical value to the persons in whose interests this journal is published, are cordially invited. Subscribers are also requested to forward newspaper clippings or written items of interest from their respective localities.

*The Ontario Association of Architects has appointed the "Canadian Architect and Builder" its official paper.*

*The publisher of the "The Canadian Architect and Builder" desires to ensure the regular and prompt delivery of this Journal to every subscriber, and requests that any cause of complaint in this particular be reported at once to the office of publication. Subscribers who may change their address should also give prompt notice of same, and in doing so, should give both the old and new address.*

WE published a description some time ago of the alarming landslide at Quebec, and some doubt was expressed at the time as to with whom the responsibility should rest. The Dominion Government has given permission to claimants of damages to sue it for the amounts claimed, and no doubt some interesting actions will soon be fought out.

THE statement is made that the Provincial Natural Gas Company will not pipe St. Catharines before next spring, owing to the impossibility of securing pipe from the American factories, which are said to be crowded with orders. It would be interesting to know why this pipe is not being manufactured in Canada. Are Canadian manufactories unequal to its production, or have they also more work than they can do? Or, is the duty inadequate to afford the Canadian manufacturer a fair protection against the older and larger American factories? Whatever may be the cause, we hope to see this kind of work done at home in the future.

MR. Justice Proudfoot, in a case which came before the Toronto Courts recently, held that a mechanics' lien could not stand against a building belonging to a municipality. It would be a good thing for owners and reputable contractors if the Mechanics' Lien Act was removed from the statute book.

The only persons who might have cause to complain would be the men who set up as contractors without money, and frequently with as little experience, relying upon the competition between the dealers in building materials to enable them to obtain the necessary credit. The loss of such men from the ranks of the builders would be a decided benefit rather than a calamity.

THE tyranny exercised by "organized labor" was well exemplified at Ottawa the other day. The despatch states that a certain contractor of that city agreed, at the dictation of the bricklayers' union, to dismiss the tuck pointers or foundation men he had employed on a certain building contract, but found that his agreement with the men precluded his dismissing them. Then the union called off all the bricklayers, and the contractor was unable to proceed with his contract. Finally, on paying a fine of \$10, he was allowed to have the men back again. Such a method of extorting money would be worthy of the greatest brigand. At the same time, the contractor who meekly agrees to dismiss his employees who have been guilty of no offence at the dictation of the trades unions, is deserving of little sympathy.

A TORONTO property-owner awoke from sleep recently to find that the side of his house had fallen out as the result of an excavation on a neighbor's property having been carried too near to his foundation. He declares that but for the support afforded by an inside wall recently built in the cellar in connection with the furnace, the whole building must have gone down, burying him and his family in the ruins. The wall of a school building in course of erection collapsed a few weeks ago from the same cause. The gross stupidity and carelessness of some workmen is illustrated by the fact that an architect not long since discovered that a pier in the foundation of one of his buildings had been undermined by a drain having been cut beneath it. The building inspector might show that he is a living entity by making an example of persons guilty of such criminal carelessness.

THE terrible accidents that every now and then occur by the insecurity of platforms erected for sightseers, have been capped by one of the most horrible ever recorded, although in this case the platform was intended as a permanent structure, and gave way for want of that careful time to time inspection, the neglect of which should be made criminal. We refer to the collapse of the landing stage at Halifax, which upon the arrival of a ferry steamer was crowded with intending passengers, who moving to one side, caused the platform to tip up and the whole crowd of men, women and children to slide off into the water in a mass, the hindmost on top of the foremost. Such an occurrence *ought* to be a warning to the owners of all such platforms, and it behooves them to see that they are substantially built in the first place and well looked to afterwards, but unfortunately the element of cost comes in too often and the work is carried out without proper plans, without even the supervision of an engineer or architect, the owners trusting to the mechanic who puts in the lowest figure and intends to save as much as he can out of it for his own pocket.



THE Ontario Association of Architects desire to receive designs for an official seal. The sum of \$10 will be awarded to the best design sent in as an acknowledgement on their part of their indebtedness to the designer. The seal is to be  $2\frac{1}{2}$ " in diameter and to have the name of the association around the outer edge.

A LEADER in a recent issue of the *Toronto Evening Telegram* criticizes the architecture of buildings in the city and declares that such monstrosities would never be "tolerated in the United States." No doubt there may be some remarkably ugly buildings in all cities of Canada, but we certainly were not aware that "artistic culture" in the States had attained so high a degree that ugly buildings were not permitted to be put up. We are afraid we in Canada must be a long way behind the times if this is the case, for as yet we are hardly able to prevent the construction of fire traps and booby traps—and certainly to build safely must be learnt before we can enforce building with beauty. And then, too, we must find out what constitutes beauty in a building, for the list of buildings given by the writer that do possess "grace of outline and cultivated finish" takes us over a wide field of design and leaves us in doubt as to which particular building ought to be set up as the standard of beauty.

SEVERAL hundred thousand dollars have been expended by the Dominion Government and the city of Toronto on the construction of the breakwater at the south-east boundary of the Island, with the object of preserving intact the magnificent harbor. This expenditure will be entirely wasted if steps are not speedily taken to complete the work by extending the protective wall along the entire southern and western boundaries. The narrow strip of land comprising the island is rapidly diminishing in extent before the action of wind and wave, and its entire disappearance may be looked for within a comparatively brief period if the necessary protection is not afforded it. This would prove one of the greatest calamities that could possibly befall the city, and the stupidity of those who were responsible for it, would excite the indignation of all future generations. It is to be hoped united action will be taken by the Government and city authorities to continue the construction of the breakwater during the coming winter.

ALTHOUGH we believe that the gift of High Park to the city of Toronto should be acknowledged by the erection of a monument to the late Mr. Howard, we cannot regret the defeat of the \$10,000 by-law for that purpose. If the money had been voted it would have been worse than wasted, except that it would have acknowledged the indebtedness of the citizens of Toronto to the man who so generously provided the city with so magnificent a park. A monument would to a certainty have been erected which, while it might meet with the approval of the general public, would have been held in contempt by the better informed. A bad statue is worse than no statue, and if we cannot have good work, let us at least not have work of which we may be ashamed in the near future. One Ryerson monument is sufficient in Toronto, and until we can obtain statues of real merit let us do without them. The munificence of the late Mr. Howard can be much better acknowledged and kept before the citizens of Toronto by the erection of a building which can be put to a useful purpose. Let the building be of fine design and thoroughly and substantially built, and it will be a worthy monument to a man who was the first architect which the city of Toronto possessed. A bronze or marble bust of Mr. Howard could be placed in a prominent position in the building, with a tablet giving particulars of his gift to the city.

A WINNIPEG insurance agent has published a scheme for the better protection from fire of small towns that are usually built of wood. It is simply the introduction into these places of occasional fire-walls, which shall divide blocks of houses. With such an arrangement there would no doubt be a slight diminution in the possible spread of fire, but unless the streets were widened considerably or a fire wall carried down

the centre to prevent the flames from reaching across the streets, there is nothing here to hinder the spread in this direction. And then, how about sparks which will fly over fire walls and ignite distant structures? We are afraid the only actual protection for wooden towns would be to enclose sections in fire wall all round and put a fireproof roof on top of the walls over the whole area enclosed. The cost of this would probably be greater than building the towns of bricks. But while on this subject our attention has been called to the rows and rows of houses built in every city, even those that have a so-called fire by-law, without a brick wall between each house and its neighbor. We know of rows containing as many as twelve houses built with a gable wall of brick at each end and a face of half brickwork to the front: all the rest is frame with rough-cast back. If a fire does start in one of these, there is nothing whatever to hinder the destruction of the whole row in a fearfully short space of time, and the farce of framing by-laws to prevent the spread of fire goes on, without a proper enforcement of such clauses, even if any practical clauses happen to exist at all.

IN response to repeated requisitions Hamilton has now a regular system of granting building permits and keeping a record of all new buildings, but we notice one point in the form of permit that we think is hardly advisable. It is that the name of the contractor who is to do the work appears on the permit. This means that a tender has been accepted even if a contract has not actually been signed, before the permit was given or the plan examined to ascertain if it was in accordance with the requirements of the by-law. In nine cases out of ten where the plans have been prepared by competent men, no change would have to be made, but in the event of changes, possibly sweeping ones, having to be made, there might arise a great deal of trouble between the contracting parties, for which the architect would be solely responsible. It is a question for architects to decide whether it is advisable to let a contract before the permit is given, but we think it is always wisest to be on the safe side. As an example, take an instance where a contract has been let and the owner does not intend to spend more on his house, or it may be a public body for whom the work is to be done, who cannot spend more without recourse to further loans. The Inspector insists on the addition of a brick wall somewhere in the centre as a requirement of the by-law against fire. The contract having been let, the contractor is asked to give a price for this addition, and if he is not a scrupulous man, will "pile it on" and perhaps in the end put the owner to the expense of arbitration, and naturally the blame of all this must rest on the architect.

MANY of the old macadam roadways of Montreal are to be taken up and relaid with modern paving materials, some in wood, some with granite "setts" and others again with asphalt. The somewhat hot-headed discussions that have taken place on the subject at the City Council meetings show, that many of the aldermen do not possess quite as practical a knowledge of the methods of constructing pavings and the dealings with contracts as it would be advisable they should. A number of aldermen advocate the construction of these roadways under day-work system instead of contract work, simply because they think a considerable saving would be made in public funds by this means. The question they are discussing is one of *permanent* roadways, and the very best method of securing a *permanent* result is to insist upon a valuable guarantee from the contractor. By day-work no guarantee can be given, and unless the supervision by the City Surveyor is constant and minute—such as would take up all his time—unless the city undertakes to test the materials to be used and procures the services of engineers who are thoroughly acquainted with this kind of work, the result will never be a success. And if in order to make it a success the city incurred such expenses as these, the cost would far exceed the amount of the contracts. By contract one man is made responsible, and this system of doing work must prove far more satisfactory to the public who wish for a tangible proof that their money is not being thrown away. It is not a question of the cost; the result must be as near per-



fection as it is possible to go, or it is of no use doing the work at all.

