

(No Model.)

2 Sheets—Sheet 1.

P. B. BAGLEY.
ROTARY BUFFING ROLL.

No. 603,357.

Patented May 3, 1898.

Fig. 1.

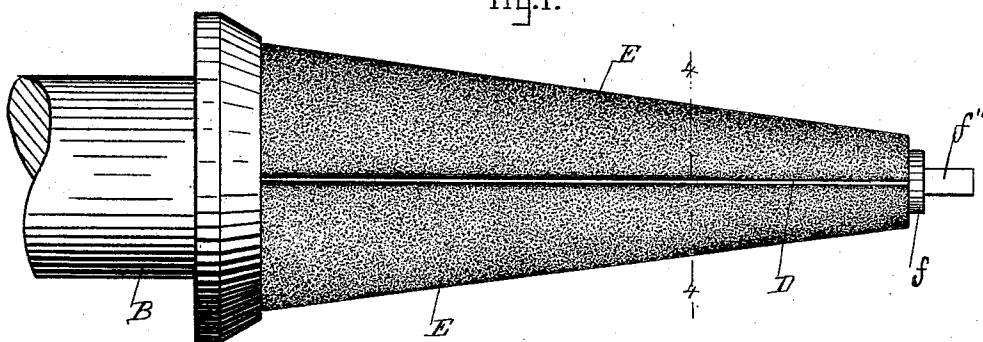


Fig. 2.

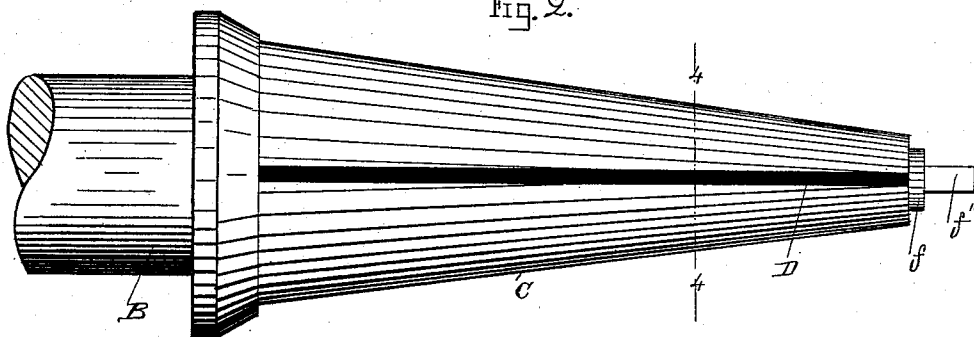
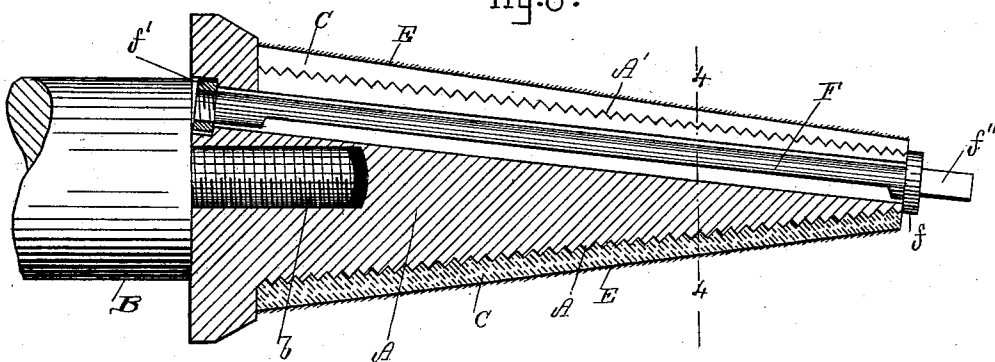


Fig. 3.



Witnesses.

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Inventor.

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Fig. 4.

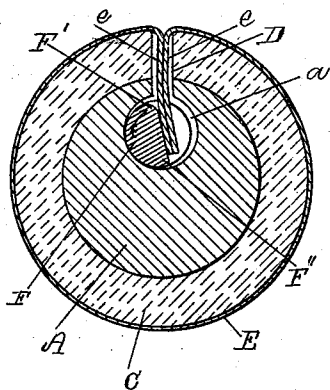


Fig. 5.

