

(No Model.)

T. J. CLARKE.

COP SUPPORTER FOR LOOM SHUTTLES.

No. 266,675.

Fig. 1.

Patented Oct. 31, 1882.

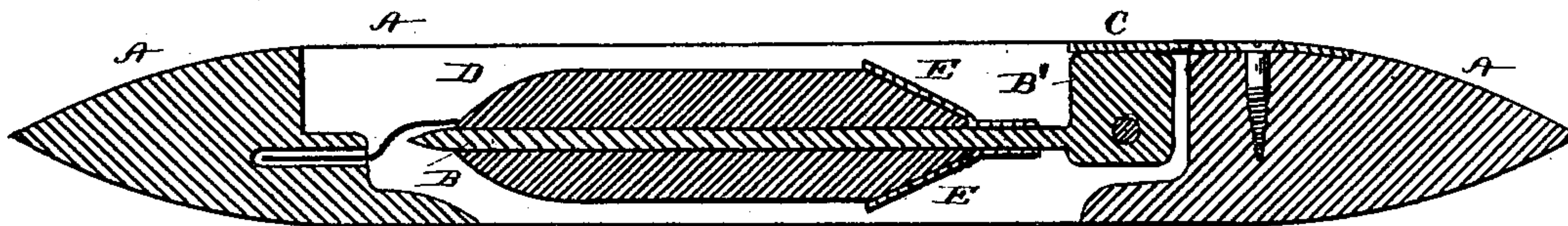


Fig. 2.

