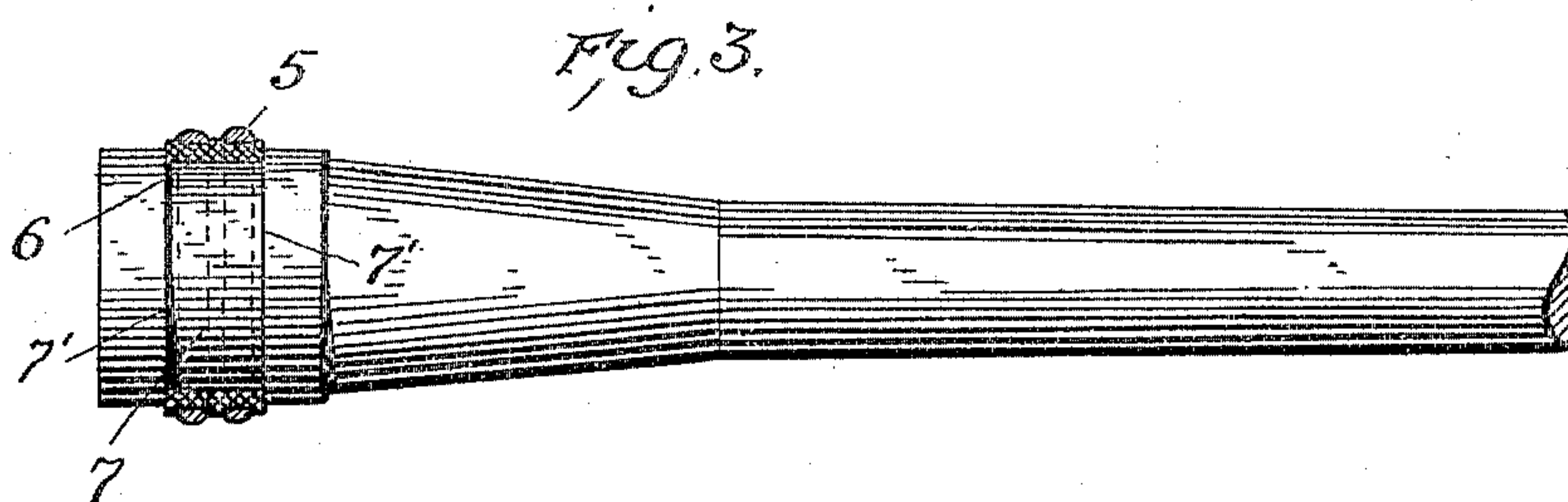
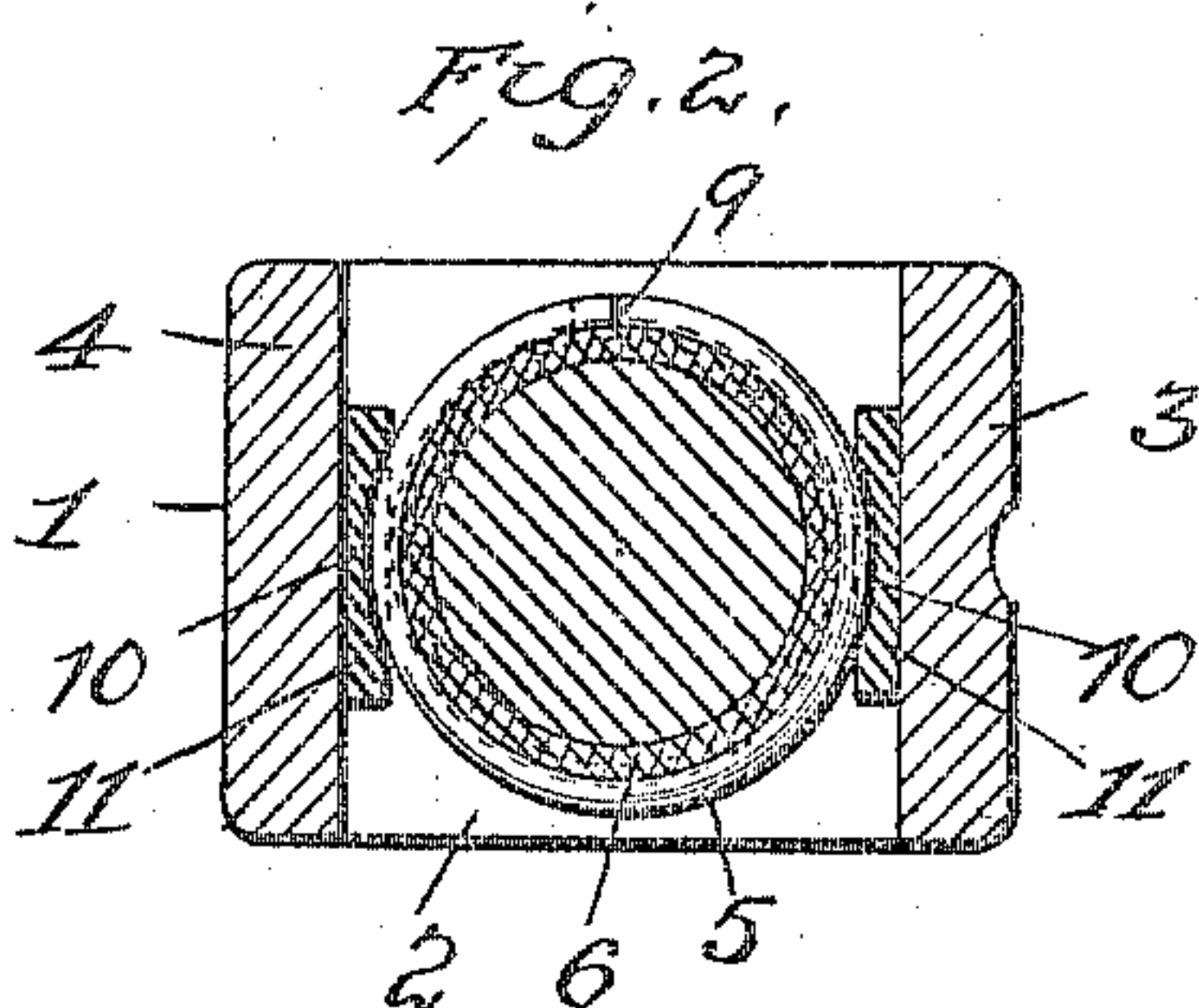
