

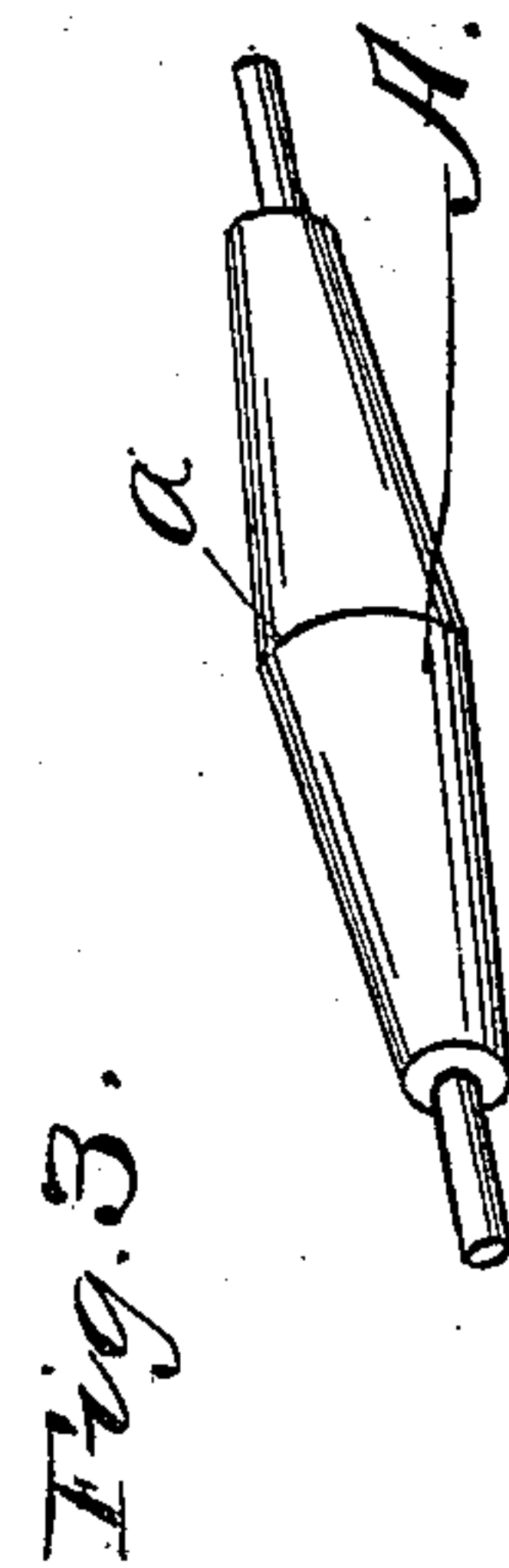
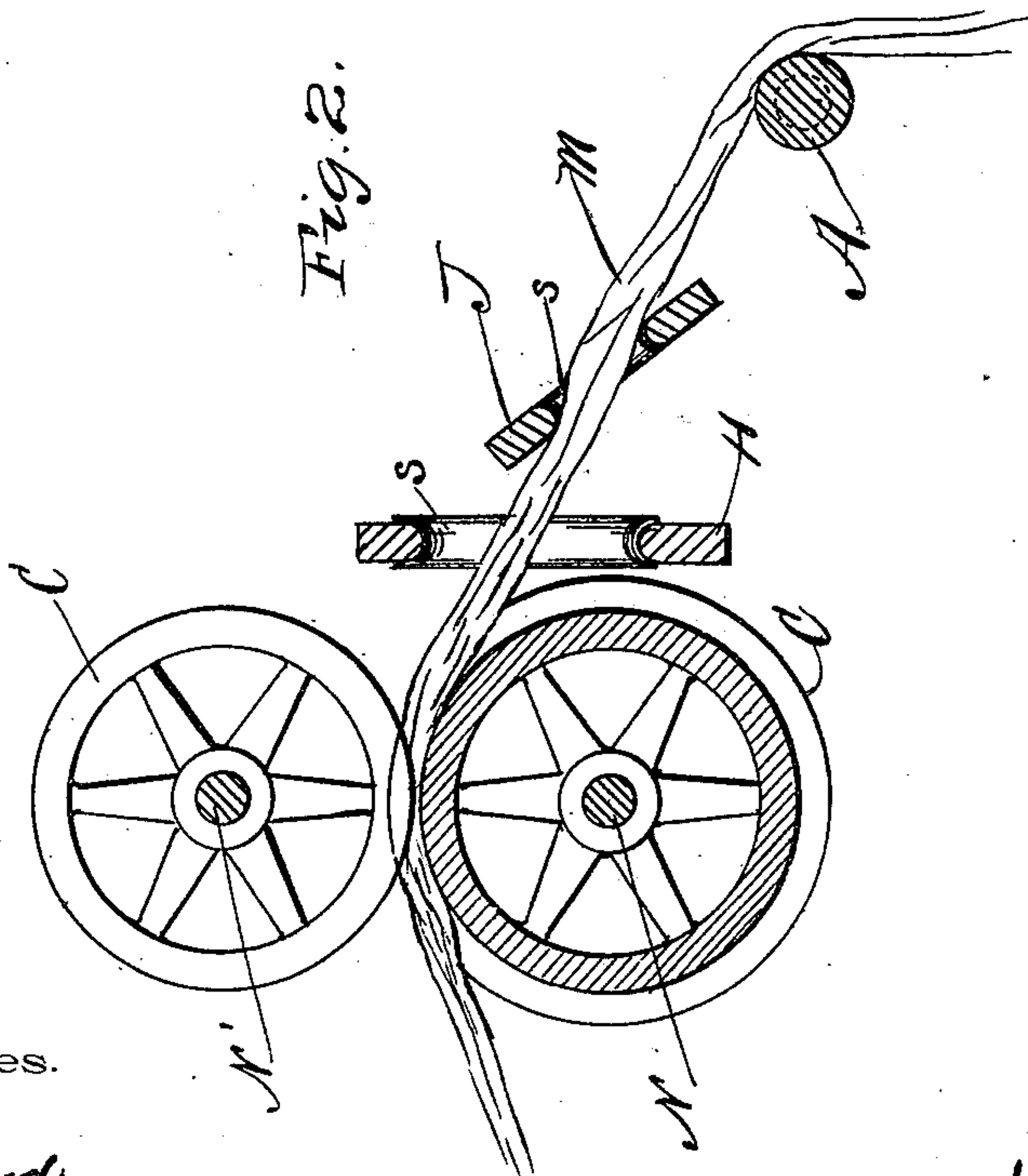
