

# **Badische Landesbibliothek Karlsruhe**

**Digitale Sammlung der Badischen Landesbibliothek Karlsruhe**

## **The young man's book of amusement**

**Halifax, 1848**

Electrical Air Cannon

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

tube to the other, till the electricity of both is discharged.

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*The Candle Lighted by Electricity.*

Charge a small coated phial, whose knob is bent outwards so as to hang a little over the body of the phial; then wrap some loose cotton over the extremity of a long brass pin or wire, so as to stick moderately fast to its substance. Next roll this extremity of the pin, which is wrapped up in cotton, in some fine powdered resin; then apply the extremity of the pin or wire, to the external coating of the charged phial, and bring, as quickly as possible, the other extremity that is wrapped round with cotton, to the knob; the powdered resin takes fire, and communicates its flame to the cotton, and both together burn long enough to light a candle. Dipping the cotton in oil of turpentine will do as well, if you use a larger sized jar.

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*Electrical Air Cannon.*

Hydrogen is inflammable, and extinguishes flame. When pure, it burns quietly with a lambent blue flame at the surface, in contact with air; but, if mixed with thrice its volume of air, it burns rapidly, and with detonation. In making this experiment, a strong phial, capable of holding about six ounces of water, may be employed; or the inflammable air cannon,

which admits of the mixture being fired by the electric spark. This instrument consists of a cylinder of brass about three-fourths of an inch diameter, and six inches long, in the form of a small cannon or pistol-barrel, properly mounted, and having a wire, passing through a tube of ivory, and not quite touching the interior of the cylinder, at the part usually occupied by the touch-hole, an electric spark communicated to this wire inflames the mixture of hydrogen and atmospheric air in its interior. It may be charged by previously filling it with dry sand, and emptying it out into a phial of hydrogen, which rises into the gun sufficiently mixed with air; the muzzle may be secured by a cork, which is expelled with much violence and a loud report, upon the inflammation of the gas.

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#### *Artificial Earthquake.*

In the middle of a large basin of water, lay a round wet board. On the board place any kind of building made of pasteboard, of separate pieces, and not fastened together. Then fixing a wire that communicates with the two chains of the electrifying battery, so that it may pass over the board and the surface of the water, upon making the explosion, the water will become agitated as in an earthquake, and the board moving up and down, will overturn the structure, while the cause of the commotion is totally concealed.

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