

E. L. MORRIS.
Toy.

No. 221,693.

Patented Nov. 18, 1879.

Fig:1.

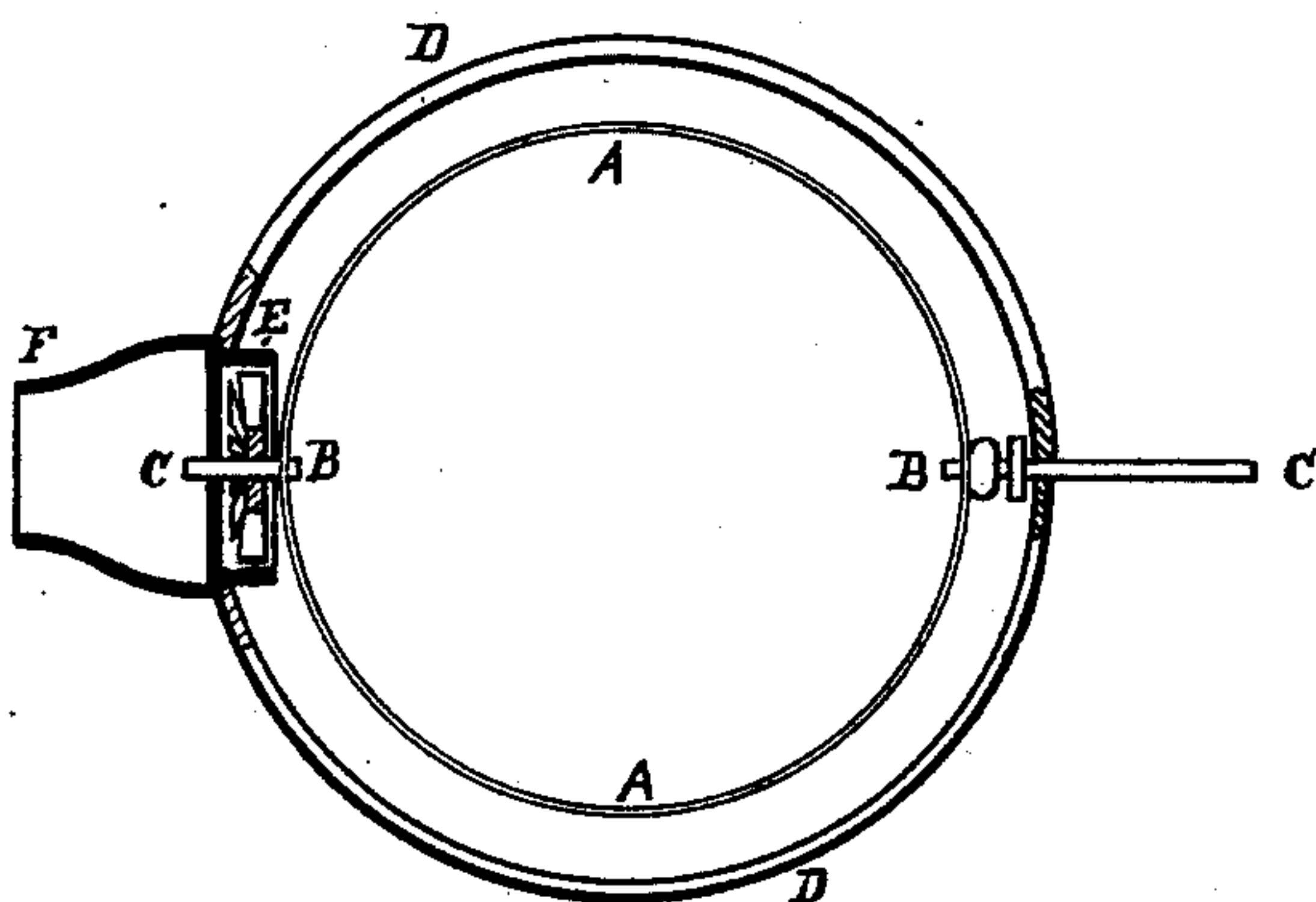


Fig:2.

