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VOL. XIII

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ILLUSTRATIONS.

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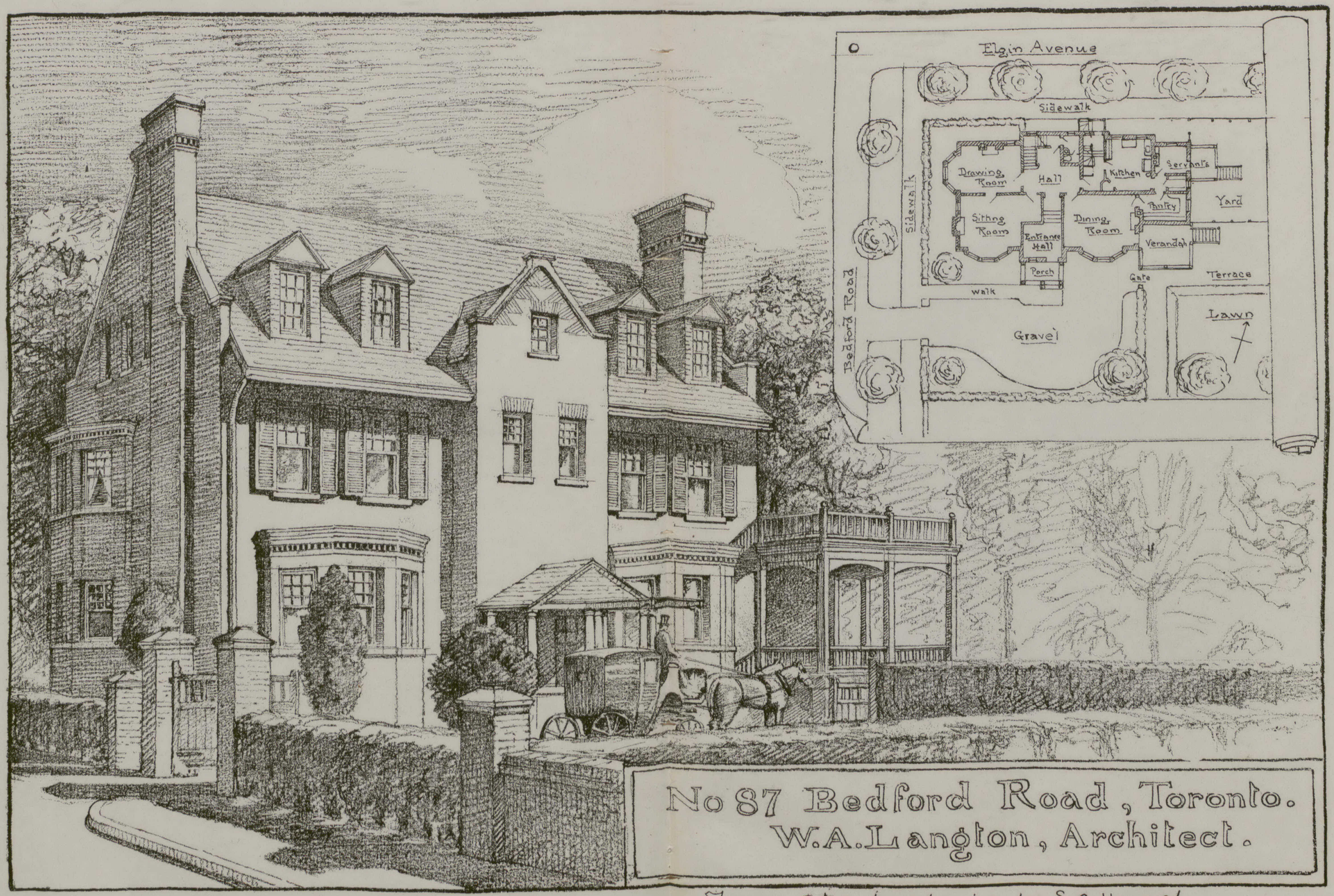


No 87 Bedford Road, Toronto.
W.A. Langton, Architect.

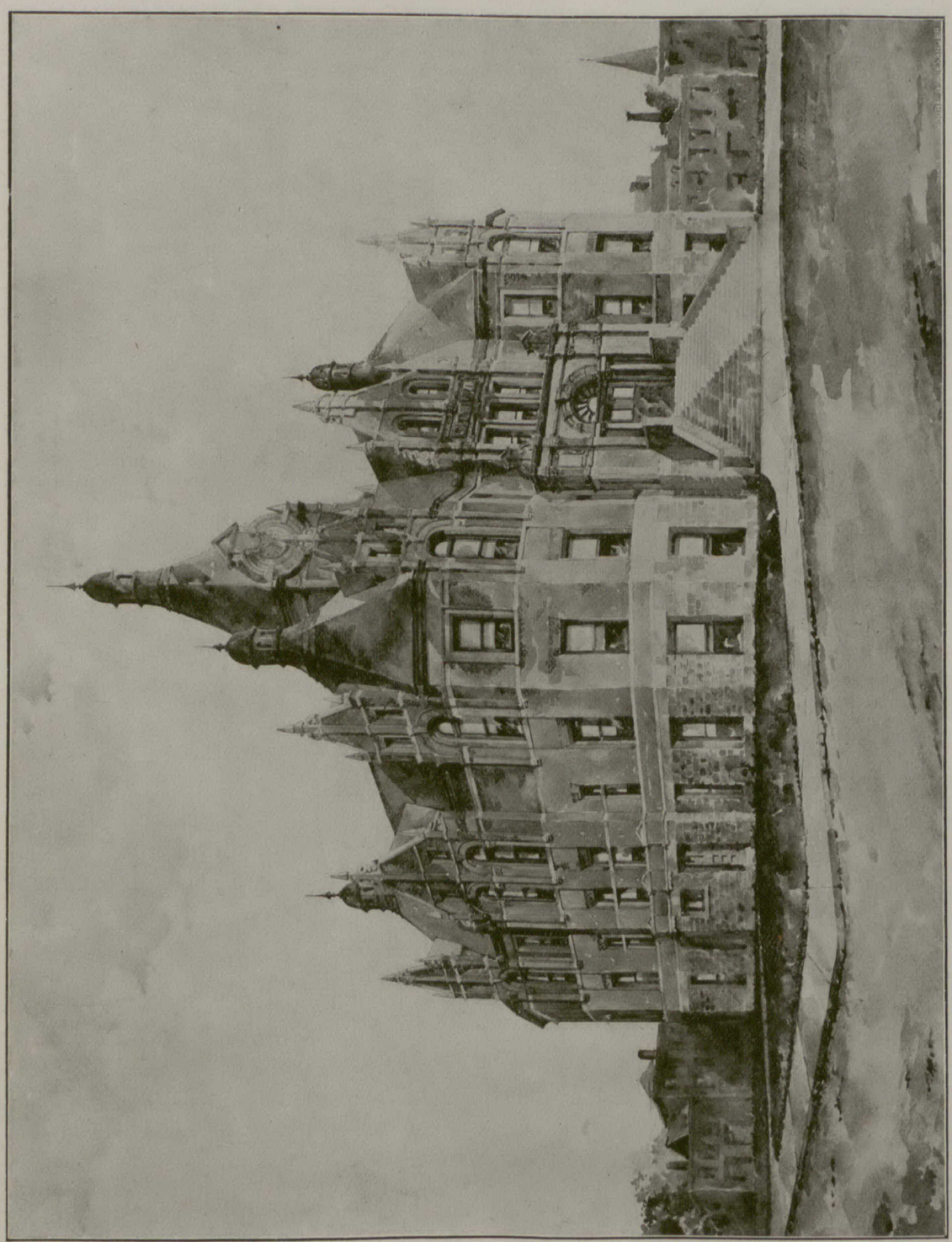
From a water colour drawing by S.A. Heward

MR. A. FRANK WICKSON,

PRESIDENT ONTARIO ASSOCIATION OF ARCHITECTS.

BUSINESS PREMISES ON KING STREET WEST, TORONTO, FOR MESSRS. JOHN KAY, SON & COMPANY.

S. G. CURRY, ARCHITECT.



CITY HALL, STRATFORD, ONTARIO.
J. W. SIDDALL, ARCHITECT.

THE "MARLBOROUGH" APARTMENT-HOUSE
MILTON ST. MONTREAL
MESSRS. TAYLOR & GORDON, ARCHITECTS
MONTREAL

CANADIAN ARCHITECT AND BUILDER.

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—THE—

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

PUBLISHED ON THE THIRD WEDNESDAY IN EACH MONTH IN THE INTEREST OF

ARCHITECTS, CIVIL AND SANITARY ENGINEERS, PLUMBERS, DECORATORS, BUILDERS, CONTRACTORS, MANUFACTURERS OF AND DEALERS IN BUILDING MATERIALS AND APPLIANCES.

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EDITOR'S ANNOUNCEMENTS.

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

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Legislation Affecting Builders.

THE builders' organizations of New York and Buffalo have appointed a committee whose duty it will be to watch all new legislation and prevent the enactment of measures which would operate to the disadvantage of the building industry. This is an important step in the right direction which should be taken by the various builders' exchanges in Canada.

Destructive Effects of Earth Currents.

ENGINEERING, of London, in a recent article, refers to the disturbance caused at St. John's College, Oxford, by stray currents emanating from dynamos in the building. Reference is also made to the Toronto Observatory, where the delicate recording mechanism was so seriously affected by the current employed on the street railway lines 700 feet distant, that removal to new location several miles east of the city became necessary. In the construction of the new building the stone was mechanically tested, blocks showing traces of iron being rejected. In the Cavendish laboratory at Cambridge, even the hot water pipes are made of copper. Notwithstanding every precaution, however, it is stated that several of the prominent observatories, including the national institution at Greenwhich, are seriously affected. The most certain remedy, although a costly one, is that adopted by the Toronto Observatory. The purpose

of the Toronto Railway Co. to weld together the ends of the rails throughout their entire system, should greatly lessen the escape to earth of return currents and the destructive effects of the same. Engineering suggests that a remedy may also be found in the use of aluminum conductors, but of this we are not sanguine, as aluminum is not well adapted for use in cities, where the injury from earth currents is greatest.

Students' Competition.

ARCHITECTS are requested to direct the attention of their students to the competition, particulars of which are given in the Students' Department of this number. It is hoped that there will be manifested such an interest by the students in this competition as that we shall feel encouraged to provide for others of a similar character. Architects who feel an interest in the advancement of their students, should direct their attention to this competition and urge them to enter. The subject should be a particularly interesting one to young men, most of whom will no doubt be quite familiar with the requirements. Let none be deterred from engaging in the competition by what may appear to them to be the difficulty of the problem. Whether they should chance to win or fail, they will greatly profit by the time and study which they will have devoted to the subject.

Building in 1899.

PRESSURE upon our space prevents the publication of a detailed statement of building operations in Canada during 1899. The reports to hand, however, show that great activity prevailed and that in the cities and more important towns improvement was the order of the day. This is a natural result of the prevailing commercial prosperity. The extent of building improvements was considerably reduced, however, by the impossibility of securing necessary supplies of structural steel. The unprecedented rise in price of certain lines of staple materials, the increased rate of wages and reduction of hours demanded by artisans, made it difficult for contractors to obtain a fair margin of profit on their undertakings. As an offset the unusual mildness of the weather has permitted operations to be continued almost without interruption until the present, and there can be but a short gap between the seasons. The outlook appears to be very satisfactory.

The Ontario Association of Architects.

THE convention of the Ontario Association of Architects held in Toronto last week, the full proceedings of which will be found in this number, was one of the most important in its history. It was realized that the time had come when radical changes in the policy and plans of the Association were required. Several recommendations of the Consulting Committee were in line with suggestions presented of late in these columns. The Association also received with courtesy and consideration the opinions and suggestions of the 18 Club, and the members of that organization were cordially invited to join hands with the Association in carrying into effect the necessary reforms. There was a general agreement of opinion that a system of education for students should be an important feature of the future work of the Association, and that it be made a condition of studentship that students shall pursue the course of study and pass the qualifying examinations prescribed by the Association. This policy, if strictly adhered to, must result in great advantage to the students and the cause of Architecture. The proposal to adopt the atelier method of instruction for students is a valuable and perfectly feasible one. The decision to have as the headquarters of the Association suitable rooms in the central part of the city is a necessary feature of the educational scheme and should bring into closer relationship the members and students. If as Mr. Hynes stated, one of the exhibitions under the direction of the Architectural League of America can be brought to Toronto next year no time should be lost in arranging the matter. The holding of such an exhibition in Toronto would awaken in the profession, the students and the public, an interest and enthusiasm in Architecture which must conduce to progress and the welfare of the Association. This important matter should not be lost sight of, nor should action with regard to it be delayed, lest the opportunity be lost. It is to be hoped that the joint committee of the Association and the 18 Club, appointed to consider in detail what should be the plan of action for the future, will get to work immediately and be able to see eye to eye, and that in consequence all the members of the Club will shortly connect themselves with the Association and assist in its upbuilding and the advancement of Architecture in Canada. If this course be taken, the future is full of promise.

BY THE WAY.

THE project for the erection of a palace hotel in Toronto seems to have dropped out of sight. In view of the recent advance in the rate of interest it would seem that the promoters of this enterprise have lost for a time their opportunity.

× × ×

IN the construction of modern tall buildings in which stone and brick are employed as covering for the steel skeleton, it has become the practice in Pittsburg and New York to carry forward the brickwork of the upper stories simultaneously with the masonry on the lower stories. By this method a large saving in time is affected.

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THE Mayor and City Commissioner of Baltimore have recently defined the difference between a bow and a bay window. Bow windows are defined as those used by merchants in displaying their goods, and bay windows are those placed on private dwellings for purposes of adornment or comfort. An annual rental, according to locality, will be imposed on the former, while the latter must be paid for outright.

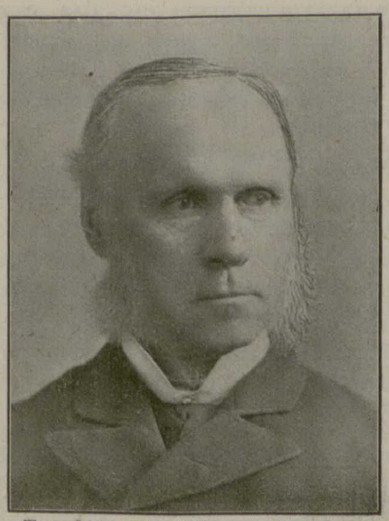
× × ×

A NEW method of employing Portland cement is in connection with the rehabilitation of dilapidated frame buildings, the foundations of which are good. The modus operandi consists of refinishing the walls in wood and then covering the entire outside of the building except door and window openings with expanded metal, on top of which is laid a coat of Portland cement mortar, finished in any suitable manner. This method of reconstructing old buildings has been employed for a number of years in San Francisco and of late has been adopted in Chicago.

The governments of Nova Scotia, New Brunswick, and Prince Edward Island, are considering the establishment of a School of Technology at some convenient point in the Maritime provinces.

WALTER SHANLY.

With the death of Mr. Walter Shanly, at Montreal, on December 17th last, there passed out of life an interesting personality. The late Mr. Shanly was widely known, not alone as an eminent engineer, but as one who once occupied a distinguished place in the commercial and political life of the nation. Born in Queen's County, Ireland, in 1819, he came with his father to Canada when a youth of 17, and adopted the engineering profession. He was employed on the Beauharnois and Welland canals and on American railways until 1850. In that year he became engineer of the Ottawa and Prescott Railway, in 1851 engineer of the western division of the Grand Trunk Railway, and in 1858 general manager of the latter system. In conjunction with his brother, the late Frank Shanly, he built the celebrated Hoosac Tunnel. His advice was highly esteemed as a consulting engineer in connection with many important undertakings. He was for some years president of the Mechanics' Bank, and was a member of the delegation of representative Canadians to the Detroit Trade Convention of 1864. From 1863 until Confederation he was a member of the old Parliament of Canada,



The Late Mr. Walter Shanly.

and sat in the first, fifth and sixth Parliaments after Confederation. He was a life-long friend and supporter of the late Sir John Macdonald. His remains were interred at London, Ont.

T SQUARE CLUB OF PHILADELPHIA.

We have received from this Club the catalogue of their exhibitisn of 1899-1900. It is a really valuable publication, and the T Square Club is an institution to inspire hope for the future—the near future—of American architecture. It describes itself as "a working man's club," but the bond seems to be more than merely a common profession ; there seems to be a common aim—to follow lines not of convention but of development. In the exhibition to which this catalogue is a guide they have got together a collection of drawings by American, English, and a few French architects, which represent work in a diversity ot manner, but all good of its kind, and some of the drawings are wonderful. This collection of drawings, (505 in number, of which about 120 are reproduced in the catalogue,) appears to travel from town to town, between affiliated clubs, during the year. The drawings are evidently selected with great care, either by a hanging committee or in the first instance at the office of the exhibitors. The travelling representatives in England and France have no doubt had the opportunity of marking their catalogues at exhibitions in London and Paris and afterwards begging from the exhibitors the selection thus made. The circuit of the drawings in this collection is arranged by the Architectural League of America, which seems to be a machine for obtaining combined action upon points of common interest by architectural clubs or societies of diverse character.

Whatever the other clubs of the league may be like, there is life in the T Square Club. They have besides this annual exhibition a travelling fellowship for which is appropriated "a sum to be spent in a few months of European travel under the direction of the Club." The competitive test for the fellowship is not an examination, but a series of competitions upon the same theme. Each competition is upon a part ; the plan, elevations, the grouping of parts, the grasp of the problem as a whole. In the last two competitions improvements on the original design are allowed which would naturally be suggested in the process of making the drawings, and for the sake of which such drawings are, in actual practice, made. Each competition is judged by itself independently but the award is made on the average for the year ; that is to say upon the whole effort. The subject for this year, a Semi-Suburban Residence near Philadelphia, is characteristic of the Club. Last year there was incorporated with the catalogue a number of letters from prominent architects of the United States, in answer to an enquiry as to the possibilities of "an unaffected school of modern architecture in America." The competition this year offers a local, practical problem exactly calculated to direct the efforts of draughtsmen in the way of the modern development of old motives which should be the way by which an unaffected school of modern architecture will grow.

The T Square Club works not only at the art of architecture but takes a hand also in efforts to establish system and morale in dealings between the profession and the public, especially in the matter of competitions ; and it is endeavoring to procure competition for certain public buildings in various cities and towns of Pennsylvannia under the operation of the Tarsney Act which gives discretionary power to the Secretary of the Treasury to select local architects to enter into competition for such buildings.

