

water across the Queenston and Grimsby Stone Road, in the Township of Grantham near the residence of Mr. James Durham.

**NIAGARA FALLS, ONT.**—A number of American capitalists have purchased a tract of land near Chippewa, on the Canadian side of the river, and will erect thereon a large factory for the manufacture of threshing machines, engines, etc. The capital stock is placed at \$100,000. Mr. Ezra Lunds, of Waynesboro, Pa., will be the manager of the company.

**OTTAWA, ONT.**—Senator Clew has in contemplation the erection of a ten-story building on the corner of Rideau and Sussex streets, costing half a million dollars.—A by-law has been introduced in Council for the construction of a rock asphalt and artificial stone pavement on Sparks street, from Canal to Bank street. Sewers will be constructed on Sussex street, Redpath street, Broad street and Prinrose avenue.

**TORONTO, ONT.**—It is said that Mr. Lennox, architect, will call for tenders next week for the completion of the Court House and City Hall, and that work will be proceeded with early in March.—At a meeting of the City Council held on Monday last, Ald. Davies moved that the City Engineer be directed to report as to the advisability of securing a pure water supply by gravitation from Scarborough.—Building permits have been granted as follows: Robt. Brown, Huron street, nine att. 2 story and attic bk. dwellings, n. side D'Arcy st., nr. Spadina ave., cost \$1800; R. Thompson, Church and Wood sts., three att. 2 story and attic bk. dwellings, 371-5 Church street, cost \$7,500.

**VANCOUVER, B. C.**—Mr. H. Abbott, Canadian Pacific superintendent for the Pacific division, recently had a consultation with President VanHorne, in Montreal, and is said to have received instructions to expend the sum of \$750,000 on permanent repairs and renewals on the main line, to build twenty-eight miles of branch track from Revelstoke to Upper Arrow Lake, to open up the mining districts and to finish the Lulu Island railway from Vancouver to Lulu Island. Large extensions will be made to the wharves here, giving the company half a mile when finished.—Mr. J. P. Fisher gives notice that application will be made to the Parliament of Canada at the next session, for an act to incorporate a company for the purpose of constructing and operating a dry dock, wharves, breakwaters, building and repairing yards, and iron works in connection therewith, at some point on Burrard Inlet, with power to construct and operate a railway or tram way to connect said dock and works with any railway now in operation, or hereafter to be constructed.

**MONTREAL, QUE.**—Alterations and improvements will be made to the old Methodist church at Point St. Charles in the spring.—The Catholic school commissioners are discussing the erection of a new school to replace the present building on Champlain street. The matter has been referred to the Committee on Works.—Mr. James Moore has undertaken to provide the necessary funds for the erection of the Convalescent Home on the Protestant House of Industry farm at Longue Pointe. The cost is estimated at \$30,000.—A syndicate represented by Mr. Yule has been granted a franchise to construct a high level electric railway in the municipality of Cote St. Antoine. Work will be commenced about June.—The necessary funds have been obtained for the erection of the new Erskine church on the Sherbrooke street site, and a committee will leave shortly for a western trip to examine the latest church architecture. Mr. A. C. Hutchison has been appointed architect of the new building.—A memorial will be presented to the Dominion Government urging that the ship canal between this port and Quebec be deepened at as early a date as possible, also requesting financial aid towards the harbor improvements.—The Road Committee have recommended the construction of sewers on St. Urbain street, cost \$3,750, Fortier street, Ann street, part of Fullum street, Mount St. Mary avenue and Montcalm avenue.

#### FIRES.

Loggie's fish establishment at Black Brook, N. B., has been destroyed by fire. The loss on the building and machinery is placed at

\$14,000, and the insurance \$1,500.—The public school building at Grenville, N. S. was totally destroyed by fire last week.—The Canadian Pacific Railway Company's station at Agassiz, B. C. was destroyed by fire last week. The building had recently been rebuilt, and was valued at \$4,000.—Messrs. A & J. McKay's planing mills and pump factory at Tiverton, Ont. have been destroyed by fire. Loss, \$3,000.—The Main building of the Central Simcoe Agricultural Society at Barrie, Ont., was destroyed by fire last week. The building was owned by a joint stock company. Loss about \$7,000; insurance \$4,000.—Two cottages on the corner of King and Centre streets, Kingston, owned by Capt. Matthew Patterson and Mrs. Brophy, have been destroyed by fire.—Fire at Lindsay, Ont., On the 11th inst. destroyed a frame dwelling owned by Mrs. Johnson, and insured for \$300; the Queen's hotel, owned by Lundy estate, Peterboro, and occupied by A. McArthur, and the out buildings of Mr. F. Mark. The hotel was a large three-story brick building on which there was an insurance of \$3,500, the loss being placed at \$5,000.