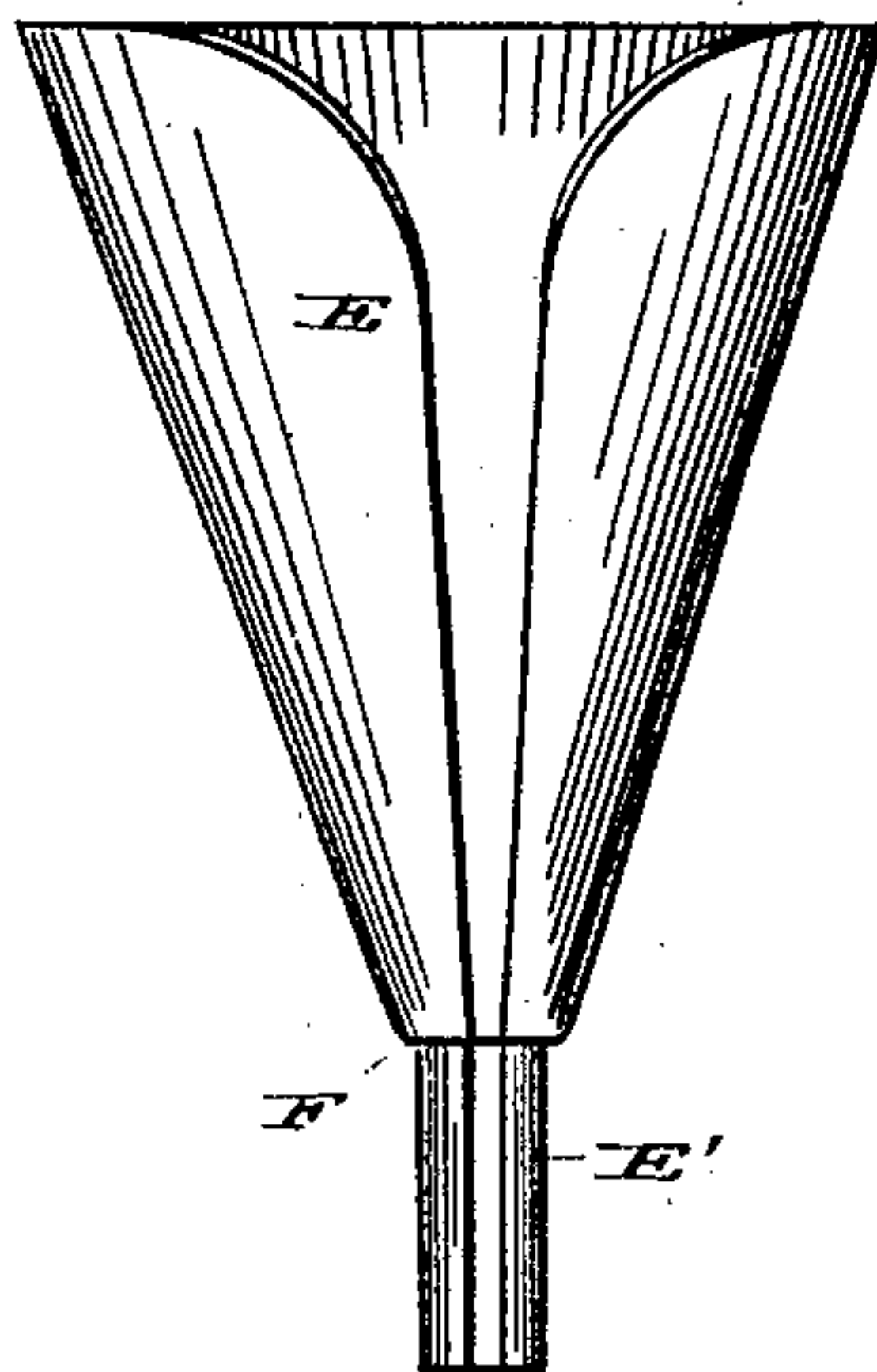


Fig. 3.

