The young man's book of amusement

Halifax, 1848

To make Water ascend between two Pieces of Glass, and form a regular Figure

urn:nbn:de:bsz:31-100120

of the winter in that climate, sometimes driving in the iron plugs as hard as possible with a sledge hammer; and yet, though they weighed near three pounds, they were always forced out by a sudden expansion of the water in the act of freezing, like a ball impelled by gunpowder, sometimes to the distance of between 400 and 500 feet; and when the plugs were screwed in, or furnished with hooks or barbs, by which to lay hold of the inside of the shell, so that they could not possibly be forced out, in that case the shell always split in two, though its thickness of metal was about an inch and three quarters. It is further remarkable, that through the circular rack, round about the shells where they burst, there stood out a thin film, or sheet of ice like a fin; and in the cases where the plugs were projected by freezing water, there suddenly issued from the fuze-hole a bolt of ice of the same diameter, and stood over it sometimes to the height of eight inches and a half. Hence, we need not be surprised that excessive frost should cause the ice to split rocks and other solid substances.

To make Water ascend between two Pieces of Glass, and form a regular Figure.

Procure two pieces of glass, about six inches square, join any two of their sides, and separate the opposite sides with a piece of wax, so that their surfaces may form an angle of about two or three de-

grees; immerse this apparatus about an inch in a basin of water, and the water will rise between the plates, and form a beautiful geometrical figure, called an hyperbola.

How to raise Water several Feet above its ordinary Level.

The syphon is employed by distillers and others, for the purpose of emptying casks, and it may be advantageously used to decant wine, as the wine may be raised from the most turbid ground without mixing with the sediment beneath. To make this instrument, it is merely necessary to bend a glass tube by the application of heat; and if a second tube be attached, and the air sucked out, the fluid will continue to flow as long as any water remains in the upper vessel.

How to Work a Pump without Manual Labour.

Captain Leslie, of the American vessel the George and Susan, invented, in his voyage from North America to Stockholm, the following simple method of keeping the ship's pumps at work, when the sea runs high, and when the crew are not sufficient, or are already fatigued:—About ten or twelve feet above the pump, he fixed a spar, or small mast, one end