

H. D. Palmer

Wringer Roll,

N<sup>o</sup> 61,559

Patented Jan. 29, 1867.

Fig: 1

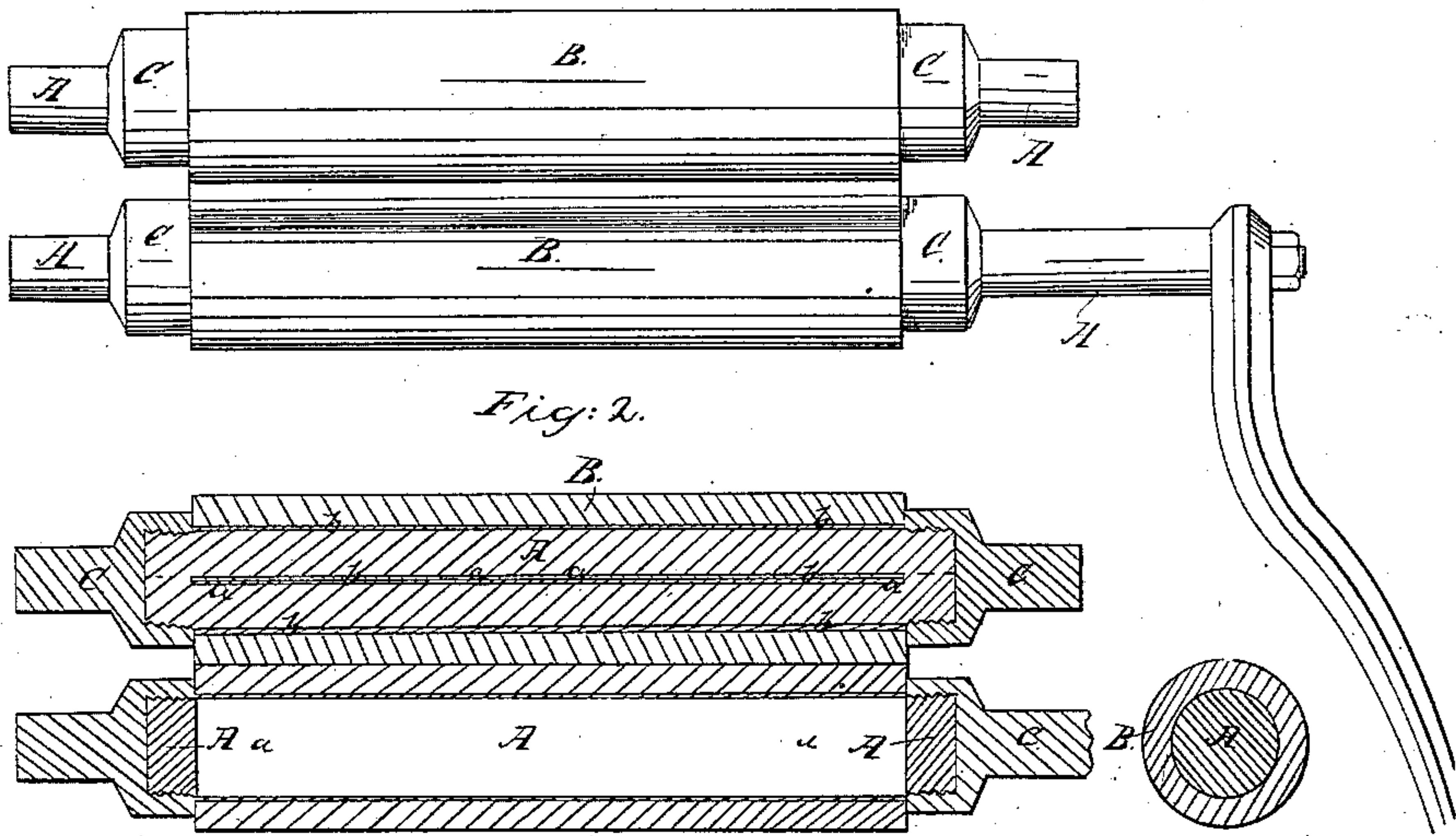


Fig: 3.

