

No. 886,297.

PATENTED APR. 28, 1908.

H. E. HUGHES.  
BOBBIN AND SPINDLE CONNECTOR.  
APPLICATION FILED FEB. 1, 1906.

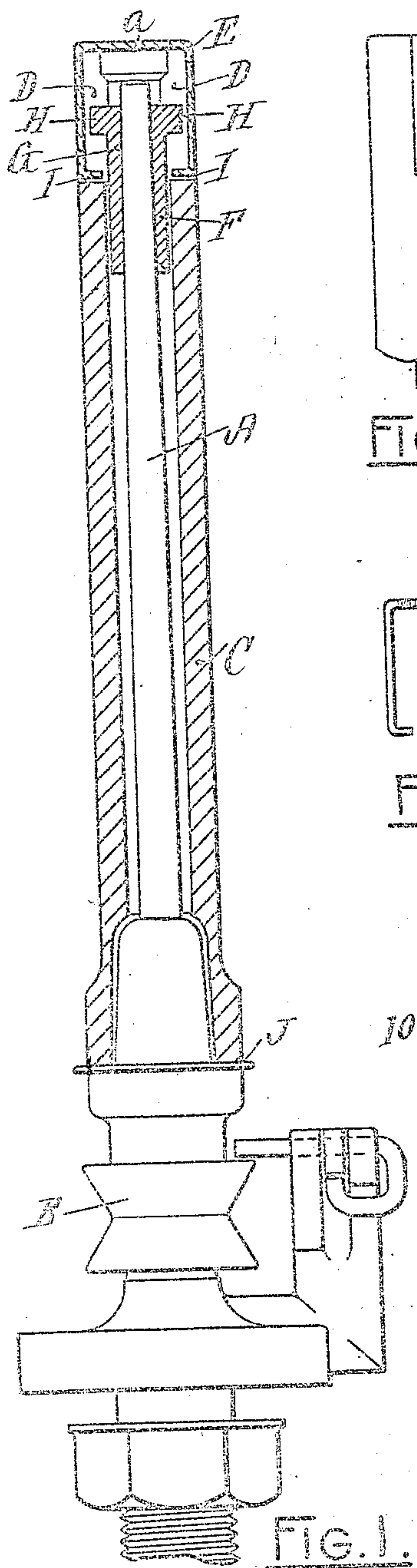


FIG. 1.

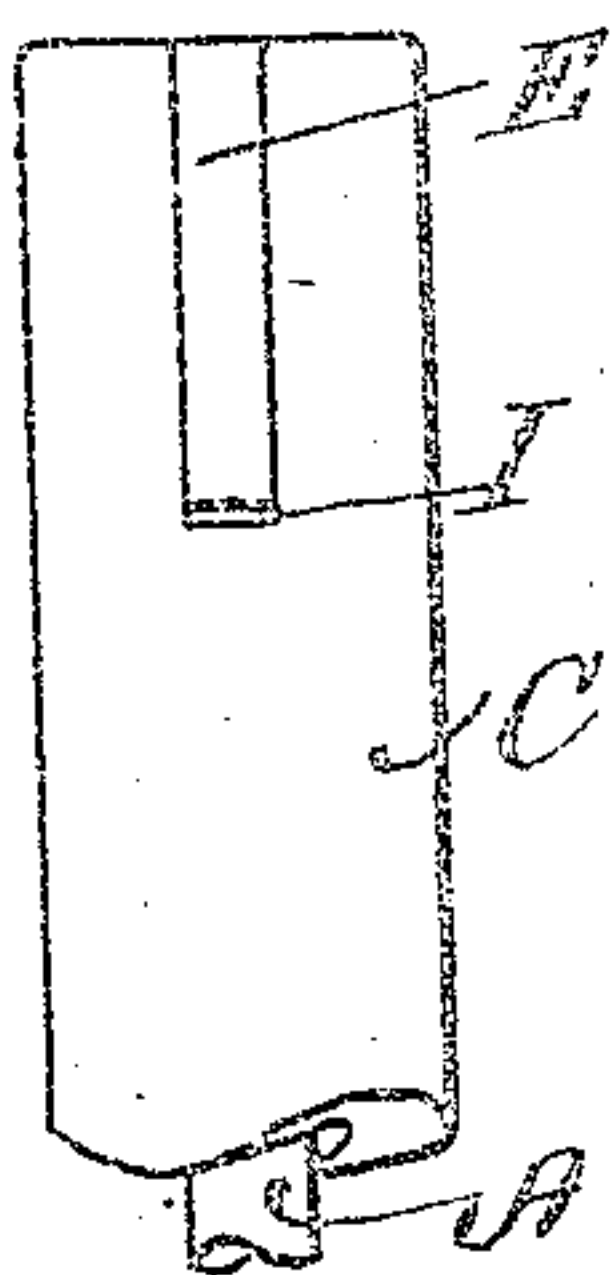


FIG. 2.