THE city of Toronto claims to have a building by-law, but it certainly is not observed. The by-law is of a character that appears to encourage the building of dangerous structures in closely built localities and will not allow of perfectly safe construction in the thinly built residential portions of the city. The *Globe* Company have been allowed under the by-law to practically build two stories of wood on the top of a four or five storey brick building. These two stories have been allowed to be erected because a wooden wall, instead of being built up plumb, has been given a slope and called a roof. The by-law would not allow of the same amount of wood being erected vertically or plumb, because it would then be a wooden erection and dangerous; but when it is given a slope and called a roof it does not infringe the by-law, and is perfectly safe. Moreover, this sloping wall or roof is covered with slate, which would, in case the top of the building caught fire, be immediately loosened and allowed to slide off into the street, rendering it utterly impossible for firemen to work anywhere near the building. Sloping roofs of slate or tile secured to wood should not be allowed to be erected on high buildings in the closely built portions of the city. Here we have an immense amount of wood placed at a height so great that it would be impossible to get a stream of water of any strength to play upon it. The by-law allows this; but at the same time does not allow of the same amount of wood being placed in a similar structure built upon the ground in a thinly built portion of the city. Again, the fire by-law has allowed of the erection at the corner of Yonge and Gerrard streets, of a building which is freely characterized as a fire trap of the worst possible description. If a fire once gets headway in any portion of the building the entire structure is doomed. While as stated it is possible to erect these dangerous structures in the business parts of the city, it is not permissible to erect within several hundred feet of any building a house with tile hung walls perfectly safe from fire except from the inside. It is also possible to erect rows of houses with wooden party walls, or with  $4\frac{1}{2}$ " brick walls carried up two or three stories and carrying the floors. The writer has seen these walls most carefully propped up during the course of their erection for fear the night breezes might blow them over, or the mischievous boy push them down. In Queen street west there was erected some years ago a brick veneered store, which some few weeks ago suddenly assumed a position slightly out of the vertical. To prevent any further trouble, the space between this building and a brick building to the west was filled in with a structure of the same character as the one which required support. Here we have allowed the erection of a brick veneered building in a business street, hemmed in on every side with buildings of a like character. The needs of this city require that a building by-law be immediately prepared which will prevent the erection of dangerous structures, either through their inflammable character or because of their inferior construction. We have a sufficient number of buildings representing both kinds, a few of which are among our most important structures.

#### FIRE-PROOFING AND ITS ADVANTAGES.

FIRE-PROOFING has now become one of the most important branches of the modern building trade, and as such, is entitled to most serious attention from our architects, engineers and builders, as well as from owners and tenants of large buildings who have considerable interests at stake.

For some unknown reason people do not attach any great degree of confidence to fire-proofing; they claim that it will not prevent a building from burning. This impression is entirely erroneous; fire-proofing, when properly carried out, will make a building so far fire-proof that by closing the doors of any one room, the fire may be confined entirely to the furniture and other combustible material contained in it. This has been proved by repeated experiments. Insurance companies are fully alive to this fact, and they are generally ready to reduce their rates considerably for buildings protected in this manner.

When compared to the loss through total destruction by fire of an expensive modern building, the cost of fire-proofing it is ridiculously small. The fire at the University which totally destroyed this valuable building a few months ago, is a striking example of the truth of this statement. In this case, fire-proofing might not have prevented the ignition of the staircase when the fire started, but it would certainly have prevented the fire from going rapidly through partition after partition as it did. What would the cost of fire-proofing this building have been as compared to the total loss of the numerous records, curiosities, books and other valuables contained in it? let alone the building itself, which was a credit not only to the city and to Canada, but to the whole continent.

Some short-sighted members of the Court House Committee are opposed to the expense of fire-proofing this *expensive* structure. What would the "expense" be if the building burned down two months after its completion, and what would the advantage be in having had it insured for its full value? The building will cost in the neighborhood of \$1,000,000, and the cost of covering this with insurance will be enormous. Should the building be fire-proofed, the amount of insurance and the rate on it can be reduced to such an extent that the saving in premium alone would pay for the fire-proofing in a few years; and even were this not the case, the expense of fire-proofing is as nothing compared with the loss in case of total destruction. To say that it would cost \$200,000 to fire-proof such a building, (as one of the members of the Committee is reported to have said) is believed to be rank absurdity.

There are two ways in which fire is most easily communicated in a burning building: 1st, by the total destruction of the floor or partition between any two adjoining rooms; 2nd, by the overheating of the floor or partition. This overheating causes the woodwork, the paints, varnishes, etc., to exhale a quantity of combustible vapors and gases in the room where there is as yet no fire, and as soon as the flames reach them these gases are ignited with such rapidity that they carry fire to every part of the room at once.

Fire can scarcely be communicated in this second way when fireproofing tile is used. This tile is such that although there may be a raging fire on one side of the floor or partition, the other side is comparatively cool. The Rathbun Co., of Deseronto, the United States Fireclay Co., of Pittsburgh, and the Pioneer Fire Proof Co., of Chicago, all manufacture tiles of this description.

Now, as the tiles will not burn, the only way in which the fire can get through is by the floor or partition warping and falling out of its place. This, however, should not occur, as the tile are burnt at such high temperatures in the kilns that no ordinary heat can warp them. Fireclay tiles are now being manufactured of such dimensions and strength that they can be used in the body of the outside walls and partitions without the help of brick or stone, thereby saving the cost of fireproofing brick or stone walls after they are built. Several buildings of as many as six or seven stories high are now in existence in Chicago and elsewhere, and have proved to be an entire success. The blocks of fireclay are extremely ornamental and can be made to any shape required.

All these are facts which should be taken into serious consideration by our architects, the Court House, the Home Savings and Loan Co., the Confederation Life, the proposed athletic association building, and many others being well worthy of such protection as fireproofing can afford.

Apart from the protection against fire, this material, considered from a sanitary point of view, presents a great many advantages too numerous to be fully considered now.

We learn from the *Halifax Chronicle* that there is a small Episcopal wooden church at Auburn Station, King's county, which is said to be one hundred years old this summer, and the congregation worshipping there are talking of celebrating its centennial. As far as can be ascertained, the clapboards on the sides and the shingles on the roof are the ones put there when the edifice was built and they are sound yet. The shingles were originally three-quarters of an inch thick, but have gradually worn away until now they are scarcely thicker than the blade of a knife.



### FIRST MEETING OF THE EXECUTIVE COUNCIL OF THE ONTARIO ASSOCIATION OF ARCHITECTS.

IN accordance with the Act incorporating the Ontario Association of Architects passed during the last session of the Ontario Legislative Assembly, the Lieut.-Governor-in-Council gazetted the Council on the 26th day of July last. The following architects were gazetted, viz: Messrs. W. G. Storm, D. B. Dick and F. J. Rastrick for a term of three years; Messrs. Edmund Burke, W. Edwards and King Arnoldi for a term of two years, and Messrs. David Ewart, Wm. Blackwell and S. G. Curry for a term of one year.

The Council met on the 5th of August at 10 a.m. in the rooms of the Toronto Architectural Sketch Club, Toronto, all of the members being present.

The proclamation in the *Ontario Gazette* appointing the Council was read, and it was determined to organize according to the said proclamation.

In response to the expressed wish of the meeting, Mr. Storm presided over the proceedings and Mr. Curry acted as Secretary.

It was determined that the first business to be taken up should be the approving of the officers named in the Act of Incorporation, when the following were elected to the positions:

Moved by Mr. Arnoldi, seconded by Mr. Edwards, that Mr. Storm be the President of the Council. Carried.

Moved by Mr. Burke, seconded by Mr. Dick, that Mr. Arnoldi be the first Vice-President. Carried.

Moved by Mr. Burke, seconded by Mr. Edwards, that Mr. Rastrick, of Hamilton, be the second Vice-President. Carried.

Moved by Mr. Arnoldi, seconded by Mr. Ewart, that Mr. Townsend be appointed Registrar, salary to be fixed later on. Carried.

Moved by Mr. Ewart, seconded by Mr. Edwards, that Mr. Dick be appointed Treasurer. Carried.

Moved by Mr. Rastrick, seconded by Mr. Ewart, that Mr. J. W. Curry be appointed Solicitor. Carried.

Moved by Mr. Ewart, seconded by Mr. Arnoldi, that Messrs. Curry, Burke, Dick and Storm be appointed a Committee to prepare by-laws, the Committee to send copies of proposed by-laws to all members of the Council for their consideration and suggestion before reporting to the Council; the Committee to report at the next meeting of the Council. Carried.

Moved by Mr. Curry, seconded by Mr. Rastrick, that in pursuance of sub-section 3 of section 20 of chapter 41 of 53 Victoria, the admission fees payable by architects on enrollment, including the first year's dues, shall be fifteen dollars; that the admission fee for students under sub-section 2 of section 24, shall be one dollar, and that for students admitted under sub-section 1 of section 24, shall be five dollars, and that this resolution be afterwards embodied in the by-laws of this Association. Carried.

Moved by Mr. Burke, seconded by Mr. Rastrick, that a notice to register be placed in the *Ontario Gazette* and *CANADIAN ARCHITECT AND BUILDER*, and that a copy of application to register be sent to every architect whose address may become known to the Registrar, the necessary details to be arranged by the Solicitor and Registrar. Carried.

Moved by Mr. Edwards, seconded by Mr. Ewart, that Messrs.

Storm, Dick, Burke and Curry be the Executive and Finance Committee, who shall have charge of all matters connected with finance. Carried.

Moved by Mr. Curry, seconded by Mr. Dick, that Messrs. Ewart and Arnoldi be appointed an Education Committee to take up the question of the standard of knowledge to be required of students at the preliminary, intermediate and final examinations, and report at next meeting. Carried.

