

(No Model.)

S. HENDERSON.
GUIDE TUBE FOR SPINNING FRAMES, &c.

No. 401,350.

Patented Apr. 16, 1889.

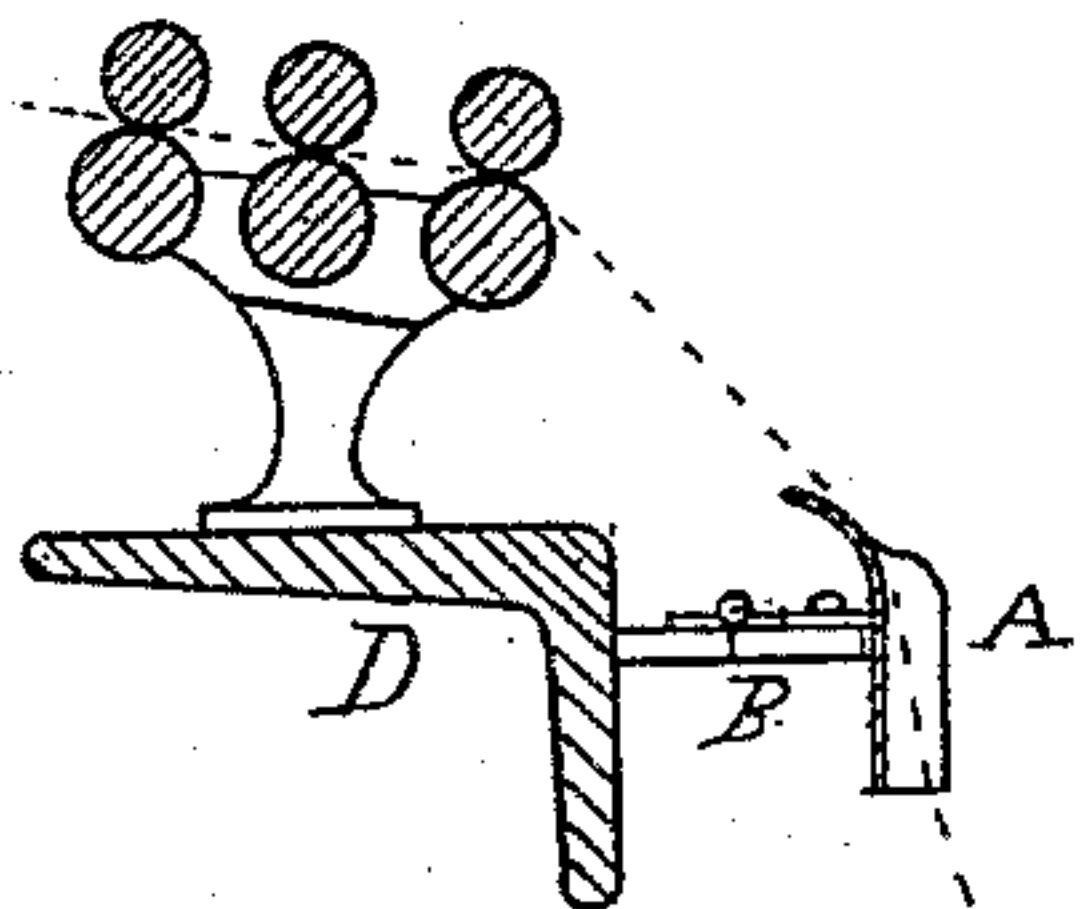


Fig. 1

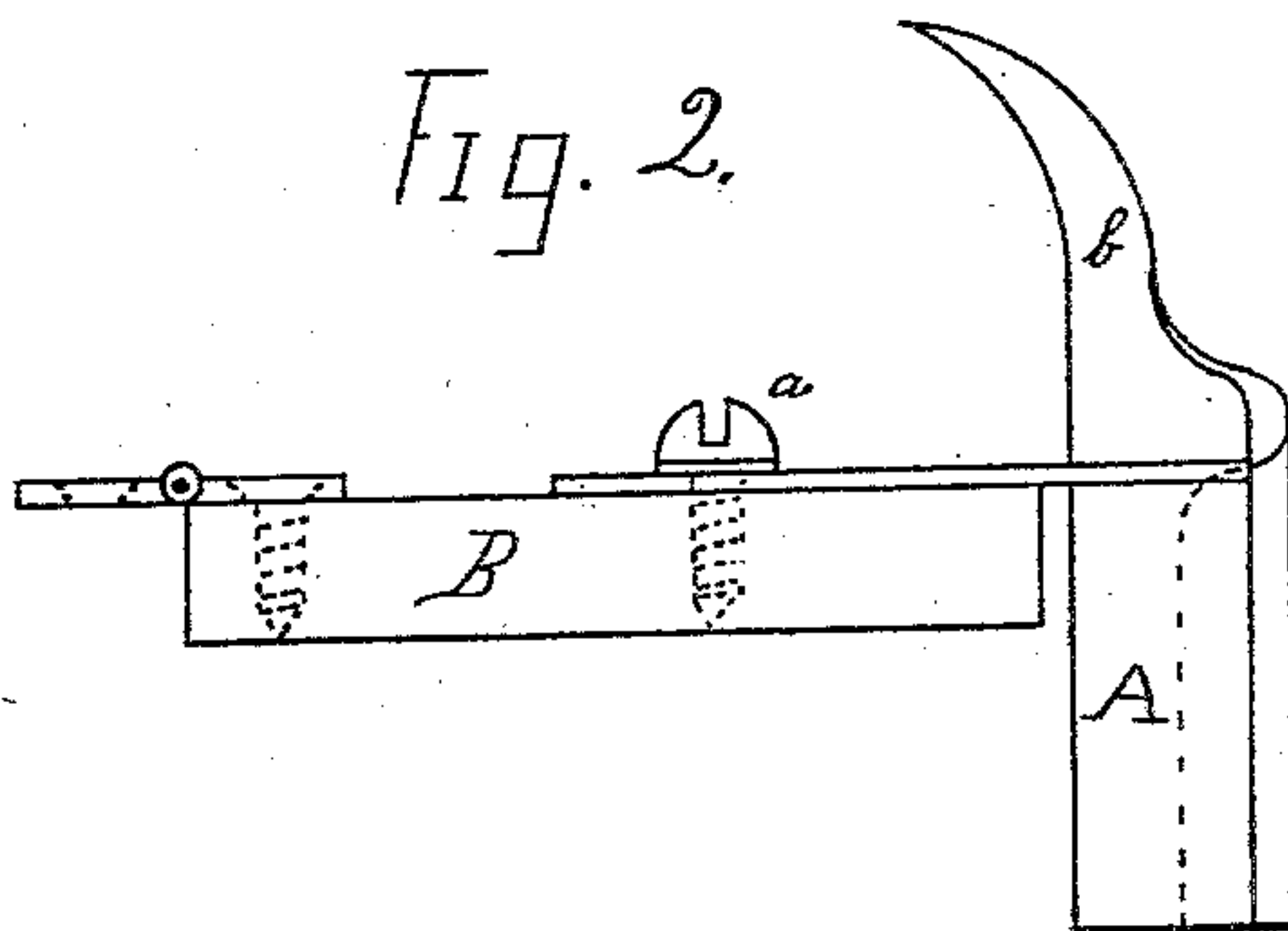
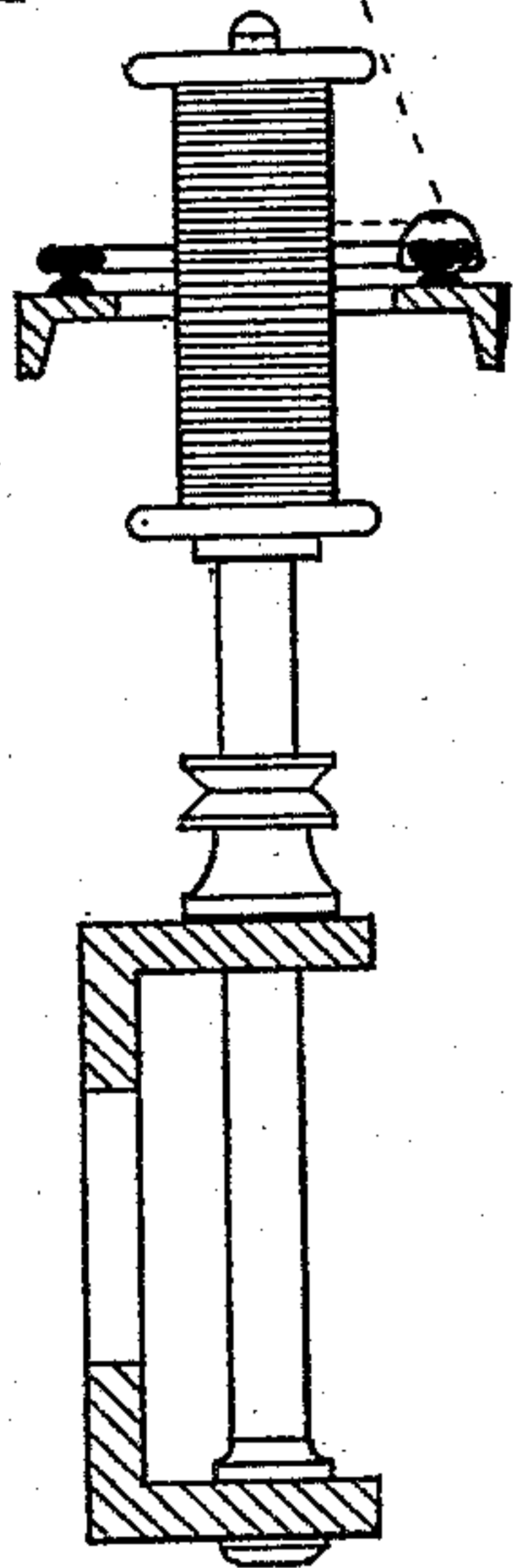