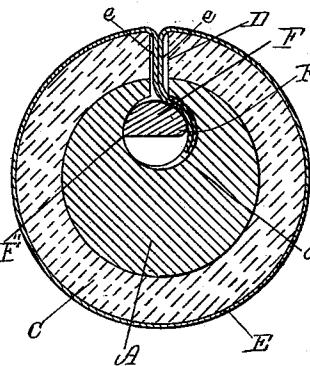


Fig. 6.

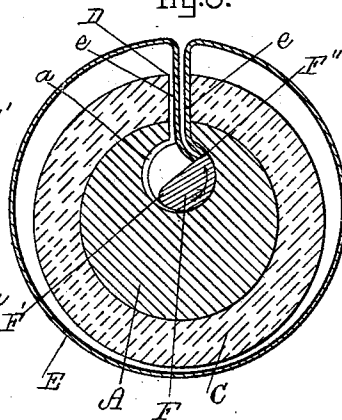


Fig. 7.

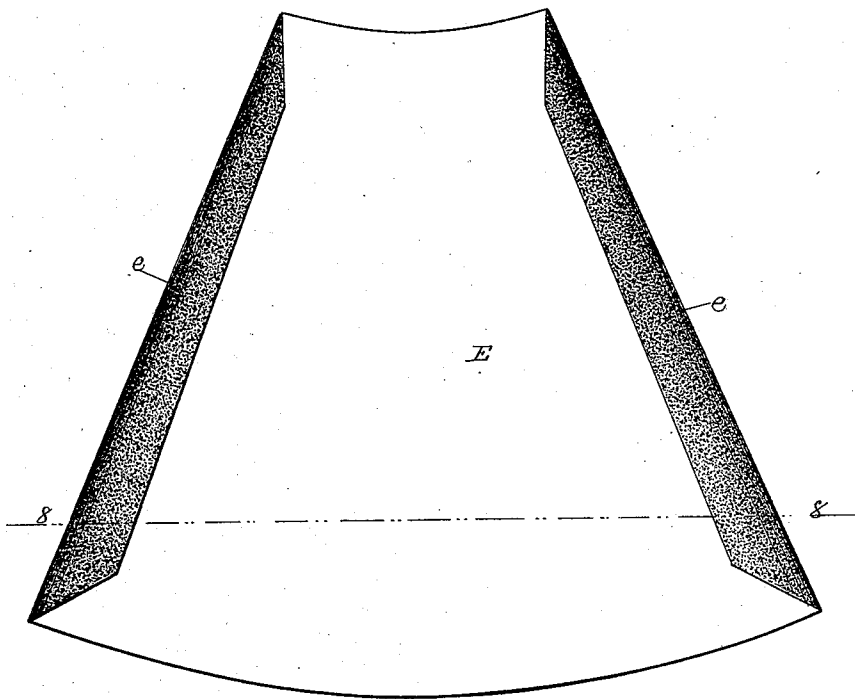
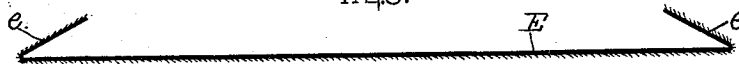


Fig. 8.



Witnesses.

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Inventor

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UNITED STATES PATENT OFFICE.

PRESTON BROOKS BAGLEY, OF PEABODY, MASSACHUSETTS.

ROTARY BUFFING-ROLL.

SPECIFICATION forming part of Letters Patent No. 603,357, dated May 3, 1898.

Application filed July 26, 1897. Serial No. 645,912. (No model.)

To all whom it may concern:

Be it known that I, PRESTON BROOKS BAGLEY, a citizen of the United States, and a resident of Peabody, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Rotary Buffing-Rolls, of which the following, taken in connection with the accompanying drawings, is a specification, in which—

Figure 1 represents a side elevation of the improved buffing-roll. Fig. 2 represents a similar side elevation showing the abrasive covering removed. Fig. 3 represents a central longitudinal section on the line 3 3 shown in Fig. 1. Fig. 4 represents an enlarged cross-section on the line 4 4 in Fig. 1, showing the creased or crimped edges of the abrasive covering inserted in the slit of the roll previous to securing such abrasive covering to the roll. Fig. 5 represents a similar cross-section showing the abrasive covering secured to and firmly held in position on the roll. Fig. 6 represents a similar cross-section showing the crimped or creased edges of the abrasive covering in the act of being expelled from the slit of the roll. Fig. 7 represents a detail plan view of the abrasive covering shown as detached from the roll, and Fig. 8 represents a cross-section on the line 8 8 shown in Fig. 7. Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In the drawings, A represents the metal body of the roll, which may be tapering or cylindrical, according to the purpose for which it is to be used.

