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The young man's book of amusement

Halifax, 1848

Dr. Wollaston's Ice Apparatus

[urn:nbn:de:bsz:31-100120](https://nbn-resolving.org/urn:nbn:de:bsz:31-100120)

To Remove the Stains of Ink.

The stains of ink, on cloth, paper, or wood, may be removed by all acids; but those acids are to be preferred, which are least likely to injure the texture of the stained substance. The muriatic acid, diluted with five or six times its weight of water, may be applied to the spot, and after a minute or two washed off; repeating the application as often as may be found necessary. Less risk attends the use of vegetable acids. A solution of the oxalic, citric, (acid of lemons,) or tartareous acids, in water, may be applied to the most delicate fabrics without danger of injuring them; and the same solution will discharge writing, but not printing ink. Hence it may be employed in cleaning books, which have been defaced by writing on the margin, without impairing the text.

Dr. Wollaston's Ice Apparatus.

The cold produced by evaporation is under certain circumstances, very great. Spirit of wine, and ether, which readily evaporate, produce considerable cold during that process. Upon this principle, wine-coolers, and similar porous vessels, refrigerate the fluids they contain; and thus, by accelerating the evaporation of water, by exposing it under an exhausted receiver, containing bodies that quickly absorb its vapour, Professor Leslie has contrived to

effect its congelation ; the heat required for the conversion of one portion of the water into vapour, being taken from the other portion, which is thus reduced to ice. The instrument invented by Dr. Wollaston, and called by him the cryophorus, acts upon a similar principle. It consists of a glass tube with a bulb at each extremity. One of the bulbs is about half filled with water, and a good vacuum is produced in the other by boiling the water, and sealing the tube whilst full of steam. On immersing the empty bulb in a freezing mixture, the water soon congeals in the other, although the intervening tube be two or three feet long. The vapour in the empty bulb is condensed by the cold, and a fresh quantity of vapour arises successively from the water in the other, by which so much heat is carried off as to cause it to congeal.

Method of Colouring Alum Crystals.

In making these crystals, the colouring should be added to the solution of alum in proportion to the shade which it is desired to produce. Coke, with a piece of lead attached to it, in order to make it sink in the solution, is the best substance for a nucleus ; or, if a smooth surface be used, it will be necessary to wind it round with cotton or worsted, otherwise no crystals will adhere to it. *Yellow.*—Muriate of iron. *Blue.*—Solution of indigo in sulphuric acid. *Pale-blue.*—Equal parts of alum and blue vitriol. *Crimson.*—Infusion of madder and cochineal. *Black*

Japan ink thick
parts of alum and
oxide of iron.
Add over a glass e
which precipitates

Valua

Pour half an ounce
into an ale-glass, &
mix with charcoal : e
in a warm plac
covered over with
cut with a forecep
the shew.

Put two or three s
into a crucible, cont
a silver, red hot; vi
will take place. The
red with silver wi
also for show.

Easy Meth

Prepare a diluted