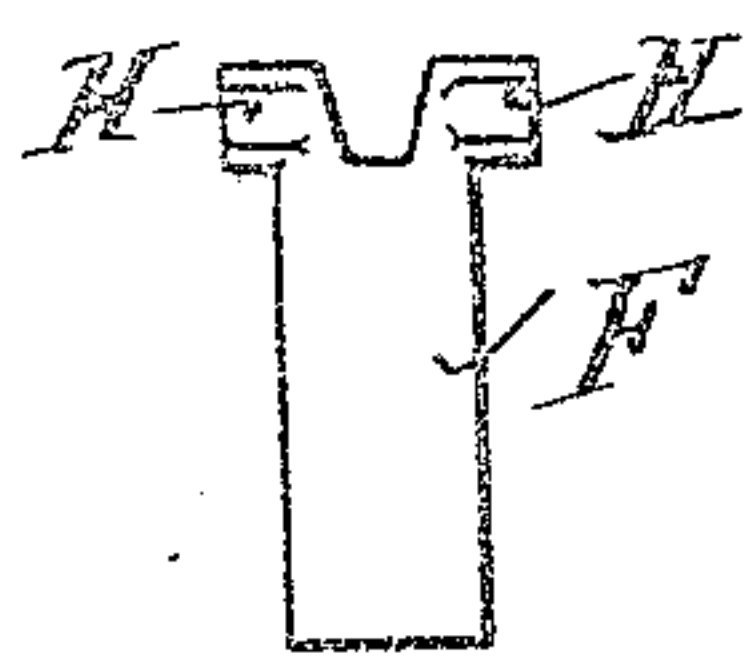


FIG. 3.

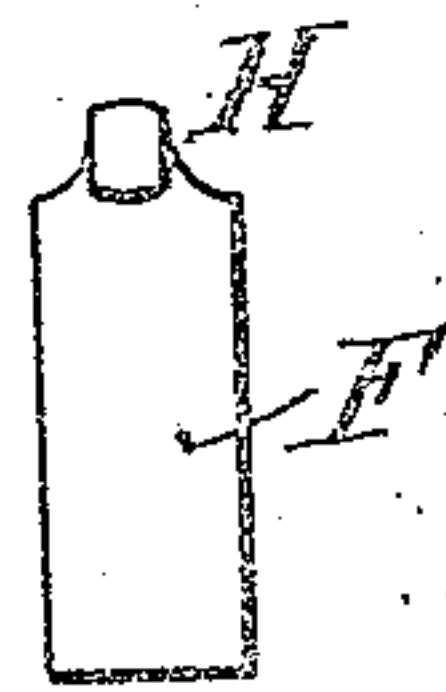


FIG. 4.

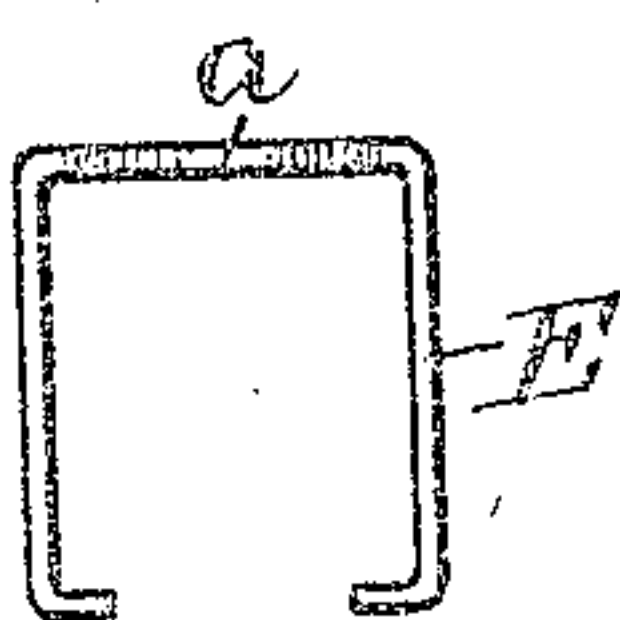


FIG. 5.