Fig. 2.

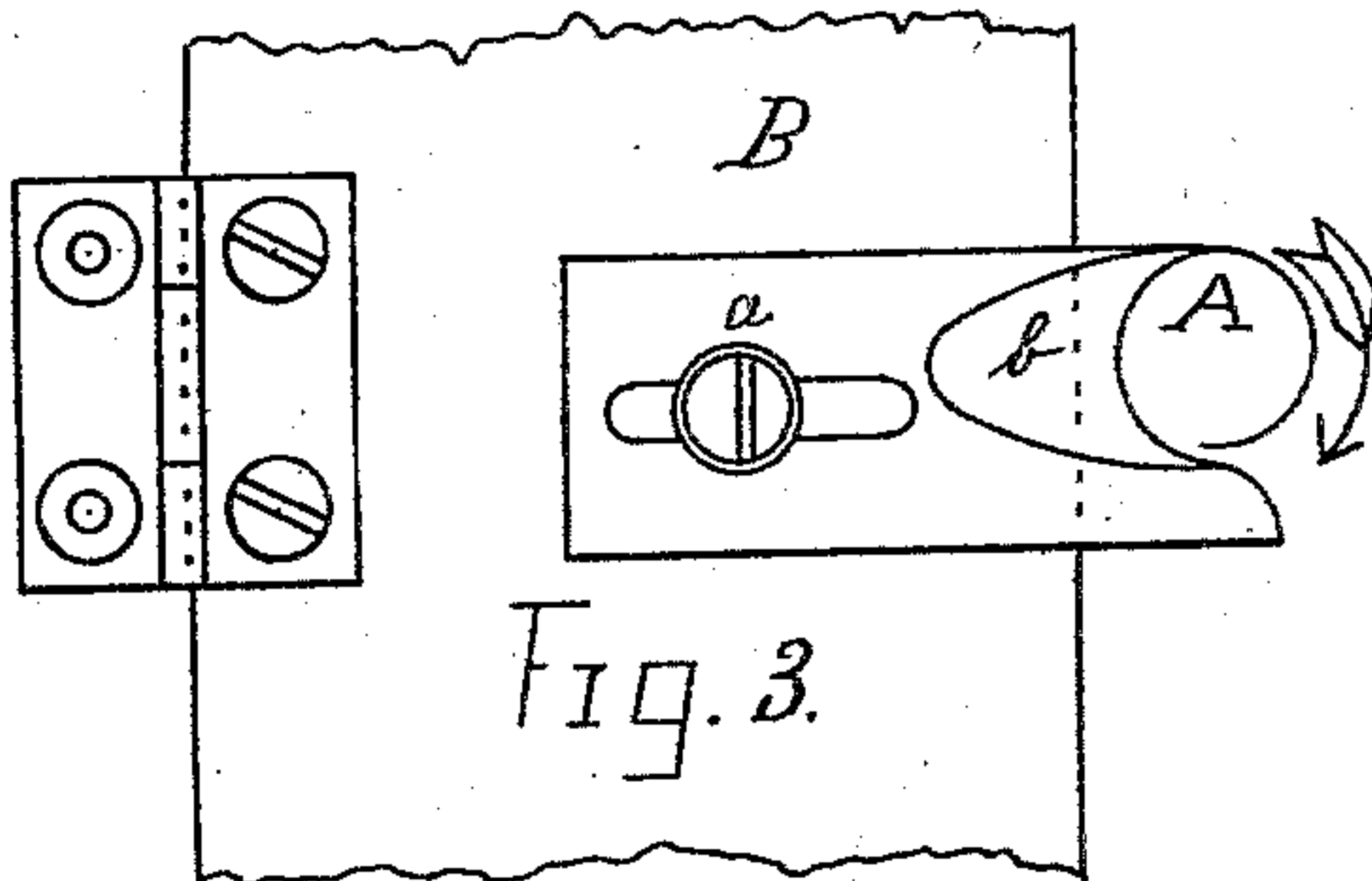


Fig. 3.

