

and soda—the so-called water-glass—the alkali, to which the solubility was due, being removed either by the slow action of the weather, or by chemical agents specially employed for the purpose. Thus superfluous and even injurious compounds were necessarily introduced, which, when removed by solution or efflorescence, left the preservative coating porous and permeable. It is now known, however, that pure silica may in certain cases be dissolved in pure water; thus, if sulphide of silicium be dissolved in water sulphuretted hydrogen is evolved, and silica remains perfectly dissolved and in large amount; or if pure water be separated by a septum of parchment paper from a solution of silicate of soda supersaturated with hydrochloric acid, after a few days the hydrochloric acid and chloride of sodium passing through the septum will leave an aqueous solution of silica on the other side of the diaphragm. It is obvious that such a solution, which may be prepared in many other ways than those here described, will possess many advantages over a solution of water-glass, as a preservative whether of wood or of stone.

As aluminum from its malleability, ductility, tenacity, remarkable lightness, beautiful colour and impassivity to the action of those ever present chemical agents which so rapidly tarnish silver and the commoner metals, promises to become of great economic value, it is gratifying to find that the cost of its production is rapidly diminishing, so that its price has descended from £60 per lb. to 60s., at which price it is now furnished by the Aluminum Works at Newcastle.

Wood publishes in the *Journal of the Franklin Institute* the following formula for a fusible metal which becomes perfectly liquid at 180°F.; cadmium 1 part, lead 6 parts, bismuth 7 parts. This alloy has a bright metallic colour, is flexible in thin plates, is imperfectly malleable, and about as hard as coarse solder.

ARTICLE XV.—*On the date of the Report on the Geology of Wisconsin, noticed in this Journal, Vol. VI. p. 465.*

In the number of this *Journal* for December last, there is a notice of one sheet of Prof. Hall's recent Report on the Geology of Wisconsin. On the 12th of March, 1862, two copies of the same report were received at the office of the Geological Survey of Canada, by mail. Both of these are dated January 1, 1861. On one of the copies there are indorsed with pen and ink the