

R. CORNELIUS.
Electric Apparatus.

No. 32,353.

Patented May 21, 1861.

Fig 2.

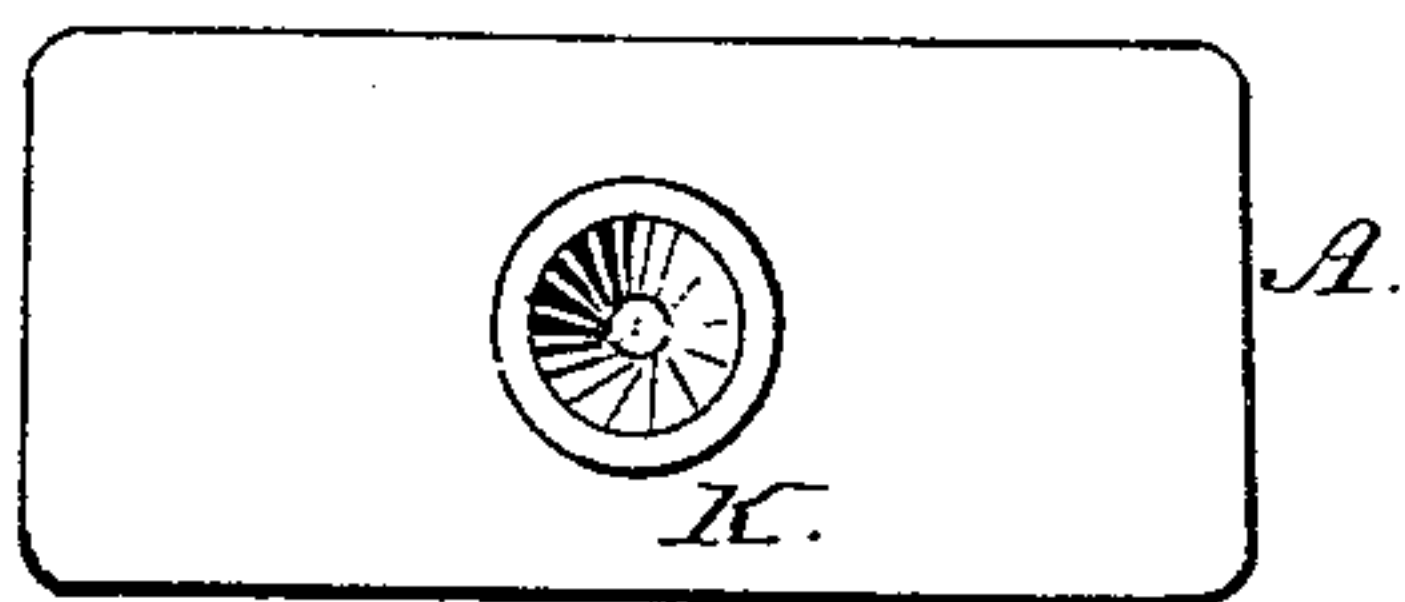


Fig. 3

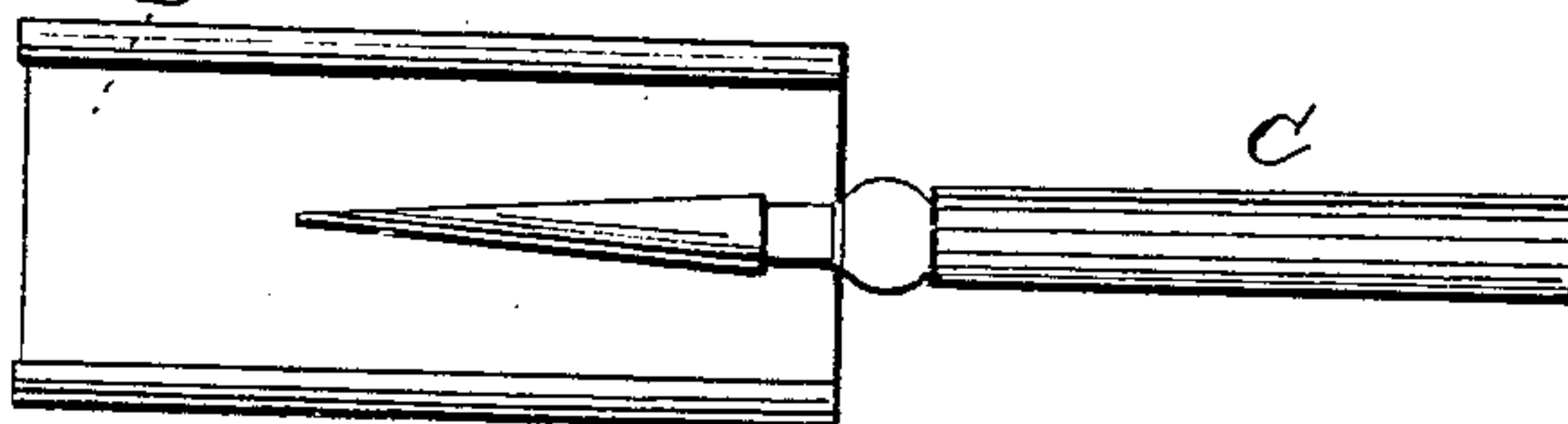


Fig. 4

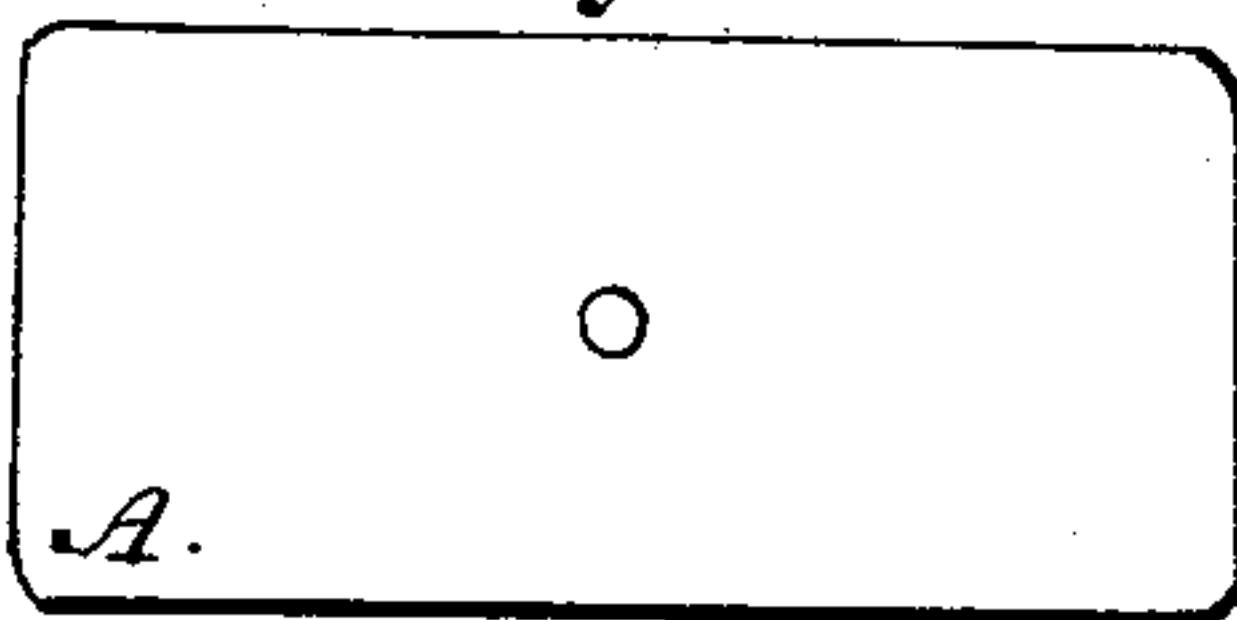


Fig. 5

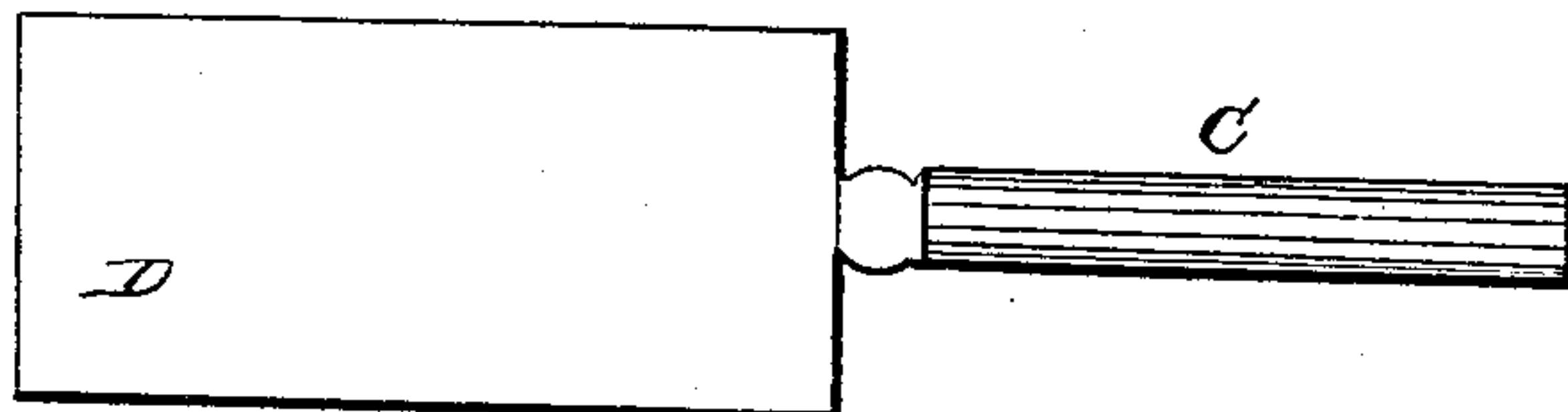


Fig. 1

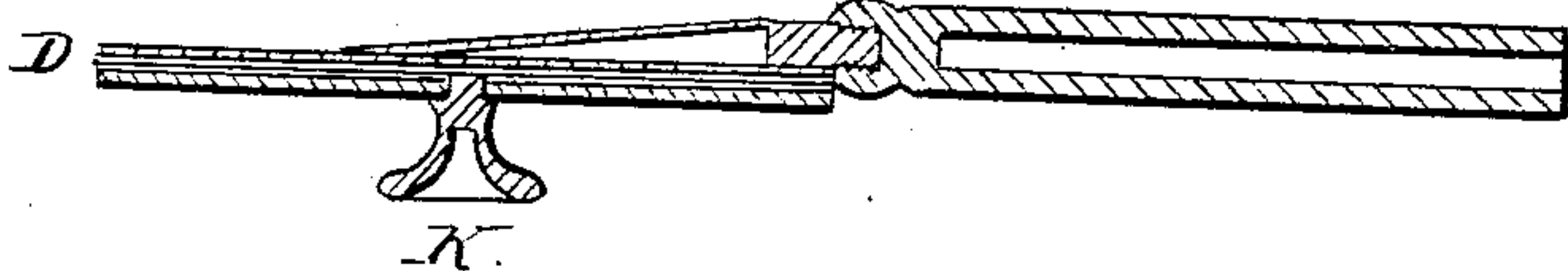
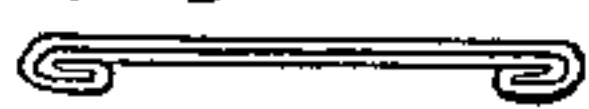


Fig. 6.



Witnesses

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ROBERT CORNELIUS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN THE ELECTROPHORUS.

Specification forming part of Letters Patent No. **32,353**, dated May 21, 1861.

To all whom it may concern:

Be it known that I, ROBERT CORNELIUS, of Philadelphia, State of Pennsylvania, have made certain new and useful Improvements in the Construction of the Electrophorus; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a vertical section of the two plates of the electrophorus in contact with the leather covering of the metallic plate. Fig. 2 is a back view of the resinous or hard-rubber plate. Fig. 3 is a back view of the metallic plate with its non-conducting handle. Fig. 4 is a view of the face of the resinous or hard-rubber plate. Fig. 5 is a view of the face of the metallic plate covered with leather. Fig. 6 is a view of the leather covering.

