

(No Model.)

H. E. KAY & C. F. HILL.

SLIVER BREAKER FOR SPINNING MACHINES.

No. 355,452.

Patented Jan. 4, 1887.

Fig. 1.

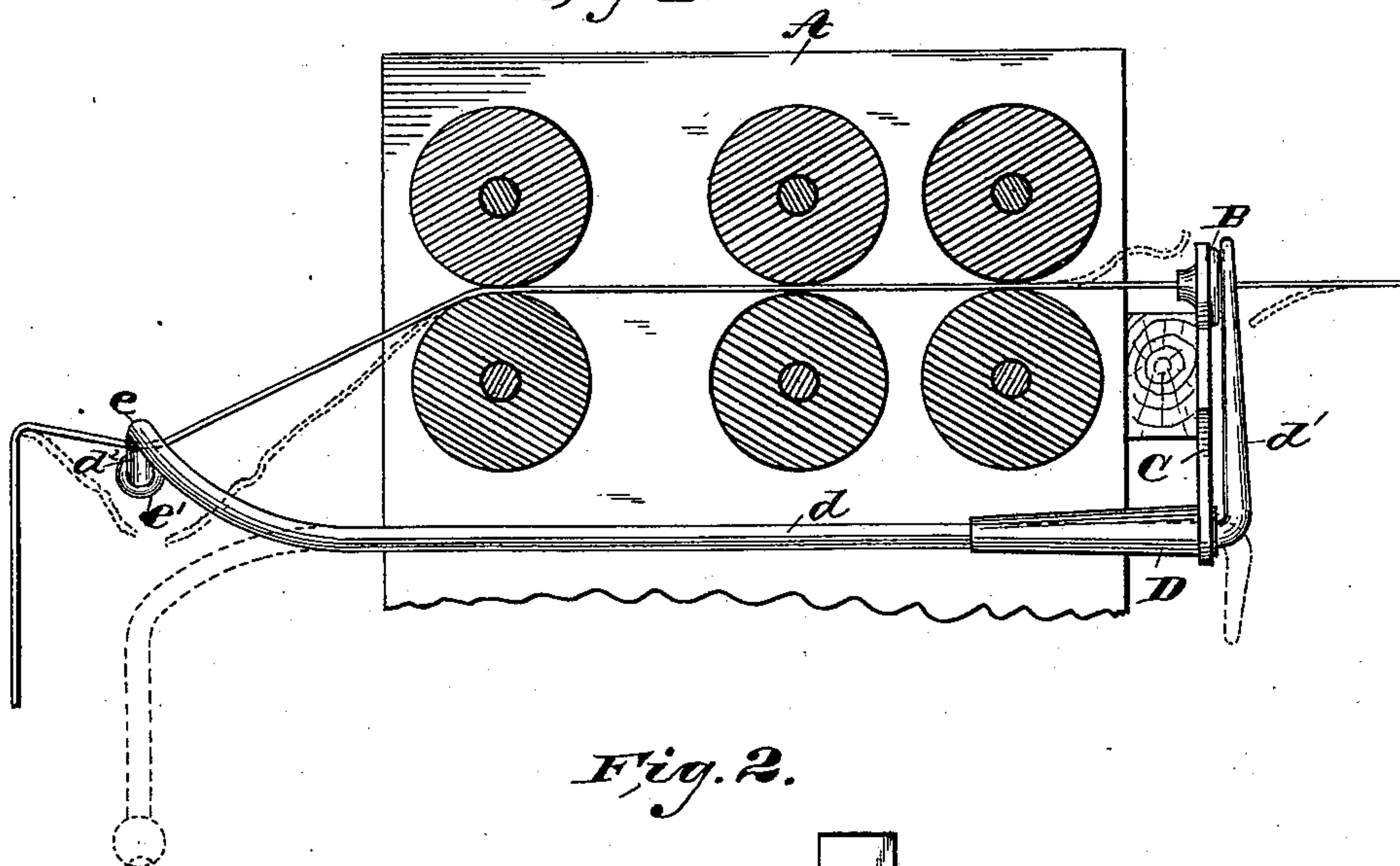


Fig. 2.

