

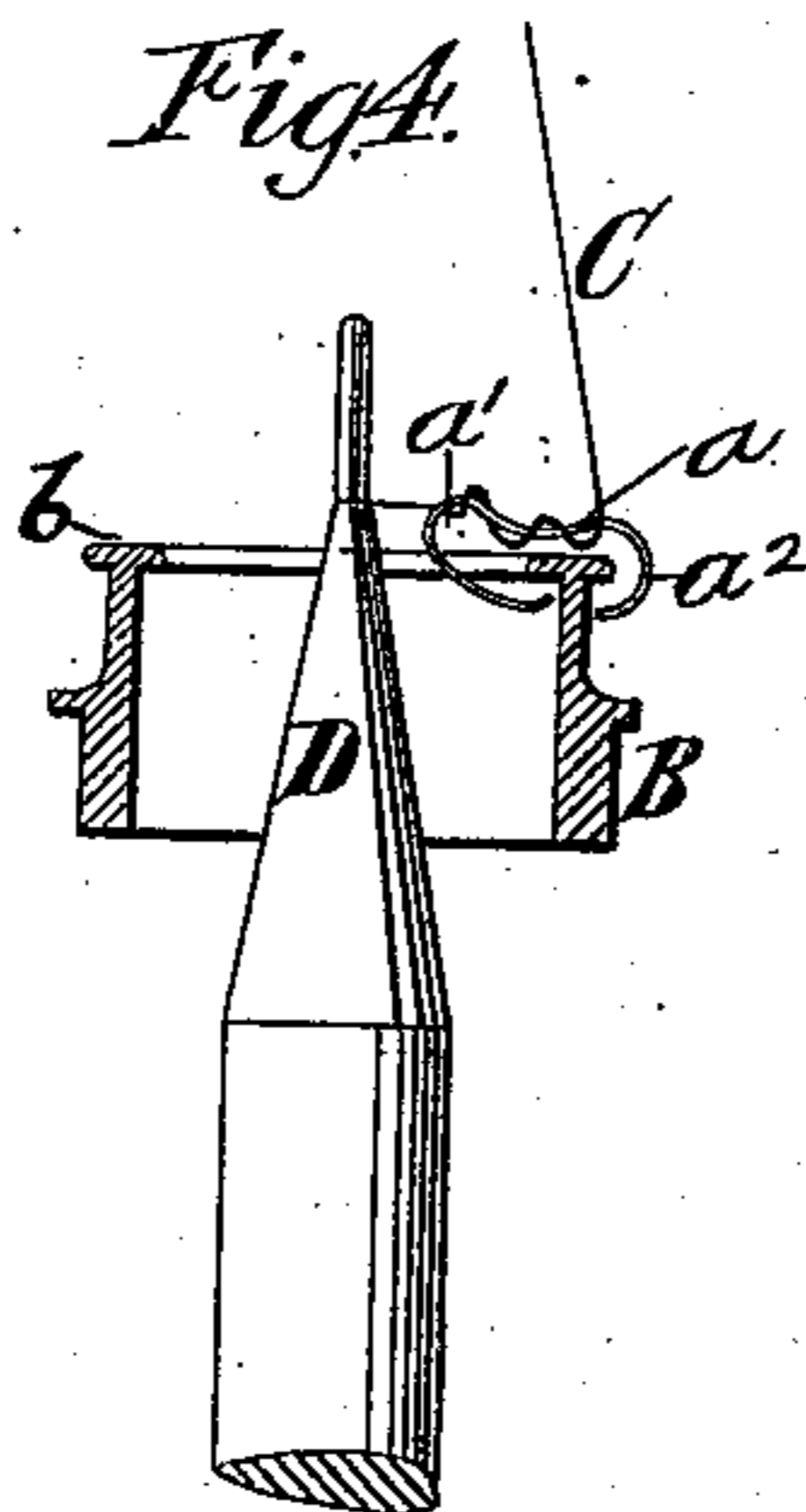