Here is a live Club in the best sense ; it is alive in the right directions. It is pleasing to see that there are two contributors from Toronto to the exhibition. We may perhaps hope that not only the aims of the Club are growing our way but the circuit of the exhibition of drawings.

NOTES.

The Trades Unions of Chicago have become so unreasonable in their demands that the architects and contractors of that city are said to have joined hands for the purpose of breaking up the power of the walking delegates.

The city council of Ottawa have appointed the Mayor as the city's commissioner on the board which is to control the expenditure of the grant of $60,000 per year voted by the Government for public improvements within the city.

The city solicitor of Toronto has been instructed to memoralize the courts to declare the Elliott & Neelon contract for the erection of the city hall closed, and to give a winding-up order which would permit of the disposal of the plant.

At the last meeting of the Provincial Board of Health of Ontario it was decided to investigate the need for adopting accurate and systematic means of ventilation for schools and other public buildings. The result of the enquiry will be reported at the next meeting.

The report of the Committee appointed by the Ottawa Board of Trade to consider what amendments should be made to the Building By-law of that city, came up for consideration a second time recently and gave rise to a somewhat heated discussion. The President of the Board was strongly in favor of the adoption of the report as printed in the Canadian Architect and Builder for November. Several of the city architects also supported the report, which, however, was strongly opposed by some of the local contractors. It was ultimately resolved that it should be again referred back to the Committee for revision.

Mr. John M. Byrens, architect, of New Westminster, B.C., has invented a device called a "storm lath" for the purpose of shutting out draughts from windows. It consists of a strip of zinc an inch or two wide, which, on being passed through a specially manufactured machine comes out with a V-shaped ridge down the centre. This is then fitted tightly into the window frame, if desired, on the sides as well as across the sill and the top, and when the window is lowered this joint fits snugly into a corresponding groove in the edge of the window. By its formation a small air chamber is formed, which has the same effect as double windows. A company has been organized and has commenced the manufacture of the device in New Westminster.

ILLUSTRATIONS.

CITY HALL, STRATFORD, ONT.—J. W. SIDDALL, ARCHITECT.

BUSINESS PREMISES, KING STREET WEST, TORONTO, FOR MESSRS. JOHN KAY, SON & CO.—S. G. CURRY, ARCHITECT.

NO. 87 BEDFORD ROAD, TORONTO.—W. A. LANGTON, ARCHITECT.

This house, at the south-east corner of the junction of two streets, is on a lot of which the greatest length is east and west. The house is kept at the outer end of the lot, so as to keep the land which is not built upon together in one piece on the private side of the house ; and it is set on the north side of the lot so as to leave a space which converts the house into a south fronting house, with its sunlight unobstructed throughout the year, and which allows a carriage to be brought up to the door. The material is red common brick toned in color by full joints of gray mortar. Sills and coping are of Ohio stone.

THE " MARLBOROUGH " APARTMENT HOUSE, MONTREAL. —MESSRS. TAYLOR & GORDON, ARCHITECTS.

The " Marlborough " apartment house is now under construction, and will be completed by the first of May. It is situated on Milton street a few yards from University street close to McGill College and with beautiful views of the mountain and has a frontage of 110 feet.

The architects of the building are Messrs. Taylor & Gordon, of Montreal, under whose supervision the work is being carried out.

The style of architecture is Elizabethan, characterized chiefly by its graceful towers, picturesque outlines and free ornament. The building is three storeys high and basement, except in the front, which is carried up another storey to provide four suites for artists, with two large, well lighted studios, each 30 x 18 feet.

The facade is carried out in red pressed brick, set off by rich cream colored sandstone trimmings. The main entrance facing Milton street is elaborately treated and finished in sandstone, effectively carved, with handsome wrought iron lamps on either side. A broad flight of marble steps in the main vestibule leads up to a spacious and well lighted entrance hall, paved with marble mosaic and completely finished in quartered oak. On the left is the waiting room, from which communication can be had to each suite by means of speaking tubes.

Opposite the waiting room is the janitor's office, where the telephone for the use of tenants will be placed.

The building is so planned that every room has direct light and air, the use of light wells of any description being entirely done away with.

The three main staircases of the building are entirely carried out in iron and marble, encased in brick walls, with all the landings finished in mosaic, thus rendering the staircases completely fireproof.

The building contains twenty-seven suites of apartments as follows : Six suites with 9 rooms each, including kitchen ; six suites with seven rooms ; six suites with six rooms ; five bachelor suites comprising sitting-room, bed-room and bath-room. On either side of the main entrances on the ground floor are two suites suitable for doctor's offices, and on the top floor facing Milton street are the artists' studios already referred to.

In the centre of the building is a large open court, 60 feet long by 30 feet wide, which will be laid out in grass with a fountain in the centre.

The floors of all the halls and principal rooms in each suite will be of hardwood. The floors of all the public halls throughout are paved with mosaic.

The drawing-rooms and sitting-rooms of all suites have open fire-places with tiled facings and hearths and Elizabethan mantel-pieces.

Each suite is well provided with clothes closets, in addition to linen closets, store closets, etc. It is expected that the larders will be fitted up with a system of cold storage, operated by the ammonia process from the basement.

The heating, plumbing, sanitary appliances, and ventilation of the building are up-to-date in every respect.

The bath-rooms of each suite are fitted up with enamelled baths and marble basins, the hot water being supplied from the boilers in the basement.

The rooms of all suites are ventilated by means of ventilating shafts. The building is heated by hot water and lit by electricity. The tenants will find the dust-chutes provided for each kitchen a great convenience.

In addition to other conveniences, each suite is provided with an open balcony, and also store rooms in the basement for boxes, trunks, &c. There is also adjoining each stair a lift for trunks and for tradesmen's supplies, etc., with speaking tubes to the several suites.

Such are a few of the attractions and advantages of the latest addition to Montreal's apartment houses.

Mf. A. F. Gault, who is the owner, is to be congratulated upon his enterprise in providing what will undoubtedly be cosy and comfortable homes, suited to the varying requirements of residents. Mr. Stanley H. McDowell, 21 St. Helen street, has charge of the enterprise in Mr. Gault's behalf.

QUESTIONS AND ANSWERS.

AN Old Subscriber writes : " There was an article in your October number, referring to a method of roof trussing, that I was rather astonished that you should have published. To my view it appears to be a very faulty piece of building construction, as the weight of the roof is thrown upon a 2" x 6" lookout, instead of directly on the walls where it should come. I, with other builders, look upon the CANADIAN ARCHITECT AND BUILDER as an educator in building construction, and hope you may continue in the good work, notwithstanding your one mistake in your October number."

ANSWER.—Evidently our correspondent has not carefully examined the truss he takes exception to, or he would have arrived at very different conclusions. The weight of the roof does not rest on the lookout as he asserts, but on the inside stud which conveys it again to the inlook which rests vertically on the wall, thus taking off all lateral thrust from the walls. The outlook and inlook combined, rest square on the wall, and the whole weight of the roof centers directly on the top of the walls with a vertical pressure. This method of half-trussing has met with favor with many American architects, and has been copied in several journals. The London Building News, one of the best building authorities in England, reproduced the illustration referred to, and gave it its great approval. If our correspondent will examine the illustration again, we are inclined to think he will change his mind.

CORRESPONDENCE.

THE TORONTO TECHNICAL SCHOOL AS AN INFORMATION BUREAU.

THE manager of a prominent manufacturing company in Toronto writes as follows:

"Understanding that the Toronto Technical School was organized and maintained for the purpose of encouraging manufacturers, I some time ago thought I was justified in asking from a member of the faculty information on a small matter that neither myself or our engineer understood thoroughly. I accordingly on the 18th of November last addressed a letter to the Lecturer on Physics, Toronto Technical School, Toronto, in which I stated we took the liberty of addressing him on a small matter that had been giving us some trouble in our works. I then stated very plainly and in as few words as possible just what our trouble was, but so far (December 7) I have not had any reply. The information I wanted was a small matter in connection with heat which comes under the head of physics in the Toronto Technical School course. The question was: 'What temperature should Lot moist air be reduced to to cause it to liberate the greater portion of the moisture which it contained?' On the same day I also addressed the same question to an engineering firm in Montreal, and the return mail brought the required information. Possibly the member of the faculty to whom I wrote may have considered that it was presumptuous to apply to them for information, but as the school is maintained at considerable expense to Toronto, we, as citizens, thought we were justified in making the request.

THE O. A. A. AND STUDENT EDUCATION.

TORONTO, December 28th, 1899.

To the Editor of the CANADIAN ARCHITECT AND BUILDER:

SIR,—In your editorial in a recent number of the CANADIAN ARCHITECT AND BUILDER, you refer unfavorably to the proposal of the Ontario Association of Architects to provide a travelling studentship for the students of the Association to compete for, stating that this seems like starting at the wrong end of the ladder on account of the students not having had the training necessary to qualify them to profit by such a studentship. You seem to have forgotten, or not to have been aware that it is proposed to present this studentship to the student standing highest in the examination for qualification as member of the Association. Now, as a necessary qualification is, that the candidate for membership shall be twenty-one years of age, and that he shall have served five years in an architect's office, and that he shall have passed the preliminary, intermediate and final examinations, and have shown himself qualified for membership in the Association, and for practice in the community, you will see that he will have arrived at the period of his studies at which his mind is most prepared to receive the lasting and most essential impressions which are given by a period of time spent in studying the best examples of work in any one part of Europe.

You go on to say that "the greatest requirement at present is the means of educating the student." Again I beg to differ with you, as there is no lack of the means of educating architectural students in Ontario to-day. Several courses of study are open to them for the asking, but what I have maintained and now maintain is that unless a young man can see some object or some advantage to be derived from taking a prescribed course of study under such auspices as those provided by the Association, he becomes careless and indifferent, naturally saying, "Why should I take this course of study which involves the payment of fees and the fulfilling of a lengthy course, when I can arrive at the same eventuality in my own way and by my own efforts?"

You insinuate in the same article that sufficient attention has not been given to the subject of professional education by the Association. While this is correct in a sense in another sense it is not correct, for the provisions of the Association for the course of study for students is very elaborate. The failure has been caused by the inability of the Association to promise the student protection and assistance after he has completed the course and entered into practice in the province. Now, until the Association can make this promise to the student another means must be found to induce him to take the course of study and present himself for examination, for unless he does this it must be apparent to every citizen of the community that the future generation of architects shall either have received their education abroad, or be distinctly inferior in trained ability, owing to their neglect to grasp their present opportunities, unattractive as they may seem. The presentation of a medal and the offer of a scholarship will undoubtedly bring our students into keen competition, consequently the essential course of study will be taken by all, while all cannot win the medal and studentship. This, then, I claim, is the direction in which the efforts of the Association should be made, viz.: Making the course of study attractive to students.

Trusting I am not imposing too much upon your space, and allow me to say that the interest which your paper is taking in the Association's welfare is highly appreciated by its members.

Yours truly,

REGISTERED ARCHITECT.

STRENGTH OF LEAD PIPE.

To the Editor of the CANADIAN ARCHITECT AND BUILDER:

SIR,—Referring to the article appearing in your November issue relating to resistance of lead pipes, I would be thankful to know if you do not take into consideration the section of pipe in square inch for water pressure, and should not the result 90 be divided by XR^2 giving $28\frac{7}{11}$ per square inch.

Yours truly,

L. LEMIEUX, Architect.

MONTREAL, Nov. 11, 1999.

EDITOR'S NOTE.—The corrections suggested by our correspondent are seemingly right, if the tensile strength of lead be taken at 2,159 pounds per square inch. This constant, however, is not the one in general use as most authorities give it at 2,240 pounds per square inch.

The following table of the resistance of lead pipe to internal pressure, is compiled from Kirkaldy, Jardine and Fairbairn:

Diameter.	Thickness.	Weight per foot.	Bursting pressure.	Diameter.	Thickness.	Weight per foot.	Bursting pressure.	Diameter.	Thickness.	Weight per foot.	Bursting pressure.
Inch.	Inch.	Lbs.	Lbs	Inches.	Ins.	Lbs.	Lbs.	Inches.	Ins.	Lbs.	Lbs.
.5	.2	2.3	1579	1.25	.21	5.3	683	2	.21	9.2	498
.625	.2	2.6	1349	1.5	.24	7.1	734	2	.2	....	44
.75	.22	3.8	1191	1.5	.2	....	528	3	.25	....	364
1	.2	4.1	911	1.5	.2	....	626	3	.25	....	374

Tensile strength of metal = 2240 lbs. per square inch.

TO COMPUTE THICKNESS OF A LEAD PIPE WHEN DIAMETER AND PRESSURE ARE GIVEN IN POUNDS PER SQUARE INCH.

RULE.—Multiply pressure in pounds per square inch by interna. diameter of pipe in inches, and divide product by twice tensile resistance of metal in pounds per square inch.

ILLUSTRATION.—Diameter of a lead pipe is 3 inches, and pressure to which it is to be subjected is 370 pounds per square inch, what should be thickness of metal?

$$\frac{370 \times 3}{2240 \times 3} = \frac{1110}{4480} = .248 \text{ inches.}$$

The difference in weight between pipes of common, middling and strong is 12 per cent.

THE USE OF CONCRETE FOR SIDEWALKS.

A correspondent writes: In your issue of November there is an article on concrete for sidewalks. Our town started building cement walks this year, and as chairman of streets committee I have been seeking to learn all I could in the matter. I note that your article says that the walks should be kept damp for two weeks after laying. Will you kindly give me the reason for this? We laid some walks with Hercules and Diamond cements for top course, with Hercules, White Star and Parrot brands variously for the lower course of concrete, and did not dampen the surface after it was laid, and all of it seems to have made a splendid stone-like work; that of the White Star drying the slowest. Later on in the season we laid some walk with White Star in the bottom course and White Bros. (English) for finish. The weather was cold and overcast. After the walks had been thrown open to traffic a rain came and softened the top so much that footsteps made impression. Then we covered with sawdust. Frost came and where-ever the saw-dust was light or had been kicked off and the sun afterwards got a chance at the walk, it seemed to blister and a skin-like portion of the top would peel off. That part that was covered with sawdust seems to be gradually hardening, though the damp weather has kept the sawdust wet. But on the whole, the dampness just after laying seems to have worked disaster. Would be glad if your editor or contributor could throw light on the subject, and give the reason for advocating dampening the surface for a fortnight.

ANSWER:—The reason why it is desirable that a new cement sidewalk should be kept damp by repeated moistening with water

is to prevent its setting too rapidly. When the finishing or "topping off" coat of cement is left exposed to the dry air or to the rays of a hot sun immediately after it is finished, it is apt to "creep" and show fine hair cracks which may fill with water in the fall or spring and freeze, which action in time will loosen the cement from the concrete and cause it to scale off. The longer the cement takes to thoroughly harden, the more durable the work. Some sidewalk makers cover the finished work with canvas for a day or two, then after removing the canvas, cover the walk with a layer of damp sand which is occasionally wetted until removed in a week or so.

MR. L. R. O'BRIEN.

By the recent death of Mr. Lucius Richard O'Brien, R.C.A., a leader has been removed from the ranks of our native artists. The accompanying portrait is a reproduction from a photograph of the bust of Mr. O'Brien by Hamilton MacCarthy. Mr. O'Brien, who was in his seventieth year, was a native of the province of Ontario, having been born at Shanty Bay, near the town of Barrie. His father was the late Lieut.-Col. E. G. O'Brien, a retired naval and military officer.

BUST OF THE LATE MR. L. R. O'BRIEN, R.C.A.
By Hamilton MacCarthy, R.C.A.

After having been educated at Upper Canada College, he studied for a time architecture and civil engineering, but afterward relinquished these professions to devote himself entirely to the pursuit of art. In 1873 he was elected first vice-president of the Ontario Society of Artists, which office he held for seven years. In 1880 he was elected the first president of the Royal Canadian Academy of Art, founded in that year by the Marquis of Lorne and Princess Louise. This position he occupied for ten years. In 1895 he was elected president of the Provincial Guild of Sculpture.

Mr. O'Brien was a frequent exhibitor at the London Art exhibitions. His water color sketches of Canadian scenery, particularly in the Rocky mountains, were masterpieces. His diploma picture, "Sunrise on the Saguenay," is in the Ottawa Art Gallery. He was commissioned by the Queen to paint two pictures of Quebec. The Marquis of Lorne and the Princess Louise were also his patrons and friends.

The statue of Alexander Mackenzie, designed by Hebert, the well known sculptor, has been completed at Paris, and will be exhibited at the forthcoming exhibition in that city before being shipped to Canada.

Branch Office of the CANADIAN ARCHITECT AND BUILDER,
New York Life Building,

MONTREAL, Jan. 18, 1900.

THE RENAISSANCE CLUB.

The annual meeting of the Renaissance Club was held in the club rooms, Phillips Square, on the evening of Wednesday, December 20th. There were over forty members present. The secretary-treasurer's report was read and adopted. It showed a good balance on hand. The election of officers then took place with the following result: Prof. Capper, honorary president; David R. Brown, president; S. A. Findlay, vice-president; W. A. Price, secretary; D. J. Spence, treasurer. Committee—Mr. R. Dawson, Dr. Stewart Nicol, Dr. Tait McKenzie, Mr. J. MacAulay, Mr. K. Rea.

TESTS OF EXPANDED METAL AND CONCRETE FLOORING.

Prof. Bovey of McGill College and Mr. John Kennedy, chief engineer of the harbor board, at the request of the architects, Messrs. Hutchison & Wood, conducted a series of weight tests of the expanded metal and concrete floors lately finished in the new La Presse building. While this system of fire-proof construction is well known in other countries these are the first floors yet tested in Canada.

On an 8 by 14 foot floor, 23,191 lbs. of pig iron was piled equal to a distributed load of 240 lbs. per sq. ft. or three times the required strength and the delicate gauges recorded a deflection of ⅜ inches only. On the same floor plate a centre load of 11,580 lbs. was laid, resulting in $\frac{5}{16}$ inch deflection. A third test was on a 6 ft. 8 in. by 15 ft. floor which took a load of 38,800 lbs. before ½ inch deflection was registered, being over a ton more than four times what the architects have called for. In every case upon removal of the load, the deflection disappeared.

