

In reply to a subsequent objection of Deschamps that its alkalinity is owing to the caustic potash or soda used in its preparation, they assert that it may be obtained by Calcined Magnesia and even by neutral acetate of Lead.

It appears also that *Conicine* has been analysed by Liebig, and found to consist of

Carbon,	-	-	-	-	66.91
Hydrogen,	-	-	-	-	12.00
Azote,	-	-	-	-	12.80
Oxygen,	-	-	-	-	8.29

100.

Annales de Chimie, Avril, 1836.

G.

On the latent heat of Carbonic Acid Gas. By M. BISCHOFF.

In decomposing Carbonate of Lime by heat in a gun barrel, I found the end of the barrel at $144\frac{1}{2}$ Far. while the current of gas indicated only $88\frac{1}{2}$ F. If we suppose the temperature to which the Carbonate of Lime was exposed to be equal to the melting point of gold, or about 2500° or 2600° F. the gas would have rendered latent 2430 to 2500° Far.

When chalk is decomposed by weak sulphuric acid the mixture marks 122° F. and the gaseous current 86° . When the acid is concentrated, the mixture is 212° F. and the current 133° .

Ann. de Pog. in Ann des Mines.

G.

On the use of Ether in Analyses. By M. DOBEREINER.

If to a solution of chloride of manganese and cobalt in alcohol, fifteen to twenty times its volume of ether be added, all the chloride of manganese will be precipitated and the liquid becomes of a beautiful blue. In adding water, the chloride of cobalt is precipitated of a rose colour; and by redissolving in alcohol and employing ether again we may separate the whole of the chloride of manganese.

Ether has a strong tendency to form a special combination with twice its volume of alcohol, and this tendency may frequently be turned to profit in chemical analyses.

An alcoholic solution of hydrate of potash, which contains .25 to .30 of water is entirely decomposed by ether, so that the potash separates in the state of an aqueous solution; but if the alcoholic liquor contains no water, the ether does not separate the potash, and the separation is effected only by adding water to the mixture.

If a mixture of nitrate of lime and nitrate of strontian be treated with alcohol, and that independently of the first salt a little of the second be dissolved, the whole of the latter may be precipitated by adding ether and allowing the liquid to remain some time at rest.

Ann. des Ph. in Ann. des Mines 1836.

G.

Promotion of the Germination of Seeds.

"Having procured, while in England, seeds of various species of the Australian *Acacia*, and sown them immediately on my arrival at the Cape [of

Good Hope], I was much disappointed at the apparent failure of many of them, but have found several of them vegetating after being three years in the ground, during which period they were duly attended in weeding and watering. Seeds, also, of *Acácia longifolia*, saved at the Cape, and sown ten days after gathering, showed the same tardiness in vegetating. This circumstance led me to consider the best mode of treatment in trying experiments with the Cape species of *Acácia*, and other South African Leguminosæ; and I find that nearly the whole of this order thrive better by having water heated to 200°, or even to the boiling point of Fahrenheit's thermometer, poured over them, leaving them to steep, and the water to cool for twenty-four hours. Where there is a numerous collection, and the quantity small of each species they may remain in the papers."—*J. Bowie, Cape of Good Hope, Feb. 16, 1831. (Gard. Mag., vol. viii. p. 9.)*

"Great degrees of heat, short of boiling, do not impair the vegetative power of seeds; nor do we know any degree of cold that has such an effect. Those who convey seeds from distant countries should be instructed to keep them dry; for, if they receive any damp sufficient to cause an attempt at vegetation, they necessarily die, because the process cannot, as they are situated, go on. If, therefore, they are not exposed to so great an artificial heat as might change the nature of their oily juices, they can scarcely, as several cultivators have assured me, be kept in too warm a place." (*Smith, in his Introduction to Physiological and Systematical Botany, 6th ed., p. 81.*)

Mag. Nat. Hist.

Valuable Acid for Engravers.

M. DELESCHAMPS has written to the *Académie des Sciences* that he has accomplished the solution of the following problem, for every kind of biting acids employed in engraving. *To obtain a clean and deep line, without sensibly enlarging the furrow in ordinary engraving, and without eating away the sides of the subject in engraving in relief.* He uses a composition of acetate of silver, and hydrate of nitrous ether. Immediately after the contact, the acetate is precipitated into the lower part of the furrow, where it produces a rapid and energetic action. The upper parts of the furrow are occupied by the nitrous ether, and preserved by its presence.

Mag. Pop. Sci.

Progress of Civil Engineering.

Thames Tunnel.

As it may be interesting to our readers to know what progress has been made in this great work, we beg to present them with an extract from the last report of the directors. We have also the pleasure of adding, that the work continues advancing with every prospect of a successful termination. Since the last report, 60 feet of the brickwork of the tunnel have been completed, which, added to the quantity previously finished, makes a total of 660 feet. By this addition, the tunnel is now carried beyond the centre of the river, and is steadily approaching the Wapping shore.

As this important work now occupies a large share of public attention, the directors take advantage of the opportunity at present afforded them, to place before the proprietors a few facts connected with its progress and