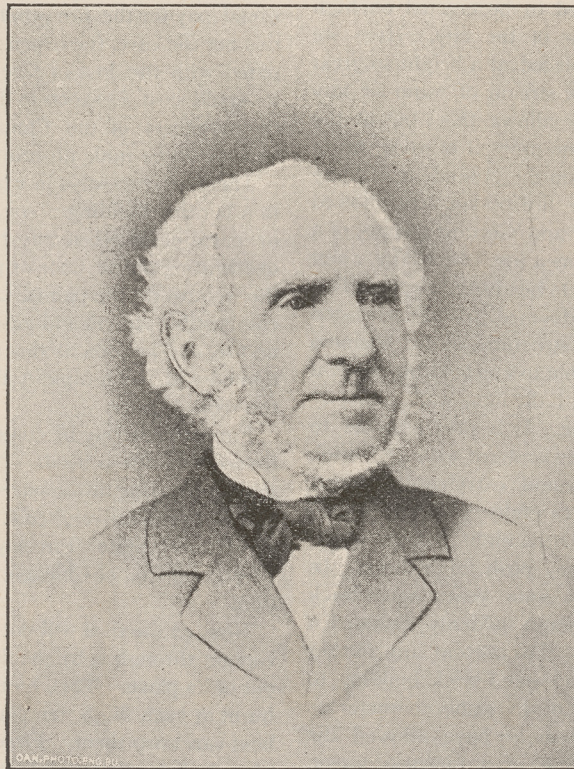
Moved by Mr. Curry, seconded by Mr. Edwards, that \$10 be offered for the best design for a seal, to be cut on a 2½ inch die, for the Association.

Moved by Mr. Curry, seconded by Mr. Arnoldi, that the first annual meeting of this Association be held on the third Wednesday in February, 1891, or at such other day in February as may be decided by the Council. Carried.

Moved by Mr. Blackburn, seconded by Mr. Burke, that the thanks of the Council of the Ontario Association of Architects be tendered to the Toronto Architectural Sketch Club for the use of their room for the first meeting of this Council. Carried.

The meeting adjourned.

The above is a formal record of the business transacted by the Council. It does not, however, represent the work actually accomplished, as many matters were discussed in an informal manner with the object of placing the members in a position to give more attention to business which will be brought up at the next meeting of the Council. The Council sat all day and spent very little time in useless discussion. The Council thought it would be better for the first year to combine the registration and annual fees in one fee. The fee was placed as low as possible, but at the same time at a sufficient sum to meet all expenses. The Association has to provide for the payment of about \$125 in obtaining the Act and the cost of administration, examinations and sundry other expenses, and also the accumulation of a fund to be devoted to the education of students and draughtsmen. No accurate estimate can be made of the number of architects who will register.



THE LATE JOHN PAGE, CHIEF ENGINEER DOMINION CANALS, BROCKVILLE, ONT.

### OUR ILLUSTRATIONS.

FOURTH PREMIATED DESIGN CONFEDERATION LIFE ASSOCIATION BUILDING, TORONTO—ALFRED FLOCKTON, ARCHITECT, MONTREAL.

DESIGNS AWARDED FIRST POSITION IN "CANADIAN ARCHITECT AND BUILDER" COMPETITIONS FOR "FRONT AND VESTIBULE DOORS" AND "WOOD AND BRICK MANTELS."

### PUBLICATIONS.

The business hitherto carried on by the Dominion Illustrated Publishing Company (limited), has been purchased and will be continued by the Sabiston Lithographic and Publishing Company, of which Mr. Richard White is President and Mr. Alex. Sabiston is Managing-Director. It is hoped to add to the interest and value of the paper, both from a pictorial and literary standpoint, and to extend and improve the business in its various departments. The business will be carried on in the meantime at the old premises, 73 St. James Street, Montreal, under the management of Mr. J. P. Edwards, to whom all communications in connection with accounts due the old company and new business should be addressed.



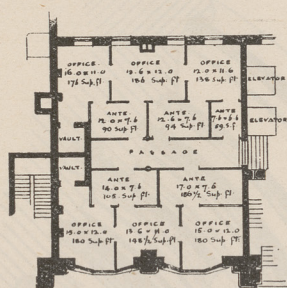
## MONTREAL.

(Correspondence of the CANADIAN ARCHITECT AND BUILDER.)

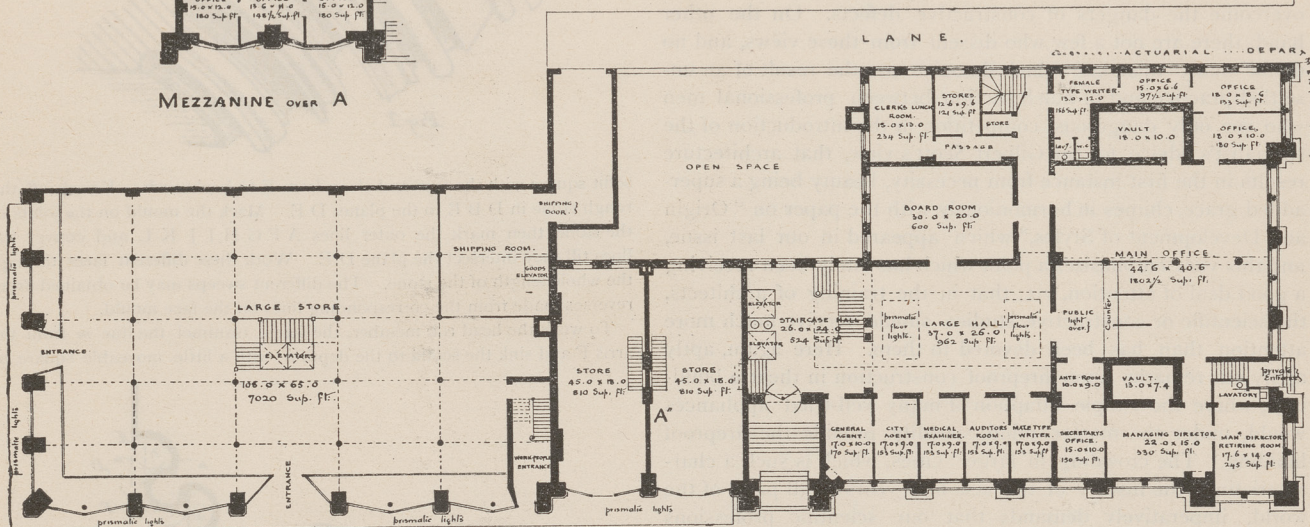
THE Canadian Society of Civil Engineers have moved into their new rooms situated in the Bank of Montreal's western branch building, at the corner of St. Catharine and Mansfield streets. The large room will be used as a library and general meeting room of the society, while the smaller room facing St. Catharine street will be the Secretary's office, where the council will meet.

## BOARD OF TRADE BUILDING.

The Board of Trade of the city of Montreal having acquired a site acceptable to all, have now under consideration the advisability of having their plans prepared. The president and secretary have recently made a tour through the States examining the various Boards of Trade buildings and have returned to the city fully convinced that no Canadian architect will be found fit to erect their building. They have interviewed several American architects who have promised to submit plans. It is rather rough on Canadian architects to see the president and secretary of an influential body scouring American towns and interviewing American architects regarding plans for a comparatively insignificant building. Surely the Dominion of Canada—if not the city of Montreal—contains architects well qualified to erect a building equal if not superior to any produced by American architects, especially if they are not handicapped by lack of money and other considerations. I suppose the Board of Trade would hardly consider it fashionable to employ purely local architects while other large corporations



MEZZANINE OVER A



## :Confederation Life Association:

Design by Utility

import theirs from the States.

The Board of Trade have now an opportunity of showing a patriotic spirit by opening their competition for their new building to Canadian architects only; following the example set them by the Sun Life Insurance Company. This would give our architects some stimulus to enter into the competition. I will have more to say on this subject as matters develop.

## QUEBEC ARCHITECTS' ASSOCIATION.

Articles and by-laws have been drafted by the committee of organization to submit to the general meeting to be held early in September. Copies have been forwarded to the local association of architects of Quebec for acceptance.

## ANOTHER SPECIMEN OF "ARCHITECTURAL COMPETITIONS."

Montreal architects are expressing their indignation at what they regard as the "cheek" displayed by the President and Secretary of the Fortress Hotel Co., of Quebec, in addressing to them a circular which reads as follows: "Tenders will be received up to 15th of September next, for plans and specifications for a new hotel at Quebec. Parties wishing to compete will require to visit the ground owing to its exceptional position. A prize of \$1,000 is offered for the best plan. Further information can be had from the Secretary. A reply, stating whether you intend to compete or not, will greatly oblige."

"CONDITIONS—1st.—Total cost (heating, plumbing and lighting included) not to exceed \$175,000; 2nd.—To contain at least 200 bed-rooms; 3rd.—The majority of the Directors will decide which plan is entitled to the \$1,000."

The Fortress Hotel Co. have much to learn about the conditions which should govern architectural competitions and the cost of building construction. Let silence be the universal response to the above circular.

## WARPING OF WOOD.

AS lumber is now sawn, every board but one will warp and curl up in the process of seasoning. The reason for this is plain. If the board be sawn from the side of a log, the grain rings of the wood lie in circles, which have a greater length on one than upon the other side of the board. A board cut from the very centre of the log has grain circles of equal length upon each side, and will lie perfectly flat when seasoned.

When selecting the lumber for a tool-chest or some other fine job, pick out boards which show that they came, as near as possible, from the centre of the log. A method is in use which compensates for this tendency to curl in seasoning. This is known as quarter sawing, and quartered oak, of which so much is said at present, is sawn by this process.

It consists in cutting out boards radially from the centre to the outside of the log. Suppose a log to be split into four pieces, each of these pieces is sawn diagonally so that the grain rings run through, instead of the circles running into, part way through and out upon the same side of the board.

Quarter sawn lumber will not warp in drying, neither will it yield so readily to changes of weather. It has the disadvantage of being more expensive, as in sawing each quarter a narrow board is first taken off, then one a little wider. The boards increase in width until the middle of the quarter is reached, making the widest board equal to half the diameter of the tree. The narrow boards may be glued up into wide strips, but that shows considerable sap, and they cannot be used in some kinds of work.