The interesting experiments were witnessed, among others, by Hon. T. Berthiaume; Mr. F. A. Peterson, chief engineer C.P.R.; Sir Adolphe Caron; Mr. Edward Maxwell; Mr. Arthur Berthiaume; Mr. F. H. Leonard; Mr. A. Dansereau, director of La Presse; T. W. Horn, president, Mr. C. S. Spencer, chief engineer, Expanded Metal Co., Toronto, by whom the work was installed; Mr. G. W. Brunette, Mr. James Paton, Mayor Desjardins of Maissonneuve; building inspector Lacroix; Mr. A. C. Hutchison; Mr. H. R. Ives; Mr. R. F. Ogilvy; Mr. John Baillie; Mr. William Hutchison; Mr. L. Bourgoine; Mr. L. Cadieux.

MONTREAL BUILDERS' EXCHANGE.

The Second Annual Report of the directors of the above Exchange, contains the following: "The past year has been, to some extent, an eventful one in building circles, inasmuch as a notable improvement was made in regard to the letting out of contracts and the erection of some important buildings. An unfortunate feature, and one which has seriously hampered the year's progress, was the scarcity of iron, but as it is an "ill wind that blows nobody good," the large demand for iron from this country to the United States and the inadequately small supply, has been the means of influencing large capitalists in establishing extensive iron works in our own country, thus developing our national resources.

Our Charter was granted to us by the council of the legislature under date of March 10th, and under its provisions a special meeting was called for the 27th June, at which the action of the Directors was confirmed and the by-laws adopted. At this meeting a recommendation from the board to have subcommittees appointed

to present the different trades, was taken up, approved of, and since acted upon. Sub-committees were formed from the following different trades, viz. : Masons, iron and steel construction, carpenters, lumber, plasterers, painters and decorators.

A matter of great importance was discussed by the meeting on 27th June, in regard to certain grievances which existed that were detrimental to the building trades. In order to have some of these adjusted, the secretary placed himself in communication on three different occasions with the secretary of the council of architects, who promised to take action on the request made by us for a conference ; but so far, notwithstanding our strenuous efforts, we have been unable to secure any result from our overtures. Your board of directors would recommend to the incoming board that they seriously consider the questions relative to existing grievances, and the advisability of bringing the same to the attention of the committees of the Board of Trade and Chambre de Commerce with a view to their adjustment.

" Your board has given most careful attention to the proposed amended building by-law, and instructed the secretary to draft a letter to our city council, urging that it be pushed through as expeditiously as possible.

TESTS OF CONCRETE FLOORING.

The Montreal Gazette recently published particulars of a test of concrete flooring constructed by the Roeblings Co. in the Foley Apartment House Building, corner of Metcalf street and Dominion Square. The test took place in the presence of the architects of the building, Messrs. Saxe & Archibald ; Mr. Alex. Peterson, Chief Engineer of the C.P.R.; Mr. St. George, City Surveyor ; Prof. Capper, President of the Province of Quebec Association of Architects ; Mr. Lacroix, City Building Inspector ; Mr. A. L. A. Himmelwright, the manager of the Roeblings Construction Co.; Mr. E. D. Hofeller, of Buffalo, who represents them for Western New York and Canada; E. F. Dartnell, their Montreal agent and others.

" The test arch was constructed and concreted on the 14th of October, and the requirements were that the arch was to be capable of sustaining a superimposed load of 275 pounds per square foot without cracking or failure, the deflection of this load not to crack the plaster. The floor is of concrete construction, the ingredients being one part Dyckerhoff cement, two and a half parts sand, and six parts unscreened steam ashes. A section of flooring fifty-three inches wide and sixteen feet long, between supports, was cut free from the rest of the flooring with cold chisels. Wood boxes without bottoms and with sides twelve inches high, fifty inches by sixteen feet, were superimposed over the section tested to retain the sand with which the arch was loaded. The test was begun at 11 a.m., when two cubic feet of sand were weighed and averaged ninety pounds in weight. A layer of sand one foot deep was placed in the box over the arch, and the deflection was found to be one-eighth inch, when a similar load of 120 lbs. per square foot was placed, the deflection was found to be three-sixteenth inch, and when 180 lbs. per square foot was placed on the arch, the deflection was quarter in. This load was allowed to remain on the arch one hour (until 12.30 p.m.) when, the deflection having remained the same, the load was increased to 275 lbs. per square foot, which was the total load required, making a total of 17,250 lbs. for the portion tested.

" Although the Roebling Company offered to increase the load until the arch broke, the strength developed was sufficient to meet the requirements, and the breaking down of the arch was deemed unnecessary. At the request of the parties for whom this test was made, the load was allowed to remain on the arch until this morning." On the following day, Nov. 30th, a further test was made by concentrating 10,170 pounds on the centre of the arch equal to a strain of about 500 pounds to the square foot.

NOTES.

Dr. Laberge, city medical health officer, attended the recent Sanitary Convention at Minneapolis.

An exhibit of the work of the pupils of the Industrial Classes conducted by the Council of Arts and Manufactures of the Province of Quebec, will be sent to the Paris Exhibition.

A deputation, representing the Master Plumbers' Association, have requested the municipal authorities to appoint a practical plumber as one of the sanitary inspectors under the new building by-law.

A stained glass window will shortly be placed in St. Paul's Presbyterian church as a memorial to the late Mr. John Hope. Its dimensions will be 28 feet by 17 feet. The window will be divided by five stone mullions. The design will be in the Gothic style. The work is being carried out by Messrs. Ballantyne & Gardner, of Edinburgh, under the supervision of Mr. Eric Mann, architect, of this city.

Mr. W. E. Doran, a prominent architect of this city, was in the field as a candidate for the mayoralty, in response to the request of a large number of the ratepayers. Mr. Doran is the nominee of the Irish Catholic electors.

A large deputation of citizens recently waited upon Mr. William McNally, of the firm of William McNally & Company, to request him to allow himself to be put in nomination for the mayoralty of Montreal. After due consideration, Mr. McNally declined to become a condidate.

St. George's church, one of the historic ecclesiastical edifices of this city, has recently received two valuable donations, viz., a tower clock and chime of bells similar to those recently placed in the Royal Exchange in London, by Mr. A. F. Gault, and a salo and echo organ by Mr. James Crathern.

An error crept into the item published in this correspondence last month referring to the election of officers of the Montreal Builders' Exchange, wherein it was stated that Mr. J. W. Hughes was elected vice-president and honorary secretary-treasurer. Mr. Hughes is vice-president only, Mr. George J. Sheppard being, as heretofore, the honorary secretary-treasurer.

A correspondent in the Monetary Times refers to the excellent business qualifications of the nuns who manage the affairs of the Mother House of the Providence Nuns on Fullum street, corner St. Catharine street, Montreal. The institution is presided over by Sisters Charles and Maximillien, whose signatures are required to all documents such as notes, cheques, contracts, etc. The building occupied by the nuns consists of two wings each 400 feet in length, with twelve separate three storey pavillions, chapel and power house, the outlying parts of the premises being connected by an electric car service. It is proposed to also erect isolated cottages. M. Hypolite Bergeron has for twenty-five years been connected as architect with the institution.

IMPACT TESTS.

The Report of the American section of the International Association for Testing Materials, presented at the second annual meeting, Aug. 15th and 16th last, contained the following with regard to impact tests : " It is particularly gratifying to note that in America impact machines have been constructed, or are in process of construction, at the laboratories of the U. S. Arsenal at Watertown, Mass., Lehigh University, Purdue University, the Virginia Polytechnic Institute, and McGill University. These machines are intended for scientific research which will have to be devoted primarily to obtaining the requisite fundamental data for placing impact testing on a more definite basis. Studies in tension and bending, and compression tests on steel, iron, cement, and stone are contemplated. One of the most important questions connected with impact testing is: To what extent is the resilience under slow tension a measure of the resilience under shock ? To answer this question, comparative tests under many varying conditions, as to material, dimensions and form of specimen, temperature, etc., will have to be made under such conditions that the work preformed in deforming the specimen can be measured within reasonable limits of accuracy. Since this work is the product of force by deformation, any incidental deformation of the apparatus will be at the expense of the energy of the blow. The work of deforming the specimen is necessarily less, in all cases, than the total energy expended by the hammer. There is no great difficulty, however, in getting a closely approximate measure of the work performed upon the apparatus. The necessity of rigidity in the apparatus has been insisted upon in recent discussions, and this matter has doubtless received due consideration in the later machines. The practical difficulties of impact tests in tension are sufficiently evident. In compression, there is the advantage that the entire volume of the metal is more uniformly deformed, whereas in tension the specimen does not deform uniformly as a whole, but has a partly elastic and partly plastic deformation irregularly distributed."

Mr. Robert Barber, Inspector of Factories for Ontario, states that there was a large increase in the number of elevator accidents during 1899. He favors the appointment of a city inspector of elevators, as a means for the prevention of such accidents. Under the present municipal law, the provincial inspectors are not authorized to examine elevators in buildings other than factories.

ONTARIO ASSOCIATION OF ARCHITECTS

PROCEEDINGS OF TWELFTH ANNUAL CONVENTION.

THE annual convention of the Ontario Association of Architects was held on Tuesday and Wednesday, the 16th and 17th inst., at the rooms of the Registrar, Mr. W. A. Langton, in the Canada Life Building, King street west, Toronto.

The following members were present: Messrs. J. E. Belcher (President in the chair), A. Frank Wickson, Grant Helliwell, D. B. Dick, W. A. Langton, J. Wilson Gray, M. B. Aylsworth, John A. Pearson, H. B. Gordon, W. R. Strickland, A. E. Paull, John Gemmell, John Kay, Frank Darling, W. R. Gregg, L. Munro, H. F. Duck, members of the Association, and Messrs. Eden Smith, C. Acton Bond, C. D. Lennox, C. E. Langley, H. Sproatt, E. R. Rolph, J. C. B. Horwood, W. Rae, members of the Eighteen Club.

The proceedings opened at 2.30 p.m. on Tuesday, the President, Mr. J. E. Belcher, M.R.S.C.E., in the chair.

The minutes of the last meeting were read, and on motion by Mr. A. F. Wickson, seconded by Mr. G. Helliwell, were confirmed and signed.

The President then read his annual address, which was received with much approval, as follows:

PRESIDENT'S ADDRESS.

GENTLEMEN,—Permit me at this my first opportunity to thank you most heartily as a member of the profession practising in one of the towns of the province for the honor you have done me in electing me to the Presidency of this Association. Not having the advantage of city practice, we of the country have not the opportunities enjoyed by our more fortunate city confreres, hence the occasional recognition of the outside members of the profession tends greatly to enhance the feeling of esprit de corps existing among the members of the Association as a body. This feeling of kinship with our city brethren will no doubt inspire the members of the profession in the smaller places with a desire to keep abreast of the advance of architectural effort and to withstand the temptation to sink into the commonplace of the country town, where one is more or less cut off from intercourse with fellow members of the profession and from the advantages, culture and inspiration of more immediate contact.

At the close of my year of office I desire to lay before you one or two things pertaining to the work and scope of our Association which have occurred to me, and which have been gathered more particularly from the proceedings of the last year's committee meetings. With reference to the suggestion made at the conference of the Council and Consulting Committee—a report of which, dated April 1st, 1899, will be laid before you—that some means be adopted to improve the condition of the Association, it seems to me that it would be well for us to adopt what I may term a progressive policy; and yet whilst we may feel in matters of art it is our duty to lead the people up to an appreciation of art in architecture, we must nevertheless so conform our policy of progress to the circumstances surrounding us as to make that policy feasible.

1. First all it is necessary to consider the facilities afforded by the Association for the education of the younger members. The suggestion has been made that lectures in design should be given to students. Can such lectures be instituted as part of the Association work in the new rooms?

2. The desirability of having central down-town rooms with a library attached, as mentioned in the report, is beyond doubt. Facilities for reading, meeting and discussion are a necessary supplement to the lectures in design.

3. As to the question of membership for practising architects—not now members of our Association—it is to be hoped that the better times in view, and the advantages offered of down-town rooms, library, etc., will prove sufficient inducement to at least the city architects to become members, and when the government decides to recognize the Association in proper form, the practising architects in the towns will then no doubt appreciate the advantages to be derived from membership also, but apart from these advantages I should think there ought to be the higher desire to bind ourselves together in a guild for mutual improvement and establish that esprit de corps which should be engendered in all who love their art, especially those whose experience, derived from the practice of it, justifies its being called a delightful profession.

4. A course for students with proper preliminary examinations is obviously necessary, and has been referred to in a pointed manner by the late Sir Gilbert Scott, who speaks as follows:

"Architects had admitted pupils who had not only evinced no creative art powers, but who had been by reason of serving their pupilage, allowed to go at large and practice as architects, although they were destroyers of art, and a disgrace to the age. He did not know how this evil had to be met. He saw no way to get over it unless they (the architects) were to bind themselves never to receive a pupil unless he had shown some qualification by passing some sort of examination, by a committee appointed by the R.I.B.A. who would certify if he has the right stuff in him—five out of six of the pupils sent to architects were worthless as regarded their aptitude for the profession, and yet on completing their articles, they had as good and sometimes better opportunities of getting on than the best of their contemporaries; they perhaps had a large circle of friends, and possibly a fair amount of practical knowledge; but these things did not constitute an architect," and finally wound up by saying "that pupils of ability would become better architects and practical men if they were to spend more time actually in the midst of works in course of execution, but above all, all architects should combine to reject all pupils but those who may prove to have some aptitude to the work of the profession."

These few suggestions strike me as comprising some of the elements of our requirements. If they can be carried out we should then be able to take our position with the other recognized professions of the province.

It was found impossible to secure the necessary funds for the Travelling Studentship proposed at our last Convention, although some of the gentlemen appealed to very kindly offered subscriptions of the amount apportioned to them.

I would add that in the matter of public competitions members of this Association should strictly adhere to the resolution formerly adopted, wherein the desirability is set out of their being a properly constituted Board of Architects to whom competitive plans should be referred for selection and award. Although this question is perhaps to some degree an open one, and is doubtless also difficult to educate the public up to such a standard, yet I am persuaded that this standard is in no small degree essential to the well being of the profession.

It strikes me then that some such defined schemes as those above mentioned are more desirable than straining after the doubtful possibilities of the Travelling Studentship, medals, &c., of the established R.I.B.A., since an Association such as ours in its infancy while desiring adequate protection, and fitness for its members, must aim at what is readily within its reach.

The Treasurer's report was then submitted by the Treasurer, Mr. G. Helliwell, as below:

TREASURER'S REPORT.

Financial statement for the year ending Dec. 31st, 1899.

RECEIPTS.

Balance from 1898		$1,082.46
Members' annual fees	$179.00	
Students' registration fees	6.00	
Students' examination fees	11.00	
Sale of examination papers	.25	
Interest on bank account	34.40	
		230.65
		$1,313.11

EXPENDITURE.

W. A. Langton, Registrar, salary for year	$200.00
W. A. Langton, general disbursements	15.76
Printing reports, circulars, etc.	36.85
Convention lunch	22.50
C. H. Mortimer, CANADIAN ARCHITECT AND BUILDER for 1899	22.00
Books added to library	9.75
Engrossing minutes	6.00
W. J. Graham, attendance on Convention	5.00
Total disbursements	317.86
Balance on hand	995.25
	$1,313.11

We have examined the books, vouchers, etc., of the Association, and certify that the above is a correct statement thereof,

HENRY LANGLEY, WM. R. GREGG } Auditors.

All outstanding accounts have been paid. The expenditure ($317.86) is approximately the same as that for 1898. The receipts ($230.65) are $144.75 less than for the preceding year. This falling off in receipts is in the payment of fees in arrears, which in 1898 amounted to $233, while in 1899 they amounted to only $93. The fees amount to $86 for 1899, the same amount as for the preceding year. The number of members who have paid

fees for 1899 is 26, of which 10 are in class 1, 4 in class 3, 3 are in class 5, 5 are in class 6, and 4 in class 7. The receipts, expenditures and balances for the last three years are as follows :—

	1897.	1898.	1899.
Receipts	$ 254.65	$ 375.40	$230.65
Expenditure	443.00	314.72	317.86
Balance	1,021.78	1,082.46	995.25

Respectfully submitted,
GRANT HELLIWELL, Treasurer.

On motion by the Treasurer, seconded by Mr. D. B. Dick, the report as submitted was received and adopted.

The report of the Librarian and Registrar was submitted by the Registrar, Mr. W. A. Langton, as follows:

REPORT OF REGISTRAR AND LIBRARIAN.

MEMBERS.—Continuing the system recommended by the convention of 1898, only three members have been printed on the Annual Register who are not in arrears for the annual fee for a longer period than three years. The membership as thus printed for 1899 numbered 31 non-resident members, 28 resident members, 3 travelling members, and 1 honorary member ; in all 63 members. One member has since withdrawn.

STUDENTS.—There has been one student registered. The examinations were held in April. The board of examiners was Prof. Galbraith (chairman), Messrs. C. H. C. Wright, S. G. Curry, R. J. Edwards, W. R. Gregg, Grant Helliwell, W. A. Langton, S. H. Townsend and. A. F. Wickson. There were two students examined ; one for the first examination, who passed well ; and one for the second examination, who is required to take a supplemental in one subject.

PROCEEDINGS OF THE COUNCIL.—The principal work of the Council has been the consideration of proposals for reforms in the working of the Association. A circular letter making a list of proposals was sent out to members of the Association with a request for an opinion as to their usefulness and feasibility. Only nine replies were received. An effort was made to obtain from prominent citizens of Toronto the sum of $5,000 for the purpose of endowing a travelling scholarship for architectural students. The effort did not meet with success.

In response to a request from the Royal Institute of British Architects, the Council have undertaken to conduct for Ontario the R.I.B.A. special examination, open to practising architects not less than 25 years of age, or to chief assistants over 30, and qualifying for associateship of the R.I.B.A.

The Council have endeavored to procure the use of the Association Conditions of Competition for the new Toronto market, and also wrote to the syndicate of the proposed new hotel in Toronto setting forth reasons why it would be desirable to have a local architect in preference to an American.

THE LIBRARY.—There have been 48 lendings among 19 borrowers. There has been added to the library "Modern Plumbing and Steam and Hot Water Heating," by J. J. Lawler.

On motion by the Registrar, seconded by Mr. F. Darling; the report was received and adopted.

Mr. Pearson inquired if any action had been taken in regard to communicating with the Quebec association, as the Council had been requested to do with a view to securing for members of the Ontario Association in good standing the privileges of the Quebec Association.

Mr. Wickson explained that it had not been thought necessary to take any action, because on looking into the matter it was seen by the constitution of the Quebec Association it was provided that members of other associations of equal standing might be admitted to the desired privileges.