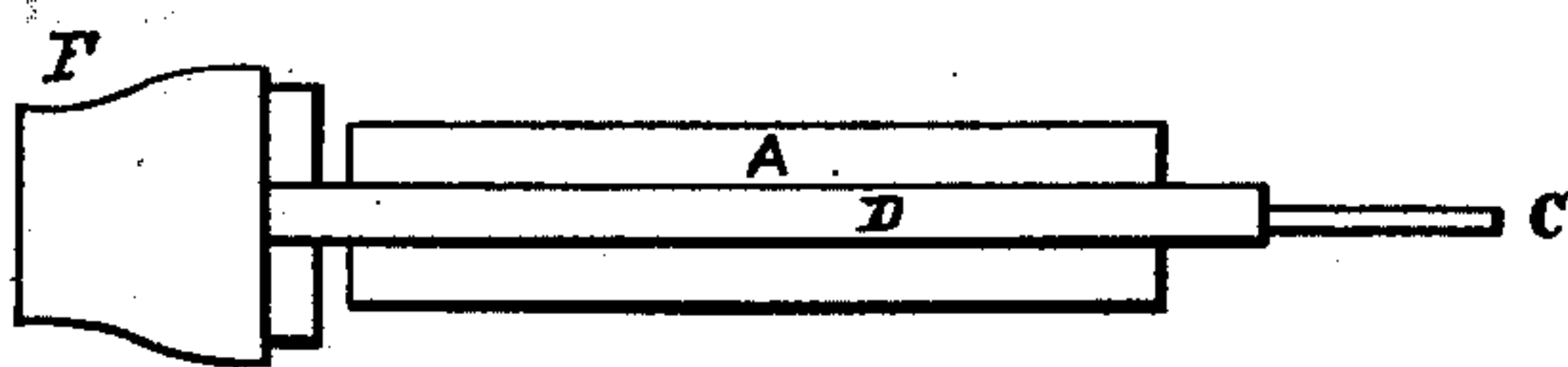


Fig:3.

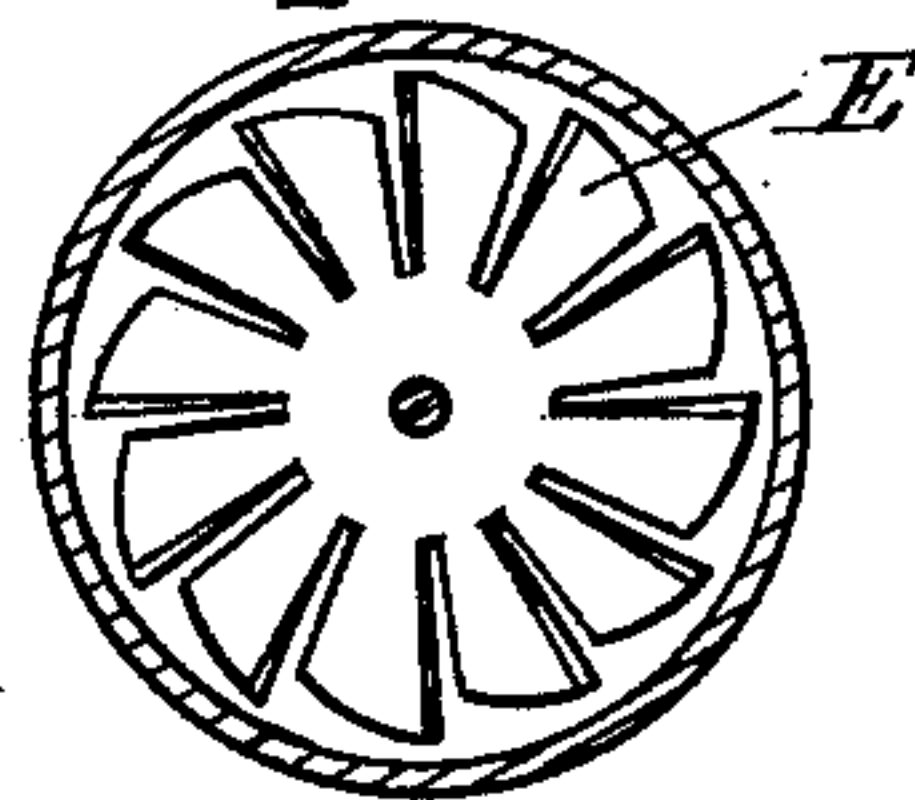


Fig:4.