#### CONTRACTS AWARDED.

**MOUNT FOREST, ONT.**—The contract for the erection of a new brick house for Mr. Alex. Brown, of Arthur tp., has been awarded to Messrs. W. Davidson and A. Welton of this town.

**WINNIPEG, MAN.**—The contract for the construction of an iron bridge across the Red river has been awarded to Mr. W. G. Reid, of Montreal. The cost will be in the neighborhood of \$60,000.

**ST. CATHARINES, ONT.**—Mr. George Wilson has been awarded the contract for building St. Barnabas church in this city. It will be built of stone, 84 x 39 feet. Mr. C. J. Gibson, of Toronto, is the architect.

#### USEFUL HINTS.

When oil has been spilled on a cast-iron surface, which surface is afterwards to be finished, turned or planed, rub it thickly over with chalk; this will remove most of the oil, and to a great extent overcome its tendency to disturb the tool.

If the size appears to be too dry for gilding, blow several times in succession on it, and then gild quickly, taking one letter at a time, and should the gold leaf adhere or stick to the panel, you can easily take it away with a wet chamois.

Here is a good gold lacquer for tin:—Make a solution of shellac 1 part in 4 parts of alcohol and allow to stand until clear, or filter to get rid of the fatty matter. Add an alcoholic solution of picric acid until the desired color is obtained, then 1 per cent. of borac acid.

**COAL TAR FOR MASONRY.**—It is found that masonry may be rendered impervious to water especially in positions exposed to direct contact with that element, by the application of coal tar. The latter is employed in a boiling state, in one or more layers, or it may be made to flame up before being used, the first being suitable for surfaces exposed to air, while the second is appropriate in the case of parts intended to be covered up. This method of treating foundations is declared to be of special utility in all public buildings, particularly those designed for the preservation of works.

**LIFE OF IRON OR MASONRY.**—The life of iron railway bridges, according to English and German expert authorities, does not exceed seventy-five years. In many instances a shorter period of use renders them unsafe. This conclusion is

the result of special investigation, instituted by European governments, to determine the durability of railway bridges. Nothing in ancient or modern construction has ever been discovered that in point of durability, is superior to good, solid masonry for bridges. The advantages of cheapness, rapidity of erection, etc., will, however, probably continue for a long period the use of iron for bridge construction.

**WAX VARNISH FOR WALLS.**—One gallon white Damar varnish, five ounces of white wax, one-half gallon turpentine; melt the wax in a steam kettle, to avoid darkening. When completely melted, add the turpentine. Let the mixture cool somewhat, then add the Damar varnish. If the varnish dries too glossy, add more wax. Prime the wall with pure oil, give four coats of color, flat, and apply the varnish over all; brush marks will disappear in a short time. The varnish may be mixed with color, if preferred. Plenty of wax will insure dead flatness and will bear stencilling upon.—*Plumber and Decorator.*

Hot water pipes should have a pitch upward as they flow away from the boiler, and downward as they return to it, which makes substantially two pipes side by side, with an upward grade as they go from the boiler, the one the flow and the other the return pipe. The object of this pitch is to get rid of the air. By getting rid of the air we secure circulation; therefore the grade is the cheaper, as on the level, except in very large pipes, air binding will follow. With good alignment and straight tubes a very small grade will do, say ¼ in. to 10 ft. With ordinary small pipes, up to 1 ½ in., a pitch of ½ in. to ¾ in. to 10 ft. may be required. Flow and return pipes should be of the same diameter and of the same pitch of grade.—*Engineering Record.*

Zinc is a somewhat difficult metal to solder, even when it is new and clean; and still worse when it is old and dirty. The best soldering liquid is spirits of salis (muriatic or hydrochloric acid), and care must be taken that this is only applied to the part to be soldered as it is a very corrosive acid, and will weaken and deteriorate the zinc wherever applied. Old zinc should be scraped thoroughly clean before soldering. Solder does not flow so freely and work so well on zinc as on tin, because under the action of the heated soldering iron a small portion of the zinc combines with the solder and injures. This also causes the solder to adhere to the iron, and rapidly harden, for which reason the iron should be cleaned tolerably frequently.