Mr. Aylsworth inquired if the report just read was the only report the Association received from the Council? He thought when the Council met for the transaction of business several times during the year, there ought to be a fuller report to the Association of what had taken place at the meetings.

The President replied that the report just adopted embodied the reports of everything that had come up for consideration by the Council.

Mr. A. F. Wickson said that while no doubt that was correct, yet a great deal of work had been done by the Council in regard to the travelling scholarship alone, of which the report said nothing. For instance, a number of persons were personally visited in regard to raising the necessary funds for the proposed scholarship.

Mr. Aylsworth said that was exactly the kind of information he desired to elicit ; he thought full information of that kind should be afforded.

The Registrar, Mr. Langton, said that the details were recorded in the minutes of the Council ; the report was a skeleton stating the results that had been accomplished.

Mr. W. R. Gregg asked if the report of the Consulting Committee was not really a report from the Council as well.

The Registrar stated that it was not, but was the independent report of the committee.

Mr. Aylsworth said he gladly accepted the explanation given by the Registrar, but the fact still remained that a great deal of work was done by the Council during the year of which the Association had no information. He thought with a fuller knowledge of the doings of the Council the members would be in a better position to discuss many of the subjects that came up at the convention, and there would be less confusion and misapprehension, He would therefore suggest that in future fuller reports be furnished by the Council, stating not only what had been accomplished, but also that which had been attempted.

Mr. Darling thought what Mr. Aylsworth asked was reasonable, and that it might be well to give the members a history, more or less elaborate, of what the Council had attempted ; the causes of failure in one direction or success in another ; the attitude of persons with whom they were thrown in contact, etc. Such a report, he thought, would arouse considerable interest. Take, for instance, this question of the travelling scholarship, it would have been of interest to know the position taken by the persons approached, and the exact reasons why the scheme had been found impracticable.

The Registrar pointed out that to make a record of all that had been attempted but resulted only in smoke would not make very scientific minutes ; but he could make a report that would be a happy medium. This report should not be spoken of as the report of the Council. The proceedings of the Council were reported in it but the manner of doing so was his own.

Mr. Gemmell said it was not possible to keep the record in any other way than that followed. If members desired further information it could be given on being asked for.

The President agreed with the view taken by the last speaker, and suggested that "business arising out of the minutes," afforded the opportunity of asking for the information that was desired.

Mr. Wickson thought it would be a good suggestion for the new Council to report a little more fully as to what had been done and what attempted. The report just read showed that the project for the travelling scholarship had been abandoned because found not feasible. He thought it would have been interesting to know how many people in the city were willing to contribute and how many were not.

Mr. Darling pointed out that the desired information could be obtained by moving to have the correspondence relative to the matter in question read.

Mr. Aylsworth said after the discussion that had taken place, he was content to leave it as a suggestion for the future guidance of the Council.

The next business taken up was the report of the Consulting Committee, appointed to consider and report on resolutions moved by Mr. F. S. Baker, in the convention of 1899, which report was as follows :

REPORT OF THE CONSULTING COMMITTEE.

This Committee was appointed primarily to consider and report on the following resolutions made by Mr. F. S. Baker, in the Convention of 1899 :—

1. To find, and if possible obtain an option upon, premises which would make a suitable headquarters for the Association.

2. To consider the advisability of increasing the membership fee, and of using a portion of the increased income to form a benevolent fund, to be used for the relief of any worthy member who may be in distressed circumstances.

3. To approach the government with a view to their appropriating funds to provide a medal, to be known as the "Ontario Gold Medal," to be presented annually to the member of the Association, or other architect, whose work in ordinary practice in Ontario is considered of the highest merit.

4. To consider the advisability of providing a suitable medal out of the funds of the Association annually, and of raising a sum of money by popular subscription, or otherwise, to found a scholarship, or travelling studentship, and that this medal and scholarship be presented each year to the student who ranks highest in the final examination for qualification for membership, or for other qualifications.

The Committee was instructed also to consider other matters ; to confer with the Council from to time ; and to present a definite report to the Convention of 1900.

The Committee beg to report as follows :—

1. They have procured an option upon rooms suitable for the uses of the Association. The rooms are situated at 94-96 King

street, Toronto, between York and Bay streets. It is proposed to arrange them as in the accompanying plan, so as to share the premises and cost with the Engineers. The rooms will occupy the second floor, but will have a separate entrance from the street, and every member should have a key to the door. The rent for each of the societies associated as tenants will be $150 a year. The alterations necessary to arrange the floor as planned will be made by the landlord. Heating and caretaking will be provided, but not light.

2. The institution of an Association medal for presentation to architects is recommended, with the suggestion that the medal be provided by the Association, as the government is unwilling to assume the position; that the presentation be not necessarily annual, but occasional; and that the decision as to its presentation be by ballot of members of the Association in good standing.

3. The Committee suggest that members of the Association should agree to make it an essential requirement from their students to go up for the examinations, and this requirement might be made a condition in the student's articles.

4. The Committee suggests that young architects in practice, who have not opportunity for much study, should be allowed to pass the final examination by coming up for one or more subjects at a time, as they are able to learn them.

5. The Committee suggests that students of the Association, who propose to travel in Europe, should be supplied with a certificate, which will enable them to obtain the advantages which are offered by the European governments to art students who bear credentials of this kind.

6. The Committee suggests that the proceedings of the Convention, as reported by the CANADIAN ARCHITECT, be printed separately in a convenient form.

7. The Committee suggests that instruction by architects to students upon the work in which the students are to be examined should form part of the work of the Association.

8. The Committee agrees in theory with a proposal that has been made to hold the Convention in different cities outside of Toronto, as well as in Toronto, but doubt whether it would be practicable to do so at present.

9. The Committee thinks that the building and fire by-laws, drawn up with so much care by a committee of the Association, should not be forgotten; that occasion should be found to press them again upon the attention of the Toronto City Council, and to bring them to the notice of other municipalities.

10. The Committee agrees with a proposal that has been made that a certificate of membership should be issued, suitable for display in the offices of members, and that members should be requested to adopt the words "Member of the Ontario Association of Architects" as their distinguishing title.

11. The Committee agrees with a proposal that has been made to make the office of Registrar and Librarian honorary.

Mr. Gray moved, seconded by Mr. Darling, that the report be taken up and read and dealt with clause by clause.

The Convention proceeded to discuss clause 1, relating to the proposed rooms.

Mr. Helliwell inquired what was to be done with the library, whether it would be placed in one of the rooms, and, if so, under whose charge it would be.

The Registrar stated that it was proposed to place the library in the room of the Association, and that it was thought it might be in the charge of a student.

Mr. Dick said if the library was to be accessible to members at all times, each member having a key, what was to prevent them helping themselves?

Mr. Pearson pointed out that it would be necessary to have the books under lock and key, and students who desired to get books would have to attend at stated hours.

Mr. Aylsworth said in that case the library would not be freely accessible.

Mr. Darling thought if the library was not in charge of some one who would be responsible it would be found to diminish rather than increase; not because anyone would actually steal the books, but through the carelessness that would be inevitable, and through books being taken away and no record kept of the persons in whose possession they were. He thought the whole question was one of finance. He did not think members would care to be restricted to looking at the books through the doors of a glass case, and members would not want to go to somebody's office about it; it was essential that there should be someone there permanently, and if that could be managed it was excellent. But he did not see where the money was to come from for that.

Mr. Wickson said that unless the arrangement was such that members could avail themselves of the library in their spare moments at luncheon hour or at other times he did not think they would use the library; he did not think they would go at certain appointed hours.

Mr. Gordon suggested, as a possible solution, that by a slight change of plan a portion of the space devoted to cloak rooms might be utilized as an office, which might be occupied by a typewriter, who, in consideration of free office room and the possibility of picking up architects' work in the way of copying specifications, etc., would assume the charge of the library and render whatever service was necessary. He felt sure plenty could be found who would undertake it.

Mr. W. R. Gregg thought a division of the library might be made, that portion of the books intended for circulation being placed in charge of someone having an office who would be willing to undertake the responsibility; and the reference books being kept in the room lying on a table accessible to all members who had keys.

Mr. Pearson, having ascertained that there were only 19 borrowers of books last year, said he could not understand why there was so much objection raised. He thought the circulating part of the library might very well be entrusted to some responsible student who would attend at stated hours to give out books. Then, as to the other books, he did not apprehend any danger of their being taken away and not returned.

Mr. Dick was not in favor of having part of the books at one place and part at another. He thought some such plan as outlined by Mr. Pearson and others might be desirable. Let the books be freely accessible in the rooms, with the understanding that no book was to be removed save at stated times, when someone appointed for that purpose would be in attendance.

Mr. Strickland inquired whether the architects and engineers, by maintaining a joint library, might not be in a position to employ someone permanently to take charge of it.

The Registrar replied that the engineers, like the architects, would probably find it enough to undertake the expense of the rooms without undertaking any additional expense.

Mr. Wickson proposed that, so far as city members were concerned, the library should be treated as for reference purposes only, while outside members could still obtain the loan of books on application to the Registrar or a student appointed for that purpose.

Mr. Gordon then moved, referring to the report as a whole, "That the proposed scheme be adopted, subject to the co-operation of the Engineers' Association, and also subject to any change of plan or method of administration that is found feasible." He thought the convention ought to approve of the general plan, leaving the details to be worked out.

Mr. Darling, who seconded the resolution, asked if there was any question of their financial ability to carry the plan out.

Mr. Dick thought it was desirable, before further considering the details or putting Mr. Gordon's resolution, to elicit from those present some expression of opinion on the broad question of the desirability of having rooms at all. Were the advantages to be derived from having rooms sufficient to warrant the expenditure which the plan would involve?

Mr. Gordon said that was covered by his motion, which simply called for an expression of opinion as to the principle of having rooms.

Mr. Kay, of Paris, Ont., asked if the sum of $150 mentioned included all the expenditure necessary.

Mr. Darling replied that it covered everything except light.

Mr. Wickson pointed out that there would be an expenditure for furnishing.

Mr. W. R. Gregg, in order to bring the matter more distinctly to the point, moved "That we rent these rooms for one year." He did this because he understood the engineers were meeting this evening.

Mr. Darling said the owner of the building would hardly go to the expense of fitting up the rooms as proposed with the object of renting them for only one year. He felt that the whole subject was one of very great importance, and that if anyone had objections to urge they should be heard.

The undertaking proposed involved a distinct change

in the whole working of the Association and if there was any opposition it should be heard.

Mr. W. R. Gregg said he was quite in favor of carrying the scheme through if at all practicable. The only question was as to the advisability of committing themselves to a three years lease at $150 per year. In addition to that there would be the cost of furnishing and light. The furnishing would require $100, so that the first year the expense would be $250 plus cost of lighting, and the other two years $150 a year and cost of lighting.

Mr. Dick said that the committee by whom the report was drawn up had no doubt had in view the possibility of deriving a rental from the large hall by occasionally renting it for meetings to other societies of a similar character, which would reduce the expenditure.

Mr. Gordon said, as bearing on the question of the expenditure, that by a reference to the 11th clause of the report members would see that it was proposed to make the office of Registrar honorary. This would put the Association in funds to a certain extent, which would be applicable to the project under discussion.

Mr. Aylsworth thought before the adoption of the resolution there ought to be the very fullest discussion. Would any benefit be derived from taking the rooms? Would the architects avail themselves of the use of them? Certainly they would be useful for monthly meetings of the Association, and, then, there must be a home for the library. It seemed to him that they were embarking upon a very radical change of policy. In the first place they were undertaking a liability of, at least, $150 per year for these rooms, which might or might not be useful. It seemed to him that a more practical plan would be to continue somewhat as at present, with a Registrar and librarian, and a room such as the one they were in, and used in the same way ; to pay the Registrar and librarian for his services and the use of the room. He did not know of any room better for the purpose than the present one.

The Registrar, Mr. Langton, said it was of the greatest importance for the Association to have some kind of rooms which the members could call their own, a place in which they could accumulate things and have some sort of a home, and a rendezvous to bring them together. The rooms proposed were very convenient, consisting of the large meeting room and the smaller room for the library. There were many other things to be done. There had been many criticisms of the Association. It had been complained that they had not instituted classes for instruction within the Association, sketch clubs and similar sub-organizations. The proposed rooms would render possible the branching out into these matters, which was imperative if they were to become a live voluntary Association. He thought the large meeting room might be rented, as had been stated by Mr. Dick, enough times in the year to materially reduce the expenditure for rent.

Mr. Darling did not think it made much difference with regard to the principle ; the main question was whether they would take these rooms. They would have to be in a position to tell the engineers what they were going to do. It was probable they would have to lease the rooms in question for five years.

Mr. W. R. Gregg said that, not having yet decided to make the position of Registrar honorary, in the meantime the only thing they had to go on was their surplus. Were they warranted in renting these rooms for five years? Mr. Gordon's motion was merely postponing the discussion. For the purpose of bringing the matter to a focus, he would move, subject to the action of the engineers, that the rooms be taken for three years, the minor arrangements to be made by the Committee.

Mr. Gordon said that was exactly what his motion was. As a point of order, he would say it was quite impossible to have an amendment to a motion which was merely a repetition of the motion.

Mr. Gray proposed that Mr. Eden Smith should be heard in regard to the matter.

The Registrar said that Mr. Smith was present, not only as a member of the Association, but as a representative of the 18 Club. He thought Mr. Smith might now be heard, not only as to the matter immediately under discussion, but also as to the views of the 18 Club in general.

Mr. Eden Smith, representing the 18 Club, said he had not contemplated coming before the Association. Mr. Wickson had asked them to meet a committee of the Association to discuss a few matters which came out, he thought, in the CANADIAN ARCHITECT. That was just before Christmas, and, owing to the holidays, they had had no meeting, but had talked the matter over casually, and had considered a scheme for Mr. Wickson to put before the Committee, but not for submission to the Convention, because it had been very roughly drawn up, and not in proper form to lay before the Association. As to the rooms, he thought the Association ought to get rooms, but at as low a rent as possible. He thought the rent of the rooms proposed was a little high.

Mr. Darling reminded Mr. Smith that they were all met together as architects interested in the advancement of their profession. There was no need for an elaborate formal report ; what was wanted was a good frank talk together, and among them they should be able to evolve something which should mark a new era in the history of the Association. In the old days, it seemed to him, the students seemed to have more go about them than now. They had a room in which they had classes and sketch clubs, and they made things hum. He had no doubt that many who had been successful could trace no small degree of that success to these agencies. He did not think they would ever have a better opportunity than the present to discuss these matters, and he felt sure that something of value would result from a full and free talk on what was best for architecture.

Mr. Acton Bond, also of the 18 Club, said that, falling in with Mr. Darling's suggestion, he would ask Mr. Smith to read the rough draft that had been prepared.

Mr. Smith then read the report of the Committee of the 18 Club, as follows :—

REPORT BY COMMITTEE OF THE TORONTO ARCHITECTS' EIGHTEEN CLUB.

Before making any suggestions, causes of the Association's failure to accomplish any good results must be first mentioned. It seems to this committee that the Association started with entirely wrong principles. It apparently started for the purpose of doing good to architects rather than to Architecture. If instead of using every effort to make the profession a close corporation, the same energy had been applied towards making the profession better, more results would have been obtained, and in the end architects would have felt the benefit themselves. It is true that a more or less elaborate system of examinations was instituted, but these examinations without any means being given to the student of obtaining the necessary education to pass them have proved somewhat of a farce, and necessarily so. The charter as it at present stands is really more of a hindrance to the Association than a help, and if it cannot be amended in some form, should be thrown aside as a useless clog on the efforts of the more intelligent architects of the province to do something for architecture. A great deal of energy has been expended by the members preparing papers and talks to deliver before the Association at various times. Much of this energy was puerile and wasteful. If the Association only employed those to give lectures who are fully competent to do so, even if this meant only one lecture per year—this one thing would place the Association on a better footing, and instead of the annual meetings of the Association being devoted almost entirely to papers, it would seem more logical and sensible to have not more than one really good paper, and devote the rest of the time to discussing the work of the Association, and going thoroughly into all possible means of doing something for Architecture. The Arts and Crafts Exhibition, which the Ontario Society of Artists is now getting up is one glaring instance of where the Association has failed. There can be no question but what such an exhibition should have been started and gotten up by the architects and of course by the Association. In other cities where these exhibitions have been started the architects have almost always been the prime movers, and naturally so. It has remained for the Ontario Association of Architects to remain quiet and let the artists do this work for them.

It seems to this Committee that such work as this might easily be thrashed out at the annual conventions, rather than, as before stated, listening to amateurs and useless papers. Also, if the Association were in touch with what is going on in the architectural world long before this it would have made some steps to obtain for Toronto the circulating exhibition of the American Architectural League rather than leave it solely to the committee of a small club of young architects. These are simply suggestions as to what might be done to benefit Architecture in the way

of bringing it intelligently before the public and showing them to some extent what Architecture means.

A point the Committee would make against the Association is that nothing has been done since the organization of the Association some ten years ago to improve the attitude of the architect and the public to each other. Surely with such an Association and in that number of years a better feeling should prevail. In the case of competitions alone the efforts of the Association have been to a great extent useless and undignified. After the Association in a number of cases protesting against the conditions of competitions, it has been found that even members of the Council have entered such competitions. Practice such as this tends to lessen the respect of the public for the architect, and from that point of view alone it would be better that the Association did not exist. It would seem to the Committee far preferable that the Association, for some years to come, should be much more exclusive in its membership, rather than to have such loose ways of carrying on its business.

The suggestions which will follow are based upon the supposition that for some years the Association be composed to a large extent of the reputable architects of Toronto and the other large cities and towns of Ontario. It is hardly likely that the rank and file of Ontario would immediately step into any well regulated organization as far as architectural education and practices are concerned, but it is this Committee's feeling that if the smaller organization, as suggested, would work for some years and create a standard, the other men would gradually fall into line, and after a few more years the legislation which is now being asked for would come as a matter of course if it were really needed. As it is now, it seems to this Committee the height of presumption to ask for legislation restricting the use of the word "architect," when the whole Association has been conducted upon such an unbusinesslike basis.