Hitherto the electrophorus has been constructed of a metallic plate which was used with a resinous or non-electric plate. The resinous plate had to be excited at intervals by rubbing it with fur or other proper material.

The nature of my invention consists in constructing the metallic plate of the electrophorus with a cover of leather or other proper exciting material, so that by simply sliding the two plates of the electrophorus together for an instant the electricity shall be excited through the leather or rubbing substance, obviating the necessity of employing a separate rubber.

I construct my improved electrophorus as follows:

A, Fig. 2, is a hard-rubber or resinous plate of any convenient shape constructed in the following manner: I take a piece of hard rubber and attach to it a metallic handle, K, which passes through the rubber and terminates on a level or slightly above the level of surface.

A hard-rubber plate, *x*, of about one-sixteenth of an inch in thickness, one and one-half of an inch in width, ($1\frac{1}{2}$ inch) and four inches in length, or other convenient dimensions, having the upper surface polished. The hard-rubber plate may be made circular or in the form of a cylindrical case, and the metallic plate covered with leather may be made to slide through the case. B, Fig. 3, is a metallic plate having a non-conducting handle, C. I stretch over the face of B a piece of thin leather, as shown at D, Fig. 5, and this passes over the edges of B, and is secured by lapping it together with the metal and pressing them down, as shown at Fig. 3.

When using this electrophorus it is only necessary to place the leather face of the metallic plate in contact with the hard-rubber plate, as shown in Fig. 1, by the section, and slide them across each other, when a sufficient charge is excited to light a jet of any inflammable gas or vapor. The leather may be continued over the back of the metallic plate as well as the face, but that is unnecessary; also, only a portion of the face may be covered with the leather. Advantage may be derived by interposing between the leather rubber and the metal disk a ribbon of silk or other thin non-conducting substance. Instead of a solid metallic plate a plate of gauze wire might be used.

Having thus described my invention, what I claim as my invention, and desire to secure by Letters Patent, is—

The covering of the whole or a part of the face of the metallic plate B with leather or similar material, substantially as above described.

ROBERT CORNELIUS.

Witnesses:

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