

(No Model.)

G. H. FOX & F. H. POPE.

ROLL FOR BUFFING SHOE SOLES.

No. 369,513.

Patented Sept. 6, 1887.

Fig. 2.

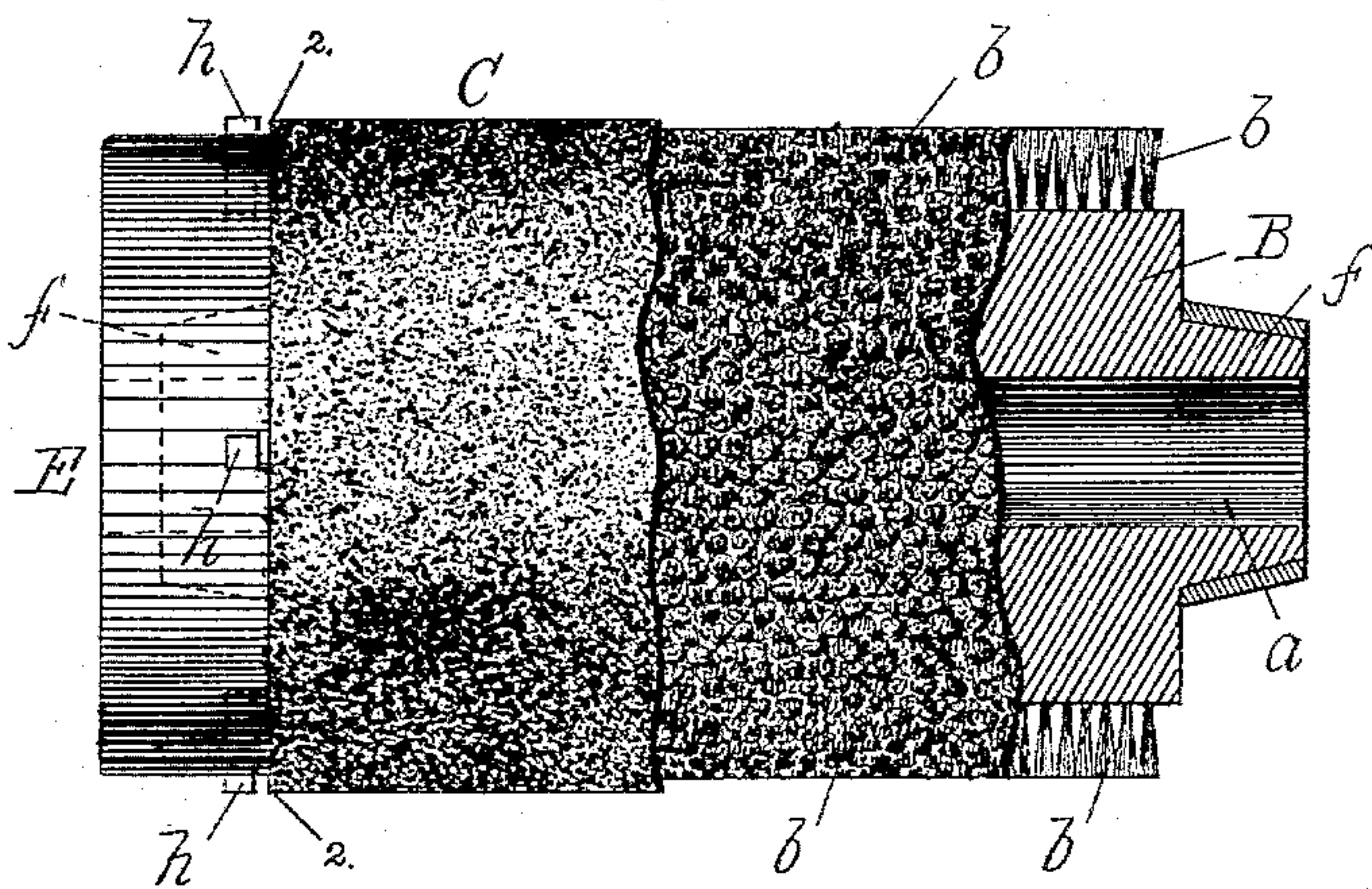


Fig. 3.