The Committee would suggest that the energy of the Association be devoted for the present almost entirely to education, as it feels that only by starting at the fundamental basis can any permanent improvement or success be gained. They would also suggest that in lieu of asking for any close legislation at present, the few really earnest and sincere members, who may stay in this smaller association proposed, will agree to only take pupils in their respective offices who will bind themselves to take the course of education laid down by the Association, and go through its examinations to enable them ultimately to become members. If this is done for some years and more members are added to the Association as before suggested, the Association would then with some degree of confidence, ask the government for close legislation if they wish to. There would then be at least a nucleus of well educated men to leaven the whole when the rank and file of the profession would have to be taken into the Association.

In regard to the educational methods of the Association the committee feels that theoretical education along with consequent examinations is not adequate to an architectural training. It thinks that some system of atelier work, in addition to office work, should be incorporated in the scheme. There are several reasons why some such work should be insisted on with office work. One of the strongest is that all pupils do not get in equally good offices, and the less fortunate ones would not have the same chance of personal instruction and design as those in better offices. Then again in a busy office a student cannot and does not get the close personal criticism which he might do under the atelier system. The committee can see difficulties in the way of carrying this out, for some students would live outside the city, but as lawyers and doctors are obliged to come to the city and spend the greater part of the year for some years, we see no reason why embryo architects should not spend a month or so each year in the city. However, this would not be a very serious consideration at the outset, as it is fully expected the sphere of influence for sometime would not extend much further than the city. The proposition is that the student should spend say a couple of months every year, possibly in December and January, at some large room either rented or loaned to the Association, possibly for the present a room in tbe School of Science building, and there work in a similar manner to the student at the Ecole Des Beaux Arts in Paris—under patrons, these patrons to be here, as in Paris, five or six of the best known and most respected architects of the city, who would probably only have to spend about an hour a week each to do their share of the work. The Committee has looked into this matter very closely, and feel it is practicable and could be carried out. The great advantage of this system must be obvious to any one, for in addition to this, of course, there should be a course of lectures and examinations to test the student's theoretical knowledge. Then in the atelier the student has a chance to apply this theoretical knowledge in connection with design under the direct criticism of men who have actually practiced and have been successfnl, not under mere professors. The promotion and progress of the students could be arranged somewhat similarly to the Paris school, details of which need not be gone into here. Much valuable information could be obtained on this point from Mr. Ernest Flagg, of New York, Mr. Thos. Hastings and several others, who the Committee feel quite sure would be only too willing to assist in this manner. The two architects mentioned above have started ateliers of their own in New York and to the knowledge of the Committee the influence they have had, with young men entering them, has been really remarkable. The committee make a very strong point of this work, as it feels that ordinary architectural methods have such a very great weakness in this respect. The cry has always been that design cannot be taught and nothing can be done in that direction. The committee differs from this in at least the fact that it considers something can be done, and a great deal, if only done in a practical way. The Committee thinks it would be no great hardship to any young man who wished to become a properly educated architect, to spend two or three months in the city every year for possibly three years, and that if the standard were only created in the city, the ambitious students would be brought in in a very few years.

There has been some talk of the Association starting a travelling scholarship, giving medals, etc., but surely this would only be adding to the farcial side of the Association to do so before providing any means of education. The Committee would suggest that everything of this kind should be left for three or four years after some logical scheme of education has been started.

Although this report is somewhat general in its remarks, the Committee has only written it after carefully discussing every detail, and feels sure that if a committee looks into the matter, they will find these suggestions practical and to the point.

Mr. Darling said he thought they ought all to feel thankful to Mr. Smith for getting up and reading the paper they had just heard. It was full of valuable suggestions, and if they would all work together on the general lines indicated it might result in a great deal of good. Of course he was only speaking as an individual, not as a member of the Association at all. He thought the suggestions as to classes was extremely valuable. He suggested that there did seem to be a certain amount of jealousy at times among architects ; he could not see why it should be so. For his part he was quite prepared to go back and start the whole thing de novo, because all he was interested in was the advancement of Architecture, and willing to adopt any procedure that promised to bring about this result. He strongly urged the abandoning of anything that divided architects, and that all should work together cordially and heartily for the advancement of good architecture. (Applause). He would once more remind them that they would not again have so good an opportunity as was now presented for discussing these very important matters.

Mr. Smith disclaimed any feeling of jealousy so far as the members of the Eighteen Club was concerned. He would like to say that that Club consisted of a few of the younger members of the profession in the city who met down town during the luncheon hour and who thought it would be a good idea also to meet one evening in the week to discuss Architecture. Their indifference to the Association, he thought, arose from their belief that the Association had identified itself more with the effort to close the profession than with any other subject. They did not think it advisable to close the profession until the public had attained some idea of what a good architect should be.

Mr. Gordon said that in this matter, as in everything else, destructive criticism resulted only in friction, whereas constructive criticism, such as that contained in the latter part of the paper read by Mr. Smith, was always fruitful in bringing men together. He therefore thought it would be well to put aside the question of whether we belonged to this or that organization, and seek for unity upon the lines of constructive criticism, such as formed so valuable a part of the paper read. He thought all would agree that much of the action suggested would be very valuable if it could be put in operation. To do that, it seemed to him, it would be necessary to have a head-quarters of some kind for the architects of the city and province, and he felt assured, from what had been said, that if they had the rooms which were in contemplation the members of the Eighteen Club would be very glad to associate themselves with the Ontario Association, as individual architects, in seeking to advance that which was so dear to them, namely, the higher education of architects and architectural students. He felt that all were agreed on the advisability of the general plan ; the only question was as to the feasibility of carrying out certain parts of the scheme. He was very glad to have the report of the committee of the Eighteen Club read, although, speaking personally, he thought it would have been in better taste had some of the earlier portion of it been somewhat modified. But, putting all that aside, he was very pleased to have heard the report, and to think the gentlemen of that Club were present, and he hoped some good would result from it.

Mr. D. B. Dick thought the subject under consideration was one requiring the very fullest discussion, and

he thought the report just read by Mr. Smith was calculated to help them along in the line they were travelling on. He thought Mr. Smith had, perhaps, put his finger on what had been the weak spot of the Association from its inception, the lack of educational facilities. The Association had been quite alive to the need of such facilities, but had found it very difficult to formulate a practical working scheme to attain the desired results. At the time of the organization ten years ago architectural education was not in as advanced a state as it was now. If the gentlemen represented by Mr. Smith would work with the Association he did not see why they should not, as Mr. Darling had said, start de novo, in the attempt to arrive at some satisfactory method of providing the students with the means of educating themselves. The attempt had been made to get the Government to provide the required facilities, but the only way that could be done was through the School of Practical Science, and, it appeared, that had not been altogether successful. He supposed the element of expense was in some measure responsible, as it necessitated the residence in the city of the student, while he could practically earn nothing during his studies. That, however, applied equally to the legal or medical professions. The suggestion had been made that there should be some examining body to examine those offering themselves as students, with a view to ascertaining whether they contained the stuff necessary to the making of an architect. That would be an easy thing to do, and some action along those lines was evidently very desirable. He thought, as he had already said, that if the gentlemen of whom Mr. Smith was the representative, would throw in their lot with the Association, and work heartily and cordially, there was no reason why an entirely new scheme should not be put in operation for the education of the student, and after all had been said and done, that had been the aim of the Association from the beginning. They had done a great deal of hard work and received very scant credit. Whenever they approached the Legislature to ask for anything they had been treated as if they were seeking their own advantage as individuals, whereas they had really taken a great deal of trouble and put themselves to a great deal of expense, with the object of affording education to young students. They frankly admitted that their efforts had not been successful, and they were quite ready to welcome any suggestions calculated to help in bringing about a better state of things in the future. He would simply urge the 18 Club, or any organization interested in Architecture, to come in with the Ontario Association, and have a fresh start and see what could be done.

Mr. Charles Lennox, with reference to the report of the Committee of the 18 Club, said he did not think it could be as well discussed at the present meeting as between the committees representing the Association and the 18 Club ; after which the Association could act upon the suggestions of the combined comm ttees. He thought more would be brought out in that way, because it would take a very considerable time to discuss and bring out everything the report was intended to cover.

Mr. Darling said Mr. Smith had referred to the desirability of ascertaining the kind of stuff prospective students were made of. He thought if reputable architects would insist that every student who came into their offices should pass the examination set for them by such examining body as the Association might appoint it would bring about the desired result as well as anything he knew of. That could be very easily carried out. Every student at the end of one year should pass the examination, and if he did not pass should not be allowed to pursue his studies further.

Mr. Gray suggested the appointment of a committee to meet a committee of the 18 Club for the purpose of discussing the matters under consideration.

The Registrar pointed out that that could be done after the matter before them had been discussed.

Mr. Aylsworth thought Mr. Gordon's resolution had been sufficiently discussed. The discussion had evoked a pretty general expression of feeling. He would suggest that they now vote to take the rooms, and thresh out the details afterwards.

Mr. A. H. Gregg said he thought there was another question which it was very important to consider before voting on the motion or the question of the proposed modus operandi, and that was the question of membership, and the conditions of membership. While everyone was agreed, he thought, that certain improvements were possible and desirable, there could be no better auspices under which to promote those improvements than those afforded by the Ontario Association of Architects. He did not think any better name could be desired, and the Association has done good work in the past ; whatever mistakes had been made, they had rendered good and faithful service. The Association now proposed to continue with certain changes in its policy. At present the membership was a limited one. He believed the Act prevented them from taking new members except on compliance with certain conditions as to examination. He thought the Association had to take things as they found them. There were at the present time a number of very desirable men, men who would make valuable members of the Association, who were debarred from membership, except by passing the examination. These men were not in a position to pass the examinations any more than the original members of the Association had been at the inception of matters. It was too much to ask men who were busy architects to pass the examination, and he thought something should be done to broaden the lines so as to admit these gentlemen, who would in any case be admitted if the Act were amended so as to be made closer.

Mr. Charles Lennox thought that difficulty might be obviated by examining such architects by allowing them to bring to the examiners such work as they had done, and let the Association pass them on that.

Mr. Darling said he thought there would be no difficulty in getting the Act amended, if it were necessary.

The Registrar stated that, as a matter of fact, it was the Council that fixed the examination, and therefore it was quite within their power to take such action as was suggested, and, with reasonable restrictions, he thought it was an excellent idea. Something had been said about the Association working for the architect, not for Architecture. That was a mistaken idea. He had himself formulated the phrase years ago that they were working for Architecture, not the architect, and that was true in every action they had taken. When they were approaching the Legislature they had always been able to take that position, that everything they were doing was for Architecture, and the Council had taken the view that the examinations ought to be made searching, in order to make them fulfil the conditions of the Act, which aimed at the advancement of Architecture. The proposition now amounted to this, that the Council should merely exercise its best judgment.

Mr. Darling said he was sure if they once got to the kernel of the matter, to do something for the advancement and benefit of the profession at large, the details and technicalities could be easily arranged. The main object was to get together in such a way as would create enthusiasm, and result in something being done for the young men coming into the profession.

Mr. W. R. Gregg said he sympathized very much with what had been said in regard to the examinations. A few years ago the young men thought the Association was going to be a close corporation, and that the only way to become an architect was to pass its examinations. The examinations were well conducted, and these men studied hard and passed them, but some of them left the city, perhaps, before the final examinations, and went elsewhere for the purpose of acquiring experience, and they got that experience, equal to any they could have had in Toronto. Some of them had come back, and were the equals of those who had stayed here and passed the final examinations and come into the Association. These gentlemen who had been away were now returned and practising, and it could not be expected that they would sit down and study text books for the purpose of now passing the examinations.

He thought the Association ought to include every good architect in Ontario. He did not know exactly how it was to be done, but he would propose that all these men be brought into the Association by January 1st, 1901, or perhaps it could be done even sooner.

Mr. Acton Bond said that, as far as the 18 Club was concerned, there were only three members in the organization at present who were not fully qualified. The point they most insisted upon was the provision for educational facilities in working out the scheme.

Mr. Aylsworth said he supposed that the 18 Club would be quite willing to go into the rooms with the Association, and make use of them in some way.

Mr. C. Lennox thought the rent of the proposed rooms was rather high. He knew of other clubs which had similar rooms on Adelaide street—one of them had four rooms—and they only paid $120.

Mr. Darling said he did not think the rooms could possibly be as good.

Mr. Dick begged to move, as an amendment to Mr. Gordon's motion, "That this meeting approves of the proposal to have rooms for the Association, and that the question of adopting this scheme, or any other scheme, be left to a committee to be hereafter appointed."

Mr. Aylsworth seconded the amendment, which was then carried.

Mr. Pearson, seconded by Mr. Aylsworth, moved that the same committee, consisting of Messrs. Pearson, Gordon, Burke, Langton, Siddall and Smith be appointed. (Carried.)

Mr. Gray then moved, seconded by Mr. Langton, that the Association appoint a committee to meet and confer with a committee of the 18 Club. (Carried.)

On motion of Mr. Darling, seconded by Mr. Gray, the following committee was appointed, Messrs. Wickson, Dick, Langton, Gray, Darling and A. H. Gregg. (Carried.)

The Registrar then read Clause 2 of the report, which, on motion by the Registrar, seconded by Mr. Aylsworth, was laid on the table.

The Registrar then read clause 3: "The committee suggest that members of the Association should make it an essential requirement from their students to go up for the examinations, and this condition might be made a condition in the student's articles" He thought while the terms of this might be qualified by subsequent action as to the course of education it was an important matter; it certainly should be insisted that every student take the course of education whatever it was. He would move the adoption of this clause.

Mr. Aylsworth, in seconding the motion, said this was a very important clause. He thought it rested entirely with the members themselves whether the Association attained a higher standing in the public esteem or not, and that this was one of the most essential features in attaining that end.

The motion was then carried.

The Registrar then read clauses 4 and 5 of the report, and moved that they be referred to the committee appointed to confer with the Eighteen Club. The motion was seconded by Mr. Helliwell and carried.

The Registrar then read clause 6 of the report, "That the proceedings of the Convention, as reported by the CANADIAN ARCHITECT, be printed separately in convenient form."

On motion by the Registrar, seconded by Mr. Dick, the clause was adopted.

The Registrar then read clause 7, "That instruction by architects to students upon the work in which the students are to be examined should form part of the work of the Association." He moved the adoption of the clause.

Mr. Dick having seconded the motion the clause was adopted.

The Registrar moved, seconded by Mr. Aylsworth, that clause 9 of the report be referred as an instruction to the new Council. Carried.

The Registrar then read clause 10, "The committee agree with a proposal that a certificate of membership should be issued, suitable for display in the offices of the members, and that members should be requested to adopt the words, 'Member of the Ontario Association of Architects,' as their distinguishing title."

Mr. Kay was in favor of adopting the clause. Every other Association had a certificate or diploma of some kind, and he thought the members of the Architects' Association should also have one. He moved the adoption of the clause.

Mr. Gemmell thought as a matter of policy that it was very advisable to issue the certificate. He felt sure members residing outside of Toronto would appreciate it.

The Registrar said that as far as he could gather there was a general feeling in favor of something of the kind. He had received letters from travelling members asking for some certificate that they belong to the Association.

Mr. Kay's motion for the adoption of the clause having been seconded by Mr. Gemmell was then carried.

Clause 11 of the report was then taken up. "The committee agree with a proposal that has been made to make the office of Registrar and Librarian honorary."

Mr. Helliwell thought that in view of the contemplated action in regard to having rooms, and the expense incident thereto, it might be well to adopt this clause. If in the future the Association found itself less straitened financially a resolution could be passed to make the office a salaried one again.

Mr. Darling said that was all very well, but what was the Association going to do without a registrar and librarian. He thought if the salary were withdrawn it would be a case of the office seeking the man instead of the man seeking it. He would like to hear of a volunteer who was willing to take the office without remuneration.

Mr. Strickland did not think it expedient that the services of the librarian and registrar should be without payment. Work done for nothing was never so efficient as that for which a consideration was paid.

Mr. W. R. Gregg shared Mr. Darling's feelings of wonder as to who would undertake the duties in question without pay. The Association had always had a great deal of work, and this coming year, if the proposed changes were carried out, there would be more than ever. He thought it would have been more to the point if the Committee had accompanied their recommendation with the names of half a dozen gentlemen who were prepared to undertake the duties without payment.

Mr. Gray failed to see how the expense of carrying out the proposed scheme was going to be met if they could not get a registrar who would do the work without pay. He thought someone might be found willing to undertake it without remuneration.

Mr. Gemmell pointed out that in the past there had been a great deal of work in connection with the attempts to secure legislation. There would not be this work now, and he suggested that while not withdrawing the salary altogether it might be possible to find someone who would be willing to accept a smaller sum than was now paid.

The President said that in view of the importance of the subject under discussion, he thought it well that it should be left over until there was a larger number of members present.

Mr. Kay thereupon moved that the Convention do now adjourn, to meet again at 10:30 to-morrow morning.

Mr. Strickland having seconded the motion, the meeting adjourned accordingly.

THE DINNER.

The dinner on the evening of the 16th inst. was well attended, and proved to be a most enjoyable function. The proceedings opened with a loyal toast to Her Majesty the Queen and the singing of the National Anthem.

Responding to the toast to the School of Practical Science, Professor Galbraith expressed his regret at the failure of the effort to obtain the desired amendment to the Ontario Architects' Act. He was at a loss to understand why the scientific schools were full of students of

engineering while there were so few students of architecture, and was obliged to leave with the Association the solution of the problem. Mr. C. H. C. Wright, whose name was also coupled with the toast, was pleased with the determination arrived at by the Association to establish a system of education for students, and to fit up rooms for the use of members and students. He wished that he might be able to connect himself with the Association so as to enjoy the privileges which were about to be provided.

Messrs, Kay, of Paris, Ont., Power, of Kingston, and Munro, of Hamilton, were asked to respond to the toast "Our Guests," proposed by Mr. D. B. Dick.

Mr. Munro said there sixteen or seventeen architects in Hamilton, and suggested that the Association should cultivate that field ; and also that a summer meeting might profitably be held there, affording the opportunity to sketch the remains of old forts and other objects of interest to be found in that locality.

Mr. H. Gordon, in proposing a toast to the Eighteen Club, took opportunity to say some pleasant things of the younger men and to invite their hearty co-operation with the Association for the advancement of Architecture.

Mr. Hynes, in responding, outlined the aim and work of the Architectural League of America, and urged that an effort should be made to secure the holding in Toronto next year of one of the series of exhibitions under the direction of the League.

Mr. C. H. Mortimer, of the CANADIAN ARCHITECT AND BUILDER, responded for "The Press," and Mr. Gemmell for "The Ladies."

A most enjoyable feature of the evening was the singing in excellent style of several humorous songs by Mr. Lincoln Carlisle. Recitations by Messrs. Pearson and Langton also contributed to the pleasure of the evening.

