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The young man's book of amusement

Halifax, 1848

The Leyden Phial

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large ones to the bottom of the frame of the machine, carrying two branches expanding beyond the periphery of the plate. The extremities of the conductors are furnished with points in order to collect the electricity from the excited surface.

The Leyden Phial.

The Leyden phial (see Fig. 8.) consists of a thin glass jar, coated internally and externally with tin-foil, to within a short distance of its mouth. When the inner surface is rendered positive by union with the conductor of the electrical machine, the exterior, being connected with the ground, becomes negative by induction. When the inner and outer surfaces are united by a conductor, all electrical accumulation is annihilated by a powerful spark, and the two opposite states are found to have been precisely equivalent. If the communication between the opposite surfaces of the Leyden phial be made by the hands, a painful jarring sensation is felt at the joints of the fingers, the elbows, shoulders, and chest, commonly called the electrical shock. Metallic wires, with balls at their ends, bent or jointed and fixed to a glass handle, are generally used to transfer the electric charge, and these instruments are called dischargers.