To prove that the circles of sap rings cause curling during the seasoning

process, it is only necessary to take such curled boards and wet the concave side, or apply heat to the convex side. If each or both be done, the boards will straighten out forthwith. This method is often taken advantage of by carpenters, in working twisted or warped boards. The seasoning process is also controlled by frequently turning boards over so that each side may receive just enough heat and air to keep the boards flat.—*Woodworker.*

## PERSONAL.

Mr. W. R. Gregg, a highly esteemed member of the architectural profession in Toronto, was united in marriage a few days ago to Miss Grace Angus, of Montreal, and will spend the honeymoon in Europe.

The City Engineer of Toronto has taken upon himself the responsibility of appointing a third plumbing inspector. If the three inspectors conscientiously strive to fulfil their duties, they are not likely to find themselves with much idle time on their hands.

Mr. J. C. Merriwater, of Greenwich, England, proposes a combination of lead with paving materials to prevent slipping. One plan is to place lead plugs or strips at or in the joints of paving blocks; preferably at the intersection of cross and longitudinal joints, and another is to use the same device in coalhole or manhole covers, the theory being that "lead is sluggish and bites."



## ENGINEERING AND ARCHITECTURE.

BUT these suggestions bring uppermost once more a much debated question, and that is the relative importance of the two professions of engineering and architecture in the design of any great work. The scheme to build a 28 storey building, and the construction of an Eiffel tower, are works in which the engineer takes a special delight, but they are a style of construction which the architectural examples of past ages cannot parallel, even in the very interesting catalogue of circumstances and result provided in the paper which Mr. Behrendt recently read before the Victoria Institute of Architects. The Eiffel tower is scarcely "a thing of beauty," and the 28 storey house of the future is unlikely to provide a better field to the architect for delighting the eye than do the new tall buildings in these Australian cities. The scheme seems rather to open up a new field for engineering science, in construction and sanitary arrangements, and in a still further development of that branch of it which has devoted itself to the speedy and easy conveyance of passengers from floor to floor. We have had a very interesting discussion carried on in these columns under the heading of "Friends in Council," in which the division of duties between the engineer and the architect has been much debated, and there is an increasing number of enlightened minds who are accepting the views, that, in these days of rapid progress in, and fresh developments of the scientific arts, specialists will more and more command a leading position in them; that the vast strides being made demand too much attention for one mind to successfully grasp and practice them all, and that great architectural undertakings need the work of a specialist in engineering to overcome the dangers of constructive defects. On the other hand, there are not a few who dissent from these views, and no doubt many mistakes which do occur are the result of an unsettled practice and of much friction between professional men who see only dangerous competition in the introduction of the specialist's advice, for Sir Gilbert Scott's view, that architecture results in the first instance from necessity, beauty being a super-added grace, chimes in harmoniously with the paper on "Origin and Development of Styles," which appeared in our last issue, and this view emphasizes a point which has lately been receiving a good deal of attention, viz., that in the training of architects, the scientific or constructive studies should receive much more attention than has been devoted to them. Here again, aptly apply our remarks upon fireproof construction in theatre buildings, where the simple adaption of many well-trying appliances would, under the master mind, speedily provide the fireproof building. The crowding in larger cities, which is such a characteristic of the history of the last fifty years in all parts of the world, imperatively demands that our scientific professions should keep pace with the requirements of the times in this respect in constructing hotels, theatres, and all large public buildings, and it clearly emphasizes the view that the practical and useful in architecture is its most important feature, while its ornamental and decorative work should be the outcome of refined taste sufficiently controlled to yield no sacrifice excepting to strictly utilitarian principles. The specialist in sanitary matters, or in the acoustic properties of a building, is finding to-day full occupation for all his energies; the decorative artist has recently had opened to him fresh fields for his special proclivities, and the constructive art in the more modern building is rapidly assuming a phase which demands that the training of an architect should be on a much higher plane, and his admission to practice controlled by much stricter laws than have prevailed among us hitherto. The question of a University training and a University certificate has been fully discussed in these columns, and the Victorian Institute has led the van in asking Parliament to appoint a professor of architecture in the local University. These are questions which are engaging much attention in other places than the Australian colonies, and it is desirable they should be fully discussed here, but that that discussion should be so widely published that the public will become interested and assist by their "silent vote" in effecting a radical change in the existing state of affairs. Only recently a case was heard before a colonial court in which heavy damages were awarded against

a so-called architect for faults in construction, which led to the subsequent very serious injury of the shops, and in the newer style of building in which ground space and value compels the addition of many stories in the height, it is imperative in the public interest that highly skilled professional advice should be secured as a preventative to disasters, which may be even more startling than the destruction by fire of a flimsily-constructed theatre building.—Sydney, N. S. W., *Building and Engineering Journal*.

## STEREOTOMY.

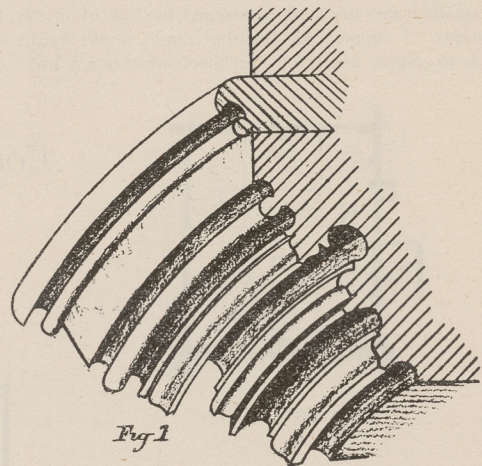
BY JOHN A. PEARSON.

TO WORK A MOULDED ARCH STONE.

Fig. 1 represents an arch stone.

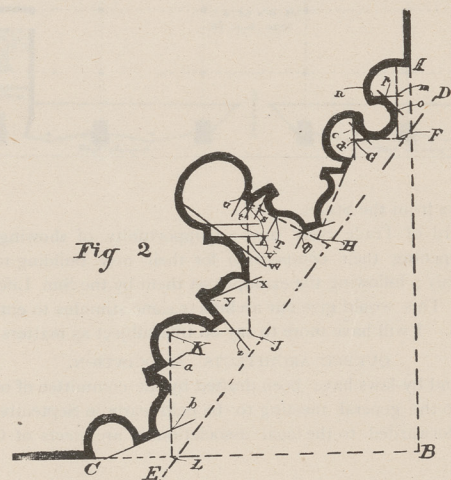
Fig. 2 is the moulded portion of the arch stone, made twice the size of figure 1.

Having worked the face A B, the top portion A being cleaned and drafts run along the joints and arris of the intrados to save labour, scribe upon this face the face mould with the radiating joints and soffit. Work the



soffit square with the face and clean from E C backwards. Knock off the rough stone in D B E to the plane D E. Mark the mould on the joints of the stone, then mark the outer lines A F G H I J K L and convey the lines till they intersect the plane D E. Work these different faces through the whole length of the stone. The different sweeps may be obtained from reverses made from the corresponding lines on the face mould.

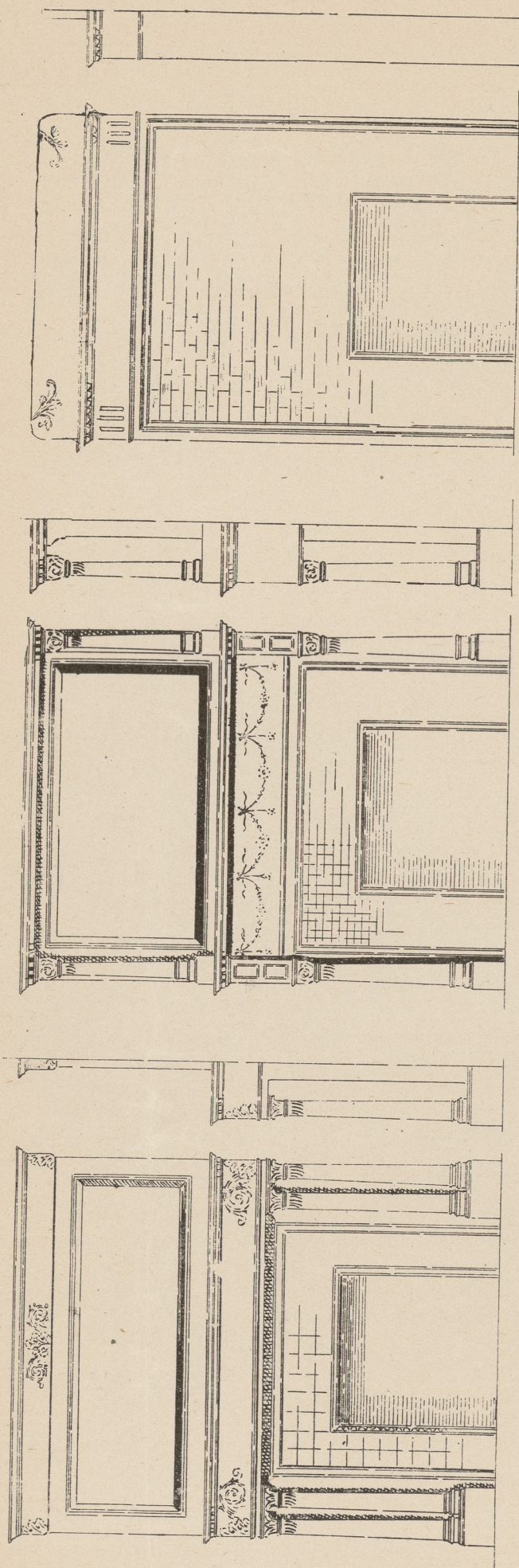
To work the head roll member, the faces, trammel the line *m* from the arris F and sink the scotia to the depth *n* with a little moveable square or



shiftstock, then work the scotia through. We have now *m* F and E G already worked. Trammel the line O with the distance O F from the arris F and the line *p* with the distance *m p* from the arris *m*. Work this plane through, then work off the little angles formed between the faces, the face *c d* is worked similarly. To work the mould on the face H I, trammel the point *q r s t u* from the arris H, the entire length of the stone, run the core *r q* and the quirk *s t* to their different contour taken from the mould scribed on the joint. Then the point V W and X may be trammelled from the arris J and sunk to their different depths.