The proceedings closed with the singing of "Auld Lang Syne."

Mr. Chas. Langley was justly complimented upon his skilful designs for the menu card.

SECOND DAY.

The Convention re-assembled at 10.30 on Wednesday, the 17th inst., but owing to many of the members being engaged in committee with the 18 Club, the proceedings were not resumed until 11.30.

The President then called attention to the fact that clause 11 of the report of the Committee was still open for discussion.

Mr. Dick pointed out that the attendance was, if anything, smaller than yesterday, when this matter was left open because it was not thought well to deal with it without having a larger number present. He thought it had better be still left over until more were present.

Mr. Gordon said it was not proposed now that they should appoint anyone as Registrar ; all that could be done was to elicit an expression of opinion, and, if necessary, put it in the form of a resolution, with instructions to the Council to secure, if possible, the services of a suitable person to act as Registrar gratuitously. What was required was some one with sufficient enthusiasm to undertake the duties without pay, and with sufficient executive ability to carry them out in a manner satisfactory to the Council. There were many persons who, while very enthusiastic, were not very painstaking and analytical in their methods, and what was wanted was someone who combined with enthusiasm the necessary executive and literary ability. He would therefore simply move that the suggestion of the Committee that the office of Registrar and Librarian be made honorary in the meantime—that is for the next year—be adopted, and that the Council be instructed to try and secure the services of a suitable person among the members to act in that capacity.

The President thought the question was one of vital importance, and should very carefully considered.

Mr. Aylsworth thought they could not expect anyone to do the work for nothing ; there ought to be some remuneration. He thought some one might be found who would undertake the duties for $100 per year, and let the instruction be made to the Council in that way.

The Registrar pointed out that the only action the convention could take was by way of recommendation to the Council as to whether the office should be made an honorary one. The appointment of the Registrar lay with the Council.

Mr. Paull said the present occupant of the position had been with them so many years, and had been so very courteous and efficient in the discharge of his duties, that he could not contemplate any change without a feeling of apprehension. If the proposed changes in policy resulted in an enlarged membership it might make a difference in the financial position of the Association. $100 a year seemed to him a very small sum for the work required, and he feared difficulty would be encountered in getting a suitable person who would do it gratuitously.

Mr. Power found it impossible to reconcile the increased duties which would fall to the Registrar in connection with the enlarged policy of the Association with a reduction in the remuneration of that officer. It did not seem to him that that was equitable. Speaking as an outside member, he had always felt that he could write to the Registrar for any information or anything he wanted with the expectation of receiving a prompt answer, but it would be unreasonable and unfair to expect one who was receiving no payment for his services to leave his own affairs and attend to communications of that kind at once.

Mr. Wickson admitted the force of Mr. Power's remarks, but said they were on the horns of a dilemma. On one hand it was quite conceded that it was necessary to have the rooms and carry out the proposed scheme which involved extra expense, while on the other hand there was this feeling that the Registrar ought not to be asked to perform his duties without pay. But the fact remained that if they were going to incur the expense necessary for the proposed innovations they would find themselves seriously embarrassed if they retained a salaried Registrar. He thought if someone could be got who would undertake the duties for a year free of charge, by that time things might be in such a position as would enable them to revert to paying a salary. Of course, if no one could be found to do it, there remained no option.

The President called attention to the fact that in the earlier stages of the Association, they had managed to get along with an honorary officer in that position. Certainly if the right person could be had it would be a very great consideration to save that money.

Mr. Gordon said the salary had already been reduced to the very lowest possible figure that could with any conscience be offered to a salaried officer, $200. He thought that was indeed very small remuneration for the services performed by the Registrar at present. To offer a man $100 for those services was asking him to assume the position of a paid officer without the remuneration that a paid officer gets. But if you asked someone to undertake it for the good of the cause, for a year or two years, gratuitously, then that person is in an honorary position, and his services are regarded by his fellow members in their true light, and he receives their commendation and whatever honor attaches to the position. But to offer a man a paltry hundred dollars, and expect him to regard that as a quid pro quo for his services was little short of insulting. Therefore he was not in favor of any compromise. It was either a question of recommending the Council to go on and pay the salary of $200 a year or else to procure someone who would do the work for the pure love of the cause.

Mr. Wickson made the suggestion that while the office might be regarded as purely honorary, there might be an allowance made of, say $100 a year, for clerical work, which would go a long way towards relieving the Registrar from the drudgery incident to his duties. He thought if someone would volunteer for the work it would practically settle the question.

Mr. Gordon said the mere fact of someone volunteering would not settle it. A volunteer might have the enthusiasm, but the Council might not have confidence in his ability to carry on the work. It would not do

to have someone volunteer and get turned down ; that would be most unpleasant. It was more a matter for quiet investigation.

Mr. Gray regarded Mr. Gordon's idea as very practical. He thought the Council was almost unanimously in favor of reducing the expenditure along that line ; in fact, it must be done if they were to carry out the other ideas proposed ; otherwise they would fall behind.

Mr. Aylsworth said that he had made the proposition to pay $100 as salary, but after hearing the discussion he had altered his views to this extent, that the office should be honorary, with the understanding that the occupant of the position would be authorized to charge for clerical work he had to get done by anyone else as part of the working expenses.

Mr. Gray said, as he understood it, the Registrar at present did make charges of that character for clerical work, such as for having notices printed, etc., and in that way he reduced his clerical work to a minimum.

The President said there was a great deal of clerical work in addition to that.

Mr. Gordon then moved the following resolution : "That this Convention, while placing on record its high opinion of the services of our present Registrar, and its opinion that the present salary of $200 per year is very moderate, in view of the quantity and quality of the service rendered, yet, in view of the present financial condition of the Association, and the idea of expending money to secure rooms and enlarge the scope of the Association, we recommend the Council, if practicable, to make the position of Registrar and Librarian honorary for at least one year, and that a liberal allowance be made for clerical work, etc."

Mr. Dick seconded the motion.

Mr. Gemmell suggested that instead of the words "a liberal allowance" the sum of $100 be inserted. He thought that would be a better way.

Mr. Gordon did not receive with favor the idea of naming any fixed sum. The sum of $100 might prove to be a great deal too much, or it might not be sufficient. That was something for the Council to decide. With Mr. Dick's permission, however, he would change the resolution to read, "and that all necessary clerical work to lighten the labors of the office be paid by the Association."

Mr. Wickson was in favor of inserting the sum of $100, and if the Registrar could save some of that amount let him have the benefit of it.

Mr. Gordon replied that $200 was the lowest amount that could be offered any man for his services. He did not think $100 would be any inducement to such a young man as was necessary to fill the position ; it was not a man to whom the $100 would be an inducement that was wanted, but one whose inducement would be his enthusiasm for Architecture.

Mr. Gemmell still held to his opinion that $100, while it might not pay for the enthusiasm of the Registrar, would pretty nearly pay for all the clerical work required, and would be an inducement to an ambitious young man.

Mr. Darling, who had been absent from the room, asked what Mr. Gordon's motion was, and on learning expressed his entire agreement with it.

Mr. Pearson wanted to know if the Council could not get a man who would accept the office without remuneration. What was going to be done about the rooms? He thought something definite should be done. He did not think any man need be insulted by the offer of $100.

Mr. Darling said that the trouble about that was that it was tying the Council's hands. The Council had a perfect right to give $200, $100, $50, or any other sum they considered proper ; therefore, what was the use of mentioning any sum in this resolution, which was only a recommendation after all. If a man could not be got for $100 what would the Council do? They would have to exercise their judgment after all.

Mr. Gordon's motion was then read by the Chairman and put to the Convention, and carried.

The Registrar then read the following notices of motion :

"By Mr. F. S. Baker : That there be a regular meeting of the Association one evening in each month, except during the summer, for the purpose of reading and discussing papers, etc.

By Mr. F. S. Baker : That a suitable medal be provided out of the funds of the Association, to be given to the student standing highest in the final examination.

By Mr. W. A. Langton : That the Association establish a tariff of fees as a guide to members in making charges for professional services.

By Mr. S. H. Townsend ; To the effect that every year the Association place a mark of distinction upon a certain number of houses approved for excellence."

As Mr. Baker was unavoidably absent from the Convention, he would move the resolutions appearing after his name on his behalf, as he knew Mr. Baker desired to have them brought before the meeting. He thought, however, that both of the motions might be referred to the committee appointed to confer with the 18 Club, because they would come within the scope of the programme that those committees were arranging. The committee appointed yesterday to confer with the 18 Club had reported, and its report was that a committee of three be appointed in place of the committee of six.

Mr. Darling then moved that the members of the committee be Messrs. Wickson, Dick and the mover. He thought it was very much better to have a small committee.

The motion was seconded and carried.

Mr. Langton then moved, seconded by Mr. Wickson, that the first two motions be referred to the committee just appointed. The motion was carried.

Mr. Pearson inquired if the committee was to bring back its report to the Association ? If so there would be none of these proposed meetings for another year.

Mr. Gray wanted to know if this was a sub-committee of the former committee, or what was it?

Mr. Darling explained that it was thought better to have a smaller committee to deal with the matter alone.

Mr. Denison asked when the committee had come to a conclusion as to what was best to whom would they report?

Mr. Langton said that the committee of three now appointed would report to the Council.

Mr. Langton then moved the resolution appearing after his name in the notice of motion, "That the Association establish a tariff of fees as a guide to members in making charges for professional services." He thought this tariff was very necessary as a guide to the Association and as their standard in court. If any one thought he ought to get more than the tariff rate for his services, or that he might accept less, that was a matter for special arrangement between him and his client; in the absence of such arrangement the tariff would be the standard.

Mr. Denison seconded the motion.

Mr. W. R. Gregg produced copies of a tariff which he said were printed by the Architectural Guild of Toronto, of charges based upon those of the American Institute of Architects, and suggested that the members look over them and see if the tariff was in their view a reasonable one, in which case they might save time by adopting it.

Mr. Gordon said the tariff in question was not that published by the Guild, but was published considerably before the one issued by the Guild, published by an earlier Association. Then the Guild thought some amendments were desirable, and later on one was published by the Guild, copies of which some of the members had in their possession.

Mr. Denison said that while it was true an amended pamphlet was published by the Guild, he thought the changes made in it were not as good as the rules in the copy they now held in their hands. He thought it would be desirable for the Association, if possible, to have a tariff uniform with that of the American Institute in every way. He was strongly in favor of the adoption of something similar to that adopted by the American Association.

Mr. Darling said he thought one was practically the same as the other. This tariff only stated that it was based upon that of the American Institute, but as a matter of fact it went further. As far as the question of a tariff was concerned, he understood that this was only recommended as a guide by the Association. He

would not wish to belong to an association having a tariff binding on its members, for everyone was aware that human nature was only human nature. He thought all the information procurable should be obtained, both from the United States and England.

Mr. Wickson said one reason why the tariff they were looking at should not be adopted just as it stood was that there was provided a special rate for monumental or decorative work, "a special rate in excess of the above." That, he thought, was altogether too vague. In the case of a man who wanted an elaborately fitted up store it only gave the information that there would be a charge in excess. That was not enough, it ought to state from so much to so much more, so as to give a more precise idea.

Mr. Langton said he would move that the resolution be amended to read as follows: "That the Association adopt a tariff of fees as a guide to members in making charges for professional services, the tariff to be drawn up by a committee named by the President, which committee will report to the Council, and the Council shall have power to enact this tariff."

The resolution as amended being seconded by Mr. Denison was then carried.

Mr. W. R. Gregg inquired if there was any prospect of the tariff being adopted within the year? Had the Council power to enact a tariff?

The President replied that he thought they had.

The notice of motion by Mr. S. H. Townsend, to the effect that "Every year the Association place a mark of distinction upon a certain number of houses approved for excellence," was then taken up, and a letter from Mr. Townsend, explaining his unavoidable absence from the meeting, was read by the Registrar.

Mr. Gordon then moved for the appointment of a committee to consider the matter.

Mr. Darling said he was entirely opposed to the proposal; he thought it was a mistake from beginning to end, and he pointed out the absurdity of every little country town being stuck all over with tin labels like those of an insurance company. He thought if it was desired to do something to bring architects into contempt this was the very thing to accomplish it. Who, he asked, was going to be the judge of these houses, and to say that this or that was a good house, "designed by John Jones, architect."

Mr. Wickson thought the plan was one of the best and quickest ways of interesting the public in good architecture.

Mr. Langton said that he did not all agree with Mr. Darling. The proposal might present difficulties in working out, but he did not think it was at all fair to compare the proposed mark with the tin label of an insurance company. It might take the form of a stone let into the building, which by virtue of its own design would command respect. As to the question who was to be the judge in the matter, if this Association could not tell what was a good house he would like to know who could.

Mr. Darling wanted to know why the proposal was limited to houses? He thought the principle of the thing was utterly wrong. He thought it was only in cities like London, Paris and Berlin that such a project could be carried out. He thought a proper committee could only be got in such places.

Mr. Wickson said that was only a matter of detail. He had known competitions where the competition was decided by the competitors. He thought the Association could decide. He thought the scheme was a good one. They all knew that sometimes a badly designed house would catch the public, and yet, if they were told it was not a good thing they would be more careful about forming their opinion.

Mr. Denison thought the proposition if carried out would defeat the very object for which the Association was formed, to create a feeling of fellowship among architects. If members here and there were singled out, whose work might happen to be in fashion at the time, or who had, as it was called in municipal politics, "a pull——"

Mr. Langton:—No no, we have none of that.

Mr. Denison, continuing, thought that by picking out work here and there, and saying of it, "This is the genuine thing, none other need apply," a great mistake would be made. He thought the public were the persons to judge, and he thought, notwithstanding all that was said of the stupidity of the public, that in nine cases out of ten you were safer in their hands than in the hands of a committee. He thought every building ought to be let speak for itself.

Mr. Wickson said if the architects were not the proper ones to educate the public in such matters as this he would like to know how they were going to be educated; where else would they get their education in such matters.

Mr. Langton expressed his entire dissent from Mr. Denison's view that the public in this country were the best judge. He quite admitted that the architect's business was, as Robert Louis Stevenson said, "to please the bourgeois who carries the purse," but it did not at all follow that in doing this he should do what was unpleasing to himself. Because the public taste was bad was no reason why they should work down to it, but they should rather seek to educate the public taste up to that which is good. The proposition if carried out would afford a good opportunity of educating prospective clients in the lump, by bringing prominently before them work that was really good. He had been told the other day by a member of the Association as a good joke a remark that he had overheard in passing a group of ladies and gentlemen on the street. They were standing opposite a typical piece of claptrap design, close to which was a quiet but good piece of work by a member who was then in the room. The remark heard in passing was "How can anyone build a thing like that (pointing to the better building) when he can get a nice house like this!" (pointing to the other). Would not a mark on the better house have had some effect here to influence opinion?

Mr. Wickson thought Mr. Darling must have taken to turning "handsprings" of late. If he remembered rightly the last time this proposition was before the Association Mr. Darling quite approved of it. He thought if the convention adjourned for lunch Mr. Darling would come round to that view again.

Mr. Darling said that in nine cases out of ten public opinion would be found to be right. He did not mean to say that it did not go wrong in isolated instances, but where it had crystallized it was almost invariably correct. The instance cited by Mr. Langton was merely the isolated case, where a single individual had gone wrong. If any labelling was to be indulged in it would be wiser to begin with buildings like Toronto University and Osgoode Hall, but not with modern work. He did not think, however, that there was any necessity for such a course.

Mr. Denison said those in favor of the proposition had better go one step further, and put a label on every building designed by a member of the Association.

Mr. Aylsworth said there was a limit to all these things. If the proposition were adopted it should be on condition that no mark be placed on any building that was not at least twenty-five years old.

Mr. W. R. Gregg said he entertained strong objections to the proposition, because he considered it impracticable in Toronto, where they were all hunting so earnestly for a living that it was quite a common practice when an architect was being employed by some one for another architect to hunt out the employer and insinuate to him that the man he had was not just the right man for the work, and that he himself might do better. It had been proved in committees that that kind of thing had been resorted to in Toronto. With such a state of things existing they could not trust each other to carry out this proposition. It needed some one like Prof. Ware, of New York, some one who had gone through the work and become a professor in a college and could be trusted. Even Prof. Ware got criticized. Another objection was to be found in the fact that a building might be erected and bear this mark of distinction for ten or fifteen years. Then it might be necessary to make some alteration or addition to it, and the original architect might in the meantime, by reason of being on the wrong side of politics, or some such thing have lost his position, and the addition be designed by another architect, and be of such a character as to completely change the effect of the whole building. Now, in a case of that

kind, would the label be removed or what course would be taken? He thought the proposition quite impracticable. The motion said the mark was to be conferred for general excellence. Would that necessitate an enquiry from the mistress of the house as to whether the bath room plumbing or the fixed washtubs were satisfactory, or whether the back stairs were of sufficient width and so on? All these things, and hundreds of others, entered into the general excellence of a house, and made it impracticable to decide the question. The thing was impracticable, and outside of all that, who was going to take the time to attend to it? Here was a committee that had been appointed to look into the matter, and they had not had time time to meet about it, and the mover of the resolution was so busily engaged that he had not even time to come here and support his own motion.

Mr. Gordon said that although he had moved the resolution he had not yet spoken to it. He thought that all the remarks had been somewhat premature. One of their members had given a certain amount of thought to this subject, and had looked at it in various lights, and had thought it feasible to find some way in which our best buildings might be recognized, and so serve to aid in developing a better architectural taste on the part of the public. Without at all committing themselves to the scheme, he thought it would be quite proper to allow this gentleman and the committee associated with him to look still further into it, and bring in a report which would give more light. Then it would be possible to intelligently discuss the main proposition, whether the principle was right. He thought the committee should be appointed, and if they were he hoped they would do a little better than they did last year, when there was no meeting.

Mr. W. R. Gregg suggested as a better way of educating the public taste, a large public meeting, at which views of the best buildings in the city might be given, with an explanation by a lecturer of the points of merit and demerit, with free scope for criticism.

Mr. Darling moved in amendment to the resolution that the committee be dissolved for good. The committee had never met, and the convener could not find the time to come down and put his motion to the vote.

Mr. Gordon said that was not a motion, that was simply voting it down.

The motion was then put, and lost.

The Convention then adjourned from 1 o'clock until half past 2 o'clock in the afternoon.

AFTERNOON SESSION.