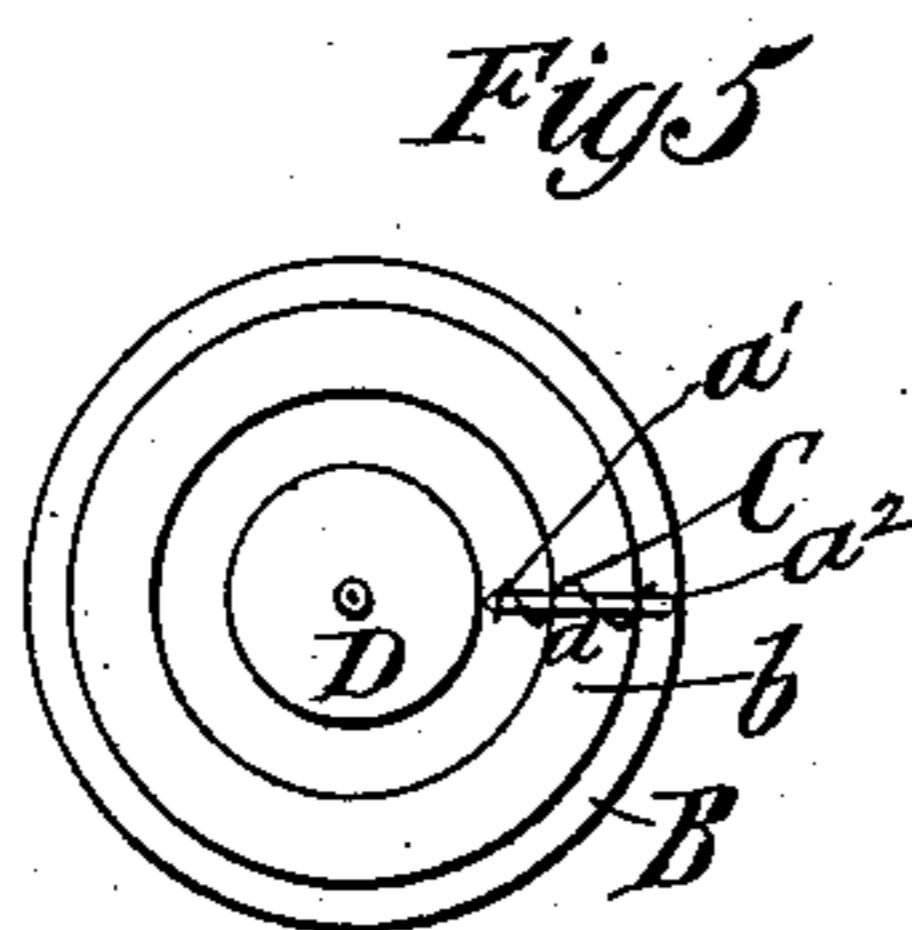