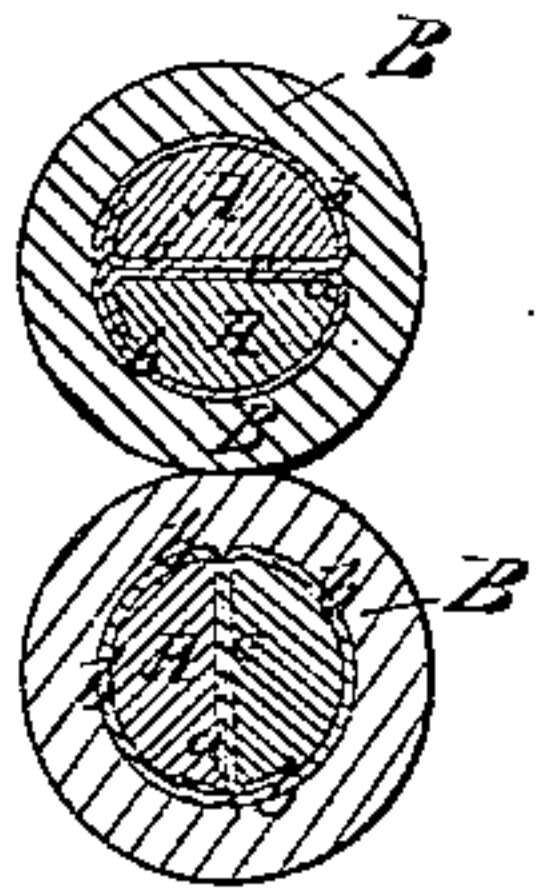


Fig: 2.

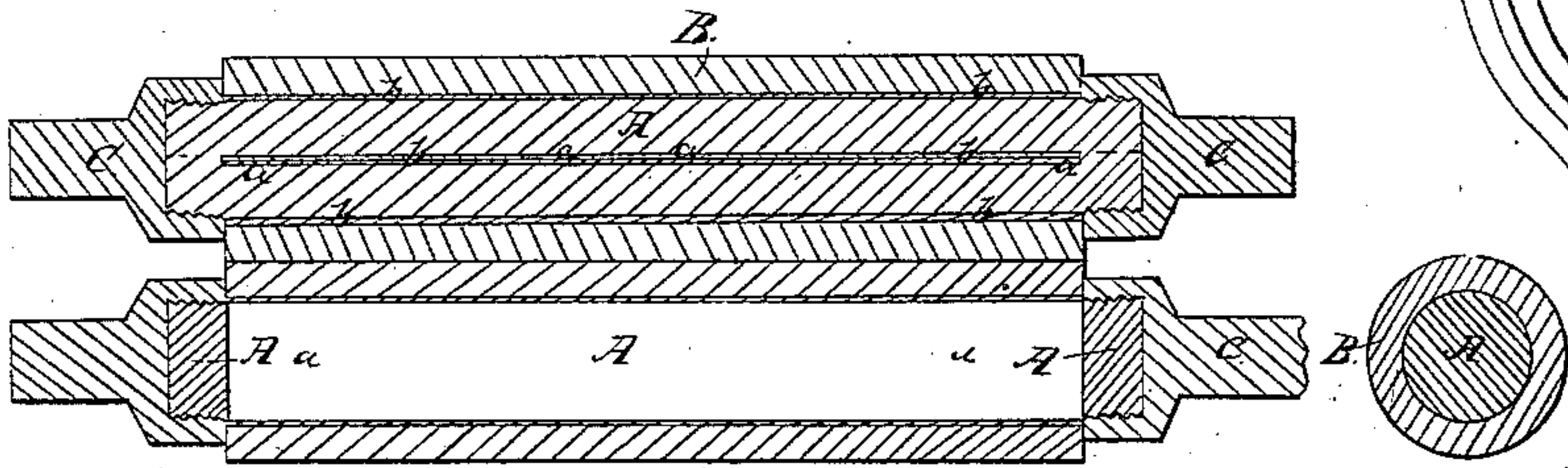


Fig: 4.