When the Convention was called after luncheon two papers were read by Mr. H. B. Gordon and Mr. J. Gemmell, on color in its relation to architecture.

SOME SUGGESTIONS AS TO THE CHOICE OF DIFFERENT COLORED BUILDING MATERIAL.

Building material must necessarily first be chosen for its structural fitness. This may be more or less modified by its adaptability to surfacing or ornamentation. But these two considerations should in their turn be modified by the suitability of the color of the material for the proposed building. For instance, an ornamental doorway of light colored sandstone may be quite correct from a structural view point, and its adaptability to ornamentation no one will dispute, but the desirability of its presence in the sombre solidity of a brown stone front is decidedly open to question. The structural fitness of a heavy projecting copper cornice may be accepted by many, and its easy adaptability to ornamentation is quite plain, but its presence as the crowning member of a light colored front is intolerable.

If as much thought was given to the color of the materials as to their form, there is no question but that our architecture would be more satisfactory.

While not presuming to formulate and express any laws for the guidance of choice in building materials, some suggestions have occurred to me, the statement of which may provoke fruitful discussion.

1. As to a general scheme of color for a building and its relative intensity in the various parts: The colors of building material, if there is any variation in tone, should be darker at the base of a building and lighter as they ascend. There is a structural suggestiveness in this. Dark colored materials (other things being equal) are usually stronger and denser than light colored ones. Hence, the darkest (which suggests the strongest) should be placed in the lower or supporting portions of a structure. Thus a most satisfactory combination is secured by making the lower part of a building dark brown stone, the body of it dark red brick, and the roof a lighter colored tile.

Perhaps the most unsatisfactory combination in general use is a foundation of light colored stone, a body of red brick, and a roof of dark slate. The roof problem is one of the most difficult questions of color in the ordinary cheap class of buildings. The cost of tiling is almost prohibitive for such structures, while the raw crudeness of a new shingle roof is offensive. The use of some light colored shingle stain is suggested as an expedient in cheap work, and the adoption of light colored green slate where the matter of cost is not so important.

2. Concerning the color of the body of work in relation to that of trimmings or ornamentation: As the body represents the more solid and structural portions of the work, it should generally be darker than the trimmings. This suggestion applies to nearly all the questions of broad surfaces with adjacent ornamentation. The object of plain wall surfaces being to give the needed repose and dignity to any composition, it naturally follows that the darker colored materials in the construction are the most satisfactory to use in this relation. Ornamentation, on the other hand, calling for the effect of light and shade, as in moulding and carving, should be in the lighter colored materials, as only in such can the best effects of sunshine and shadow be secured. In illustration of this, one has only to consider the tame and inadequate effect of a plain, smooth dressed, light stone wall, especially if the color be quite uniform and the joints disguised. If, however, the surfaces be rough rock face (which is Nature's ornamentation), the effect of light and shadow gives an entirely different impression.

On the other hand, one has but to consider the inadequate results from fine mouldings and elaborate carving in dark colored stone, and contrast it with the beautiful light and shadow effects produced by the same class of work in light colored material.

3. My third suggestion is one which is so simple as to be self-evident, viz., that the character of the design should dictate the color scheme of the materials.

Designs that rely on the disposition of the masses and not particularly on the quality of the detail are naturally suggestive of dark colored materials.

Designs, on the other hand, that are elaborate and emphasize detail are most effectively rendered in light colored materials. For instance, how much less satisfactory the general impression of the main buildings of the Chicago Exposition would have been if they had been executed in dark colored materials.

Breadth and solidity, with heavy members and correspondingly coarse scale of detail, are most effective when executed in the darker materials. Fineness and elegance of detail and general lightness of design is most effectively expressed in the lighter colored materials.

Milan Cathedral, with its multitude of pinnacles and flying buttresses, would not be a "dream of beauty" if the white marble was changed to a brown sandstone.

The fourth suggestion is that the general character and use of a building should in a great measure determine the amount of variety in color of material.

Buildings of a monumental character, and especially those that are intended to express solidity and permanence, should not have a great deal of variety in their color. Municipal buildings, banks, universities, and structures for similar uses should not be marked by materials of strong contrasting color. Many of us have perhaps regretted that designs otherwise stately and dignified have been marred by chequer board variations of different colored stone. Our only consolation is that the gentle hand of Time, aided by city smoke, will temper the colors and make the contrast less obtrusive. What is true in respect to monumental buildings also applies along different lines to ecclesiastical ones. Here the idea of harmony is most essential, while the avoidance of a gloomy effect is also necessary. Hence the use of light colored stone is most pleasing for churches, as it gives the necessary impression of unity and permanence, coupled with the suggestion of light and hope.

When domestic architecture is undertaken, the possible field of color in material is much enlarged. Here cheerfulness of effect is more important than dignity of expression. Probably the only limit, other than the general suggestions laid down in this paper, is the avoiding of fussiness and vulgarity.

And this leads to a 5th suggestion: The character of the surroundings must greatly influence the choice of color in building material. It will, I think, be readily granted that a house surrounded by trees and grass gives a much wider latitude in the choice of color in building materials and their use in contrasting positions, than one surrounded by other buildings. The harmonizing and softening effect of green surroundings in nature is familiar to all.

It appears to me that much more satisfactory results might be accomplished by architects if they made a study of the surroundings of their proposed buildings before deciding upon the color of the materials.

My next point I present with some diffidence, viz., that the style of Architecture adopted is to some extent a determining influence in the limit of color contrasts.

Pure classic Architecture, which depends so much upon the relative proportions of each part for its successful impression, must necessarily be limited in its variety of color. Any very strong contrasts of tone would distract the eye from the harmony of the parts.

Renaissance in its different variations affords the possibilities of greater scope in color, especially in the different storeys of the facade. Even here, however, care must be exercised to use the contrasts of color in the curtain wall, rather than in the classic framework of the design.

Gothic admits of a wide range of color in material, provided that the main lines of the design are not confused by sharp divisions of contrasting colors.

The less formal styles of Architecture, such as the Queen Ann, probably give the greatest permissible range of color in building

materials. To those who favor the restlessness of these styles of design, the added restlessness of abundant contrast in color is an open door.

A 7th suggestion is in regard to the use of veined or mottled material of different colors or shades, such as marbles and some varieties of terra cotta. The general suggestion may be given that veined and mottled materials are for use in plain surfaces, where their variations of color are a help, and not to fine moulded or foliated parts, where their differing color produces confusion with the lines of the design.

And might I conclude with a caution about ascertaining the permanency of the color in any building material before adopting its use. I have in mind an important building, the body of which was built with a dark limestone and the trimmings with light Ohio stone. In process of years the color relations were reversed, the limestone bleaching nearly white and the sandstone darkening with age, smoke and dust.

The President, in expressing his appreciation of the papers read,* said that it is the color of a building which must impress the mind most forcibly because it is the color that lives most vividly in the recollection. When in the old country two years ago he had been looking at some work of Pugin, whom he had the pleasure of knowing very intimately, notably a building at Queenstown, now approaching completion, but upon which they had been working for forty years, and there were also some churches erected by him. The stone employed was a red trap, chiefly, and a limestone ranging from about a cobalt blue to lighter shades, almost pure white. The main walls of the buildings in question were of the red trap, and it was graduated in the way suggested by Mr. Gordon in his paper, while the trimmings, the cut stone work, the dressings of the windows and some of the salient points were of this blueish gray limestone, a very beautiful effect being produced in that way by the blending of the colors. The cathedral, which was by Burgess, was of light limestone, a magnificent structure. He had himself been a chorister in the old cathedral, and it carried many happy associations for him, but alas! it was gone, and the present magnificent structure was in its place. He thought it looked rather cold in its whiteness. Then there was another building of red brick, with white and grey limestone trimmings, a contrast one would expect to find rather marked, but the effect was anything but glaring, owing to the surroundings of turf and trees, which had the toning effect that green always seems to have. Although the contrast of the material in itself was perhaps rather striking, the combined effect was very beautiful.

Mr. Paull thought the members were very much indebted to Messrs. Gordon and Gemmell for their interesting and instructive papers. He had listened with much pleasure to Mr. Gordon's able treatment of contrasts in color, and drew from its conclusion that it was undesirable to build generally with very dark colored materials. He referred to the Guild Hall in the city of London which was of dark stone, and recalled the cleansing process which had been applied to it some fifty years ago. After having been cleaned it looked remarkably well, and compared quite favorably with the Royal Exchange, the Bank of England and other adjacent buildings.

The President said he remembered the period referred to by Mr. Paull, when there was a general movement in the way of scraping down and cleaning the walls of buildings in London, which spread to the provincial towns and resulted in a kind of crusade of renovation, but which, when enquired into, came to a sudden stop.

As there were other papers to be read and time was pressing the discussion was not prolonged.

Mr. E. R. Rolph, of the 18 Club, contributed a very interesting talk on "The Building of the Crow's Nest Railway," illustrated by a very fine collection of photographs, which were handed around among the audience. Mr. Rolph's description of the wonderful country traversed by the railway, and the methods adopted in the construction of trestle work and bridges was very interesting. The bridge he felt most interested in was one across the St. Mary's River, $\frac{3}{4}$ of a mile in length and constructed of piles. The average length of the piles was 80 feet, some running to 87 feet, 18 inches in diameter at the butt and 12 inches at the stock, and, as he put it, straight as lead pencils. These were driven by pile drivers having a drop of 100 feet. He described some wonderful fossil shell fish they discovered, some of them 10 feet in diameter and three feet thick. Specimens of smaller ones were collected and sent to McGill University. Then there was a wonderful bed of transparent oyster shells found at an altitude of 3,000 feet above the level of the sea, and also clam shells, showing that at some remote period there had been a sea there. The bridge over the St. Mary River was completed within six weeks from the time the timber was drawn on the ground, notwithstanding that a large part of the work was carried away by a spring freshet. Among the photographs displayed was one of the framing shop, in which the various erections were fitted together. As an instance of the rapidity with which the work was pushed on, he stated that in this shop on two occasions the entire framing of a 150-foot Howe truss had been completed in a single night. The duties of an architect out there, he said, were very different from what they are in Toronto. He had to get out a bill of quantities for everything, from tacks and nails to bricks and mortar, and order them from wherever he could get them. One piece of work he designed was a transfer slip at Kootenay landing. There was a fall in the Kootenay river there of 28 feet and to get down that 28 feet they had to pile on a grade of about $2\frac{1}{2}$ per cent. running back for a mile and a half. The pile work ran right down about 8 feet below the lowest known water level. Then there was a top and a travelling stage with three tracks to bring it up to the level of the water or fall back as the water rose. Then from the end of the travelling stage, which was 239 feet long there was an apron 40 feet long, so that the end when it was lowered would go down to the scow loaded with the tram. The detail work of this had taken some eight weeks to do. Then he had to get together his material. The timber came chiefly from Vancouver; the cast steel and most of the rods and bolts from Montreal; the carriages were made in the shops at McLeod. The materials for this structure, indeed, were collected from both ends of the continent. He had not the satisfaction of seeing it completed before he left.

The President here informed Mr. Rolph that he had heard of the structure in question from an engineer who had seen it in operation, and who described it as a very successful piece of work.

Other work he had done in designing and erecting pile drivers and hoisting machinery, and laying out the work for the bridges. He also had to design living cars for the men, called jumbo cars, watering tanks, station and section houses, and coal sheds. A photograph of one of the latter was shown, designed to hold 1200 tons, and which coaled the engines automatically.

The Registrar, Mr. Langton, then read his paper on "The Architect's Part in His Work, as Exemplified in the Methods of H. H. Richardson."

This paper will be printed in a future number.

On motion of Mr. D. B. Dick, seconded by Mr. Kay, the thanks of the Convention were tendered to the gentlemen who read papers, and to Mr. Rolph for his contribution.

A vote of thanks was also passed to the auditors, Messrs. H. Langley and W. R. Gregg.

The election to fill vacancies in the Council caused by retiring members was then proceeded with, and Messrs. A. H. Gregg, W. A. Langton and J. A. Pearson were declared to be elected.

On motion, duly seconded, Mr. W. R. Gregg and Mr. Gemmell were appointed Auditors.

Mr. Power then moved a vote of thanks to the Past President for the assiduity he had shown in conducting the business of his office during the year.

Mr. A. H. Gregg seconded, and the motion was passed.

The retiring President, Mr. J. E. Belcher, of Peterboro', acknowledged the vote of thanks.

A communication from Messrs. Langley & Langley, offering to place at the disposal of the Association bound volumes of the "Builder" and the "Building News," dating back as far as 1868, was read by the Registrar; and on motion by Mr. Kay, seconded by Mr. Power, the offer was accepted.

The Convention was then declared adjourned sine die.

* Mr. Gemmell's paper, which for want of space is omitted, will appear in our February number.

STUDENTS' DEPARTMENT.

CANADIAN ARCHITECT AND BUILDER STUDENTS' COMPETITION.

THE publishers of the CANADIAN ARCHITECT AND BUILDER invite from architectural students and draughtsmen in Canada, competitive drawings for a Suburban Bicycle Club House. The building to be erected on a lot 60′ x 150′ in size, to have a southern exposure, and to cost not more than $6,000. It should contain bowling alley, billiard room for six tables, gymnasium, card rooms, reading and other rooms, necessary for a bicycle club. Provision must also be made for social entertainments, such as kitchen, etc.

Competitors are required to submit drawings to ⅛ scale showing south and east elevations of building, or it lieu thereof, a perspective trom ¼ scale plan drawn at an angle of 30 degrees to the picture plane ; also plans to 1-16 scale of all floors, including basement, graphic scale to be indicated on each sheet. Competitors are also asked to state briefly the materials proposed to be employed in the construction of the building.

Drawings must be made with pen and PERFECTLY BLACK INK on white paper or cardboard. NO BRUSH OR COLOR WORK WILL BE ALLOWED. Drawings should be so arranged as to admit of photographic reproduction in the illustration pages of the CANADIAN ARCHITECT AND BUILDER. The size of each page is 7 x 10 inches. No set of drawings must occupy more than two pages.

Competitors must send in their drawings under motto, marked "Students Competition," and addressed to "The publishers of THE CANADIAN ARCHITECT AND BUILDER, Confederation Life Building, Toronto," prior to 5 o'clock p.m. on Monday, February 12th, 1900. Each set of drawings must be accompanied by a sealed envelope bearing on the outside the author's motto and enclosing a card giving his full name and address.

The merits of the designs which may be submitted in this competition will be judged by a committee of the Ontario Association of Architects and of the Province of Quebec Association of Architects, whose decision shall be final. For the benefit of competitors, the judges will be requested to give a detailed criticism of each plan.

Three prizes are offered, as follows : To the winner of 1st position, $10 ; to the winner of 2nd position, $5.00, and to the winner of 3rd position, one year's subscription to the CANADIAN ARCHITECT AND BUILDER.

The right is reserved to publish any or all of the drawings.

NOTE.—Competitors are required strictly to observe and comply with the above instructions and conditions.

NICHES.

THE abundant use of statues by the Romans led to the adoption of the niche—a feature unknown in Greek architecture—as a convenient mode of inserting them within the surface of walls and thereby decorating them ; at the same time space was gained in interiors where if otherwise placed they would have taken up room. Niches frequently occur in Roman temples and baths, and were occasionally decorated with a frontispiece of small columns, with their entablatures and pediments, but were generally left plain and were for the most part semi-circular in plan, in which they usually terminated an arch or semi-dome, after the manner of a tribune or large recess, of which the niche was, in fact, a miniature copy. Niches, however, are very frequently rectangular in plan, and were also exhedræ, or recesses, in which case the latter formed arches vaulted hemicylindrically.

PERSONAL.

H. R. Woodley was recently appointed plumbing inspector at Rat Portage, Ont.

Mr. E. J. Lennox, architect of the new Municipal Buildings, Toronto, was recently presented by the employees under his control with a handsome marble clock and an appreciative address.

The new Minister of Public Works for Ontario, the Honorable Frank Latchford, was recently tendered a banquet at the Russell House by the citizens of Ottawa. There were present upwards of three hundred citizens, representing all classes and interests in the community, and many kind things were said of the guest of the evening.

Mr. W. H. Law has been appointed chief engineer and manager of the Hamilton Bridge Works Company, Hamilton, Ont. Mr. Law was formerly manager of the Central Bridge Works at Peterboro, and has had a long and valuable experience in this line. He is also an experienced civil engineer, and will undoubtedly fulfill with ability and satisfaction his present position.

Mr. James Smith, of the firm of Smith & Gemmell, architects, Toronto, has just entered upon his twenty-first year as Secretary-Treasurer of the Royal Canadian Academy, and is busy preparing for the annual convention, which will be held this year in Ottawa in February.

Samuel Walker, who was for seventeen years general foreman of the Grand Trunk Railway shops at Point St. Charles, has accepted the position of general foreman of the Dominion Bridge Company's works at Lachine. He was the recipient of a presentation at the hands of his late confreres.

LEGAL.

JAMES CONNOLLY VS. THE DETROIT BRIDGE AND IRON WORKS CO.—The plaintiff who was employed by the company on their works on the new Victoria bridge at Montreal, sued for $1,999 damages for having his leg crushed by a car on which iron beams were being conveyed to the position where they were wanted. The Lower Court dismissed the action on the ground that the plaintiff had been guilty of negligence in not blocking the whee of the car. Messrs. Justice Tashereau, Lorange and Lemieux, of the Court of Review confirmed this decision.

HAVEN V. HUGHES.—Judgement by Chief Justice Burton, in the Ontario Court of Appeal, on appeal by plaintiff from judgment of Boyd, C., dismissing action with costs. Action for injunction to restrain defendants from trespassing upon certain land and taking stone therefrom. The plaintiff claims the sole right to quarry under a lease from defendant Troup, which he asked to have reformed if necessary. The defendants purchased the land subject to the lease, and contended that, properly construed, it was only a license to quarry 50,000 cords of stone and no more, which they are willing to allow plaintiff to do. Held, not a case for specific performance. There is plenty of stone to cover the plaintiff's contract in addition to what defendants are taking, and their submission gives him all that he can ask for. Appeal dismissed with costs.

