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The young man's book of amusement

Halifax, 1848

Bottels broken by Air

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

cause the plate is liable to be scratched, and the smallest unevenness between the receiver and the plate would prevent the success of any experiment.

The Shower of Fire.

Place on the top of the air-pump a small circular plate, pierced with holes, and supporting a small cylindrical receiver, terminating in a hemisphere, and cover the whole with a larger receiver, having a hole in its summit, to admit a glass funnel filled with mercury. The funnel must shut with a stopper, so as to open when necessary. Then exhaust the air from the receiver, and open the funnel which contains the mercury, which will run down, and falling on the convex summit of the interior receiver, will be thrown up in small luminous drops, so as to resemble a shower of fire.

Bottles broken by Air.

Take a square bottle of thin glass, of any size. Apply it to the hole in the air pump, and exhaust the air. The bottle will sustain the weight of the external air as long as it is able, but at length it will suddenly burst into very small particles, and with a loud explosion.

An opposite effect will be produced, if the mouth

of a bottle be sealed so close that no air can escape; then place it in the receiver, and exhaust the air from its surface. The air which is confined within the bottle, when the external air is drawn off, will act so powerfully as to break the bottle into pieces.

Water boiled by Air.

Take water made so warm that you can just bear your hand in it, but that has not been boiled; put it under the receiver, and exhaust the air. Bubbles of air will soon be seen to rise, at first very small, but presently become larger, and will be at last so great, and rise with so much rapidity, as to give the water the appearance of boiling. This will continue till the air is let into the receiver, when it will instantly cease.

Glass broken by Air.

Lay a square of glass on the top of an open receiver, and exhaust the air. The weight of the external air will press on the glass, and smash it to atoms.

The Hand fixed by Air.

If a person hold his hand on an open receiver, and

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