

Badische Landesbibliothek Karlsruhe

Digitale Sammlung der Badischen Landesbibliothek Karlsruhe

The young man's book of amusement

Halifax, 1848

The Electric Sparks

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

thread drawn out of the same cotton, tie it to the end of the prime conductor: then set the machine in motion, and the lock of cotton on being electrified, will immediately swell, by repelling its filaments from one another, and will stretch itself towards the nearest conductor. In this situation let the cylinder be kept in motion, and present the end of your finger or the knob of a wire towards the lock of cotton, which will then immediately move towards the finger, and endeavour to touch it: but take with the other hand a pointed needle, and present its point towards the cotton, a little above the end of the finger, and the cotton will be observed immediately to shrink upwards, and move towards the prime conductor. Remove the needle, and the cotton will come again towards the finger. Present the needle, and the cotton will shrink again.

The Electric Sparks.

When the prime conductor is situated in its proper place, and electrified by whirling the cylinder, if a metallic wire, with a ball at its extremity, or the knuckle of a finger, be presented to the prime conductor, a spark will be seen to issue between them, which will be more vivid, and will be attended with a greater or less explosion, according as the ball is larger. The strongest and most vivid sparks are drawn from that end or side of the prime conductor which is farthest from the cylinder. The sparks have the same appear-

ance whether
negative con
long line of
to the opposi
spark is long
the line of
of being be
exactly rese
The figur
dimensions
be drawn fr
meter, it wi
but if the ba
as half an in
appearance

Take a co
placed a bra
conductor, a
balls touch
touches only
glass will be
about so as
successive,
appear by tu
ber of pith or
balls will imm

ance whether they be taken from the positive or the negative conductor; they sometimes appear like a long line of fire reaching from the prime conductor to the opposite body, and often (particularly when the spark is long, and different conducting substances in the line of its direction) it will have the appearance of being bent to sharp angles in different places, exactly resembling a flash of lightning.

The figure of a spark varies with the superficial dimensions of the part from which it is taken. If it be drawn from a ball of two or three inches in diameter, it will have the appearance of a straight line; but if the ball from which it is drawn be much smaller, as half an inch in diameter, it will assume the zig-zag appearance above mentioned.

Dancing Balls.

Take a common tumbler or glass jar, and having placed a brass ball in one of the holes of the prime conductor, set the machine in motion, and let the balls touch the inside of the tumbler; while the ball touches only one point, no more of the surface of the glass will be electrified, but by moving the tumblers about so as to make the ball touch many points successively, all the points will be electrified, as will appear by turning down the tumbler over a number of pith or cork balls placed on a table. These balls will immediately begin to fly about.