GREENWAY V. GARDINER.—Judgment by Justices Armour and Falconbridge in the Divisional Court at Toronto, on appeal by defendant from judgment of junior judge of County Court at Middlesex in favor of plaintiff in an action in that court for $141, balance of the price of a heating apparatus put into defendant's house by plaintiff, under a contract which required that the furnace should heat the house up to 70 degrees when the temperature outside was 10 degrees below zero. The defendant's counter claim for $290, amount paid for putting apparatus in proper condition was dismissed. The defendant contended that it was not sufficient that the thermometer should once have registered 70 degrees when it was 10 degrees below zero outside, but that it should be shown that the furnace was reasonably fit to heat the house. Held, that guarantees such as these in this case are to be construed reasonably according to the interest of the parties, and the more strongly against those giving them ; Cadill v. Carbolic Smoke Co. (1893), 1 Q.B.D., 256. The proper and reasonable construction is that the furnace if fed and managed as such heating apparatus is ordinarily fed and managed, would give 70 degrees of heat when the weather was 10 degrees below zero outside, and heat the rooms containing radiators to such degree. This being so the evidence is clear beyond reasonable doubt, that the apparatus did not answer the guarantees. Appeal allowed with costs. Plaintiff to have judgment in court below for $141 with costs, and defendant to have judgment there on her counter claim for $290 with costs. Plaintiff's judgment and costs to be set off pro tanto against defendant's judgment and costs.

THE BUILDER

[THIS DEPARTMENT IS DESIGNED TO FURNISH INFORMATION SUITED TO THE REQUIREMENTS OF THE BUILDING TRADES. READERS ARE INVITED TO ASSIST IN MAKING IT AS HELPFUL AS POSSIBLE BY CONTRIBUTING OF THEIR EXPERIENCE, AND BY ASKING FOR PARTICULAR INFORMATION WHICH THEY MAY AT ANY TIME REQUIRE.]

Finishing Eyebrow Windows.

In our November issue we showed several examples of eyebrow windows, and in Figs. 1 and 2—(the latter by the way, having been set by the printer–upside down), we showed how the window should be laid out in order to get the best results. The whole ground, however, was not covered, and we purpose discussing the subject a

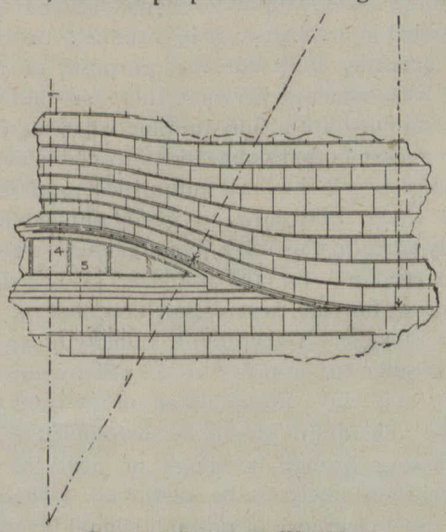


FIG. 1.—EYEBROW WINDOW.

little more. The eyebrow window, when properly proportioned, and the work neatly performed, always produces a good effect, but when constructed as ordinarily done, it makes an ugly feature on a roof, and is sure to have a bad effect on the onlooker, often, without his being able to explain the reason why. There should

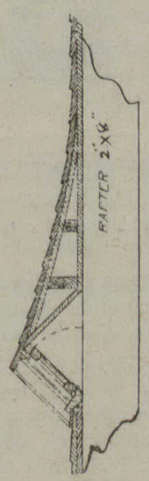


FIG. 2—SECTION THROUGH ROOF.

not be too much height in the middle, and the reverse curve should die into the body of the roof without being noticed. A very good example is shown at Fig. 1, when it will be noticed the central height is quite small, and the shingles weave over the whole window without showing any line of division. The dotted lines show where the centres are from which the curves are described. This style of eyebrow is always effective. Fig. 2 shows how the frame-work for the window may be made, the ends of the curving ribs are seen in section. Unusually the sashes of an eyebrow window are hinged below, if they are intended to be opened at all, and the sweep of this one may be seen by the curved dotted lines. Drawn to a larger scale, is the working sectional drawing at Fig. 3, where the window-frame,

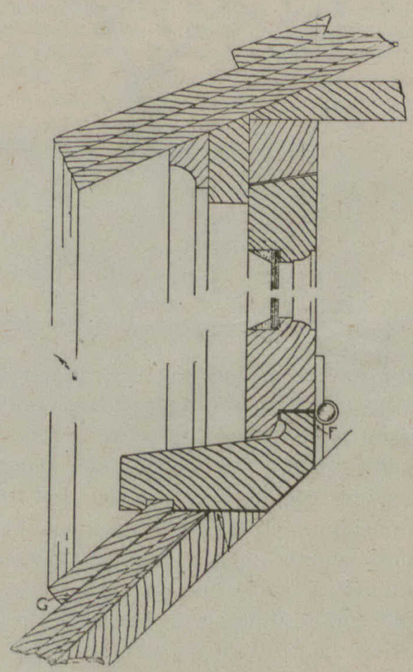


FIG. 3. SECTION THROUGH FRAME.

sash, and other finish are shown in place. The method of hinging, and scheme for preventing water from finding its way, inside, are shown. It will be seen that a metal flashing is placed on the roof under the frame, and extends from F to G as denoted by the arrows, which precludes the possibility of any leakage. All the illustrations shown in connection with the eyebrow window, in these columns, show square-cut glass and ordinary sash, but, in many places where this window is adopted, the sash would have a much better appearance if it was leaded and filled with white glass.

Curved Verandah Roofs.

WORKMEN often find it difficult to get the proper curves and lengths for veranda or other roof hips, and jack rafters where such roofs turn at an angle, and to aid them in overcoming this difficulty, the following diagrams and descriptions are presented : Let a b (Fig. 4) be the seat of the common rafter, and c b the curve or profile, which in this case is an ogee ; now draw the

seat of the hip or valley , as b d; then divide a b into any number of spaces, as 2, 4, 6, etc.; from these points draw lines at right angles to a b intersecting the profile of the common rafter and the seat of the hip, b d ; then from these points on the seat of the hip continue lines at right angles to seat of the hip, making 9 10 on the common rafter, and 7 8 on the hip rafter equal to 7 8 on the common rafter ; 5 6 on the hip equal to 5 6 on the common rafter, etc.; the points thus found are

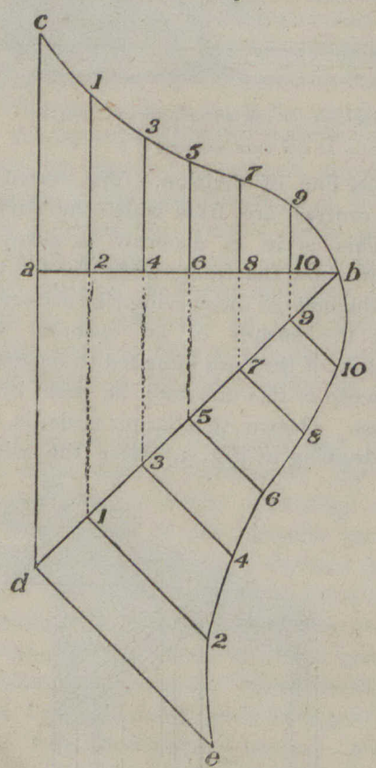


FIG. 4.—CURVES FOR VERANDAH HIP-ROOFS.

points on the profile of the hip rafter ; then connect b 10, 10 8, etc., with the curved line as shown, thus giving the profile of the hip rafter. This should be readily understood, for if we raise the curved line c b, until it stands plumb over a b, we get the common rafter in position. Then, by lifting c b until the curved line stands plumb over the seat d b ; we get the hip curve in position, and a line laid on c and e, or from 1 to 2 on the curved lines, will be level or horizontal ; thus proving the truth of the solution. In order to get

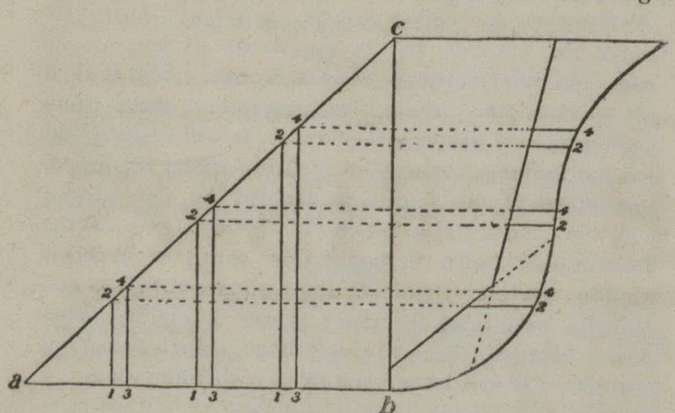


FIG. 5.—LENGTHS AND BEVELS OF CURVED RAFTERS.

the jack rafters of the proper curve and length, we draw the plates a b and b c in Fig. 5 ; and the seat of the hip, as a c. Now draw the rise and profile of the common rafter, as c e and e b ; lay off the seats of the jack rafters, as 1 2, 3 4, etc., making 1 3 the thickness of the jack rafter. Continue these lines from where they strike the seat of the hip, parallel to a b, until they strike the curve of the common rafter. Then b 4 will be the length of the jack rafter, 4 will be the long length and 2 the short length, or 4 will be the line of the cut on one side and 2 the line of the cut on the other side. The curves on these rafters must be made by the same pattern as that used for the common rafter, and the lengths, as shown, must be taken from the bottom of the pattern, as at b ; the curves will then all work on the same plane.

Drainage.

WHEN a soil drain has to be fixed inside a house, or outside it where a leakage from it would find its way into the house or under the footings, cast iron with caulked lead joints, is preferable to glazed or stoneware tiles, whatever kind of joint may be adopted ; the pipe not being less than ⅜ in. thick in any part for a 4 in. or 5 in. diameter, and thicker for drains of a larger size. Instead of laying an iron drain in the ground, where it is inside a house it is better that it should be carried on the fan of some wall, or be suepended from the floor, or be carried in a subway, or in a tunnel, or creeping-trench, specially built for the purpose, of bricks or cement, with openings here and there so that the pipe can be examined from time to time when desired. In order to secure proper connections to main sewers, it is always best to get the local authorities to do the work, as they know best how to go about it, and they generally perform the work in compliance with municipal rules prepared for the purpose. When drains are solely meant for rain water, much less fall is required than for sewage. Generally a velocity of 2½ feet per second is sufficient in order to carry away any dust and dirt that may have accumulated on the roofs between showers. The drains should be surrounded by concrete when passing through buildings or near the roots of trees, or when likely to be disturbed. The provision for the rapid clearance of rain fall should be ample, and should vary to meet the average annual rainfall according to the district in which the building is located. If there is no regular sewage system, and the soil is carried to a cesspool from the house, the greatest of care should be taken to have every inlet to the drains well trapped and thoroughly ventilated. There should also be suitable vent from the covered cesspool, with a proper goose neck attached. A small vent, leading to the outside of the house should be attached to every sink outlet, for, as a rule, the sink traps are not overly efficient.

PUBLICATIONS.

The Plumbers' Trade Journal of New York issued to the trade a Christmas number which was attractive in appearance and interesting in contents.

Mr. Horace B. Hudson contributes to the Review of Reviews for December an account of the movement to establish a national forest park in Minnesota, near the headwaters of the Mississippi.

The David Williams Company, 232 William Street, New York, has recently published a book by Mr. F. T. Hodgson on "Estimating Frame and Brick Houses." It comprises 147 pages 5×7 inches in size, illustrated by means of scale drawings and constructive details. This appears to be a practical and fairly comprehensive work explanatory of the method of estimating for labor and materials as applied to domestic buildings of wood and stone. The book is well bound in cloth and sells at $1.00 per copy.

The new court house building at St. Thomas, Ont., was formally opened a fortnight ago, and is said to be a handsome structure.

HAMILTON BUILDERS' EXCHANGE.

It is learned that no meetings of the Hamilton Builders' Exchange have taken place since last spring. Enquiry seems to point to indifference on the part of the members as the cause. It is stated that an effort is to be made to revive the interest of the members and to arrange for the holding of meetings regularly during the winter. The Exchange had attained to a membership of about 70. It is to be hoped that it will not be allowed to lapse.

TORONTO BUILDERS' EXCHANGE.

The annual meeting of the Toronto Builders' Exchange was held on Monday, the 15th inst. The following members were present :

Frank Saunders, W. D. Hutson, Jno. B. Vick, Jno. Hillock, W. Keane, J. C. Gilchrist, T. Robinson, W. F. Marshall, D. Williams, Thos. Thompson, Jas. B. Thomson, R. Chalkley, J. Russel, W. F. Petrie, Ben. Brick, R. Hewitt & Son, J. Maloney, T. Cannon, jr., W. Smallwood, Geo. Henry, Wm. Clarke. R. C. Kirby, T. Painter, J. R. Lyon, T. Christie, W. F. Davidson, D. Patterson, Scott & Cross, J. Lucas, A. McCurdy, J. Bowne, J. Pears, A. P. Stewart, E. Gearing, Geo. Burry, A. Weller, J. H. Morrison, J. Holtby, C. J. W. Neale, Mr. Nelson (of Hanna & Nelson), Mr. McGowan (of Bayliss & McGowan), W. F. Payne.

The meeting opened at 3 p.m., the president, Mr. Henry Martin, in the chair.

The finance report showed the finances to be very satisfactory, there being a substantial balance in the treasury.

The directors' report showed that the Exchange had made progress in all lines during the past year, and that the membership had been considerably augmented, there being at present 139 members.

The election of officers resulted as follows : President, H. Martin, re-elected ; 1st vice-president, T. Christie, re-elected ; 2nd vice-president, J. B. Thompson, re-elected ; treasurer, D. Williams, re-elected ; directors, J. Crang, R. G. Kirby, J. Russell, T. Cannon jr., Jno. M. Gander ; auditors, Geo. Clay and F. Holmes.

The president thanked the members for his re-election, and gave a brief review of the history of the association from its commencement, 22 years ago.

LONDON BUILDERS' EXCHANGE.

There was a large attendance at the second annual meeting of the above Exchange, held on the 15th inst. The President, Mr. Jeffery, in reviewing the work of the year 1899, expressed the hope that as a result of the large amount of building done, the members had reaped a fair profit, notwithstanding the unexpected and unprecedented advance in prices of materials and the shortening of the hours of labor in certain trades. He expressed the belief that no further advances in this direction need be anticipated, and consequently that no real cause existed for the postponement of projected building enterprises. Early in the year a banquet had been held that had been productive of good in continuing the already good feeling existing between contractors generally, as well as between the architects and contractors. Later on was secured the adoption of what is considered a very equitable form of contract between the proprietor and contractor, and they are now in use in all the city architects' offices. The Exchange's amendment to the Mechanics' Lien Act, he regretted to say, had been thrown out by the Bills Committee of the Legislature at the last moment through a misunderstanding, but it would without doubt go on the statute book at this coming session. Last August the Builders' Exchange of Cleveland arranged for a day's pleasure on our Canadian shores, and on an invitation from the Exchange had an early dinner with the members, enjoyed an hour's drive through the city, and the Exchange returning with them to Port Stanley, terminating what will always be remembered by both exchanges as a red letter day in their history. The President, in vacating the chair, wished every member a very prosperous year, and felt assured that harmony and good will would prevail in all meetings, honor and fairness in all dealings with each other, and wisdom and sound judgment in all legislation.

The auditors' books and report was read, showing the finances of the Exchange to be in a satisfactory condition.

The number of certificates issued during the year was 70. One member was lost by death and three by business changes.

The election of officers resulted as follows : President, William Tytler ; 1st Vice-President, Ed. Martyn ; 2nd Vice-President, Geo. Howe ; Secretary, Geo. S. Gould ; Treasurer, James S. Luney ; Board of Directors, Thomas Jones, Wm. Jeffery, John Hayman, John Fenn, Wm. Skelly.

Staff Frieze—St. George's Cathedral, Kingston, Ont.
By Wm. J. Hynes. Power & Son, Architects.

MANUFACTURES AND MATERIALS

NO CREOSOTE.

THE report that the fire at the Harvard boathouse was caused by the explosion of creosote used in the shingle stain in which the shingles were dipped was erroneous. The stain which caused the trouble was of an entirely different make.

Mr. Samuel Cabot, inventor and manufacturer of the creosote shingle stains, informs the Journal that there was no creosote stain on the premises, and that it is well known that creosoting diminishes the inflammability of wood.

Mr. Peabody, of Peabody & Stearns, architects of the building, when asked by a Journal reporter, confirmed the statement that there was no creosote in use in or about the work.—Boston Journal, Dec. 29, 1899.

MANUFACTURNG NOTES.

The capital stock of the Southampton Manufacturing Company has been increased from $25,000 to $65,000.

The Dominion Radiator Company of Toronto have recently issued a booklet setting forth in an artistic manner the merits of Safford Radiators.

The Metallic Roofing Company, of Toronto, having outgrown the capacity of their works erected a few years ago at the corner of King and Dufferin streets, have leased 85 feet adjoining, on which to build a large addition.

Of the many calendars which have reached us during the holidays, one of the most artistic and useful is that of the Robert Mitchell Co., Limited, of Montreal, manufacturers of gas and electric fixtures, ornamental brass and iron work, etc.

The Canada Foundry Co., recently organized in Toronto, have purchased outright the St. Lawrence foundry in that city. The lines of manufacture heretofore followed will be continued and new departments added, one of which will be devoted to the production of ornamental iron and bronze.

The B. Greening Wire Company, Limited, of Hamilton, advise us that they have completed the issue of their series of catalogues of perforated metals, wire cloth and screens, wire rope, steel and iron wire, counter railings, etc., and will be pleased to forward this catalogue, free of charge, to interested readers.

Mr. T. W. Carmichael, in a letter to the Clay-Worker, gives some particulars of the installation of a brick manufacturing plant at Lake du Bonnet, Man. This place has not yet been reached by the railways and is situated in the midst of a primeval forest. The machinery and supplies for the brick yard were brought in by the Indians by means of canoes and sleds from Whitemouth. A branch of the Canadian Pacific Railway is expected to reach Lake du Bonnet in the spring.

The Artificial Lumber Company of America whose head office is at 9 Pine st., New York, with works at Barberton, Ohio, announce their intention of establishing a factory in Canada at an early date. It is undersood that the Honorable Sir Richard Cartright, Minister of Trade and Commerce, will be one of the Canadian directors. The company are now looking for a suitable site in proximity to the raw material. The artificial lumber manufactured by this company is principally adapted for use in buildings as wainscoting, substitute for plaster and laths, ceilings, etc. It is, however, also adapted for many other purposes, and is highly recommended by architects, railroad companies and others who have used it in a variety of ways in the United States. Further particulars of this enterprise will be furnished in the near future.

PAGES

MISSING