

tenders for city debentures, amounting to \$206,000. The committee accepted the tenders of R. S. Morris, at \$86,703 for \$85,000, which is equivalent to 102, and the Bank of British North America, at 102 1/2 for \$35,000 jail debentures. New tenders will be asked for the remaining \$85,000.

QUEBEC, QUE.—The City Council has awarded a contract for the construction of a bridge over the St. Charles to join Parent Park.—Joseph Gosselin, of Levis, has obtained a contract for making considerable improvements at the Roman Catholic church at Cacouna, at the tender of \$3,500. The contract for the heating apparatus for both church and presbytery has been awarded to Mr. Vezina, of this city.—C. A. Parent has commenced the construction of a building at the corner of St. Helen and St. Margaret streets. It will be a three storey brick building, 65 x 40 feet, and furnished with an electric elevator. The contractors are. Masonry, F. Parent; joiner work, Mongeon et Fils; roofing, N. Barbeau; painting and glazing, Wilbrod St. Cyr. Thos. Raymond, architect. Cost \$5,000.—Mr. Martin Foley, merchant tailor, is about to erect a new three storey building on the site of that gutted by fire some weeks ago on Mountain Hill. The front will be of Deschambault stone, with handsome cornices and large plate glass windows. Mr. W. J. Peters will be the contractor, and the structure will cost about \$4,000.

SOME SPECIAL GLUES FOR WOODWORKERS.

GLUE FOR ARTICLES EXPOSED TO THE HEAT.—The following compound may be used like ordinary glue, but it is not affected by fire or heat—in fact, it is fireproof:—Ingredients: Linseed oil, two parts; quicklime, one part. Preparation: Put the lime into the oil and stir up, then boil the mixture until it is reduced to a suitable consistency, and spread out this compound on glass or glazed tiles, and let it dry out in the air, but in the shade. To use, melt the hardened compound in an ordinary glue-pot in the usual way, but without the addition of water.

GLUE FOR WOOD, GLASS, STONE, ETC.—The following compound is one which readily allows glass to be firmly attached to wood, stone, &c.—Ingredients: cabinet-maker's white glue, wood ashes. Preparation: Soak the glue for twelve hours, then pour off any water not absorbed, and melt the softened glue by heating it in an ordinary glue-pot, and when nearly boiling hot, stir in sufficient wood ashes to make the compound the consistency of honey. Use in the usual way.

A WATERPROOF GLUE.—Ingredients: Ordinary glue, four parts; venice turpentine, one part. Preparation: Soak the glue in the least possible quantity of water to soften it completely, then melt this in the glue-pot, and, while hot, stir in the venice turpentine and well mix. This glue is useful for woodwork exposed to damp and moisture, as it is not affected thereby.

TO CEMENT GLASS IN METAL FRAMES.—Ingredients: Litharge, two parts; dry white lead, one part; boiled linseed oil, three parts; copal resin, one part. Preparation: Heat the oil, and then stir in the litharge, white lead, and

copal resin (powdered) in the order named. Prepare this cement only when about to use it, as it is very quick drying.

GLUE FOR CABINET WORK, LEATHER, MOTHER-O'-PEARL, INLAYING, ETC.—Ingredients: One quart rye whisky, one quart water, 9oz. rice starch (powdered), 2 1/2oz. cabinet-maker's white glue, 2 1/2oz. venice turpentine. Preparation: Mix the two fluids and stir in the starch to make a paste. Separately dissolve the glue in an equal weight of water in a glue-pot and, while hot, stir the venice turpentine into it. Finally stir in the starch parts while keeping the glue-pot on the boil, so as to cause the starch to thicken. This compound is particularly suited for gluing leather, baize, &c., on tops of tables, as it does not penetrate the fibre like common glue, neither does it crack nor become harsh, but secures a firm adherence between the articles glued together.

FLEXIBLE GLUE FOR LEATHER, ETC.—The following compound is one to use in gluing together materials that are not to be kept rigidly tight:—Ingredients: Gutta percha, sixteen parts; pure rubber, four parts; pitch, four parts; shellac, one part; linseed oil, raw, two parts. Preparation: Make the oil very hot and then melt in it the gutta percha and rubber; next add the shellac, and when that has dissolved by the heat add the pitch. To use melt and apply hot.

A UNIVERSAL CEMENT FOR ATTACHING METAL TO GLASS, CHINA, IVORY, LEATHER, &C., is prepared by melting together equal parts of gutta percha and common pitch, and, when well incorporated, pouring the mixture into cold water, whence it becomes black, solid, yet elastic, and softens by heat, and if raised to 100 degrees Fabr., it is a thin fluid. To use it is laid on in the liquid form like ordinary glue, or else used as a soft paste or putty, according to requirements. The proportion of the ingredients may be varied.

LEATHER, TEXTILES, AND METALS may be fastened by the aid of the following compound:—Ingredients: Glue, vinegar, white-pine turpentine (or venice turpentine), white lead. Preparation and use: Soak the glue in water until well softened, then pour off any superfluous water, put the glue in the glue-pot, and pour over it enough vinegar to cover the glue, and melt the glue in

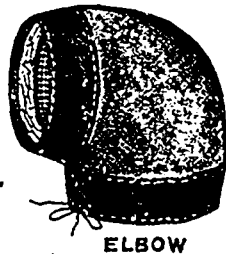
the usual way; stir up the mixture, make it as hot as possible, and then stir in one-third of the bulk of the turpentine, and reduce the compound to a workable consistence by adding more vinegar before removing the pot from the fire. To use this glue, first paint the metal with a white lead paint, allow that a day to partly dry, then lay on the hot glue, and before it cools or chills lay on the leather or other material and press it firmly over the metal.

GLUE FOR PASTE BOARD, TEXTILES, ETC.—The following compound is useful for gluing millboard, cardboard, leather cloth, leatherette, textiles, canvas, &c., to wood:—Ingredients: Glue, turpentine, water, starch paste. Preparation: Dissolve the glue in the usual way with as little water as possible, and then stir in a little oil of turpentine. Then add a thick paste of starch in the proportion of two parts of starch paste for every one part of glue originally taken; allow the compound to cool before use, and use it cold.

TO FIX IRON IN WOOD.—The carpenter sometimes wets the screws or nails before inserting them in the wood so as to cause them to oxidize (rust) and thereby become firmly attached to the hole in which they are placed. A much better plan is to dip them in a strong solution of sal ammoniac, which will oxidize much quicker; but it would be as well to point out that by the iron becoming rusted it is also weakened, and eventually becomes so rotten by the corrosive oxidizing action as to break up or crumble to pieces. The best remedy to cause screws, bolts, nails, &c., to remain tightly fixed in the wood is to dip them into common glue to which some powdered chalk has been added. They will not readily shift when this has dried.

TO PREVENT LEAKS IN SLATE ROOFS.

T. M. Clark, in "Building Superintendence," says: "The worst leaks in a slate roof come from the improper position of the gutters, by which wet snow sliding from the roof is caught and held back. It soon freezes to the roof along the lower edge, the upper portion remaining free, and the water subsequently running down the slope is caught in a long deep pocket, in which it rises rapidly until its level reaches that of



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