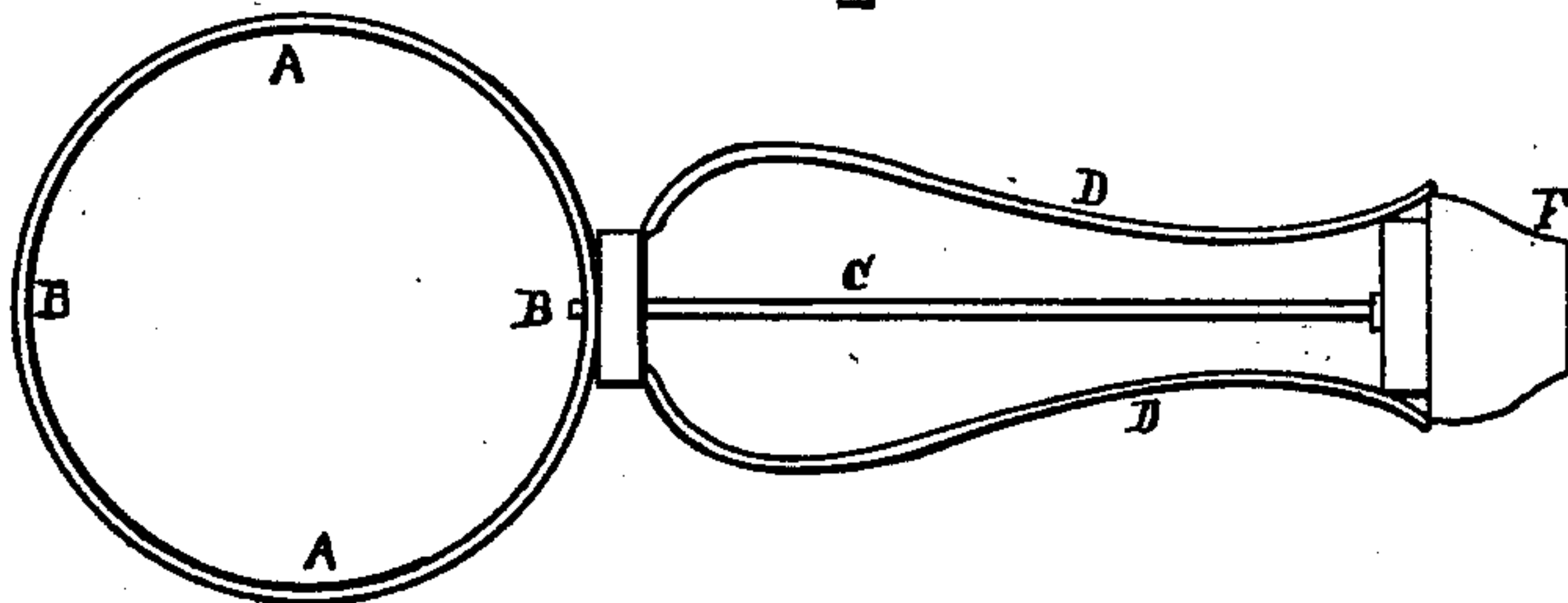
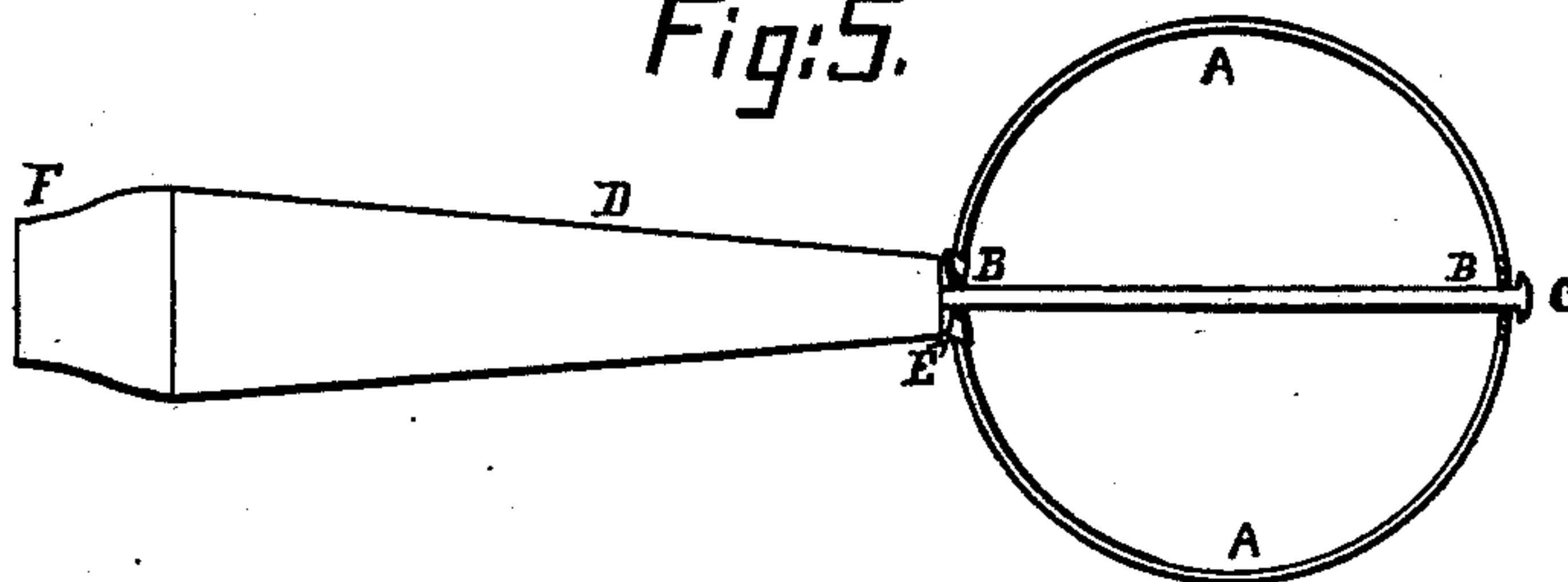


