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The young man's book of amusement

Halifax, 1848

Experiment on a Flounder

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

Experiment on a Frog.

Place a living frog upon a plate of zinc wetted with water, and paste a slip of tin-foil, or a shilling, also wetted with water, upon the back of a frog. If now a communication be formed between the zinc and the tin-foil, by means of a wire, or other piece of metal, the frog will be violently convulsed, and jump off the plate.

Experiment with a Leech.

Those animals can only be convulsed by galvanism which possess distinct limbs and muscles; yet reptiles may be shewn to be affected by it: thus if a leech or a worm be laid upon a plate of zinc, and surrounded at a little distance by pieces of silver, for example half-crowns, every time the animal touches one of the pieces of silver, it will be observed to draw itself back.

Experiment on a Flounder.

Take a live flounder, and put it on a pewter plate, or upon a large piece of zinc, wetted with water, upon its back; or place the fish upon its back, and apply the coin to its cheek or breast, then touch the plate or zinc with a wire, and apply the other extremity of the wire to a piece of silver, violent contractions will

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be immediately excited in the fish, which may be renewed at pleasure by forming a connection between the two metals. The animal, therefore, is quiet, until a communication be made between the silver and the zinc, by means of a third metal, to the edges of the others. The galvanic agency then takes place, because a galvanic circle is formed.

Besides these effects produced by the influence on the muscles, the sensations which it excites in some of the organs of sense are equally evinced in the following manner.

Place a thin plate of zinc upon the upper surface of the tongue, and half a crown, or piece of silver or tea-spoon, on the under surface. The metals ought to be allowed to remain for a little time in contact with the tongue before they are made to touch each other, that taste of the metals themselves may not be confounded with the sensation produced by their contact. When the edges which project beyond the tongue are then made to touch, a sensation is produced which it is difficult accurately to describe. It takes place suddenly, like a slight electrical shock, and a subacid taste, somewhat resembling dilute nitric acid, is perceived confounded with an evident metallic taste.

Another.

Place a silver tea-spoon as high as possible between the gums and the upper lip, and a bar of zinc between the under lip: on bringing the extremities into contact, a very vivid sensation, resembling a flash of light, will be perceived. It is singular, that this light is equally vivid in the dark with the strongest light, and whether the eyes be shut or open.

Another.

Place a cup of silver, filled with water, on a plate of zinc, standing upon a table, and touch the water with the tip of the tongue, it will be tasteless as long as the zinc plate is not touched, for the body does not form a voltaic circle with the metals. Moisten well the hands, and lay hold of the plate of zinc, whilst the tongue is brought to touch the water, a peculiar sensation, and an acid taste will be immediately experienced.

Galvanic Shock.

Several persons may receive the shock together, by joining hands, in the same manner as in receiving the shock from a Leyden phial. Their hands should

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