

Alfred Pearson's Improvement in Spinning

Fig 1.

Fig 5.

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PATENTED JUN 27 1871

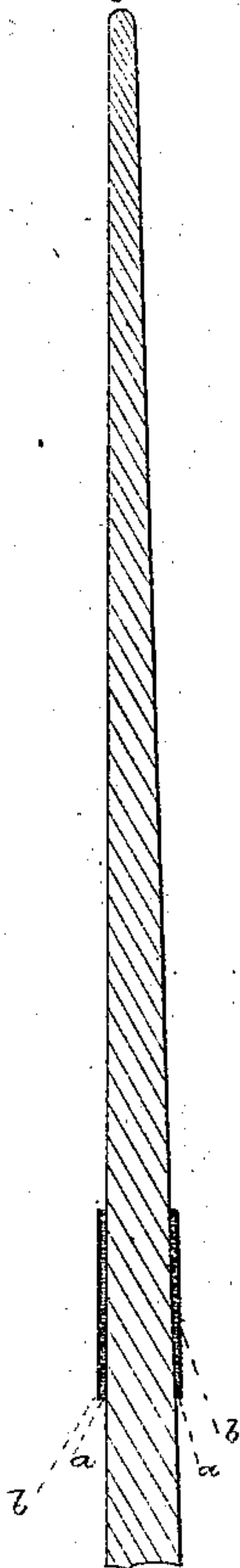


Fig 2.

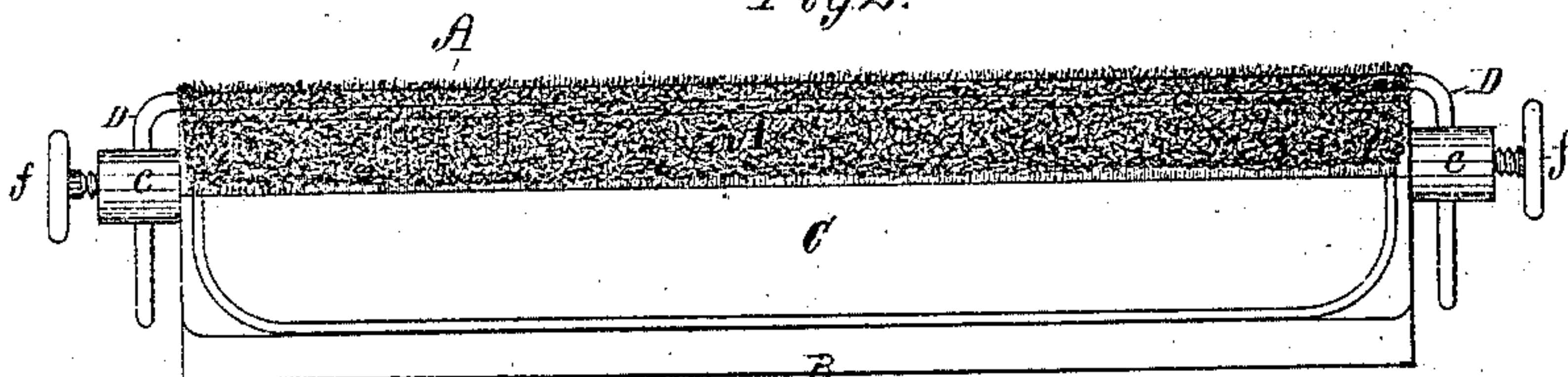


Fig 3.

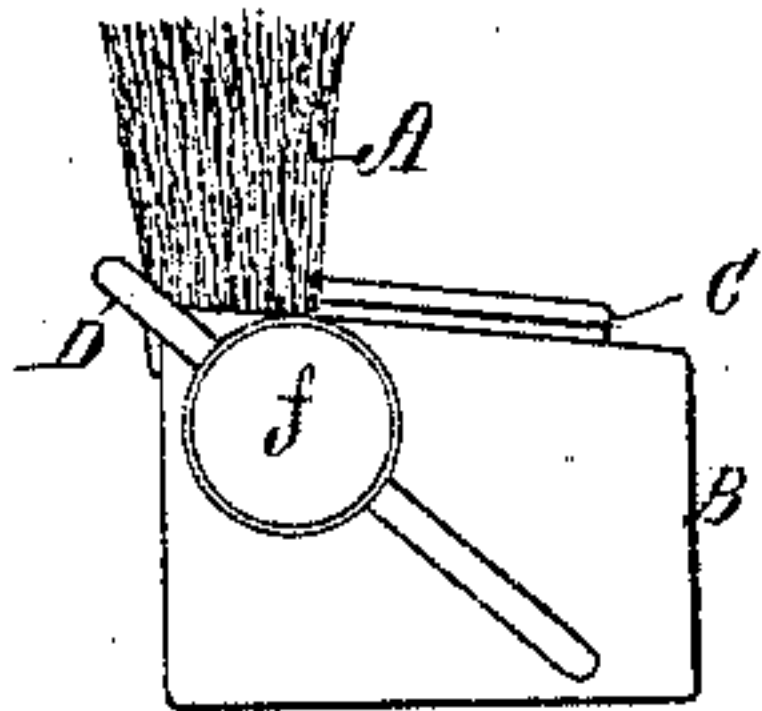
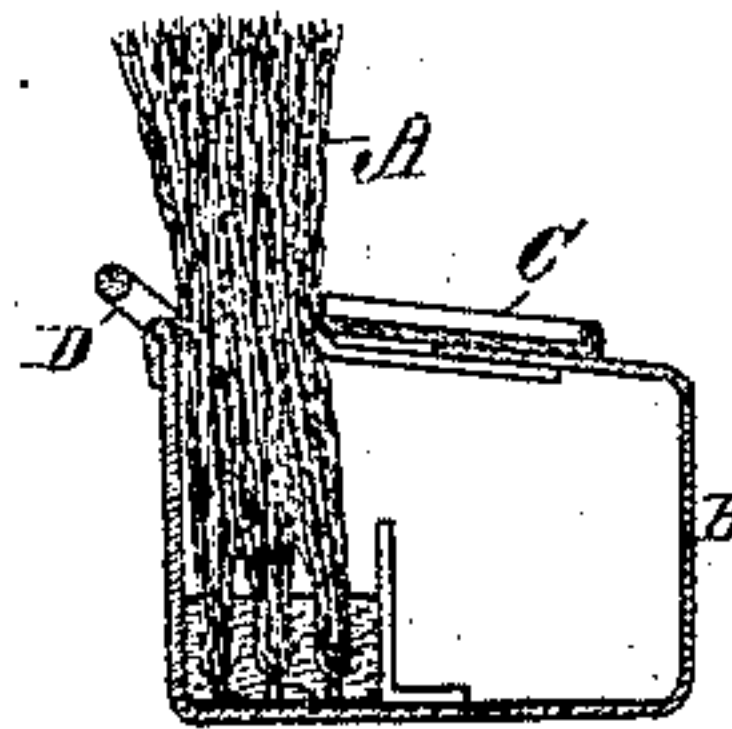