The face *z y* and *x y* may be trammelled from J and cut into their required shape, and the points *a b* may be trammelled from L on the face L K. When deep cores occur as in *a u* they should be sunk to the depth first and cleaned right through rough being left on the arrises S and U to prevent them from being abraded or snipped. All the other points of the different members of the mould may be easily obtained from the face given.



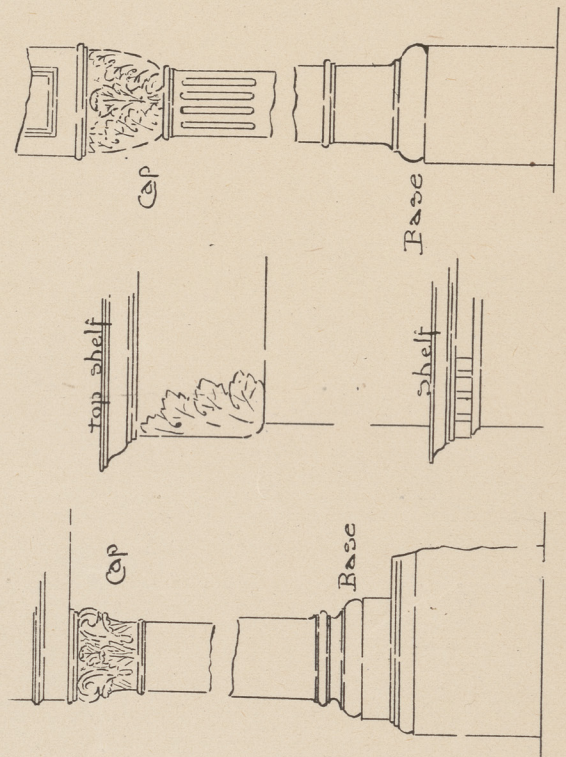


Wood Mantel

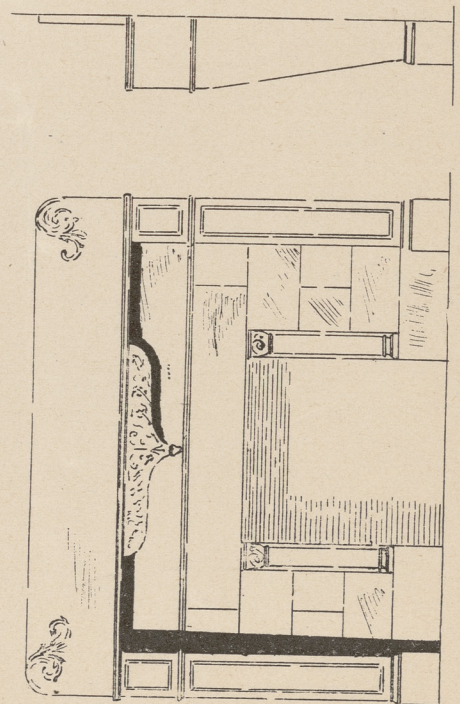
Wood Mantel

Brick Mantel

Submitted by 1890  
 scale 1 2 3 4 inches  
 scale 1 2 3 4 5 6 7 8 9 10 11 12 inches.

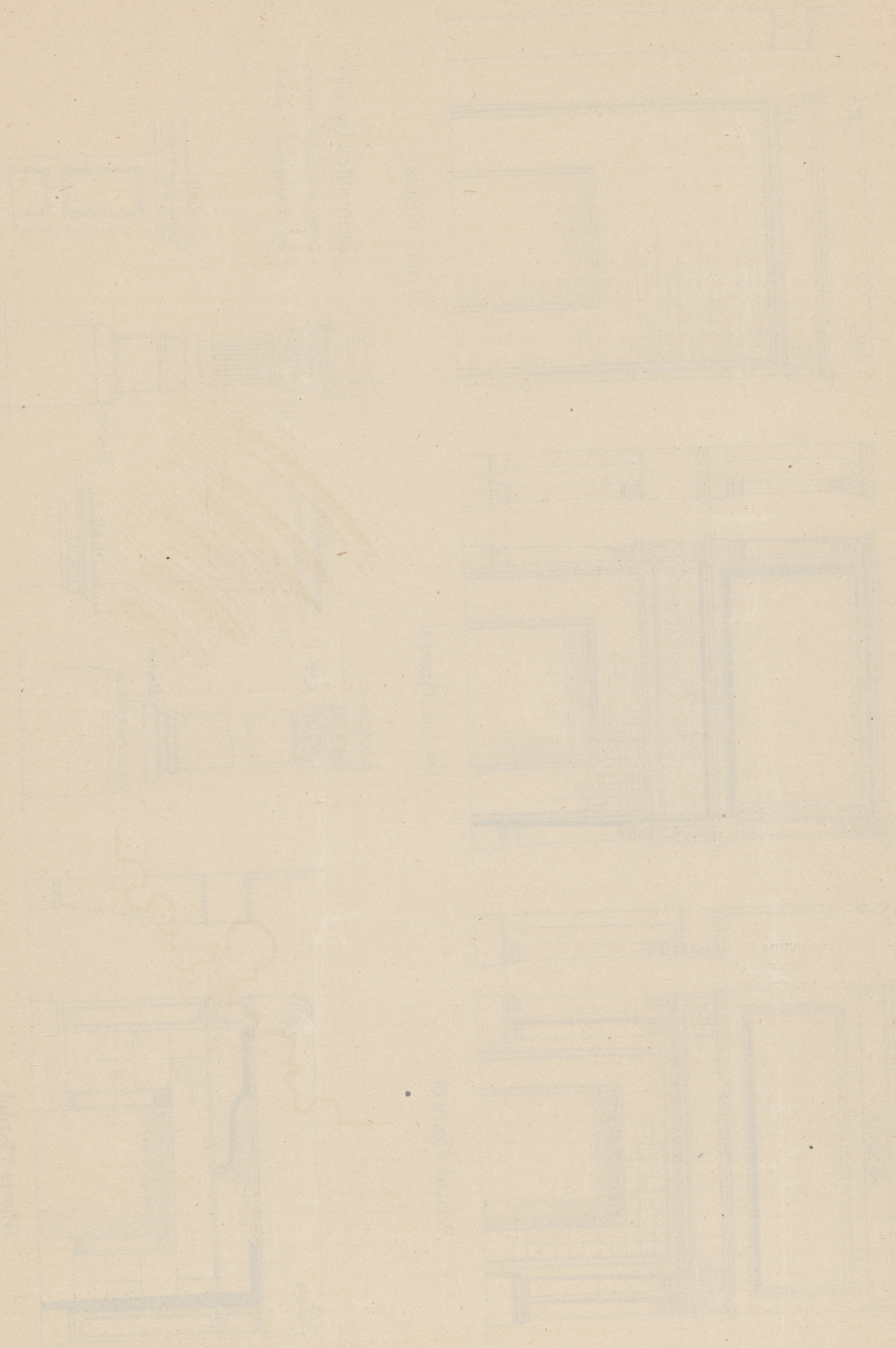


Details



Stone Mantel

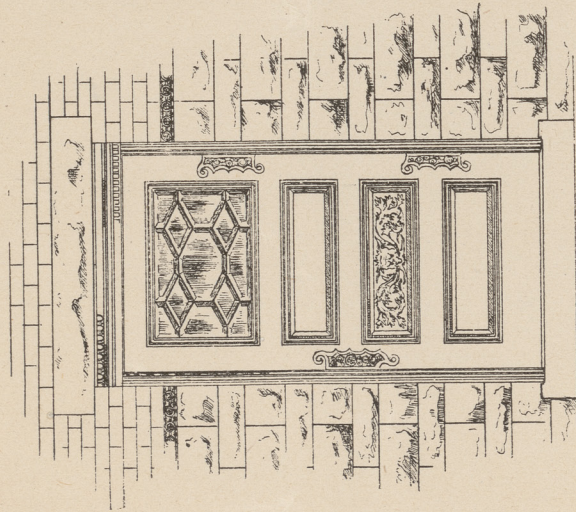




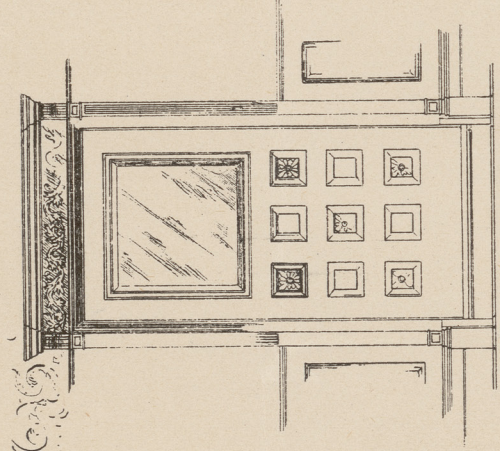


CANADIAN ARCHITECT & BUILDER COMPETITION · NO. 4 ·

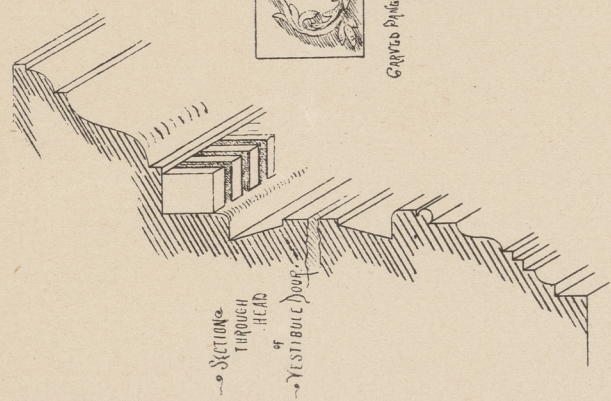
DESIGN SUBMITTED



FRONT DOOR



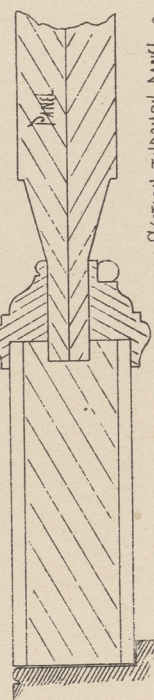
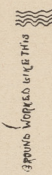
VESTIBULE DOOR



