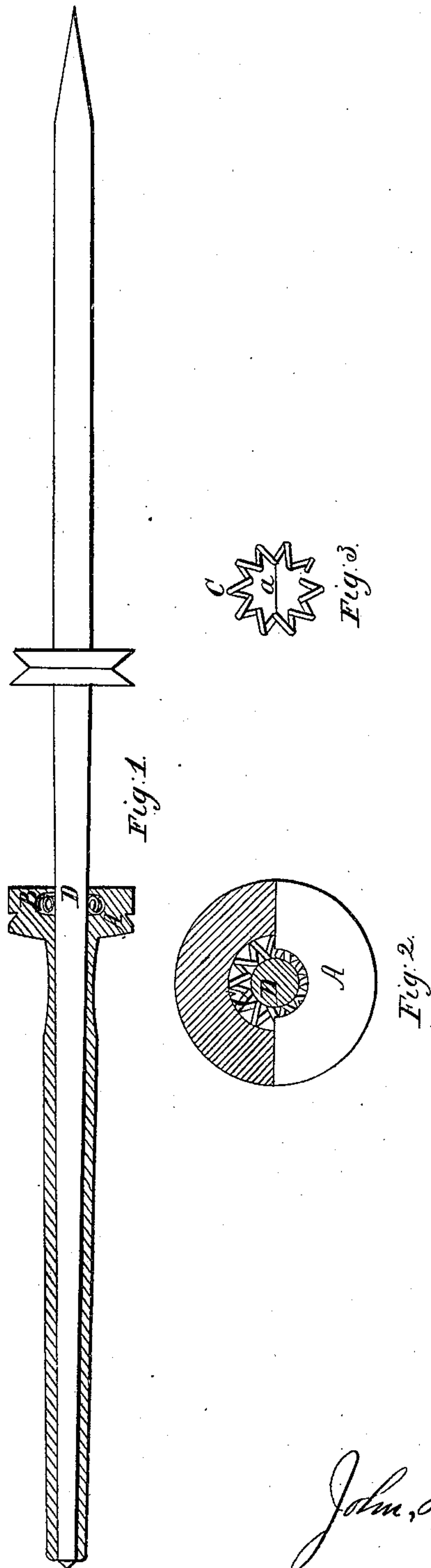


J. H. Crowell.
Bobbin Holder.

N^o 92,940.

Patented Jul. 27 1869.



Witnesses;
John O. Brigham.
Edwin Walter Gould.

Inventor;
John H. Crowell.

UNITED STATES PATENT OFFICE.

JOHN H. CROWELL, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN BOBBINS FOR SPINNING.

Specification forming part of Letters Patent No. **92,940**, dated July 27, 1869; antedated July 23, 1869.

To all whom it may concern:

Be it known that I, JOHN H. CROWELL, of Providence, in the county of Providence, in the State of Rhode Island, have invented a new and Improved Mode of Friction for Holding Spinning-Bobbins upon their Spindles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

The nature of my invention consists in providing the lower portion of the bobbin with a score on the inside, in addition to the hole made to receive the bobbin-spindle, which score holds a metallic spiral spring in its place when placing the spindle into or taking it out of the bobbin. The axis of this spring encircles the spindle, which spring, forming a circle having its inner diameter measure less than the diameter of the spindle, will press against the spindle when the spindle is placed into the bobbin, thus causing friction, which holds the bobbin upon the spindle.

To enable others to understand the construction and operation of my invention, I will proceed to describe it by referring to Figures 1, 2, and 3 of the drawings.

The lower portion of bobbin A has a score, B, Fig. 1, on its inside, in which is placed the spiral spring C, Fig. 3. The spring encircles

the spindle D, as shown in Figs. 1 and 2. Fig. 3 shows the shape of the spring C after it is placed into the score B, Fig. 1, which score B, being made to fit the spring C, prevents the spring from coming out when the spindle D, Fig. 1, is pressed into or drawn out of the bobbin A. The friction is caused by having the inner diameter of the spring C, Fig. 3, as it forms a circle, (the distance being shown by line *a*,) measure less than the diameter of the spindle D. Therefore when the spindle is placed into the bobbin it touches the spring and presses it against the bottom of the score B, which pressure causes the friction that holds the bobbin upon the spindle.

I am aware that elastic materials and packings of various kinds have been used and patented, such as rubber and leather; also, I am aware that elliptical springs have been used and patented, all of which I disclaim.

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

The spiral spring C, in combination with the chambered bobbin A B, as and for the purposes set forth.

JOHN H. CROWELL.

Witnesses:

J. O. BRIGHAM,
EDWIN WALTER GOULD.