Fig 4.



Witnesses.

S. A. Piper.
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UNITED STATES PATENT OFFICE.

ALFRED PEARSON, OF ASSONETT, MASSACHUSETTS.

IMPROVEMENT IN APPARATUS FOR SIZING THE INITIAL COILS OF COPS IN SPINNING-MACHINES.

Specification forming part of Letters Patent No. 116,481, dated June 27, 1871.

To all whom it may concern:

Be it known that I, ALFRED PEARSON, of Assonett, of the county of Bristol and State of Massachusetts, have made a new and useful invention having reference to Spinning-Cops on the Spindles of Spindle-Machines; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, which exhibits the sizing apparatus of my said invention for the sizing of a cop or the initial part thereof.

Of such drawing, Figure 1 exhibits a spindle with such part of a cop formed on it ready for being sized. Fig. 2 is a top view, Fig. 3 an end elevation, and Fig. 4 a transverse section of the sizing apparatus.

The purpose of my invention is to dispense with the use or employment of a tube in the making of a cop on the spindle of a spinning-frame, it being well known that, preparatory to the commencement of the cop, what is usually termed a "cop-tube" is placed on the spindle, and comes off the same with the cop after the latter may have been formed. The object of this cop-tube is to keep the base part of the cop intact, so as to enable it to be readily applied to the spindle of a weaver's shuttle.

Preparatory to using the sizing apparatus hereinafter described, and which constitutes my invention, I wind on the spindle one or a few layers of yarn to the height required. Then, while the spindle may be in revolution, I apply, by means of my apparatus, to the external surface of the mass of yarn so wound on it a quantity or coating of sizing. The yarn, continuing to be wound on the spindle and the mass so sized, will adhere to the sized mass, the sizing, when dry, serving to agglutinate together the helices or layers of yarn at or near the base of the cop, so as to answer all or most of the purposes of a cop-tube. Fig. 5 is a vertical section of a spindle, showing the initial part of the cop built on it, and having the layer of sizing applied to it, such part being seen at *a* and the sizing at *b*. The apparatus for applying the sizing consists of a long brush, A, placed within a reservoir or size-holder, B, so as to project therefrom, in manner as shown. A

slide-plate, C, applied to the top of the size-reservoir so as to be movable toward or away from the mass of bristles of the brush by the thumb of a person while grasping the reservoir, serves, with the reservoir, to compress the bristles more or less, so as to regulate the flowage of the size out of the reservoir and into and through the bristles. Besides the said plate C there is a guide-wire, D, which, formed as shown, is applied to the reservoir and arranged with the brush in manner as represented. The wire extends transversely through ears *c c* projecting from the ends of the reservoir, and is held in place by clamp-screws *f f*, screwed into the ears. The wire rests against the spindle at or near its base while the size is being applied to the initial part of the cop by the brush. By means of the wire the bristles are estopped from applying too great a quantity of size to the said part of the cop. The wire, particularly when adjustable or provided with adjustments, as shown, can be moved and adapted to the brush as the latter may become worn.

In using the sizing apparatus a person holding it in his hand is to move its brush from end to end quickly against the initial parts of the cops while in revolution, going from one to the other in succession throughout a range of spindles of the spinning-frame.

I make no claim to the application of size to the surface of the spindle preparatory to the building of the cop thereon; nor do I claim the application of the sizing to an initial layer, or one or more initial layers of the yarn on the spindle, my invention being a sizing apparatus for such purpose.

I claim—

1. The combination and arrangement of the brush A, the size-holder or reservoir B, and the adjustable gauge-plate C, all as set forth.

2. The combination and arrangement of the size-reservoir A, the brush B, the gauge-plate C, and the guide-wire D, all substantially as and for the purpose as hereinbefore explained.

ALFRED PEARSON.

Witnesses:

R. H. EDDY,
J. R. SNOW.