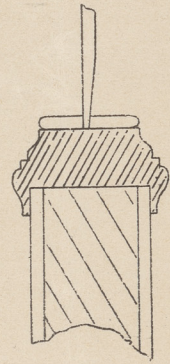
SECTION THROUGH HEAD OF VESTIBULE DOOR



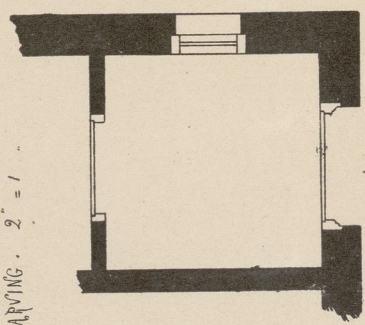
CARVED PANEL FOR VESTIBULE DOOR



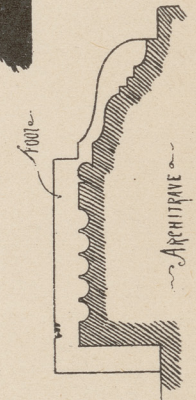
SECTION THROUGH PANEL OF FRONT DOOR



SECTION THROUGH GLASS PANEL



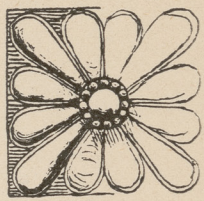
PLAN



ARCHITRAVE



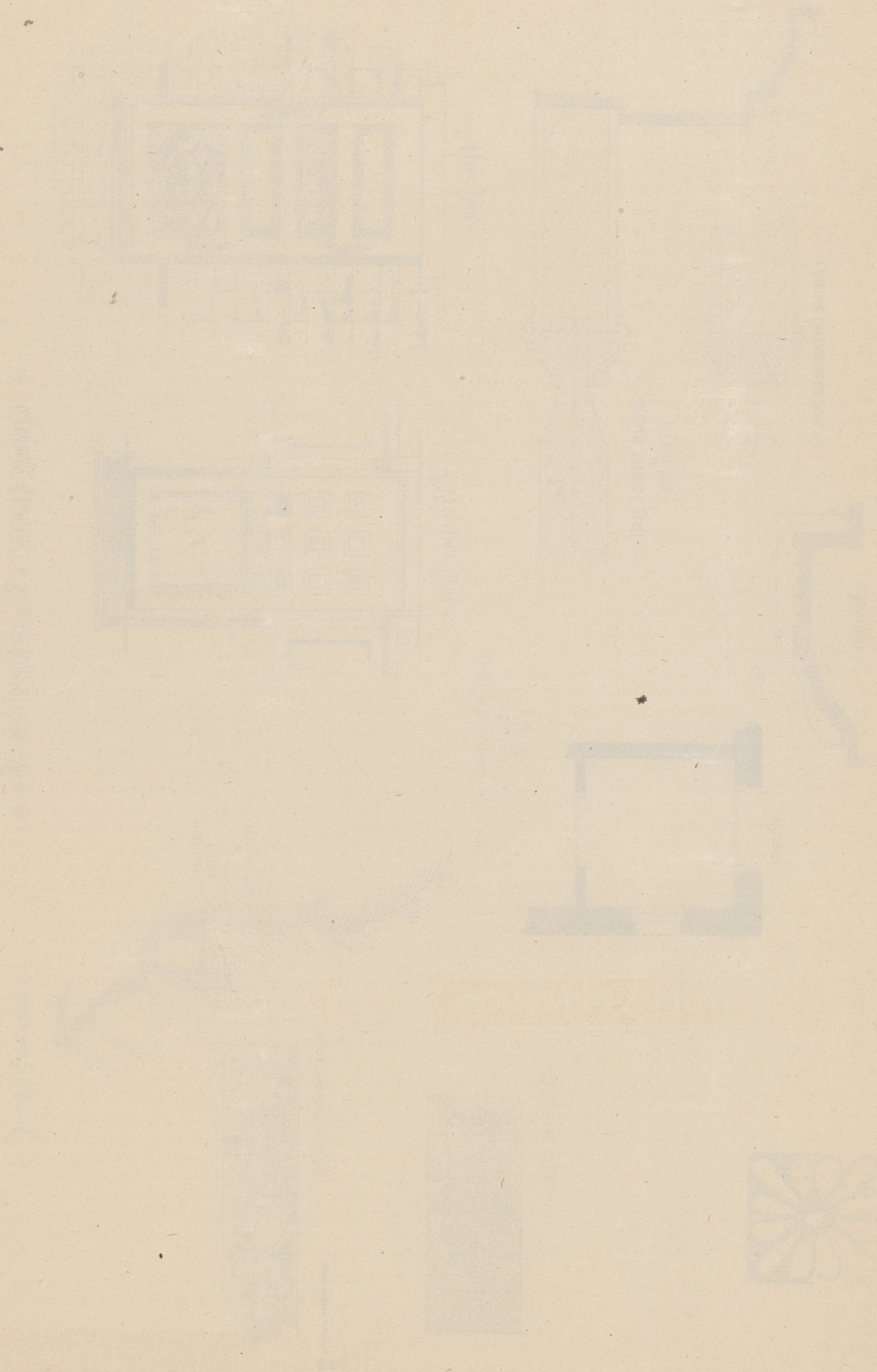
CARVED PANEL ON DOOR



CENTER OF PANELS, VESTIBULE DOOR

SCALE OF ELEVATIONS 1/2" = 1 FOOT  
DETAILS 6" = 1  
CARVING 2" = 1







1872

1873

1874

1875

1876

1877

1878

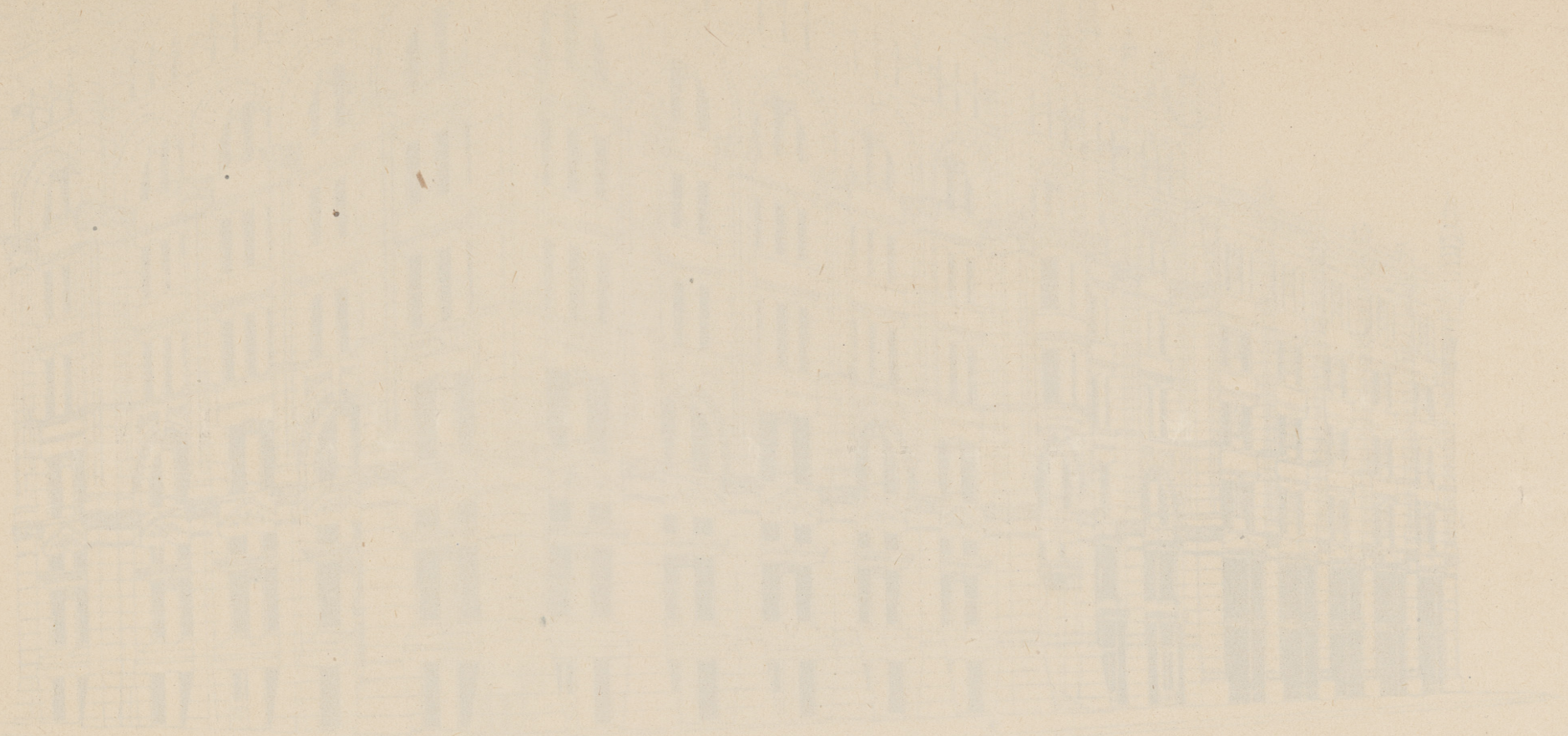




FOURTH PREMIATED DESIGN FOR CONFEDERATION LIFE ASSOCIATION BUILDING, TORONTO, ONT.

ALFRED FLOCKTON, ARCHITECT, MONTREAL, QUE.





