

in a hap-hazard convenient sort of way, to save thought or trouble on the part of the framers. Why we should have the same restrictions placed on construction of buildings erected in the residential and thickly built districts as on those in the business and thinly built portions, we cannot understand. We wish to see all reasonable provision made to prevent the spread of fire, but can see no use in regulations which do not check the spread of fire, but do restrict the erection of artistic and home-like houses for our people. What would the residential parts of Buffalo or Detroit be like if they had a fire by-law similar to that of this city? Would you see the cheap and artistic homes which are the pride of American cities, if they had tyrannical fire by-laws which would compel them to build in brick or stone only? Where would be the tile, shingle or clapboard gables and projections, which give such pleasing relief to their homes? Where would be the neatly and artistically painted wooden dwellings, of which they are so justly proud? We have no hesitation in stating that they would not have such homes any more than we have, if their architects were unnecessarily interfered with in the designing of this work by similar fire by-laws—a fire by-law which is useless where it should be effective, and most irksome where not necessary for protecting from fire. Let us have a common sense by-law which will prevent the erection of fire traps in the business and thickly-built portions of the city, and yet will allow of safe fire-resisting construction in the dwelling house districts, although the same may not be of stone or brick or sheet iron coverings. Would some one connected with the framing of the fire by-law inform us how many dwelling houses have been burned in this city during the past ten years which would not have been burned if they had been constructed under the requirements of the present by-law?

THE erection of a suitable Court House appears to be a difficult problem for our aldermen. It seems to us that the matter has not been approached in a proper manner. It is first decided that the building is not to cost more than a certain sum—which is absurdly inadequate—without any reference to the accommodation required, or the dignity or self-respect of the city.

If we had had this question to decide, we would have gone about it in this manner: We would have first determined whether the building is a necessity. If we had decided in the affirmative, we would have then considered the accommodation required by the present wants of the city, and what further accommodation will be necessary owing to its future growth. It would be folly to erect a building of such limited capacity that the business of ten years hence could not be transacted within its walls. Having fixed upon the accommodation, we would then consider the mode of construction to be adopted. Shall it be a cheap and flimsy building, subject to rapid deterioration and requiring large annual outlays to keep in a habitable condition, or shall it be a substantial structure which will stand the wear and tear of time? Shall it be a fire-trap, or a fire-proof building where important documents may be safely kept? And lastly, we would take into consideration whether the wealth and importance of the city requires that the building shall be ornate or simple in design. A poor community, without artistic pretensions, may erect a cheap barn-like building without any loss of self-respect; but such can not be the case with a wealthy and presumably artistic people. Their wealth and love of art will justly be judged by their public buildings. It therefore becomes them to erect what will be a true and faithful reflection of their wealth and artistic perception. An artistic design does not always result from a large expenditure of money—very often the reverse—but a too limited appropriation may preclude the possibility of producing a beautiful building. Therefore, to allow of an artistic result, we would advise the expenditure of a sufficient amount, and take every precaution to obtain value for our money. To find out what is a reasonable expenditure, is the problem, and one which can only be solved by careful study, by men competent to deal with all the questions involved. It is absurd to find fault with a building in the construction of which money has not been wasted or stolen, because it is not grand enough, or large enough, and yet to complain indignantly of its cost. Many imagine that the chief duty of an architect is to produce for \$50,000 what can only be done properly for \$75,000 or \$100,000. And yet these same people will be the first to grumble at the imperfection of the cheaply-constructed building. If an architect could call to his assistance "Aladdin's Lamp," he might be able to accomplish this most

difficult feat; but as he has it not, nor is possessed of an immense fortune which will allow him to subscribe the difference between the amount placed at his disposal and that required to satisfy the ambition of his client, he fails. We are free to admit that architects are often wasteful of their clients' money, but so far as this city is concerned, they have not had many opportunities.

We would advise our City Council to take hold of this problem properly, and to that end to appoint a commission of three experienced and competent men, whose sole duties will be to make themselves acquainted with the requirements of such a building and direct its construction. A committee whose personnel is changing every year, and which is composed of men who have not the time, if they had the necessary qualifications, to acquire a thorough knowledge of all the questions involved, and thus be able to make intelligent decisions, is not a proper body to entrust with such an important work, requiring so much attention to details. An architect has sufficient duties to perform without being obliged to assume those properly belonging to his client. With a commission composed of men who thoroughly understood the questions, he could receive necessary instruction and directions, and not be obliged to proceed in the dark, hoping that what he does will meet with the approval of his clients. This commission would be able to judge of the expenditure necessary for the proper carrying out of the work, and could restrain any extravagant tendencies of the architect.

The appointment of practical men to look over the plans and specifications is a move in the right direction, but it does not go far enough. They will not be able to enter into all the questions involved. The Council should go further, and make certain that the building which is proposed is suitable in all respects, and will meet the needs of the city. To our mind it is not so much the question, at the present time, of the architect's plans and specifications being suitable from the practical point, as it is whether the information supplied to him is correct, and he has properly met the requirements. We believe that the architect is able to carry out the work satisfactorily if he is properly instructed as to the accommodation required, and definitely directed in all matters which his clients or their representatives should assume the responsibility of. The expenditure of so large a sum should not be proceeded with without full consideration. Time and money spent in carefully going over every question involved in the erection of this building before a single stone is laid, will give us much better results than one hundred or one thousand times the same outlay in either or both when the building is partly or fully constructed.