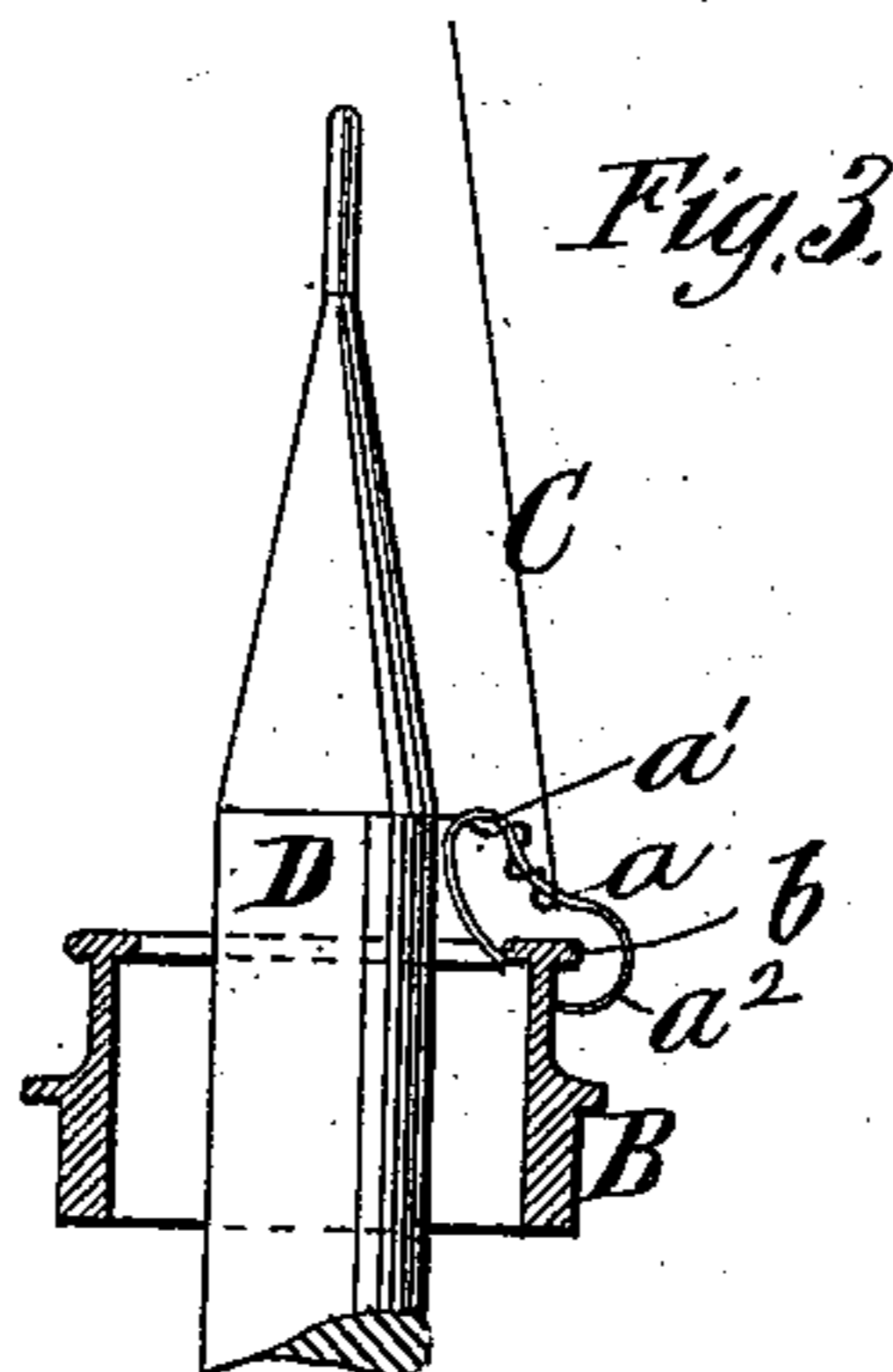
(No Model.)

