

MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

BRICK DUST MORTAR.

The use of brick dust mortar as a substitute for hydraulic cement, where the latter can not be obtained, is now recommended on the best engineering authority experiments made with mixtures of brick dust and quick lime showing that blocks of one-half inch in thickness, after immersion in water for four months, bore without crushing, crumbling or splitting, a pressure of 1500 pounds per square inch. It is considered, too, that the addition of even as small a proportion as one-tenth as much brick dust as sand to ordinary mortars is preventive of the disintegration so often characterizing mortars used in the masonry of public works. The use of brick dust mixed with lime and sand is said to be generally and successfully practiced in the Spanish Dominions, and is stated to be in all respects superior to the best Rosendale hydraulic cement in the construction of culverts, drains, tanks or cisterns, and even roofs, whether for setting flat tiles or for making the usual tropical flat roof. The proportions used there in the manufacture are, approximately, one of brick dust, one of lime and two of sand, mixed together dry and tempered with water in the usual way.—Southern Architect.

USEFUL HINTS.

A peculiar substitute for window glass known as "tectorium," is stated to have been employed in Austria, Italy, Germany, Switzerland and Russia as a covering for hothouses, marquees, verandas, windows or factories, roofs and stores, etc. It is a special, insoluble, bichromated, gelatine, translucent as opal and incorporated in wire gauze.

The following is said to make a good coating for damp walls:—Thirty parts of tin are dissolved in 40 parts of muriatic acid, and 30 parts of sal-ammoniac are added. A powder composed of freestone, 50 parts; zinc oxide, 20 parts; pounded glass, 15 parts; powdered marble, 10 parts; and calcined magnesia, 5 parts is prepared and made into a paste with the liquid above mentioned. Colouring matter may be added. The composition may be used as a damp-proof coating for walls, or for repairing stonework, or for moulding statues or ornaments.

A French metallurgist, M. Mazyre, has brought out a fluid for producing a dead black on the surface of finished ironwork. The formula is a fluid compound of 1 part bismuth chloride, 2 parts mercury bichloride, 1 part copper chloride, 6 parts hydrochloric acid, 5 parts alcohol, and 50 parts water. The iron is first made clean and bright, and is then dipped into or brushed over with the liquid, which is then allowed to dry on. Then the metal is dipped into boiling water and kept there for thirty minutes. The operation is repeated if not at first satisfactory. The colour is then fixed by boiling in oil for a few minutes, or by boiling the surface and heating it till the oil burns off.

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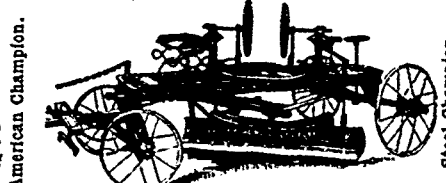
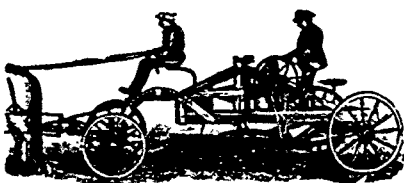
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