Private Property of the Library of the University of California, Berkeley  
Acquired from the University of California, Berkeley



## RECREATION AND FURNITURE

### THE ARTISTIC IN ELECTRICAL WORK.

ELECTRICITY, says Kuhlow's German *Trade Review*, has been the means of creating a variety of new and beautiful illuminating bodies. A completely new ornamental principle has been brought into application. The ductile conducting wire can be turned and wound in all directions, so that the most fantastic formations are possible. Thus, there may be fitted in the corners and centres of ceilings, garlands and floral ornaments in colored bronze or in gilded and painted stucco, from the open flowers of which streams the electric light, or to such garlands colored glass lamps to contain the lights are added, by which the effect of colored precious stones is produced. The light hangs down in glowing clusters, or swings from the walls in festoons of flowers, or glitters in the hands of charming bronze boys, or like a galaxy of stars it hovers above that magnificent life-size female form, cast in bronze, from Eberlein's model. Free and unrestricted can the light be disposed of. Small wonder that the naturalistic creations receive the preference! The things at present created in such illuminating bodies are really magnificent. Here, a wall bracket in the form of a pineapple, on the crown of which are the lamps, like stamens with glittering nodes. There, a lamp of colored majolica with the rays of light glimmering with fairy-like beauty between colored metallic leaves and entwining plants. Countless is the variety, each more beautiful than the other. All the large establishments for illuminating articles hold similar charming work in stock. In numerous places of public assembly in the city many have already come into application. The impression created is of such an enchanting character, that it may with justice be claimed that in this wonder of loveliness the marvels depicted in the "Thousand and One Nights" seem again to be realized. In this beautiful work there is a hint for our artistic trades: new ornamental creations are not originated by the everlasting imitation of the ornamental forms of past periods of style, but by inventive skill and new necessities.

### "ART EDUCATION."\*

ALL children should be taught enough drawing to be able to express themselves readily with the pencil. Not with the purpose of making artists of them, but because such power is an enrichment of ordinary daily life. This study awakens an appreciation for beauty and truth and leads to higher ideals in conduct and workmanship. There is a yearning toward beauty in form and color as well as in sound and morals, and it is to this upward tendency of the mind that the wise educator will address himself. The higher our conception of material beauty, the higher will be our conception of moral beauty.

We, as a nation of peace, maintaining the smallest standing army in the world, in our public education are doing nothing compared with Europe to advance and ennoble peaceful occupations. What is being done by America toward fitting the people for adjustment of their relations to peaceful labor is being done wholly by private enterprise. Pratt Institute in Brooklyn, whose varied work is illustrated so beautifully in our city to-day, is maintained wholly by private enterprise and is training 1,500 young people to self-reliance and skill, the expense of them being merely nominal. Mr. Philip Armour, of Chicago, has in view the establishing of a similar enterprise in his own city.

"With the diminution of the hours of labor for the working-man rises the demand as to how he shall spend his time. Because more leisure is coming to people we must create, foster and nourish the desire for pure and elevating amusements, and this fostering of correct tastes must be begun in childhood and cared for under the state and civil authorities. Few studies can claim to do as much as music and drawing toward advancing children in paths of peace, obedience, and order, giving them

present happiness, future occupation and a constantly elevated enjoyment.

America must not judge herself nor her arts by standards of Greece and Rome, for the conditions of life now are vastly changed and much improved. We can not do, even if it were a thousand times better worth doing, anything well, except what our American hearts shall prompt and our American skies teach us, for all good workmanship is the natural utterance of its own people in its own day. The art life which is the result of this new industrial activity will come from the sure and gradual elevation that is the necessary outgrowth of universal purity of thought and action. Inspired by the purpose to educate and thus redeem the masses, to awaken and stimulate an appreciation of nature as the externalization of God's thought—dominated by the Christian idea—the leavening of the entire lump, the nation's aim shall be, not the development of intellect for intellect's sake, nor science for science's sake, nor art for art's sake, but everything for humanity's sake—to make humanity godlike.

## SANITATION AND PLUMBING

### IN WHAT RELATION SHOULD THE INTELLIGENT, TRUSTWORTHY PLUMBER STAND TOWARD HIS CLIENT IN THE SELECTION OF SANITARY APPLIANCES?\*

IT was with considerable hesitancy that I accepted the position assigned me by the chairman of the Sanitary Committee, Mr. Wade, as one of his colleagues, to assist in the work of the committee for 1890, for the advancement of ideas for the best interests of those in the trade. I felt that I was incapable of doing justice to the position, and that older members could accomplish the work with greater satisfaction to the association. The work allotted me requires years of experience as a master plumber; however, I believe that it is incumbent upon every one to do his share of committee work, and if he does not intend to do it, he should not accept the honor. Committee work is a feature of all organizations which is worthy of more attention than it receives, especially in our own, as its prosperity depends upon the activity of the members and the care and attention they give to the performance of the tasks required from them.

The subject assigned me for this evening is: "In What Relation Should the Intelligent, Trustworthy Plumber Stand Toward His Client in the Selection of Sanitary Appliances?"

The plumber of to-day should stand in the same relation with his client as the family doctor does with his patient, as an adviser. He should first inquire, when consulted about undertaking the plumbing of a house, what kind of a structure his client is going to erect, about the amount of money he proposes to expend in building a home for himself and family. After the information has thus been obtained, it is the duty of the plumber to advise his client of what he considers best for him to do, and which he thinks best for him to use in the line of sanitary appliances. This may prove a very difficult task, and it requires considerable experience. The plumber of to-day is not what he was twenty years ago. His surroundings are changed, and the trade has changed. At that time they all had the same ideas as to which was the best closet; now they have at least fifty or more to select from, and they all seem to do the work for which they are intended. Therefore, I think the plumber should use great care in advising what goods to select. He should not let his prejudice against any firm, which for some reason or other may have fastened itself in his mind, enter into the transaction at all. He should by all means advise his client to buy the best that money can get, as it is the cheapest by far in the end.

And now I come to a feature of the business which some of you may be inclined to slight, and think of no real value to the business. Every master plumber should have his own show-room, with a complete line of his favorite fixtures set up all complete and under water, so that he will be able to show his client the advantages claimed for the various designs to be correct.

\* Extract from paper, by Ada M. Laughlin, Brooklyn, N. Y., read before the National Convention of Teachers, St. Paul, Minn.

\* Paper prepared by the direction of the Sanitary Committee, and read before the Chicago Master Plumbers' Association, July 24, 1890, by Matthew L. Mandable, member of the Chicago Association.



As it is to-day, the plumber is null and void three times out of five, as the manufacturer is standing in the plumber's place. The manufacturer goes to great expense in fitting up a grand show-room, pays big rent and employs expensive clerks—who, by the way, deserve great credit for the able manner in which they display themselves when your client happens to fall into their hands. Seldom do they lose their sale, for they have got just what the plumber should have—their own specialties to show the public.

I do not wish to be understood as expressing myself maliciously toward any of our manufacturers while on this subject, but I do feel as though the plumber of to-day should endeavor to practice the good example which the manufacturer and jobber have placed before us. We can readily see how easy it is to make a sale when we have the goods to show. The plumber should have his goods to exhibit just the same as any other retail merchant has his goods, and I feel that we are coming more and more to this feature of the business every year. We have good examples of a dozen or more of our members who are awakening to the fact that it is a good thing to have a show-room fitted up with a nice line of sanitary goods. It is highly necessary at the present time for the plumber to stop and consider what position he occupies with his patrons and the public. A great many times he is ignored altogether, and often he is not considered the proper person to consult concerning the class of fixtures to be used. This should not be the case. The plumber should call attention to the fact that the plumbing is the most important work that is put into a building, and he should endeavor to influence his client in the matter of the selection of the best material. He should not be afraid to tell his client that certain goods which he is about to put in are not what he ought to have, that they are not the best fixtures, and try and have him get nothing but the best, so far as it lies in his power.

The curse of the plumber to-day is the cheap, shoddy goods, a big discount as their only recommendation, which supply dealers endeavor to foist upon the trade, the use of which should not be permitted; but as long as they can find buyers they will live and get rich, at the cost of the plumber. But he is himself to blame for this, as he well knows that a good article cannot be bought for the ridiculously low prices which some manufacturers make. It is the sale of to-day which they are after, and not the plumber's benefit; and as long as you buy their goods, they will continue to live. It would be a blessing to the public, as well as the plumber, should the cheap man be wiped out of existence and buried forever, to return no more. Once upon a time goods were sold on their merits, but now the cry is, "How cheap can I sell them?"

#### ARCHITECTURE.

ARCHITECTURE is a tradition, is a science, and is an art. Inasmuch as it is a tradition, it necessitates a knowledge of the past, where there is an inestimable treasure-house for those who have the key. Being a science, it demands that a knowledge of the resources of construction should be at the disposal of an architect, as also a knowledge of how to most satisfactorily employ these resources. Finally, since it is an art, architecture belongs to the domain of esthetics, which, however, does not here consist of a purely metaphysical elaboration, but rather of a precise and clear expression of the scientific necessities combined with an artistic sentiment in harmony with modern civilization. We shall in this paper, examine briefly the first of these three phases of architecture, reserving the two last for the future.

Architecture, by the visible evidence of the growth of the successive styles, forms a link between the civilizations of the past and that of to-day, although it is a link which has escaped the attention of historians, because architecture is generally ignored by them.

This property of our art of attaching the past to the present by a visible chain, gives it, in addition to the qualities it has, all admit, an importance and a grandeur of character which, it is to be regretted, are not better known and appreciated by the public and especially by our profession. Upon this very fact should be based an argument against fragmentary instruction in the styles of architecture. Instruction limited to the serious study of only one style of architecture hides, not only the unity of the general evolution of our art, which thus ceases to be the constant and faithful reflection of human development in past ages, but also it falsifies to a certain point the style which is being taught. That very style is left isolated like a rock in the midst of human

development without any comprehensible beginning or end; instead of itself being, as it is, a living thing developing and growing on lines parallel to man himself.

Each style of architecture being born of the intellectual and moral forces of a human society which seek to work for its profit in its best manner, the constructive resources at its disposal, each style of architecture, I say, has become naturally the expression of a certain civilization, that is to say, of a certain social and religious doctrine, and consequently will not serve as an expression of two distinct civilizations. The using again of a style of architecture, or the adoption by one age of a style as its own other than that which it has itself created, is hence in itself a false principle.

