

St. east; John lane; Burnett St., Bern St., from Commissioners to Notre Dame; Panet, Sherbrooke St. hill; Marie Ann, Rivard to Champ-lain, Pine Ave., Arcade to St. Denis; Cadieux, Prince Arthur to Rachel; Fortier, eastern section, German, Fortier to Sherbrooke; Perreault, lane; Prince Arthur, Cadieux to Shuter; Park Ave., Sherbrooke to Pine Ave.; Hutchison, Prince Arthur to Pine; Durocher, throughout; Dowd St., Sherbrooke, University to McTavish; St. Maurice, McGill to Dupre lane; Grey Nun, throughout; Common, Grey Nun to Duke and under the canal to Mill St.; Queen, Common to Ottawa; Nazareth, throughout; Duke, William to Ottawa; Dalhousie, throughout; Ann, throughout; Murray, McCord to William; Brichest; Inspector, Chaboullier Sq. to St. James; St. Maurice, McGill to Dupre lane; Versailles, Barre to Notre Dame; Guy, from Notre Dame southwards; Argyle Ave.; Aqueduct, Overdale Ave. to St. Antoine; Richmond, from Richmond Sq. to St. James; St. Matthew, from C.P.R. track to St. Antoine, Basin, from Richmond westward; Congregation, from Wellington southwards; Notre Dame, from city limits west to Atwater Ave., Grand Trunk, west of Napoleon, and part of Butler St.—Ald. Jeannotte is urging the erection of new police stations for Hochelaga and St. Lawrence wards.—Ald. Germain, Gauthier and Clendenning have been appointed a sub-committee to report on sites for incinerators.

TORONTO, ONT.—Messrs. H. A. Massey, J.T. Johnston, of this city, Mr. John Marder, of Marder, Luce & Co., Chicago, and others, are seeking incorporation as the Toronto Type Foundry, with a capital stock of \$150,000, to erect and operate a type foundry in Toronto.—At a meeting of the senate of Toronto University, held last week, plans and estimates were presented for the new chemistry buildings to be erected near the observatory, at a cost of \$60,000. A committee was appointed to estimate the cost of requisite accommodation for the proposed departments of mineralogy and geology.—The estimates which have just been presented in the Ontario Legislature, include the following appropriations: Government and Departmental buildings, \$59,000; public buildings, \$418,350; public works, \$31,178; colonization roads, \$95,600. Under the head of public works \$14,000 is placed aside for repairs. Under the head of public buildings there is a new vote of \$50,212 for Mimico cottages, \$70,000 for an asylum for eastern Ontario, cottages at Brockville to accommodate 500 patients, the estimated cost of which is \$250,000, of which \$70,000 will be required for this year's operation, \$75,000 for six new dining rooms in the London asylum, and at the Central Prison \$15,500 for a new building for extension of industries and \$25,000 for machinery for the same; \$6,500 for an iron fence to surround the Normal School, Toronto.—Messrs. Smith & Gemmill, architects, Bank of Commerce Building, will receive tenders until Wednesday, the 24th inst., for the erection of a brick and frame residence on Summerhill avenue, North Toronto.—Building permits have been granted as follows: Mrs. E. Sexton, nine attached 4-storey brick stores and dwellings, n. w. cor. Brunswick ave. and College st., cost \$100,000; Geo. Murray, three attached 2-storey and attic bk. dwellings, w. side of Ontario st., n. of Wellesley st.; James Hewlett, three det. 2-storey and attic bk. dwellings, n. side Dale ave., cost \$10,000.

FIRES.

Mr. Langmaid's residence, near Whitby, Ont., was burned on Tuesday last. Insurance small.—The residence of Mr. John Redmond, at Oil City, Ont., was destroyed by fire on the 15th inst.—The McKellar house at Glencoe, Ont., with all its contents, was burned to the ground on the 15th inst. The building was insured for \$1,000.—The residence and bakery of E. Stevens, at Wallaceburg, Ont., was entirely destroyed by fire on Saturday last. Insurance on building, \$1,500.—The grist mill belonging to Mr. W. L. Hicks, at Selkirk, Ont., was totally destroyed by fire on the 12th inst. Loss \$3,000; insurance \$1,000.—Mr. F. S. Ree's bakery shop on Princess St., Kingston, was destroyed by fire on Saturday last. Loss \$2,000.