We have not the least sympathy with those who are apparently working against the architect by trying to place on his shoulders the mistakes which have been made by the building committee. He is not responsible for the difficulties of the situation, but those who, by their incapacity and lack of judgment, have let the matter drift along without any intelligent supervision. We have no doubt as to the architect having done the best that could be done under the circumstances, and therefore we urge that he should be given a fair opportunity to show what is in him, under the control and with the assistance of a competent commission. We believe that the plans are very good, and the design all that could be desired, and that if built they would reflect credit on the architect and on our city architecturally. When the architect has done so well, do not cause him to ruin his designs in bringing the expenditure within an inadequate amount for the erection of a good building, nor allow him to badly plan portions of the building under misconceptions as to the requirements. In conclusion, we would urge our aldermen not to spare money nor time in the preliminary work necessary to the erection of a court house which should be a credit to the enterprise of our citizens and a correct exponent of their appreciation and love of art.

Since the above was written, the experts appointed by the Court House Committee have reported that the plans and specifications prepared by Mr. Lennox were full and complete. They made but one recommendation, and that, the manner of specifying the stone for the foundation walls. The change suggested is not important to the construction of the building, but will render the preparation of tenders much less difficult for the contractors. It is very satisfactory to know that the architect has prepared his work thoroughly.

DECORATING GLASS.

WHAT is sand-blasting?" asked a *Chicago Herald* writer of a man whose life has been spent in decorating glass.

"The grinding or decorating of glass with sand—a secret process, the inside facts of which we cannot disclose," replied the expert. "Come up-stairs and see a sand-blast machine." The machine suggests a cider mill in shape, or a cheese press. The glass is laid on rubber belts at the side, and is then fed into the machine. As soon as it disappears from view some rubber flaps come down and prevent the pressure in the interior from escaping. This pressure is exerted by wind and sand—a 20-horse power engine being required to raise the "blow" which drives the sand to the glass. Looking through the window in the centre of the machine a "gun" is disclosed. It has a large mouth-shaped opening, at which it is loaded with 20-horse power ammunition of wind and sand. Before the ammunition is allowed to leave the gun, the aperture narrows to about one-sixth the width of the loading point. This condenses the sand so that when it leaves the gun it strikes the glass with such force as to eat into the surface. When the glass has been exposed it passes out of the machine on rubber belts at the opposite side. This process is called grinding, and one machine will grind about 900 sq. ft. in a day.

Now for the decorative part. Suppose the sandblaster wishes to present on a square of glass a certain design. He simply covers the surface with beeswax and a certain mixture laid on over the glass in exact duplicate of the design required. The glass passes into the machine. The sand is fired from the gun, but this time it grinds only the exposed parts. The portion covered with beeswax and the secret mixture is not touched by the sand and when the plate emerges from the machine, and the wax, etc., are washed off, behold the design standing out in sharp contrast to the ground surface which the sand has scarified.

This is the A B C of sand-blasting. The process is susceptible of much elaboration, and one improvement, which was patented last year by a Chicago gentleman, is called the "amograph." The pictures are first drawn on the back of the glass by the artist with a color which will resist the action of the sand blast. It is then subjected to the stream of sand, which cuts the glass in all parts which are not covered more or less by the resistants. The resistants are then washed off clean, leaving the pictures cut into the glass. They are next silvered over, if desired, to give greater brilliancy. The effect is that of a multiplicity of colors, but no paint or coloring of any kind is used, the effect being obtained by the different shades of the glass itself.

PERSONAL.

James Russell, builder, London, Ont., is dead.

Racette & Bousquet, contractors, Montreal, have dissolved. The Toronto plumbing inspectors were last month voted an increase of salary.

Mr. A. P. Macdonald, contractor, of this city, has gone to Bermuda in the hope of restoring his health.

Mr. Wm. Gerry, builder, of London, Ont., was recently presented with a beautiful parlor lamp by his employees.

The marriage of a son of Mr. Walter Shanley, Government Engineer, to Miss J. Conroy, of Aylmer, Que., was one of the events of the past month.

The firm of J. & W. Britton, builders and contractors, Toronto, Ont., have dissolved partnership by mutual consent. J. Britton continues the business.

The sudden death is announced of Mr. E. R. Moore, proprietor of the St. John Nail and Tank Works. Mr. Moore made the first steel nails manufactured in Canada.

Architect Jos. W. Power, of Kingston, has been confined to his house by illness for some time past, but is now, we are glad to learn, able to attend to his duties again.

Ex-Ald. Joseph Hook, a well-known builder and contractor of London, Ont., assigned last month. He is said to have lost heavily by his contract for the Military School.

Mr. Gobell, Secretary of the Public Works Department, has been in poor health for some time past, and last month started on a trip with the object of recuperating strength.

Mr. W. G. Ritchie, plumber, on the occasion of his marriage last month, was presented by his father's employees with a handsome marble clock and statuary, accompanied by a kindly worded address.

Architect David B. Dick, of this city, has been suffering for several weeks from injuries received by falling from a ladder. His friends will be pleased to learn that he has so far recovered as to be able to spend an hour or two each day at his office.

The election of Mr. Thos. C. Keefer, of Ottawa, Ont., to the Presidency of the American Society of Civil Engineers is an honor bestowed upon Canada, and a well-deserved recognition of eminent services in the field of engineering, extending over a period of nearly half a century. Mr. Keefer, who is 67 years of age, is a Canadian, having been born at Thorold, Ont. He is identified with many of the largest works of construction connected with the opening up and development of this country having had charge of such undertakings as the Erie Canal, Grt. Trunk, Montreal Waterworks, Hamilton Waterworks, and many others. He was a commissioner to the Paris Exhibition, is an officer of the Legion of Honor, and a C. M. G.