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The young man's book of amusement

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To render visible the opposite Currents in which Fluids are thrown, while they change their Temperature

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ascends with it. The usual phenomena of waterspouts are exactly agreeable to this theory.

To render visible the opposite Currents in which Fluids are thrown, while they change their Temperature.

Fill a common eight-ounce phial, or cylindrical glass jar, about two inches or more in diameter, and five or six inches long, with cold water, and diffuse through it a small portion of pulverised amber: let the phial of water be immersed into a tumbler, containing hot water: this being done, two currents, going in different directions, will be observed in the inner vessel, the one ascending, the other descending; that is to say, the minute particles of amber, which were diffused through the fluid, and were at rest before the heat was applied to the water in the inner vessel, will be seen in motion; those particles that are situated towards the sides of the glass, or which are the nearest to the source of heat, will move upwards, whilst those that are in the centre move downwards: and thus two distinct currents are formed in opposite directions. These currents gradually diminish in velocity; and when the water in the inner vessel has acquired the same temperature as that in the outer one, the particles of amber will again be brought to a state of rest.

If the position of the two glass vessels be reversed, namely, if the glass containing hot water be im-

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mersed in a vessel containing cold water, the motion of the currents will be also reversed: the particles next to the sides of the glass are thrown into currents, directed downwards, whilst the particles in the centre form a current upwards. The equilibrium of these two currents will also be restored, when the equalization of temperature of the water within, and that without, has been effected.

To render the experiment more decisive, the lower part of the water may be coloured by tincture of cabbage, or red ink, leaving the upper part uncoloured. If heat be then applied to the bottom part of the glass, the coloured part of the water gradually ascends, and uniformly tinges the whole fluid.

Mode of Attracting Water.

Hang a quantity of wool, tied loosely together, down into a deep well, about five or six yards from the water; leave it in that position through the night, and its weight will, in the morning, be greater by one-fifth than it was the evening before. The additional weight will have been caused by the accession of particles of water from the humid atmosphere.

To find the Specific Gravity of Solids.

Hang the substance by a hair to one end of the