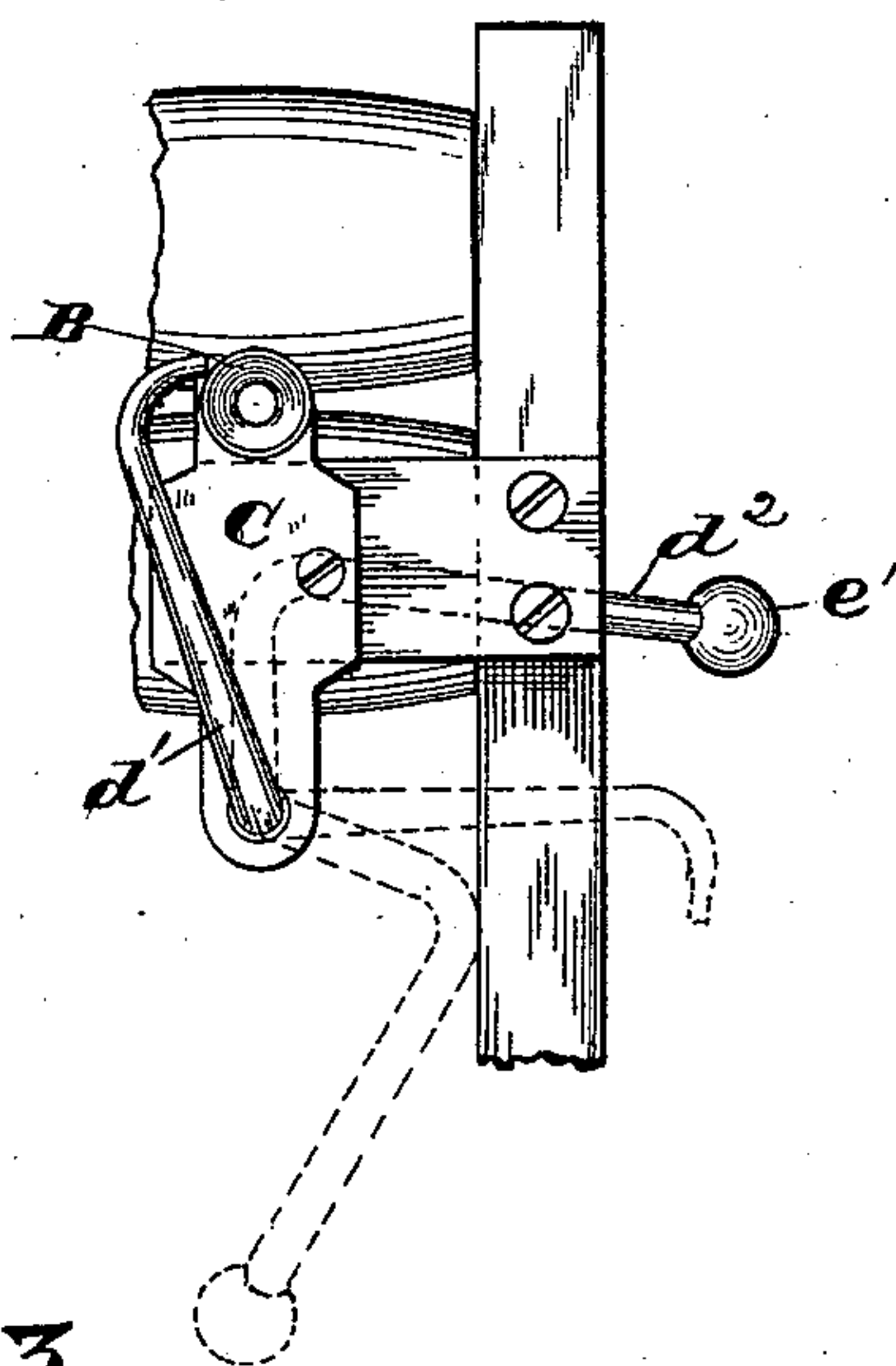