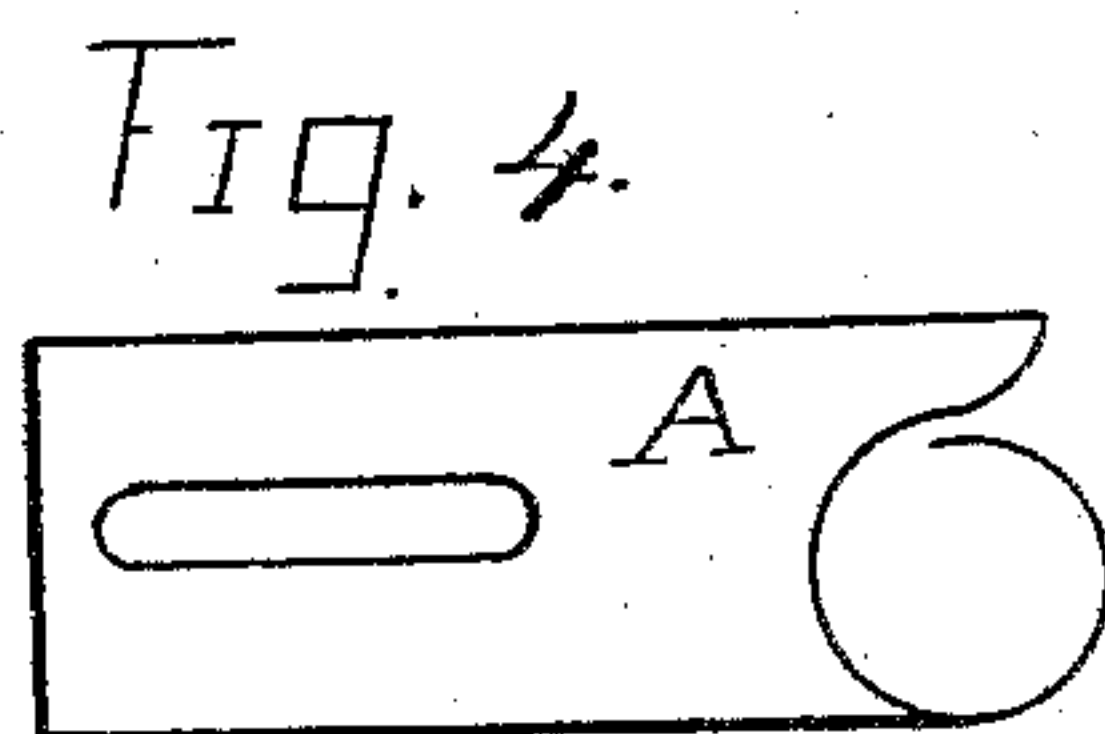


Fig. 4.

WITNESSES.

L. J. Beaumont
J. H. Beaumont

INVENTOR.

Samuel Henderson.
by John Shinn, Attorney.

UNITED STATES PATENT OFFICE.

SAMUEL HENDERSON, OF MILLVILLE, NEW JERSEY.

GUIDE-TUBE FOR SPINNING-FRAMES, &c.

SPECIFICATION forming part of Letters Patent No. 401,350, dated April 16, 1889.

Application filed December 17, 1888. Serial No. 293,906. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL HENDERSON, a citizen of the United States, residing at Millville, in the county of Cumberland, State of New Jersey, have invented a new and useful Improved Guide-Tube for Spinning and Twisting Frames, of which the following is a specification.

My invention relates to guides for guiding the yarn or thread between the delivery-rollers and the ring-traveler, cap, or flyer of a spinning or twisting machine.

The object of my invention is to prevent in a great measure the yarn from swelling in an imperfect "draft" between the guide and twisting device, which imperfect draft, with the ordinary "guide-wire," permits the yarn to swell, snarl, kink, and strike adjoining threads, breaking down the ends and making waste and kinky yarn.

My improvement consists in making the guide in the form of a tube with a curved lip at the top and a lap-opening down the front of the guide, as illustrated in the accompanying drawings, in which—

Figure 1 is a sectional elevation of such parts of a yarn-spinning frame as are required to show my improved guide-tube connected thereto. Fig. 2 is a side view of my improved guide-tube and end view of the guide-board. Fig. 3 is a top view of the parts shown in Fig. 2. Fig. 4 is a bottom view of the guide-tube.

Similar letters refer to similar parts throughout the several views.

A represents the guide-tube, which may be made of sheet-copper, steel, iron, porcelain, or glass.