Fig:5.



Witnesses.

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UNITED STATES PATENT OFFICE.

EDWARD L. MORRIS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN TOYS.

Specification forming part of Letters Patent No. **221,693**, dated November 18, 1879; application filed May 20, 1879.

To all whom it may concern:

Be it known that I, EDWARD L. MORRIS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Toys, of which the following is a specification.

This invention relates to an improved toy, so constructed as to imitate, when set in motion, a soap-bubble or transparent film in spherical, oval, or elliptical form, the ribs of which it is composed being caused to revolve about a common center upon a shaft confined to a suitable handle or frame.

The whirling ribs have been used before, in combination with a string or strings, as in Patent No. 149,596, granted me April 14, 1874; but my present improvement consists in so constructing the toy, in connection with a shaft and frame, that it may be rotated without wear of the parts and without requiring skill on the part of the operator.

In the accompanying plate of drawings my improved toy is illustrated, Figure 1 being a side view of the same, broken open at the points of bearing of the shaft C; Fig. 2 being an edge view, and Fig. 3 being an enlarged view of the windmill, illustrated at E in Fig. 1. Figs. 4 and 5 are other forms of making the same toy, the frame in Fig. 4 being placed at one side of the ribs A, and a tube in Fig. 5 taking the place of the open frame shown in Figs. 1 and 4.

A A are ribs, made of tin, wire, or other suitable material, bent into circular, oval, or elliptical shape, and having surfaces of sufficient brightness to reflect the light which strikes them when in revolution about the common center B, to which they are attached. A shaft, C, is attached to the ribs A at the

center B, and hung within proper bearings in the frame D; or the shaft C may be made fast to the frame D, and the ribs A hung loosely upon the shaft C, as shown in Fig. 5.

When the ribs A A are caused to revolve about their common center B B, which may be done by twisting the shaft C between the thumb and finger, or by applying force to the ribs A, or by other methods, the ribs A, reflecting the light from all points in the line of their rotation, in quick succession, produce the appearance of a transparent film.

By attaching a windmill, E, to the shaft C or to the ribs A at the common center B, and providing a mouth-piece, F, the ribs A may be caused to revolve about the center B by means of a current of air directed against the windmill E; and by coloring the ribs A A, wholly or in part, or forming them of substances having naturally different colors, the beautiful effect, when in revolution, may be much heightened.

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

1. A whirling toy constructed of two or more circular, oval, or elliptical ribs, A, attached to a common center and provided with a shaft, C, and frame or handle D, substantially as and for the purpose described.

2. In combination with the ribs A, shaft C, and frame or handle D, the mouth-piece F and windmill E, substantially as and for the purpose described.

EDWARD L. MORRIS.

Witnesses:

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