CONTRACTS AWARDED.

OTTAWA, ONT.—The contract for the new lighthouse to be erected at Point Anglais wharf on the Ottawa river has been awarded to Mr. Chas. Christian, of this city, for \$1,950.

VICTORIA, B. C.—Messrs. McGregor & Innes, of this city, have been awarded the contract for the erection of the new building for the Victoria Brewing Co. The contract price is said to be between \$60,000 and 70,000.

VANCOUVER, B. C.—Messrs. W. Archer & Co. have awarded the contract to Messrs. Franklin & Patterson for the erection of a large two-story building on Westminster Ave.—The City Council have accepted the tender of Messrs. Bell-Irving & Patterson, of this city, for supplies for the waterworks at the following prices: Special castings, \$60.20 per ton; pig lead, \$70.60; lead pipe, \$102.00.—Messrs. Doherty & Co., of Sarnia, Ont., are the lowest tenderers for valves and hydrants, but the contract has not yet been awarded.

USEFUL HINTS.

TO STAIN WOOD BLUE.—Boil a quart of a pound of turnsole for an hour in three pints of lime water, and color the wood with it.

Aluminum has been substituted for cast iron in the specifications for the dome of Philadelphia's new City Hall. It will save the constant expense of painting and reduce the weight of the tower about 400 tons.

To frost brass work, boil in caustic potash, rinse in clean water, and dip in nitric acid till all oxide is removed; then wash quickly, dry in boxwood sawdust, and lacquer while warm. This will give brass an ornamental finish.

The method prescribed for cleaning brass in United States arsenals is said to be to make a mixture of one part common nitric acid and one-half part sulphuric acid in a stone jar, having also ready a pail of fresh water, and a box of sawdust. The articles to be treated are dipped into the acid, then thrown into the water and finally rubbed with sawdust. This immediately changes them into a brilliant color. If the brass has become greasy it is first dipped into a strong solution of potash and soda in warm water; this cuts the grease, so that the acid has full power to act.

The following recipe gives a useful white-wash for external walls coated with common plaster, as in lath-and-plaster houses. It is the kind used on public works in the United States, and is very reliable. Take $\frac{1}{2}$ bushel of best lime, slaked with boiling water; 1 peck salt, dissolved in warm water; 3 lbs. ground rice, boiled to a thin paste; $\frac{1}{2}$ lb. ground whiting, and 1 lb. clear glue dissolved in warm water. Mix altogether, add hot water to bring to proper state for application, and let stand for several days. When required, heat and apply with a large brush.

They have a way in the North of correcting varnish when it blooms by removing it in this manner: They get a cup-full of flour and empty it into a silk handkerchief which they tie up lightly. With this pounce they gently rub the blooming varnish and then dust off any flour that may be clinging to the wall. It is said that this is an effectual cure and the blooming nuisance never troubles them any more. Some use fine sifted fuller's-earth in the same way (adding, in some cases, a little raw linseed oil), but

the flour plan is certainly the cleaner method and is said to be more effectual.

WHY TIN RUSTS.—An explanation of the rusting of block tin, as given in the *Mineral Water Review*, states that, on being exposed to the action of the air, pure tin is not affected at ordinary temperatures, but as soon as a portion of the tin is removed by injury so as to expose even a tiny speck of iron surface, corrosion at once sets in and proceeds very rapidly. The reason of this is of an electrical nature—that is, iron and tin together form what is a "galvanic couple," which will decompose the water, charged with carbonic acid, deposited upon them from the air; oxygen and hydrogen gases are liberated, and the iron, having the greater affinity for the oxygen, is the metal attacked; in particular, such corrosion is very rapid when the exposed iron surface comes in contact with water highly charged with carbonic acid, as in a mineral water factory.