B represents the guide-board, which is connected to the roller-beam D. This guide-board is hinged, as is usual in spinning and twisting frames. To the guide-board B is fastened the guide-tube A by a wood-screw, *a*.

I find in practice that a tube one and one-

half inch long and having a one-half-inch hole works well. The height and curve of lip *b* will be according to the height of the delivery-rollers from the guide-board B; but I find that a lip one and one-quarter of one inch above the board B and curved so as to cause the thread to lie on the lip while twisting answers well. The lap of the opening in front of the tube will work well with one-eighth of one inch lap, as the twist or motion of the thread will be in the direction of the arrow, Fig. 3, and the thread cannot get out of the tube while twisting.

It is well known to spinners that a uniform draft during the spinning of a "set" is almost impossible, and that when the "drag" is not sufficient the yarn between the guide and traveler or other twisting device will swell, snarl, kink, and strike adjoining threads, break down the ends, or make kinky yarn.

With my improved guide the thread rests on the lip *b*, and is confined to the tube while twisting, which prevents in a great measure the swelling, snarling, and kinking, thereby making better yarn and less waste than with the old wire guide.

My improved guide-tube may be applied to frames for spinning and twisting cotton, wool, flax, hemp, or any kind of animal or vegetable fibers where a ring-traveler, cap, or flyer is used for twisting.

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

In a yarn-guide for spinning or twisting machines, the combination, with the guide-board B, of a yarn-guide consisting of a tube, A, having a lip, *b*, and a lap-opening, as shown and described.

SAMUEL HENDERSON.

Witnesses:

JOHN SHINN,

EDW. C. DOLMAN.