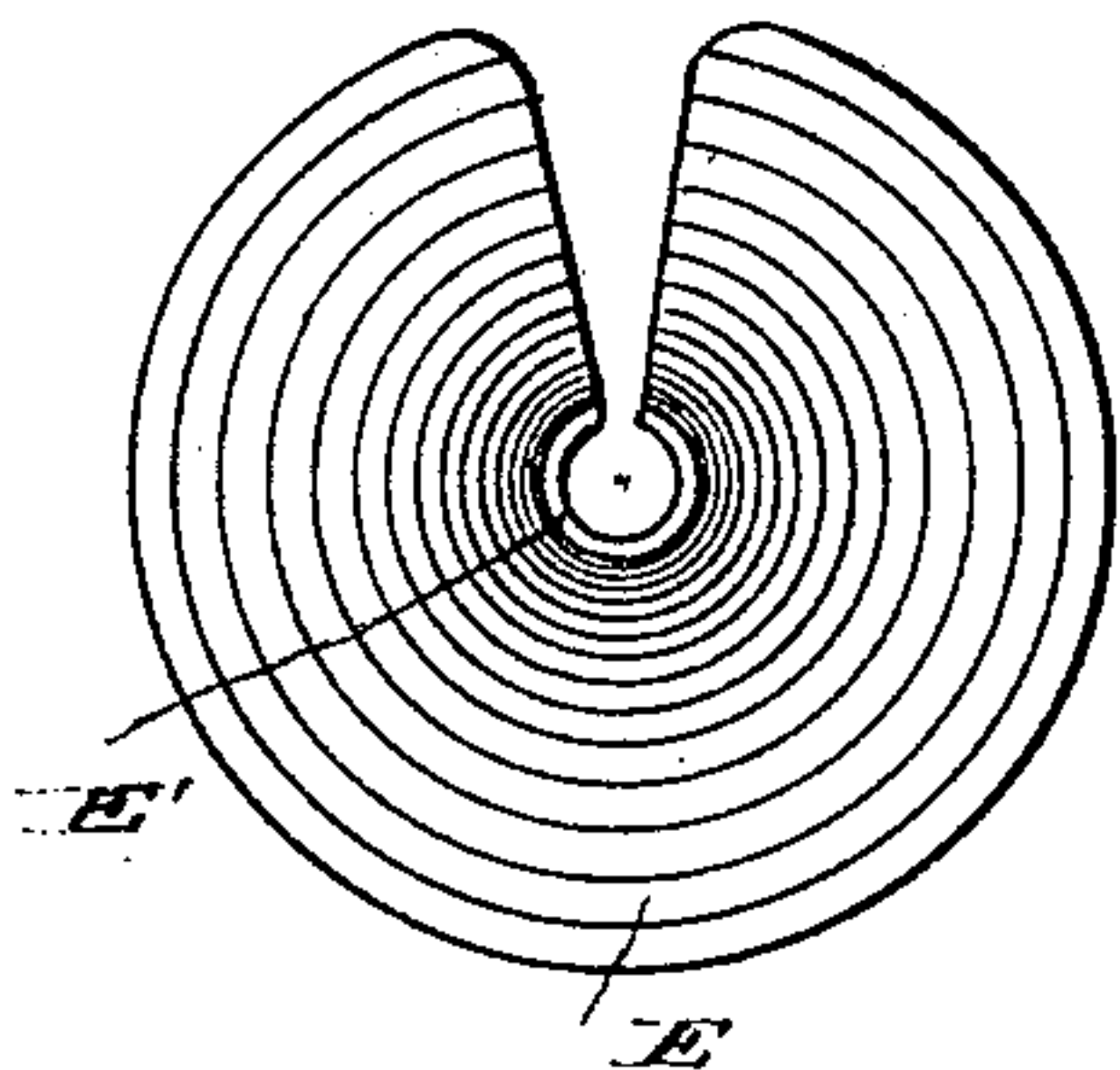


Fig. 4.