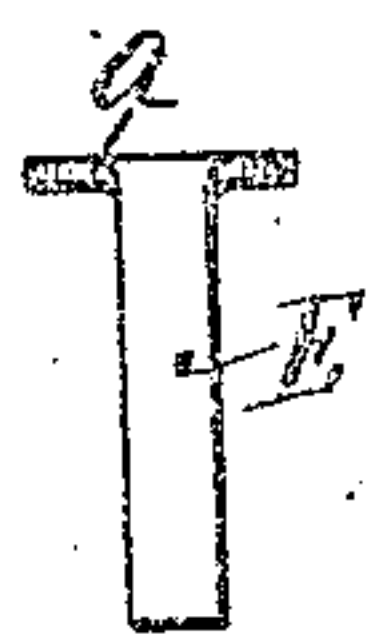


FIG. 6.



FIG. 7.

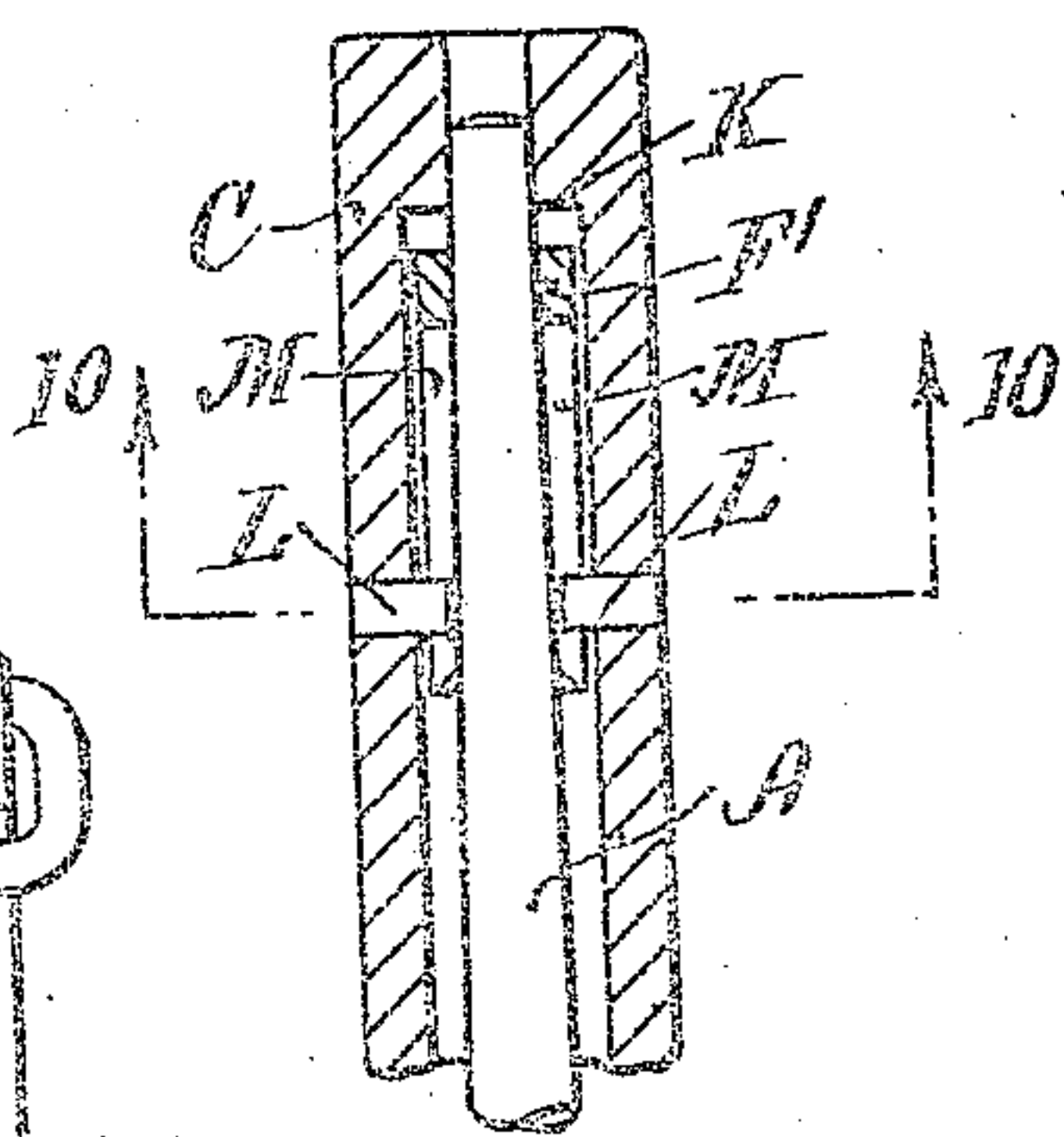


FIG. 8.