B represents the rotary shaft of the buffing-machine, to which the roll-body is secured, preferably by means of a screw-threaded end *b* on the shaft B, which is screwed into a central screw-threaded perforation in one end of the roll-body, as is usual in devices of this kind.

The periphery of the metal body of the roll is screw-threaded or grooved laterally, as shown at A' in Fig. 3, for the purpose of more firmly securing to it the annular elastic cushion or coating C, which is preferably made of india-rubber, molded around said metal body, and thus caused to adhere and cling firmly to the latter. Through such annular rubber

envelop or cushion C and the metal body A is made a longitudinal slit D, through which the crimped or creased lips *ee* of the abrasive covering E are inserted previous to securing said abrasive covering to the roll.

The abrasive covering E is made of sand or glass paper or cloth or emery cloth or paper and is provided with creased or crimped lips *ee*, by means of which and a suitable locking device the said abrasive covering is secured to the roll. The said locking device consists of a longitudinal spindle F, which is journaled in a longitudinal cylindrical perforation *a* in the roll-body A, said spindle being prevented from longitudinal motion in its bearings, preferably by having a collar *f* in one end and a nut *f'* in its opposite end, as shown in Fig. 3.

In practice I prefer to make on the outer end of the spindle F a square or polygonal head *f''*, by means of which and a wrench or suitable tool the said spindle may be turned to secure the abrasive covering to the roll or expel it therefrom, as may be desired, from time to time.

The locking-spindle F is semicircular segmental, or nearly so, in section, as shown in Figs. 4, 5, and 6, and has one of its edges F' made rounded or cam-shaped for the purpose of turning the edges *ee* of the abrasive covering E during the locking operation without breaking or disintegrating it, as shown in Fig. 5. The other edge F'' of said locking-spindle is made sharp, as shown in Figs. 4, 5, and 6, and serves as a means for expelling the lips *ee* of the abrasive covering when it is desired to remove the latter from the roll after the abrasive covering is worn out, as shown in Fig. 6.

To secure the abrasive covering E to the roll, it is wrapped around it and the lips or edges *ee* inserted through the slit D, and during such insertion of said lips the locking-spindle F is held in the position shown in Fig. 4. After the creased or crimped edges *ee* of the abrasive covering have been inserted through the slit D into the cylindrical cavity *a* the spindle F is turned in the direction of the arrow shown in Fig. 4 to the position shown in Fig. 5, causing the cam-shaped or curved edge F' of the segmental

spindle F to turn the lower portions of the lips *e e* of the abrasive covering against the interior of the cylindrical cavity *a* and causing said lips to be firmly secured between the interior of said cavity and the rounded or circular portion of said spindle, thus causing the abrasive covering E to be smoothly and firmly held against the circumference of the annular rubber cushion or covering C, as shown in Fig. 5.

When the abrasive covering is worn out and it is desired to remove it, so as to replace it with a fresh one, it is only necessary to turn the spindle F in the direction shown by arrow in Fig. 6, causing the lips *e e* of the abrasive covering to be automatically expelled through the slit D, thus facilitating the removal of the abrasive covering when so desired.

The invention is very simple in construction, is easily operated for securing an abrasive covering to a roll, as well as for removing it, and serves to produce a smooth and continuous abrasive surface void of overlapping parts.

What I wish to secure by Letters Patent and claim is—

In a buffing-roll in combination a metal body, an annular rubber cushion or cover secured to the former, said body and rubber covering being longitudinally slitted, an abrasive covering having crimped or creased lips or edges adapted to be inserted through said slit, and a segmental locking-spindle journaled in a longitudinal cavity *a*, in said roll-body and having one of its edges F' made rounded or cam-shaped for guiding the edges of the abrasive covering into locking position within the cavity *a*, and having its opposite edge F'' made pointed for expelling the lips of the abrasive covering substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 21st day of July, A. D. 1897.

PRESTON BROOKS BAGLEY.

Witnesses:

ALBAN ANDRÉN,
THEKLA ANDRÉN.