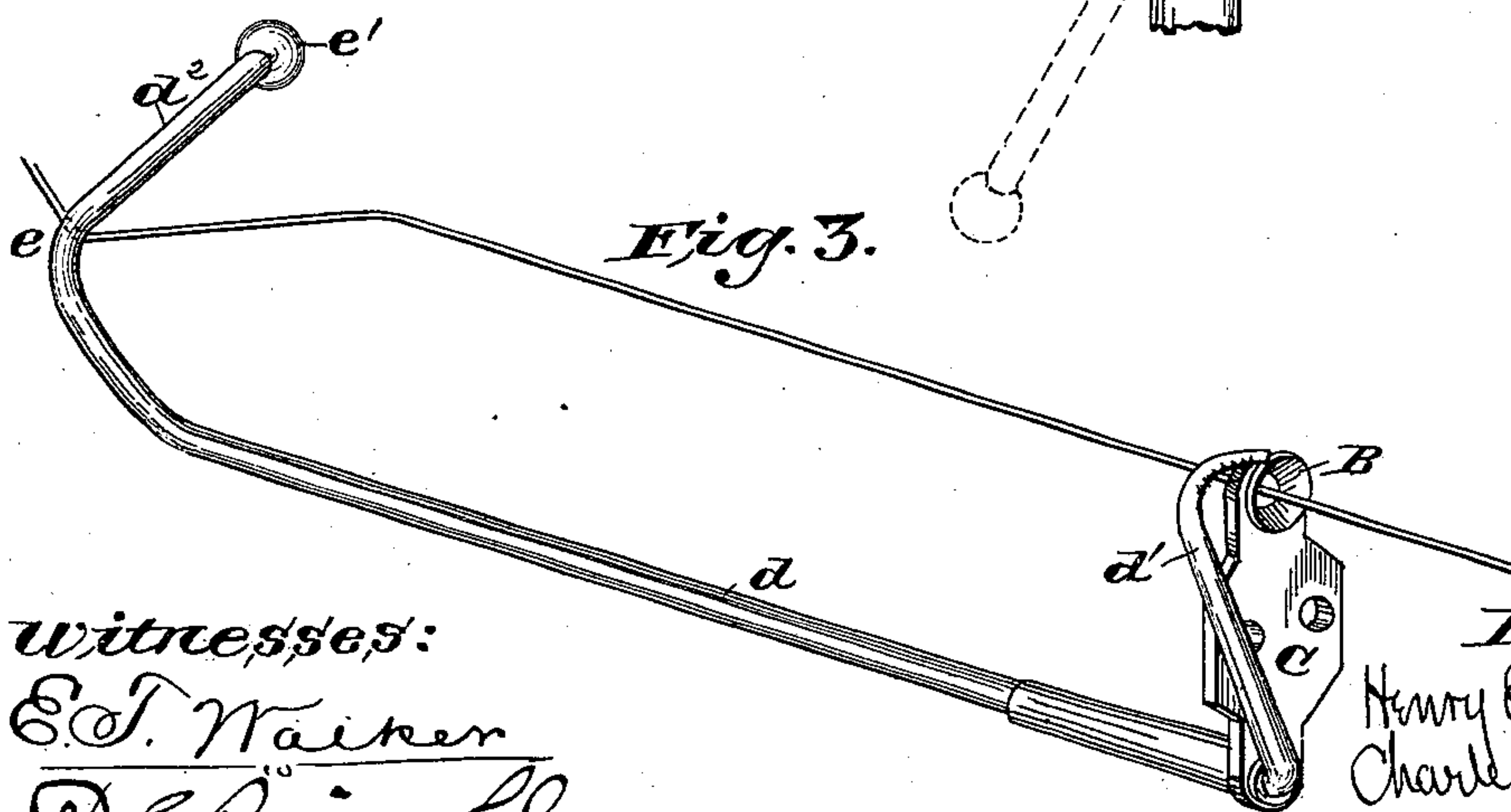