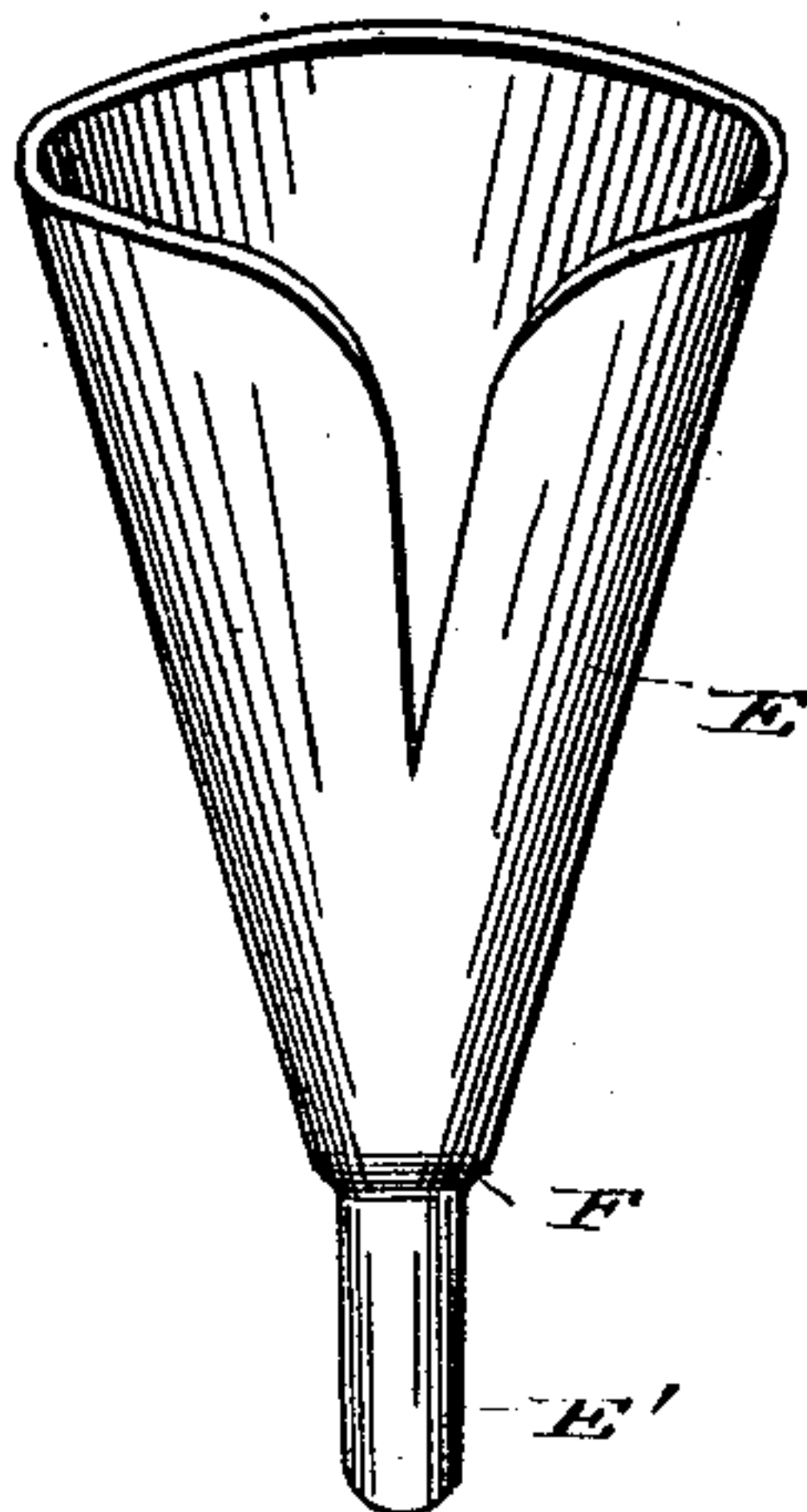
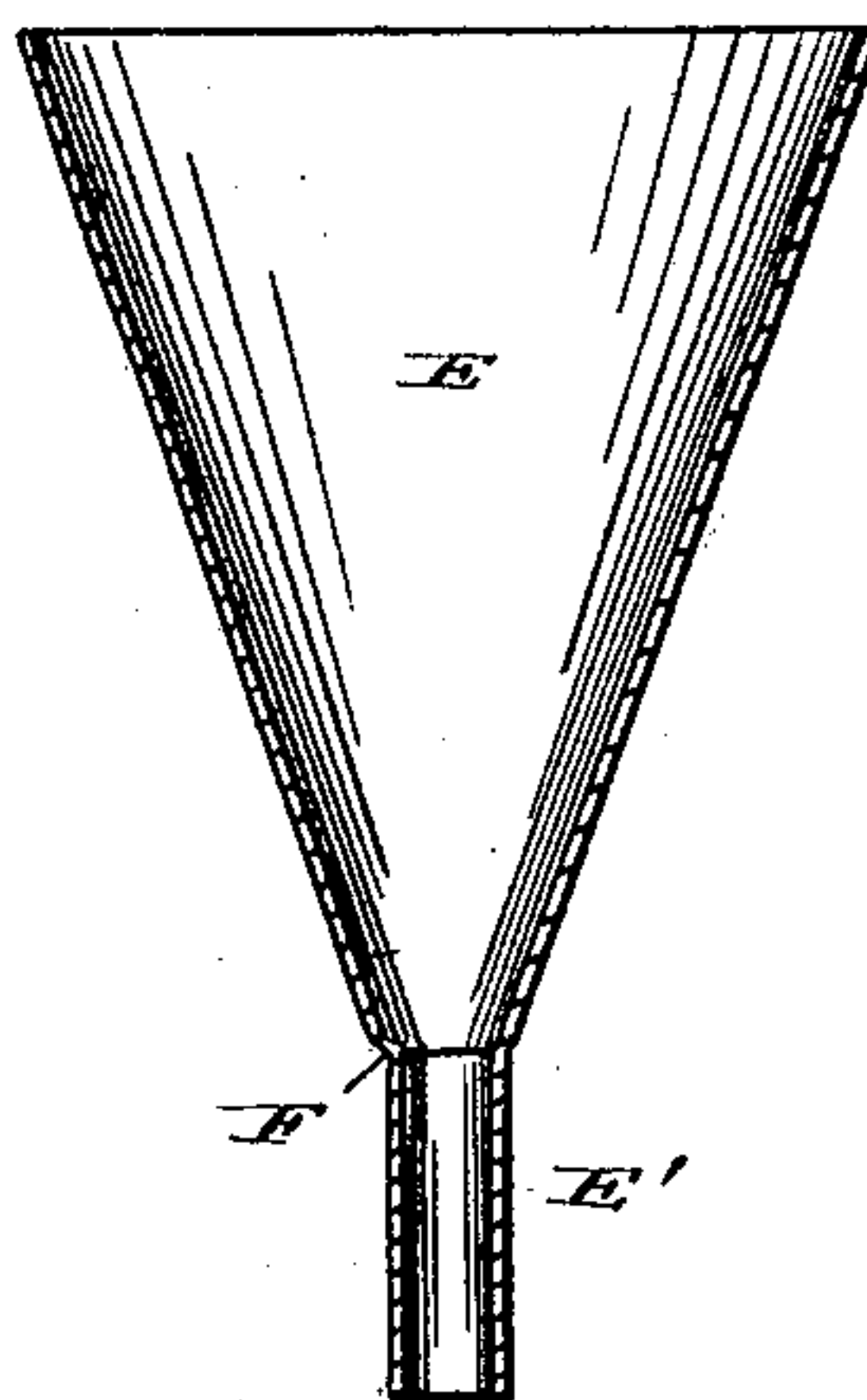