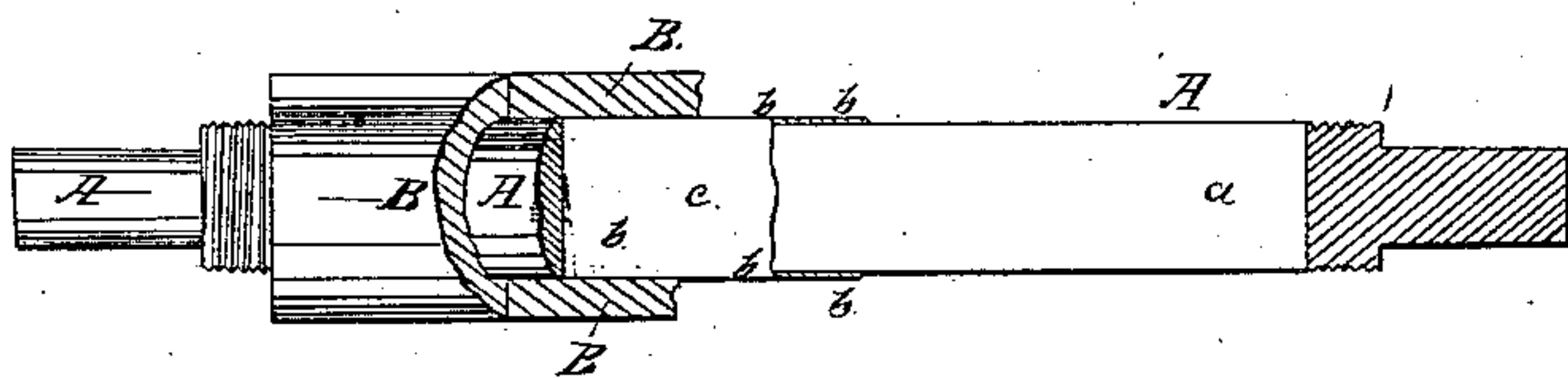
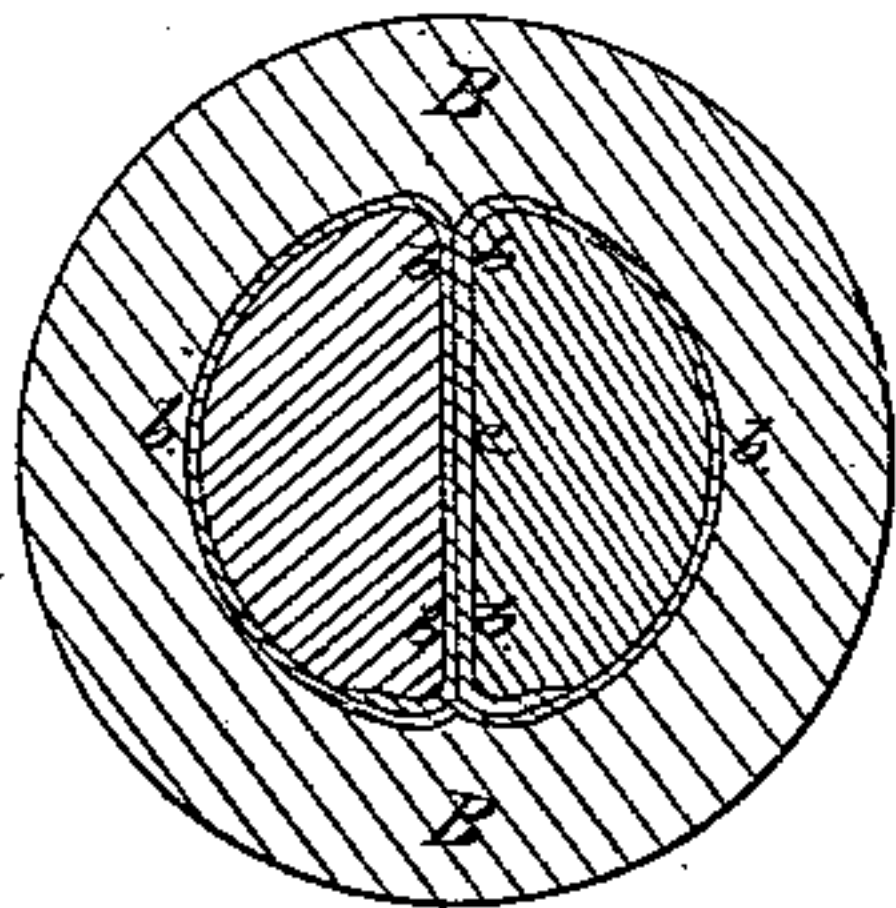


