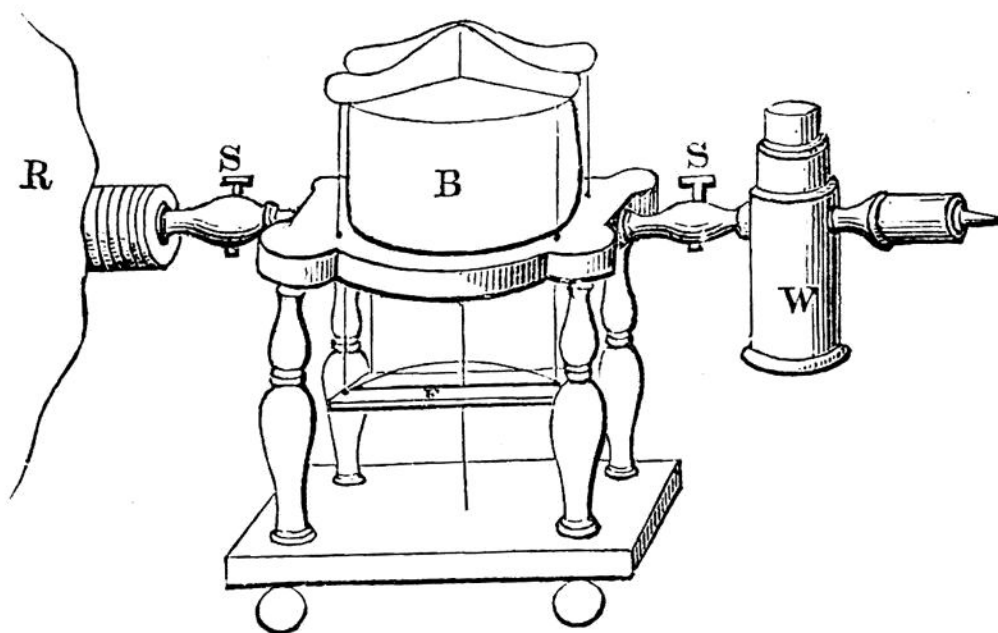


oxy-hydrogen blowpipe, which is now employed for the purposes of microscopic exhibition.

The following diagram is a representation of Gurney's blowpipe. R is a bladder containing oxygen and hydrogen, mixed in the proportion necessary for the production of water. S is a stop-cock, which opens or closes the communication between the bladder and the reservoir (B), which is a smaller bladder adopted for the purpose of preventing accident, should the gases explode. F is a board beneath the bladder, connected with that which lies upon it by wires. When the instrument is to be used, a weight, or the hand, is applied to this, for the purpose of driving the gases through the tube (S), and from thence to the jet. W is a safety apparatus.



Gurney's Blowpipe.

which may be made in several ways, to prevent the flame of the ignited gas from passing into the bladder B. When the gases are ignited, and the flame is thrown upon lime, a light of the greatest intensity is produced. The product of the combustion is water.

Water is never found perfectly pure. Rain water, and snow when melted, afford the purest kind of water that can be obtained without distillation, although this is not, on account of the great solvent powers of the fluid, quite free from admixture with other bodies, but contains carbonic acid and air collected from the atmosphere. In passing through strata it is liable to great alterations of character, by its combination