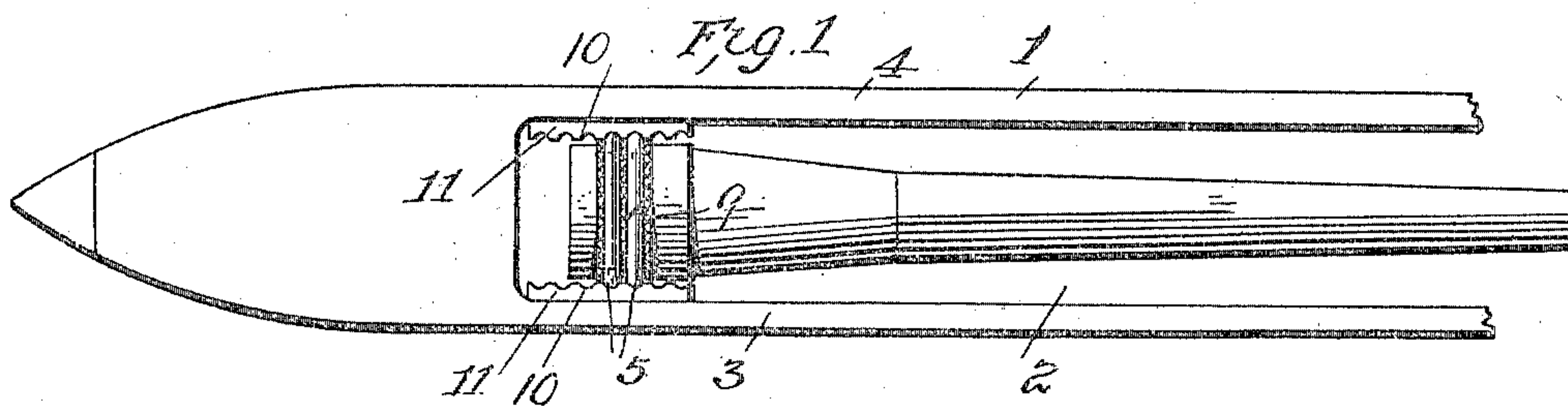


