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The young man's book of amusement

Halifax, 1848

The Pressure of Water

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	HOURS.	MIN.
The fifth	0	30
The sixth	0	47
The seventh	0	27
The eighth	0	30
The ninth	0	22
The tenth	0	21

The above experiments elicit the following conclusions:—

1. That an animal will live longer in vital than in atmospheric air.—2. That, one animal can live in air, in which another has died.—3. That, independently of air, some respect must be had to the constitution of the animal; for the sixth lived 47 minutes, the fifth only thirty.—4. That there is either an absorption of air, or the production of a new kind of air which is absorbed by the water as it rises.

HYDROSTATICS AND HYDRAULICS.

The Pressure of Water.

THE pressure of water may be known to every one who will only take the trouble to look at the cock of a water-butt when turned; if the tub or cistern be full, the water runs with much greater velocity

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through the cock, and a vessel will be filled from it in a shorter time than when it is only half full, although the cock, in both cases, is equally replete with the fluid during the time the vessel is filling. From this also is understood, how a hole or leak, near the keel of a ship, admits the water much quicker, and with greater violence, than one of the same size near what the mariners call the water's edge.

The power of Water.

Let a strong small iron tube of twenty feet in height be inserted into the bung-hole of a cask, and the aperture round so closed, that it shall be water-tight; pour water into the cask till it is full through the pipe: also continue filling the pipe till the cask bursts, which will be when the water is within a foot of the top of the tube. In this experiment the water on bursting the vessel, will fly about with considerable violence.

Expansive Force of Freezing Water.

Colonel E. Williams, of the Royal Artillery, when at Quebec, made many experiments on the expansive force of freezing water. He filled all sizes of iron bomb-shells with water, then plugged the fuze-hole close up, and exposed them to the strong freezing air