This adoption, or renaissance, which cannot be more than temporary, is, however, easily explained. At epochs of social transition like our own, or like that at the time of the Roman empire, there exists a conflict between the past which some wish to retain, and the future which others wish to prepare for or enforce before its time. This conflict renders the creation, or even the preservation, of a style impossible, since every style being the expression of an accepted social doctrine presupposes all to have the same general esthetic taste.

At present there is no general agreement as to the social doctrines that should be adopted. The old doctrines are indeed falling into decay, but the new has not yet been entirely formulated, much less generally accepted. Hence there is a struggle between the past and the future, from which for the moment results the impossibility of creating a new style of architecture, or even adopting for the time being any one of the old historic styles.

One can, however, foresee the approach of a new style, and even catch glimpses of its essential characteristics. But, while awaiting its final advent, which must be accomplished by slow steps as society changes from day to day, every architect should search in the practice of his art wherever he believes he can find assistance, whether it be from such and such styles of the past, or whether it be from all these different sources at once, but without other guide for his choice than good common sense, or the absolute requirements of his clients.

We shall come out of this temporary disorder as soon as the social doctrine of the new era shall have been definitely settled. Let no one think that this waiting shall be indefinitely prolonged, for from all quarters we hear the echoes of this incessant work of elaboration. If, then, we do not yet possess this doctrine in its clear and incontestible unity, we at least see plainly the tendencies, and it is these tendencies which the architect ought at this hour to study attentively and do his best to express in his work.

He may then take for the basis of his composition whatever style he will; he is free, but he must also respect the liberty of others. The different schools which formerly represented distinct artistic doctrines, and which are now scarcely more than groups, whose members are united by natural tendencies or habits, ought also to be tolerant toward each other, as all are already respectful toward science and disposed to profit by all the inventions of our improved industries.

Can one not see by these signs of the times, by these numerous points of contact, which already bind the different schools one to another, the approaching unity of all schools of architecture?

They will rally about one science of which all will accept the laws—about one esthetic centre and about one industry, which all shall put to their own profit.

The sun is yet below the horizon, but already the clouds reflect the first rays. The rising sun of the new art—I have the firm conviction—will rise in its splendor, before the delighted eyes of our near descendants. I wish to be a prophet for once in my life, although I must here acknowledge that my prophecy is only the logical interpretation of the history of the past and of the observation of the present times.

I hear at this point the voice of some practical reader who cries halt! and who insists upon the fact that ordinarily an architect has to live by his work, and has scarcely the leisure to devote himself to the studies I recommend. He is right, a thousand times right, and it is for this reason that I have demanded, and always shall demand with such instance, organizations for the *higher studies of architecture*. This would be the formation of a special group of workers devoted to research and the exposition of everything which is of a nature to contribute to the progress of science whose forces must be given to the architect, by means of methods calculated to spare his time, without, however, allowing him to lose any of the practical utility of these durable aids.

They should also aid in competitions by keeping the requirements always to the highest level of all discoveries as rapidly as they are made public.

They should enlighten the practical workers upon the best organization of workshops, etc.

The higher studies would give the strength of conscious unity to the different efforts made in view of our progress, and they would exercise a valuable influence upon instruction as well as upon all the practical branches of our art.

Its first benefit would certainly be to create unity in the histori-



cal studies, and to classify with order the invaluable jewels which are contained in the traditional treasure-house of architecture.

The five per cent., my practical friend, is alluring and necessary. I acknowledge it. I even find that its defect is its being often insufficient remuneration for the work performed. But ought we to stop on that account? Do you disdain all progress in art? Are you indifferent to public opinion and, consequently, to what is recognized as grand in architecture, and true merit in architects? Assuredly not. Let us then together all demand the organization of the higher studies in order that the architectural traditions shall be better understood, and the instruction be improved so that work shall be made easier for the practising architect. Also in order that the public may be as earnestly taught the moral and intellectual importance of architecture as well as its practical utility, so that they may appreciate at least the numerous points which a good architect should possess.

By this means, the country, our profession and art, would have everything to gain, while those who devote themselves to the higher studies, assisted but not bound down in their efforts by an intelligent government, would indeed deserve much from us all, since they consecrate themselves the difficult task of being the pioneers of architectural progress.

The question of the higher studies has turned us a little from that which at the beginning of this article we wished to examine. and it is time to classify our conclusions as to architectural tradition, as follows:

1. To study the prehistoric architecture as the period of the embryo, which is destined later to develop into the regular style.
2. To study at first separately the special evolution of each style, by showing clearly the action of the three factors which have contributed to its creation, its development and its decadence. The relations of each style to the civilization which produced it will then be established, and then would be shown its connection with the social, religious and artistic doctrines, also with the government. Also the scientific and industrial knowledge of the country and its products, as well as the climate and race under whose influence the style was evolved, will be then indicated.
3. To study afterward all the styles in their historic continuity through the different ages, and in the order of their logical classification, comparing them with each other. To study them with relation to the countries and races until the history of the race is sufficiently well known. To then cause to pass before the eye as completely and faithfully as the science permits, and in a continuous panorama, the evolution of the "humanity architect" from its origin to the present day.
4. Finally, to note the tendencies of progress, which are plainly marked in contemporaneous society, and explain them in the light of these tendencies upon architectural progress. It is thus that upon the majestic pedestal raised by the ancient civilization will be gradually constructed the figure of the new architecture, the symbolic expression of the modern world.

In the future we may examine the two other factors in architecture, i. e., that of science and that of art.—J. Caesar Daly in *La Semaine des Constructeurs*.

It is said to be the intention of Messrs. James Stewart & Co., of Hamilton, to engage in the manufacture of soil pipe.

Messrs. Joseph Lea, Joseph Mickleborough and J. J. Blackmore are the projectors of a new company which is about to commence the manufacture of water pipe at St. Thomas, Ont.

We regret to make the statement that Messrs. M. Staunton & Co., wall paper manufacturers, of Toronto, have been compelled by dullness of trade and keenness of American competition to make an assignment. The creditors have agreed to a compromise of 50 cents on the dollar.

Mr. Hansen, the patentee of the chimney topping advertised in this journal, in sending out circulars recently to Canadian architects and builders, gave the name of the Canadian manufacturers as being "The St. John's Drain Pipe Co.," instead of "The Standard Drain Pipe Co.," of St. Johns, Que. Our readers when opening correspondence with the company, will please note the correct address.

## MANUFACTURES AND MATERIALS

### A SENSIBLE FASHION.

THE *St. Louis Lumberman* remarks that for some years back it has been a frequent thing to hear people talk about the "craze" for oak. The large use of it was set down as due merely to a passing fashion, and as having no more solid and enduring foundation than the caprice of the public. It was said to be only a "fad," which the next new moon would in all probability bring to an end. There can be little question that through this characterization of the popular taste for oak the impression got abroad that the demand could not be relied upon from one season to another, and that it was not a safe basis upon which to make large calculations respecting the future of the business. Latterly the notion has begun to give place to a conviction that the fancy for oak is not a fad nor a craze, but one of the necessary results of the improvement in the popular taste. The beauty of natural wood for all finishing and ornamental purposes has come to be appreciated, and this appreciation gives assurance that oak will be a leading favorite so long as wood is esteemed of value for its beauty of colour and grain. The course of the development of the artistic sense cannot be backward; it may make slow progress, and fly on many a discouraging and inexplicable tangent, but withal it still moves on and the process of time shows that some things are gained never to be lost. We believe it is safe to say that a hearty liking for oak is one of these. It is so sensible a taste, and so good a one that it cannot degenerate again into the barbarism of white and mottled colored paints as a substitute for the unequalled variety of figure that natural oak affords. While a taste for beautiful wood endures, oak cannot but stand at the head of native timbers. There is none surely that surpasses it in richness of colour, fineness of grain or susceptibility to the most delicate treatment of the finisher. It fills every requirement of a finishing or cabinet wood. It is beautiful, and the most durable of any available material for such purposes. Strong as the strongest and hard as the hardest, its comparative abundance and cheapness opens for it a field that reaches from the cheapest of factory-made furniture to the finest cabinet work and finish that can be fashioned by human hands. Will this not insure for it a certain market in the future and a large one too?

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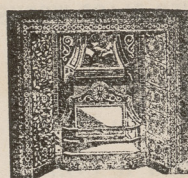
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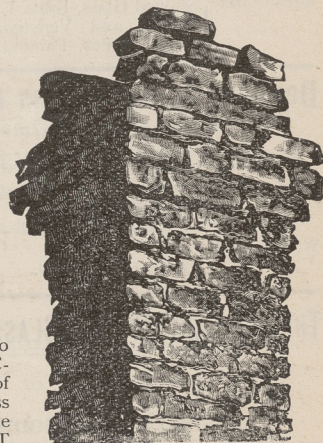
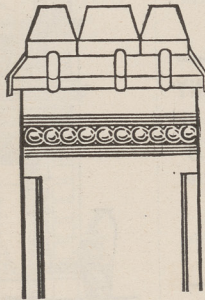
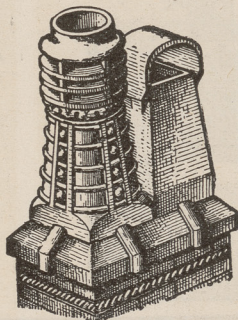
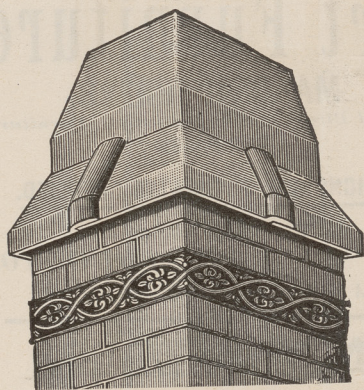
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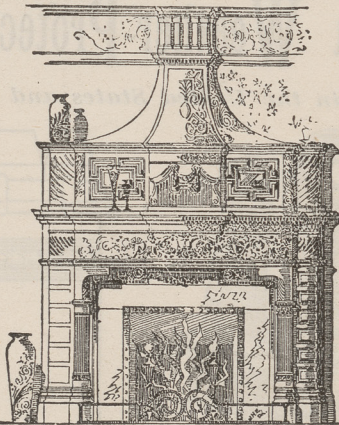
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