

TOWN HALL, VICTORIA, B. C.

(See page 57.)

This is the principal elevation on Douglas St., of the first premiated design, for the Victoria City Hall, about to be erected, under the superintendence of the successful competitor, Mr. John League, architect. The accommodation provided in this building will comprise in the basement Corn Market, Engineers Fitting rooms, store rooms, prison cells, hot air apparatus, &c. On the ground floor has been placed the police court, the public entrance of which will be by Pandora St. A private entrance to magistrate's and other rooms will also be on this street. Communication by private stairs, from court room to cells, is also provided for, waiting rooms, court officer's rooms, &c. The large Hall is approached from two separate entrances. The principal entrance will be from the entrance hall on Douglass St., and a secondary entrance and staircase leading to the gallery will be from Cormorant St.; also private entrances, retiring rooms, &c. The size of the large Hall will be 40 x 80 and 34 feet high.

First floor contains council chamber, mayor's reception rooms, committee rooms, city clerk's office, water commissioner, assessor, fire-proof room, &c.

Second floor contains city surveyor's rooms, map room, stationery, jury rooms, museum, care taker's rooms, &c. In the rear of the main building will be a two storied building for the fire engine house, a building for meat and poultry market &c. It is proposed to warm the building by hot air. The picture was photographed by Mr. Noah Shakespeare, Victoria.

TO MEND IRON RETORTS.—Fire clay 15 lbs., saleratus, 1 lb. with water sufficient to make a thick paste. Apply to the broken part of the retort while at a good working heat, then cover it with a fine coal dust, and charge the retort for working.

TO STOP LEAKS IN CLAY RETORTS WHEN AT WORKING HEAT. Five parts fire clay, 2 parts white sand, 1 part of borax pressed and ground. Mix the whole together with as much water as may be necessary to bring it to the consistence of putty. Roll it in the hands to a proper length and apply it over the crack, pressing it with a long spatula into the crack.

TO PREVENT GAS METERS FROM FREEZING.—Half a pint of good glycerine is said to prevent the freezing of 1 gallon water, though at least double the proportion is preferable in the country, whatever the temperature in the winter may happen to be.

MAGNETIZED WATCH WORKS.—The only cure is to put in a gold or brass balance and new pendulum spring. The most intense heat will not eradicate the trouble.

CEMENT FOR LEATHER.—Bisulphide of carbon, 5 ounces; tick, gutta percha, 1 ounce. The latter is like thin curly shavings of leather and must be added a little at a time. Cork up tight, and it is fit using in 10 or 12 hours.

TO REPAIR LEAKAGES IN FIRE ENGINE HOSE.—Pass a round bar of iron into the hose under the leak, then rivet on a patch of leather, previously coated with marine glue.

AQUARIA CEMENT.—Mix equal quantities of dry white lead and red lead to a paste with mastic varnish, and use as soon as mixed.

NEW STEAM PACKING.—Take long coils of continuous strands of flax or hemp loosely twisted, or better still, with scarcely any twist, saturate these coils in melted grease or tallow, and give them a good thorough coating with as much black lead or plumbago (finely pulverized), as the material will absorb. It is a most superior article.

TO ATTACH GLASS OR METAL LETTERS TO PLATE GLASS.—Copal varnish, 15 parts; drying oil, 5 parts; turpentine, 3 parts; oil of turpentine, 2 parts; liquified glue, 5 parts. Melt in a water bath, and 10 parts of slacked lime.

TURNER'S CEMENT.—Bees' wax, 1 oz.; resin, $\frac{1}{2}$ oz.; pitch, $\frac{1}{2}$ oz.; melt, and stir in fine brick dust.

BANK NOTE GLUE.—Dissolve 1 lb. of fine glue or gelatine in water; evaporate it till most of the water is expelled; add $\frac{1}{2}$ lb. of brown sugar, and pour it into moulds.

GLAZIER'S DIAMOND.—I have a glazier's diamond, which, after having lent to a friend, was returned completely spoilt, having been repeatedly drawn over the same line in his endeavours to cut glass. Can I repair this, or have it reset? The wedge-shaped cutting edge seems broken.

QUERIES.

[1008.] Can any of your readers supply a cheap and effectual remedy for sprains, bruises and rheumatism? Many quack medicines are advertised, but they are expensive when necessary to be used in quantity, and are seldom very effectual.

—MECHANIC.

ANSWERS TO QUERIES.

[1006.] Take soap, and rub it well; then scrape some fine chalk and rub it also on the linen, lay it out on the snow, (or on the grass in summer) and as it dries, wet it occasionally, and the mildew will soon disappear.—E. E. W.

[1007.] You probably over feed your fowls with soft food, and if they are not kept in a very warm place, the cold retards their digestive organs, and in a very short time the food becomes putrid and the birds die. In such cases the only remedy is to open the crop with a pen knife, and with the end of a silver spoon remove the whole mass, sew up the incision carefully, and give a tea spoonful of castor oil and keep the bird on a very small quantity of food for a few days. The best food to fatten fowls with in winter, is Indian corn and small pieces of chopped meat, this should be given to them three times a day. They should be kept very warm and free from vermin, to remedy the last evil, keep your fowl-house frequently whitewashed, and sprinkle dry lime about the floor.

McBRIDE'S IMPROVED COUPLING FOR ROUND BELTS AND CORDS.

(See page 56.)

The rapidly extending use of round belts for transmitting power for various purposes, and the difficulty of making a reliable and permanent fastening between cord and coupling, has led to the above invention. The usual method of fastening is to chase a screw-thread in the coupling, and after screwing it on the cord to fasten it there with one or more rivets passing through the end of the cord and through the coupling. This soon gives way, and in the attempt to take out the rivets the coupling is so badly damaged as to be useless long before it is worn out.

The above invention consists in combining with the coupling as now made a gimlet-pointed wood-screw of the same pitch as the screw-threads in the coupling, and having its longitudinal axis concentric and parallel with that of the coupling, so that as the coupling is screwed upon the outside of the cord, the central screw shall penetrate the centre of the cord, thus forcing the fibres of the same out into the screw-threads of the coupling, besides so completely filling its own as to preclude the possibility of the coupling being pulled from the cord until it is worn out.

These couplings, we understand, are made and sold at about the same price as the ordinary coupling.

For further information, address James McBride, P. O. Box 90, Pittsburg, Pa.

CONGREGATIONAL CHURCH, BALLIOL ROAD, BOOTLE, NEAR LIVERPOOL.

(See Illustration in January Number.)

The church consists of nave (with short chancel appropriated to the organ), 100 ft. long and 41 ft. wide; two transepts, each 30 ft. by 13 ft.; deacon's vestry, ladies' vestry, and lavatories, and will accommodate 711 worshippers,—611 on the ground-floor and 100 in the gallery over the north entrance. The stone used is the local red sandstone; the tracery of windows out of Runcorn stone. The transept arches are carried on handsome granite shafts, the gift of a friend. Stourton stone finishings are freely used in the interior.

The roof of the church is panelled in pitch pine. The height from floor to apex is 50 ft. The hammer-beam and framing generally are boldly moulded. The benches and fittings are of pitch pine. The organ-screen inclosing the chancel, and the pulpit, are somewhat elaborate.—*London Builder.*

THE deepest mine is not a mile below the surface, and we take the utmost extent that can be measured from the lowest opening known, to the highest mountain's peak, we shall not have more than the thousandth part of the distance from the surface to the centre. The skin of an apple is much thicker, in proportion than this geological crust.