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY E. KAY AND CHARLES F. HILL, OF FALL RIVER, MASSACHUSETTS.

SLIVER-BREAKER FOR SPINNING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 355,452, dated January 4, 1887.

Application filed September 2, 1886. Serial No. 212,554. (No model.)

To all whom it may concern:

Be it known that we, HENRY E. KAY and CHARLES F. HILL, citizens of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Sliver-Breakers for Spinning-Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in devices employed in cotton-spinning machinery to break the roving or sliver in advance of the drawing-rolls. In devices heretofore employed for this purpose one or more eyes or loops have been provided, through which the sliver is required to be threaded. In our improvement all additional threading of the sliver is dispensed with and the construction simplified.

The drawings accompanying this specification represent, in Figure 1, a vertical section of so much of the spinning machinery, with our invention attached, as is necessary to illustrate the working of the latter. Fig. 2 is a partial end elevation. Fig. 3 is a view of our invention detached, showing its bearing and its position relative to the sliver.

The same letters of reference indicate identical parts in all the figures.

In the drawings, A represents a section of a series of drawing-rolls of a spinning-frame.

B is the trumpet which guides the roving or sliver to the drawing-rolls, and which is supported in any usual or well-known manner in the proper position to accomplish this. In our construction we attach this trumpet to the top of a plate, C, which is provided with apertures through which it is bolted or secured in position. The lower end of this plate is provided with a sleeve, D, which serves as a bearing in which is journaled the rod or shaft d . This rod or shaft is provided at the end extending beyond the plate C with a hooked arm, d' , and at its opposite end with the arm d^2 , bent as shown in the drawings. The hooked portion of the arm d' extends slightly above the trumpet and is made with a blunt or roughened inner edge. The arm d^2 , at the opposite end of the rod or shaft, has a bend, e , midway

of said arm, and so located in respect to the arm that when said arm is turned up over that portion of the sliver extending between the drawing-rolls and a guide or guide-eye conducting the sliver to the spinning devices the innerside of this bend will rest upon the sliver. The end of the arm d^2 is made smooth, and may be, when desired, provided with a ball, e' , adjusted to furnish the requisite amount of weight to insure the proper action of the device.

While we have shown the rod or shaft d mounted in sleeve D, attached to the plate C, this construction may be considerably varied. The trumpet may be attached to the frame independent of the plate C, and in place of said plate C any other bearing or bearings for the rod d may be employed.

The relative length of arms d' and d^2 may be changed so as to secure the required effectiveness in the location in which it is employed. The form of these arms may be also changed without departing from our invention, according to the will of the maker, as one form may be found more effective than another.

The operation of the device is as follows: Before the roving or sliver is passed through the drawing-rolls to the spinning mechanism our device occupies the position shown in dotted lines in Figs. 1 and 2. As soon as the roving or sliver has been properly placed the shaft d is turned by the arm d' until the arm d^2 rests upon the sliver beyond the drawing-rolls, as shown in Figs. 1 and 3, in which position the arm d' stands as shown in full lines in Figs. 2 and 3. The weight of arm d^2 is such that it is supported by the sliver as long as the same is unbroken and the proper size and strength. When, however, it becomes injuriously weakened or broken, the arm d^2 drops and the arm d' is brought sharply against the roving close to the open mouth of the trumpet, and breaks the same at that point. As soon as the sliver is broken the shaft d and arms d' and d^2 turn to the position shown in dotted lines in Figs. 1 and 2, and are entirely out of the way in the next introduction of the sliver.

It may sometimes be found advantageous to have the arm d located between the trumpet and the drawing-rolls.

What we claim, and desire to secure by Letters Patent, is—

1. The combination, with the drawing-rolls

and guides for the roving, of a shaft journaled below and transversely to said drawing-rolls and provided with an arm at each end, said arms being of greater length than the distance of the shaft from the path of the roving, substantially as described.

2. The combination, with the drawing-rolls and guides for a roving or sliver, of a shaft journaled below said drawing-rolls, transversely thereto, provided with arms d' and d^2 , substantially as described.

3. The combination, with the plate C, having sleeve D, of a shaft, d , provided with arms d' and d^2 , substantially as described.

In testimony whereof we affix our signatures 15
in presence of two witnesses.

HENRY E. KAY.

CHARLES F. HILL.

Witnesses:

GEORGE E. BAMFORD,

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