J. TATHAM.

RING AND TRAVELER FOR SPINNING MACHINES, &c.

No. 377,871.

Patented Feb. 14, 1888.



Witnesses.
Hall.
Emil Kertu.

Fig. 1.
a'
a
a^2

Fig. 2.
a'
a
a^2

Inventor.
John Tatham
By his Atty.
Henry T. Brown

UNITED STATES PATENT OFFICE.

JOHN TATHAM, OF ROCHDALE, COUNTY OF LANCASTER, ENGLAND.

RING AND TRAVELER FOR SPINNING-MACHINES, &c.

SPECIFICATION forming part of Letters Patent No. 377,871, dated February 14, 1888.

Application filed May 11, 1881. Serial No. 33,040. (No model.) Patented in England April 16, 1879, No. 1,482, and October 16, 1879, No. 4,185, and in France October 17, 1879, No. 133,226.

To all whom it may concern:

Be it known that I, JOHN TATHAM, of Rochdale, in the county of Lancaster, England, have invented a new and useful Improvement in Rings and Travelers for Spinning-Machines, &c., of which the following is a specification.

For this invention I have already obtained Letters Patent of the United Kingdom of Great Britain and Ireland, No. 1,482, dated April 16, 1879, and No. 4,185, dated October 16, 1879, and a Brevet d'Invention of the Republic of France, No. 133,226, dated October 17, 1879.

My invention refers to that system of spinning and doubling cotton and other fibrous materials known as the "ring" and "traveler;" and the object of my invention is to cause the traveler to vary the point of delivery of the yarn or thread according to the varying diameter of the cop in the process of being wound.

The invention consists in the combination, with a ring for ring-spinning, having at the upper edge inwardly and outwardly projecting flanges, of a traveler engaging said flanges and affording an extended loop through which the yarn or thread may be passed and then lapped around the wire of the traveler, the length of the traveler from its bearing on the ring to its inner end being less than the radius of the ring, so that in use the traveler will not extend past the center of the cop.

In the accompanying drawings, Figures 1 and 2 represent in side and edge view a traveler embodying my invention. Fig. 3 represents in elevation a portion of a cop, a sectional view of a ring and traveler embodying my invention, and operating in connection therewith. Fig. 4 is a view similar to Fig. 3, but showing the traveler in another position while forming the cop; and Fig. 5 is a plan of the ring and traveler and of a cop within the ring.

Similar letters of reference designate corresponding parts in all the figures.

a designates the bent wire of which the traveler is formed, having a curved or looped portion, a' , at its upper end and another curved or looped portion, a'' , at its lower end.

The said traveler is sprung onto the ordinary flanges, b , which extend both inward and outward at the upper edge of the ring B, so as to be capable of being caused to travel thereon. The yarn or thread C proceeding from the rollers of the spinning or doubling machine is passed through the loop a' , and after being lapped around the traveler passes to the cop D. The traveler is drawn around the ring B by the yarn or thread C, as in ordinary ring-spinning; but the tension of the yarn or thread draws the upper part of the traveler inward, so that the point of delivery of the yarn or thread is in contact with or near to the surface of the cop D, the position of the traveler varying, however, with the different diameters of the cop D.

In Fig. 3 the point at which the yarn is delivered to the cop D is opposite to the largest diameter of the cop D, and the traveler will generally run just free of the said cop D. When the traveler is opposite to a smaller diameter of the said cop D, as shown in Fig. 4, the same relative point of delivery will be maintained, because the angle of the yarn or thread will exercise a greater tension and will pull over the curved or looped portion a' of the traveler in proportion, and so on for intermediate positions. In no case, however, does the curved or looped portion a' of the traveler extend beyond the center of the cop D.

I am aware of United States Letters Patent to Edmonds, No. 216,728, dated June 24, 1879, which shows a traveler having a bearing both upon the top and bottom edges of the ring, and which therefore cannot extend inward from the ring and toward the cop, as shown in my drawings, and which has not any extended loop a' . I am also aware of English Patent No. 870 of 1879, granted to Clark, and which shows a traveler engaging with flanges at the upper edge of the ring in the usual way and having an inwardly-extending loop; but such traveler is so long that it extends inward past the center of the ring, and is described as being drawn against the spindle when in use, so as to act as a lever, which assists, more or less, according to its length, the motion of the traveler around the ring. My invention is limited to a traveler which from

its bearing on the ring to its inner end is less in length than the radius of the ring, so that when in use the traveler will not extend past the center of the cop; and I do not include in
5 my invention anything shown or described in the two patents referred to.

What I claim as my invention, and desire to secure by Letters Patent, is—

10 The combination, with a ring for ring-spinning, having at the upper edge inwardly and outwardly projecting flanges, of a traveler engaging said flanges and affording an extended

loop, α' , through which the thread may be passed and then lapped around the wire of the traveler, the length of the traveler from
15 its bearing on the ring to its inner end being less than the radius of the ring, so that in use the traveler will not extend past the center of the cop, substantially as herein set forth.

JOHN TATHAM.

Witnesses:

THOMAS CHADWICK,

ROBERT HOWARD,

Both of Rochdale.