## MUNICIPAL DEPARTMENT.

### THE CITY HALL OF AMERICA.\*

(Continued from last week.)

Ornamental features such as these seem to enter more naturally into the design of municipal buildings than into any other sort of buildings unless it be a church. Yet in looking at the dome it will be well to remember, no matter what its architectural success may be, that the merit of the building is to be judged solely by the way in which the structure itself answers the necessities which have called it into existence. The town differs from the city hall in having to house a limited number of departments. Cities like New York, Chicago, Philadelphia, Boston, Cincinnati, St. Louis and Minneapolis require suites of offices exactly identical in design and intention with the rooms to be found in every modern office building. We do not need, unfortunately, for there is a wonderful fascination in such things, monumental apartments and stately rooms to show to chance visitors. Needless expensive as many of our city governments are, work-rooms, not playrooms, are necessary for carrying them on. The Council of Venice could well afford to sit in one of the stately rooms in the world, richly adorned with masterpieces of painting and other objects of art; the city fathers of an American municipality would be as much

out of place in such a room as they themselves would be in Medieval Venice. Even the reception-room and ball-room of the Paris Hotel de Ville would be out of place in an American building of this class because they would be utterly useless, and thus, no matter how great their architectural value, quite foreign to the spirit of the American city hall.

Eliminating these elements, the stern utility of the problem becomes apparent. The city hall is built because it is to be of use, and the more useful it is and the more convenient for the transaction of public business it is made, the more admirable it is, and the more it is to be valued as a model for future structures. This does not mean that an ugly city hall is to be sought, though unquestionably an ugly useful building is to be preferred to a useless handsome one; beauty and utility are not opposed elements, for each helps the other to make the structure a success. If the utilitarian necessities of the municipal building can be satisfactorily expressed in the Renaissance style, as is attempted in the city halls of Boston, Providence and Baltimore, or in Romanesque designs, like the new city hall of Cincinnati, or in hybrid styles, like the city halls of Philadelphia and Minneapolis, well and good. It is not the style of the building, but its utility, which makes it good and great and acceptable to the community.

After the useful the ornamental. And this is to be sought more in the architecture as a whole than in special attention given to some one feature. A tower which is a natural part of a design, as is the case with the city halls of Albany and of Cambridge, and of several other small New England cities, provides a very useful, and in these instances a very successful, way of emphasizing the monumental nature of the edifice. On the other hand, where a tower is built simply as a tower, as something extending upwards into space, without sense or reason in its smallest stone, as is the case with the Philadelphia city hall, no words of condemnation can well be too strong. There must be reason in the ornamental parts as well as in the useful, and it is in the beauty of the detail and general workmanship that a city hall, as well as any other building, will be successful and merit the praise or condemnation it receives.

Probably no class of structures is condemned so frequently, and with so much justice, as the city halls of America. We attempt too much; we are not satisfied with a calm, rational treatment of the problem, but seek to impress by means beyond our powers which too often produce only contempt or ridicule. In the nature of the problem itself there is no reason at all why our city buildings should not be as successful as our blocks of business houses, our suburban residences, or many of our churches, unless it be that few architects are called upon to design a city building more than once. There is a great deal in being familiar with the kind of structure one is working at, and one reason why we have succeeded, on the whole, in these special forms is the frequency with which our architects handle them. Another element against the betterment of municipal buildings is the rain: of jobbery and corruption which hangs over them, and the consequent reluctance of the best architects to compete for them. Competition is not without its merits in obtaining good designs—if mere drawings are sought—but open competitions, free to all, in which the whole world may take part, offer no attraction to well-established and successful architects, who alone are entirely competent to undertake such work. These conditions add very materially to the difficulty of obtaining good structures, and, if a city hall is to be a success, it is, in the nature of things, more a miracle than the result of a well-ordered succession of conditions. More than anything else, perhaps, in the way of progress and good results is the lack of comprehension of the real problem which too frequently pervades the most cultured communities.