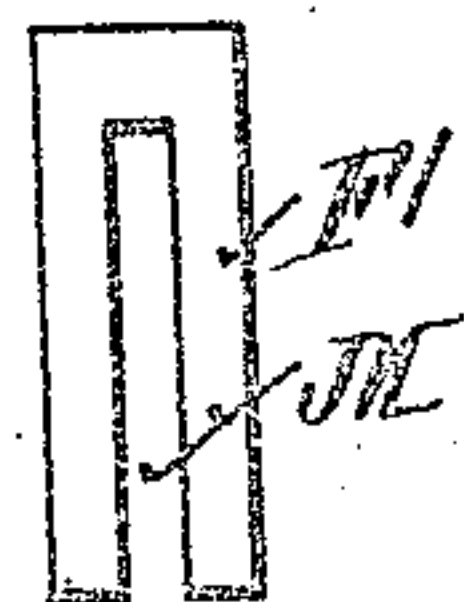


FIG. 9.



FIG. 10.

WITNESSES.

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HENRY E. HUGHES, OF CENTRAL FALLS, RHODE ISLAND.

## BOBBIN AND SPINDLE CONNECTOR.

No. 886,297.

Specification of Letters Patent.

Patented April 28, 1908.

Application filed February 1, 1906. Serial No. 299,018.

*To all whom it may concern:*

Be it known that I, HENRY E. HUGHES, a citizen of the United States, and resident of Central Falls, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Bobbin and Spindle Connectors, of which the following is a specification.

My invention relates to improved means for preventing the bobbin from slipping in its rotation with the spindle, and it consists in the combination with the bobbin of a loosely held weight adapted for frictional engagement with the tapering portion of the spindle.

In the accompanying drawings, Figure 1 represents a longitudinal section of my improved bobbin. Fig. 2 represents a side view of the upper end-portion of the bobbin. Fig. 3 represents a side view of the spindle-engaging weight. Fig. 4 represents a side view of the same taken at right angles to that of Fig. 3. Fig. 5 represents an edge view of a sheet metal strap for closing the slot opening made in the upper end of the bobbin. Fig. 6 represents a side view of the same. Fig. 7 represents a top view of the said strap and shows the end view of the bobbin. Fig. 8 represents a longitudinal section of the upper end of the bobbin showing a modification in the construction of the engaging weight. Fig. 9 represents a side view of the engaging weight showing its slotted construction. Fig. 10 represents a transverse section taken in the line 10-10 of Fig. 8.

In the drawing, A represents the tapering spindle, and B the whirl. The bobbin C is cut longitudinally at its upper end to form the opposite slots D D, the said slots being thereafter covered by means of the sheet metal strap E. The movable engaging weight F is provided with a tapering bore G, adapted to fit the tapering periphery of the spindle, and is provided with the projecting ears H H, which are adapted to pass loosely up and down in the slots D D, the said weight F being retained within the bore of the bobbin C, between the shoulders I I, at

the lower ends of the slots D D, and the head portion a of the sheet metal strap E. 50

When the bobbin C is being placed upon the spindle A, the weight F will be carried to its bearing upon the tapering end of the spindle. The ears H H of the weight will then be separated from the shoulders I I of the slots D D, as the bobbin is being carried downward to its seat J, as shown in Fig. 1. And in this case, the friction between the tapering surface of the spindle A, and the bore G of the weight F, will serve to prevent the bobbin from slipping on the spindle during its rotation. 60

A modification in the construction is shown in Fig. 8, in which the bore of the bobbin is provided with the annular shoulder K, and with the pins L L, the weight F' being provided with the longitudinal slots M M, in which the pins L L are loosely held, the bore G of the weight F' being made to fit the taper of the spindle A. 70

I claim as my invention:—

1. In a bobbin and spindle connector, the combination of the spinning spindle, with the weight held loosely for longitudinal movement within the bore of the bobbin at its upper end, and having a bore which frictionally fits the tapering upper end of the spindle, with means for preventing the rotation of the weight relatively to the bobbin, substantially as described. 75

2. In a bobbin and spindle connector, the combination of the spinning spindle, with the bobbin provided at its upper end with the longitudinal slots, the sliding weight held loosely for longitudinal movement within the bore of the bobbin and provided with projecting ears which are in engagement with the slots, and serve to prevent the rotation of the weight relatively to the bobbin, and the strap which serves to retain the weight in its working position within the bore of the bobbin, substantially as described. 80

HENRY E. HUGHES.

Witnesses:

SOCRATES SCHOLFIELD,  
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