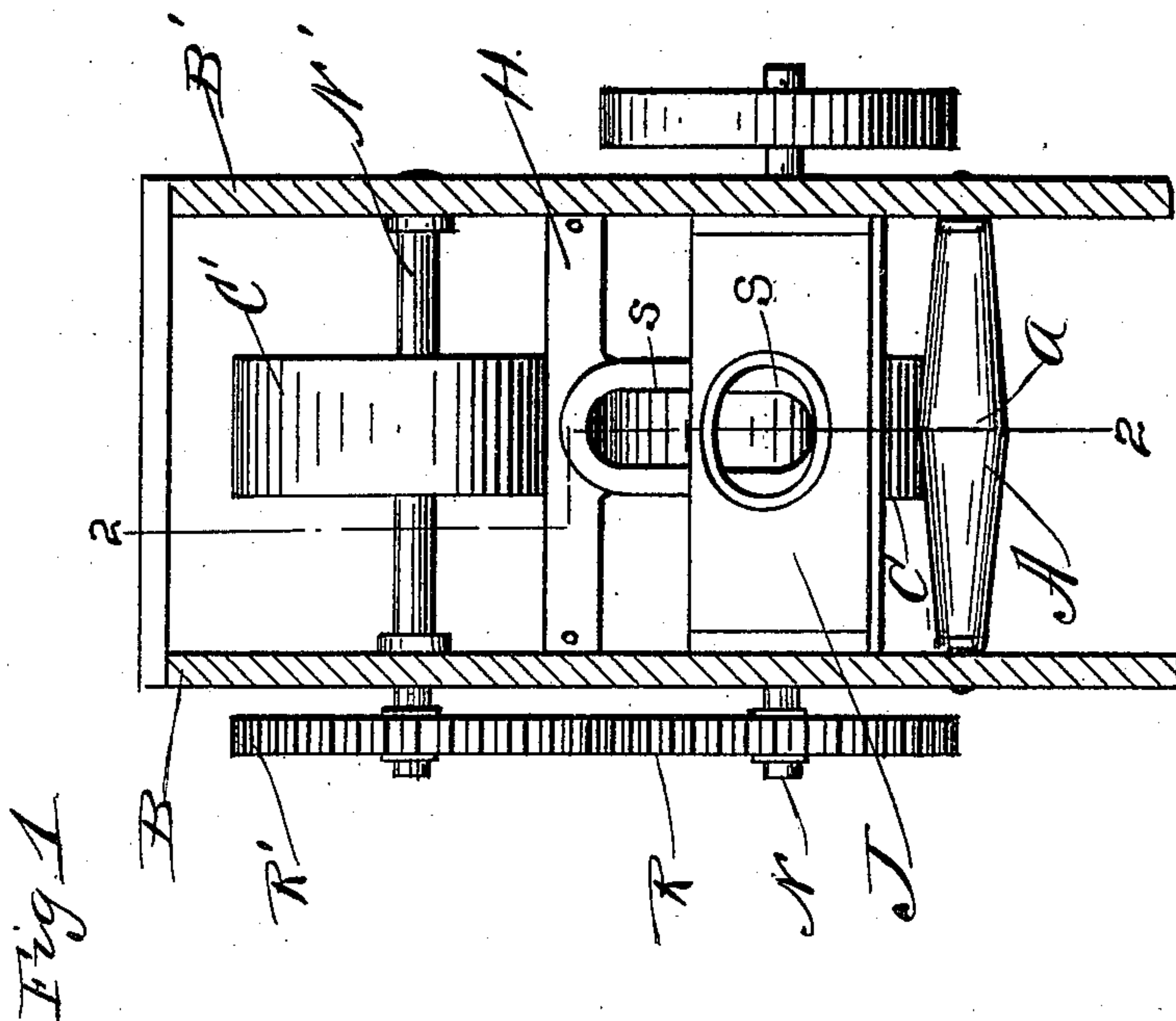
No. 632,119.