According to A. Dannenberg, the washing of fat clays cannot be recommended, this process being of advantage only for the separation of sand and pebbles from calcareous clays, meagre clays, etc. By washing, fat clays are slowly dissolved, which to a considerable extent limits their effective capacity. Furthermore, fat clay-mud dries so slowly that notwithstanding all appliances and labor, the material washed in the Winter and Spring can in wet years rarely be used in Summer. However, when a clay-mill is used, the clay can be dug and spread out in Summer and in one or two days may, as a rule, be brought bone-hard into the clay-mill or the storage-shed. The construction of the mill is very simple. It consists of an iron frame, shaft with gearing, and six steel arms which comminute the clay. The latter is cleaned by falling into and passing through a conical cylindrical sieve.

SEWER VENTILATION.

The views of Mr. W. Santo Crimp, M. I. C. E., Assistant Engineer to the London County Council, are summarized as follows:—1. That the wind is the only agent which produces measurable movements of sewer-air in an ordinary system of sewers. 2. That the fullest use of the wind should be made in effecting the proper ventilation of sewers. 3. That the offensiveness of sewer-air should be lessened to the fullest practicable extent, by systematic flushing and cleansing of the sewers and by keeping them structurally in a thoroughly effective condition. 4. That small pipe-sewers need not be ventilated to the same extent as those large enough to admit of men working in them, vents high overhead being alone required. 5. That in all systems where practicable, ventilating pipes should be carried up high buildings or other objects, where they may discharge their foul contents into the atmosphere high overhead, and that street ventilators should then be reduced to a minimum. 6. That if every house were properly drained and proof against sewer-air, ventilation of sewers, as ordinarily practised, would be unnecessary.

Hubert Prevost, contractor, Montreal, has assigned with liabilities at \$18,917.

MUNICIPAL DEPARTMENT.

OUR MUDWAYS.

"The wealth and prosperity of a country may be seen in its well made and kept highway."—*Ibid.*

Editor Municipal Department.

SIR,—With the first meetings of the various County townships, and other councils throughout the land, is not the present time an opportune one to again call attention to the question of roads and their management? We need go no further than across the line south of us to learn how largely this question has increased in interest in as short a time as the past five or six years. This is conceded even in very small places (which might be named) where, as a rule, any outlay of over \$500 would have before created a furore in the village council, if asked for to be spent on road repairs, but where now the ratepayers cheerfully laying themselves under tribute for sums varying from five to ten times that amount, in order to procure the necessary machinery for their purpose. The conditions warranting such outlays as not only expedient, but in the end strictly economical in such cases, are not unknown here. On the roads north, east and west of us, what will be their condition in a few weeks other than the usual one of utter impassability from mud, and afterwards in the dry weather, almost as useless (for pleasure quite so) from dust.

This must and always will be the case so long as the present prevailing method of road construction and maintenance is pursued, and the universal horror against toll gates is not to be wondered at, since they fail to make any improvements in the purposes they were established for.

That the present annual waste (labor and material) now going on can be controlled, requires no loud assertion. Any road leading into Toronto, having a sufficiently energetic trust board, commissioner or other official that would adopt some ordinary specification, such as is now called for for country roads, and work closely to this for even say a distance of ten or twelve miles, will be more than amply repaid, it is to be believed, by the increased traffic and consequently largely augmented receipts in tolls.

To the farmer, good roads mean better prices for his product, consequent on less wear of vehicles and animals, with quicker transport to the citizens generally, healthful pleasure in many forms, besides the more frequent visits of their surrounding customers: to the country at large, universal and enlightened advancement.

FASCIA VAPORE.

IRON AND OAK PAVEMENT.

A block pavement composed of iron and wood was put down in Columbus, Ohio, on May 30, 1890 and has been in use ever since that time with satisfactory results. The section laid is small, and is composed of blocks of wood about 5 inches long and $3\frac{1}{2}$ inches square, set on end in suitable cast-iron pockets, which in turn are supported on cast-iron base plates. The blocks project about two inches from the cast-iron, and in August, 1890, after having been in service about three months, it was found that about one-eighth inch was worn off the wood.