Fig. 5.



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UNITED STATES PATENT OFFICE.

TILLIE J. CLARKE, OF PHILADELPHIA, PENNSYLVANIA.

COP-SUPPORTER FOR LOOM-SHUTTLES.

SPECIFICATION forming part of Letters Patent No. 266,675, dated October 31, 1882.

Application filed December 23, 1881. (No model.)

To all whom it may concern:

Be it known that I, TILLIE J. CLARKE, of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Cop-Supporters for Loom-Shuttles, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part hereof.

The nature of my invention will fully appear from the following specification and claims.

The object of my device is to protect or support the "butt" end of the cop when the latter is in place on the shuttle-tongue, and to prevent that end of the cop from breaking or jamming and wasting. The jar of the shuttle tends to throw the end of the butt of the cop against that part of the shuttle where the tongue is hinged; and my device, which is a hollow cone conforming about to the conical butt-end of the cop, generalizes the shock and prevents the extreme end of the cone of the cop from being jammed up.

In the drawings, Figure 1 is a longitudinal sectional view of a shuttle with the cop in position upon the tongue thereof, and my device enveloping the butt-end of the cop; Fig. 2, an elevation of my invention; Fig. 3, an end view thereof; Fig. 4, a perspective of one modification of my invention, the slit extending only part way along the side of the cone.

A is the shuttle-body; B, the shuttle-tongue; B', the pivoted heel of the tongue; C, the spring, acting upon the heel of the tongue in the same manner that the spring of a penknife acts upon the shank of the blade thereof; D, the cop; E, the cone, terminating in a small cylinder, E', to clasp the tongue. The cone and its cylinder are preferably made in one piece. It is more economical than to solder the cylinder E' to the cone. The butts of different cops are cones of various slants or angles, and the slit or opening in the side of the cone is for the purpose of allowing the latter to adapt itself to these various cones. The slit is carried down through the cylindrical end E' to allow the latter to accommodate itself to variously-sized tongues, and also to fit and closely clasp different parts of the same tongue. The more fully to accomplish these objects last named I construct my cone E and cylinder E' of a material having some elasticity or spring, such as brass, copper, sheet-iron, or gutta-percha.

As shown in Fig. 5, a shoulder, F, is provided at the inner end or apex of the cone to prevent the cop or the paper tube upon which it is wound from jamming in the sharp angle which would be formed by the junction of the inner part of the cone with the tongue if the shoulder were absent from the construction.

In the device shown in Fig. 4 the cylindrical terminus of the cone is not split. While this construction will answer a very good purpose, it is evident that as the cylindrical terminus is of a certain unchangeable size it will only fit certain sized tongues, or only a certain part of one tongue. As such a construction would necessitate the use of several different sizes of my device to fit variously-sized tongues, I invariably use the continuous slit shown in Fig. 2, which will permit cylinder E' to fit and tightly clasp the variously-sized tongues in common use. I round off the corners formed by the slit at the base of the cone to avoid the cutting of the yarn as it is rove off the cop.

By the use of my device the cop known as the "soft cop" will be as secure from jamming and wasting as the "hard cop."

I shall make my device when of metal by stamping it out of a flat sheet of metal by means of a die. Then by means of a male and female die the flat piece is struck up into the shape shown in Fig. 2.

No matter how tightly the butt of the cop is forced into the cone E, the cop roves off freely from one end of the thread to the other. The shuttle shown is the ordinary tongue-shuttle now in common and general use, and, as is apparent, my improvement can be immediately applied to these common shuttles without requiring any alterations of the latter to receive it.

What I claim as new is—

1. As a new article of manufacture, the hollow cone E, adapted to be slid upon a shuttle-tongue and receive within its interior or hollow the butt of the cop, whereby the end of the butt is prevented from jamming against the interior of the shuttle, substantially as described.

2. The cone E, terminating in a cylinder, E', adapted to be passed down upon and around the bottom part of the tongue of a shuttle, substantially as and for the purposes described.

3. The cone E, having a longitudinal slit, as described, and terminating in a cylinder, E', the latter being adapted to be set upon and

clasp the tongue of a shuttle, whereby the butt of a cop upon the tongue can be covered and protected by the cone E, substantially as and for the purposes described.

5 4. The cone E, the apex of which terminates in a cylinder, E', and having a slit extending longitudinally through the sides of the cone and cylinder, whereby the cone will clasp cop-butts of various shapes, and the cylinder E' will
10 fit and clasp shuttle-tongues of various sizes, substantially as and for the purposes described.

15 5. The cone E, adapted to be set upon a shuttle-tongue and receive the butt of the cop, and having a longitudinal slit, whereby it is adapted to fit cop-butts of various shapes, substantially as described.

6. The cone E, adapted to be set upon a shuttle-tongue and receive the butt of the cop, and provided with a slit, the corners formed by the slit being rounded off, substantially as and for
20 the purposes described.

7. The cone E, adapted to be set upon a shuttle-tongue and receive the butt of the cop, for the purposes described, said cone having an interior shoulder, F, to prevent the end of the paper tube or the terminus of the butt from jamming fast between the end of the cone and the tongue, substantially as described.

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Witnesses:

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