Patented Aug. 29, 1899.

A. S. HOPKINS.  
FULLING MILL.

(Application filed Nov. 28, 1898.)

(No Model.)



Witnesses.

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# UNITED STATES PATENT OFFICE.

ADDISON S. HOPKINS, OF BRIDGETON, RHODE ISLAND.

## FULLING-MILL.

SPECIFICATION forming part of Letters Patent No. 632,119, dated August 29, 1899.

Application filed November 28, 1898. Serial No. 697,623. (No model.)

*To all whom it may concern:*

Be it known that I, ADDISON S. HOPKINS, of Bridgeton, in the county of Providence and State of Rhode Island, have invented certain  
5 new and useful Improvements in Fulling-Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of  
10 this specification.

This invention relates to that class of machines known as "fulling-mills," used in fulling woolen cloths and other goods. It is  
15 fully explained and illustrated in this specification and the accompanying drawings.

Figure 1 shows a front elevation with the outside removed to show the position of the mechanism. Fig. 2 is a vertical section of  
20 the parts shown in Fig. 1, taken on line *z z*. Fig. 3 is a perspective view of the guide-roll separate from the machine.

The object of the invention is to provide means to prevent injury to the cloth from various sources, which will be more fully explained in the description of the machine.  
25

In the drawings, B B' represent the sides of a fulling-mill, and C C are the two squeezer-rolls, placed one directly above and resting on the other roll. The two rolls C are made fast  
30 on shafts N N', held in bearings in the side frames B B' and are geared together outside of the casing by the gears R R'.

H and J are two guide-plates having openings made in them, with or without bushings through which the cloth *m* passes to the rolls.  
35

A is a horizontal roll over which the cloth draws.

In the process of fulling the cloth one or  
40 more pieces of the goods are made into an endless loop or loops by fastening the ends together, and in this shape it is run through between the rolls C around and around many times until it is sufficiently felted or fulled.

45 As the cloth is comparatively heavy, being wet and condensed by the plates H and J, and

the speed at which it runs being fast, in drawing it up from the chamber in the lower part of the machine into which it is delivered from the other side of the rolls it is frequently  
50 thrown from one side to the other and gets over the ends of the guide-roll A, if that roll is of uniform size its whole length, and gets torn or otherwise injured, and continually passing through the rolls under great pressure it is  
55 liable to be pressed in creases, if there is not some provision to open it out each time it passes through the rolls. This I accomplish by making the guide-roll A a double cone with the two bases in the center, with bearings in the side frames B. As the cloth, like  
60 a belt, will run toward the high part of a pulley, so the two inclines of the guide-roll will cause the cloth to run toward the middle of the roll and keep it from getting over either  
65 end of the roll, and the ridge *a* of the roll will open the folds and prevent it from becoming twisted. It changes the cloth and exposes all parts of it to the action of the rolls, with the improved effect of materially lessening  
70 the time required for fulling, and at the same time delivers the goods in a better condition and more evenly felted or fulled, without liability of injury, which, as the cloth is oftentimes of great value, is of great importance.  
75

Having thus described my improvements, I claim as my invention and desire to secure by Letters Patent —

In a machine of the character described, the combination with the squeezer-rolls, of a  
80 horizontal guide-roll made tapering from its middle toward each end, over which the cloth passes to said squeezer-rolls, and two guide-plates having openings in them, placed between said guide-roll and the squeezer-rolls  
85 substantially as described.

In testimony whereof I have hereunto set my hand this 23d day of November, A. D. 1898.

ADDISON S. HOPKINS.

In presence of—

BENJ. ARNOLD,  
M. E. CLEVELAND.