Fig: 5.



Witnesses:

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# United States Patent Office.

H. D. PALMER, OF CLEVELAND, OHIO.

*Letters Patent No. 61,559, dated January 29, 1867.*

## IMPROVED ROLLER FOR WRINGING MACHINES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, H. D. PALMER, of Cleveland, in the county of Cuyahoga, and State of Ohio, have invented a new and Improved Cover for the Rollers of Wringing Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a view of the exterior of a pair of rollers covered.

Figure 2 is a diametrical section through a pair of rollers, showing the method of covering them.

Figure 3 is a transverse section through the same.

Figure 4 shows the method of covering a slotted shaft.

Figure 5 is an enlarged cross-section of one of the rollers.

Similar letters of reference indicate corresponding parts in the several figures.

In the construction of rollers for wringing-machines, and other machines operating upon the same principle, it is desirable to employ vulcanized India rubber as the covering; but in consequence of the great strain to which such rollers are subjected, the methods hitherto adopted of applying the India rubber to the shafts do not afford sufficient strength to effectually resist such strain. To effect a more perfect connection of the covering of a roller-shaft with such shaft, the nature of my invention consists in employing a slotted or sectional shaft, and so constructing the covering that some portion of it will extend through such shaft, and thus prevent the latter from working loose or turning within its covering, as will be hereinafter described.

The shaft upon which the covering is applied may be made of two or more longitudinal sections, which are provided with screw caps on their extremities, or, what is preferable, I use a shaft, A, having a longitudinal slot, *a*, through it, which slot may extend the entire length which it is desired to cover the shaft, as shown in figs. 2 and 4. If desirable, more than one slot may be made, but for all practical purposes, and for the purpose of setting forth my invention, the single slotted roller shaft A will answer. Upon such a roller I apply a cloth covering, *b*, which is passed around the roller or shaft, and its ends carried through the slot *a*, through said shaft, and suitably fastened, by cement or otherwise. The shaft thus covered with canvas, cloth, or other fabric or substance which may be found to answer the best purpose, is now covered with India rubber, and this latter substance vulcanized directly upon said shaft, thus completing the roller. Instead of vulcanizing the rubber coverings B upon their shafts, these coverings may be made upon a sectional shaft, or upon sections of a shaft, after which the sections can be withdrawn, leaving the covering hollow, with a central division, *c*, in its centre, as shown in fig. 5. These hollow coverings can be applied to two semi-cylindrical sections, and the latter secured at their ends by means of journal screw caps C C, or in any other suitable manner. It is the divisional portion *c* of the covering of the shaft A that prevents this covering from slipping or working loose; the India rubber which surrounds said shaft will firmly attach itself to the covering *a*, but will not adhere with sufficient tenacity to the smooth metal; consequently, by having the first covering *a* surround and pass through a slot in the roller shaft, or between the abutting surfaces of a sectional shaft, the outer covering will not be liable to wear loose. The first covering *a* may be made of canvas cloth, of wire cloth, or of any substance to which the India rubber will attach itself, and which will possess strength and durability.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patents, is—

1. The rubber or other non-absorbent cloth, supported coverings, B, *b c*, whether they are made or vulcanized directly upon the shaft, as described, or separately, and afterward applied to the shaft, substantially as described.
2. Securing a cover, B, upon a slotted or sectional shaft, A, by means of a divisional cloth or canvas connection, *c*, the termini of which underlap upon the shaft, as shown, substantially as described.

H. D. PALMER.

Witnesses:

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