No. 811,620.

PATENTED FEB. 6, 1906.

R. L. CUMNOCK.
BOBBIN HOLDING MEANS FOR LOOM SHUTTLES.
APPLICATION FILED JAN. 3, 1903.



Attest,
C. Middleton.
L. B. Middleton

Inventor,
Robert L. Cumnock
By Ellis Spear & Company
attys.

UNITED STATES PATENT OFFICE.

ROBERT L. CUMNOCK, OF ANDERSON, SOUTH CAROLINA.

BOBBIN-HOLDING MEANS FOR LOOM-SHUTTLES.

No. 811,620.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed January 3, 1903. Serial No. 137,684.

To all whom it may concern:

Be it known that I, ROBERT L. CUMNOCK, a citizen of the United States, residing at Anderson, Anderson county, South Carolina, have invented certain new and useful Improvements in Bobbin-Holding Means for Loom-Shuttles, of which the following is a specification.

My invention relates to that form of loom-shuttles in which the weft is replenished automatically, the said shuttle being formed with an opening extending vertically thereof, so that the bobbin or its spindle may be discharged from the shuttle by a downward movement through its opening and a fresh bobbin may be introduced into the shuttle through its upper open side to be automatically retained therein.

My invention relates particularly to the means whereby the bobbin is caught and automatically held in the shuttle, my object being to simplify the construction and render the operation certain and effective.

My invention consists in the features and combination and arrangement of parts hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of a portion of the shuttle and the filling-carrier in place therein. Fig. 2 is a cross-sectional view of Fig. 1. Fig. 3 is a detail view of the head of the filling-carrier or bobbin-spindle with parts in section to show the means for automatically holding the spindle in place in the shuttle.

In the drawings, 1 indicates the body of a shuttle of known form having an opening 2 extending vertically through the shuttle for the introduction and discharge of the filling-carrier or bobbin-spindle. This filling-carrier when thrust into the body of the shuttle is adapted to be automatically retained by frictional contact of a member or members carried on the head of the filling-carrier, with frictional retaining-surfaces carried on the inner sides of the side walls 3 4 of the shuttle. The retaining means which is carried by the head of the filling-carrier consists of a pair of

rings 5, encircling the head of the filling-carrier, so as to project therefrom to engage proper friction-surfaces on the inner walls of the shuttle. I show in the drawings the preferred arrangement of the rings in which they have interposed between them and the head of the filling-carrier a piece of yielding material in the form of a band 6, encircling the head of the filling-carrier and resting in a wide annular groove or recess 7, so as to be retained against displacement longitudinally of the filling-carrier by the annular shoulders 7' at each side of the groove. As before stated, this band of material is adapted to yield, and in this embodiment of my invention the rings are split at 9 on an incline. The frictional surfaces adapted to be engaged by the gripping-rings and located on the shuttle are indicated at 10. I do not wish to limit myself to the arrangement or construction of these parts; but as shown herein the frictional surfaces are carried by plates 11, secured to the inner sides of the walls of the shuttle by any suitable means. These frictional surfaces are grooved vertically to receive the spring-rings carried by the head of the filling-carrier, there being a greater number of grooves than rings, which thus enables the filling-carrier to be engaged and retained in place even though it should not fall exactly in the same position at each replenishing operation. In other words, the grooves are of sufficient number to provide a frictional gripping-surface extending longitudinally of the shuttle a sufficient distance to insure the filling-carrier being caught and held even though the said carriers fall in different positions in respect to the length of the shuttle.

As above stated, I do not wish to limit myself to the manner of providing the gripping-surfaces upon the shuttle, as such surfaces may be formed on the shuttle itself, nor do I wish to limit myself to the detail arrangement of the spring-rings, nor to the construction wherein said rings are split. The yielding or resilient material may be of rubber or like substance. The ring or rings embed themselves in this material.

I claim as my invention—

1. In combination, a shuttle having rigid bobbin-holding surfaces and a bobbin having yielding rings for engaging said rigid surfaces, substantially as described.
- 5 2. In combination, a shuttle having opposing corrugated rigid bobbin-holding surfaces, a bobbin having rings for engaging said corrugated surfaces, and an elastic sleeve

between the rings and bobbin, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT L. CUMNOCK.

Witnesses:

ROBT. E. LIGON.

J. C. HARPER.