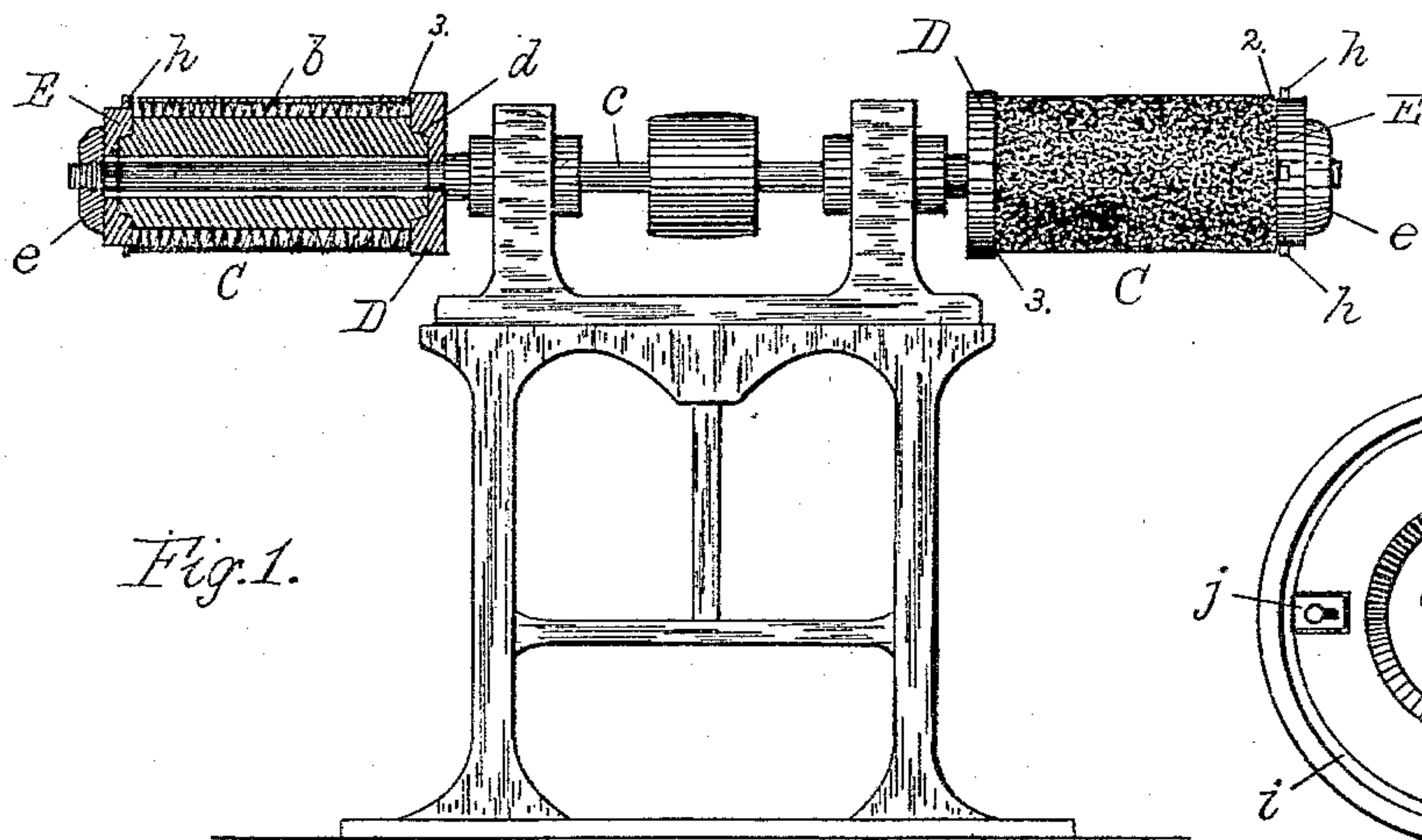
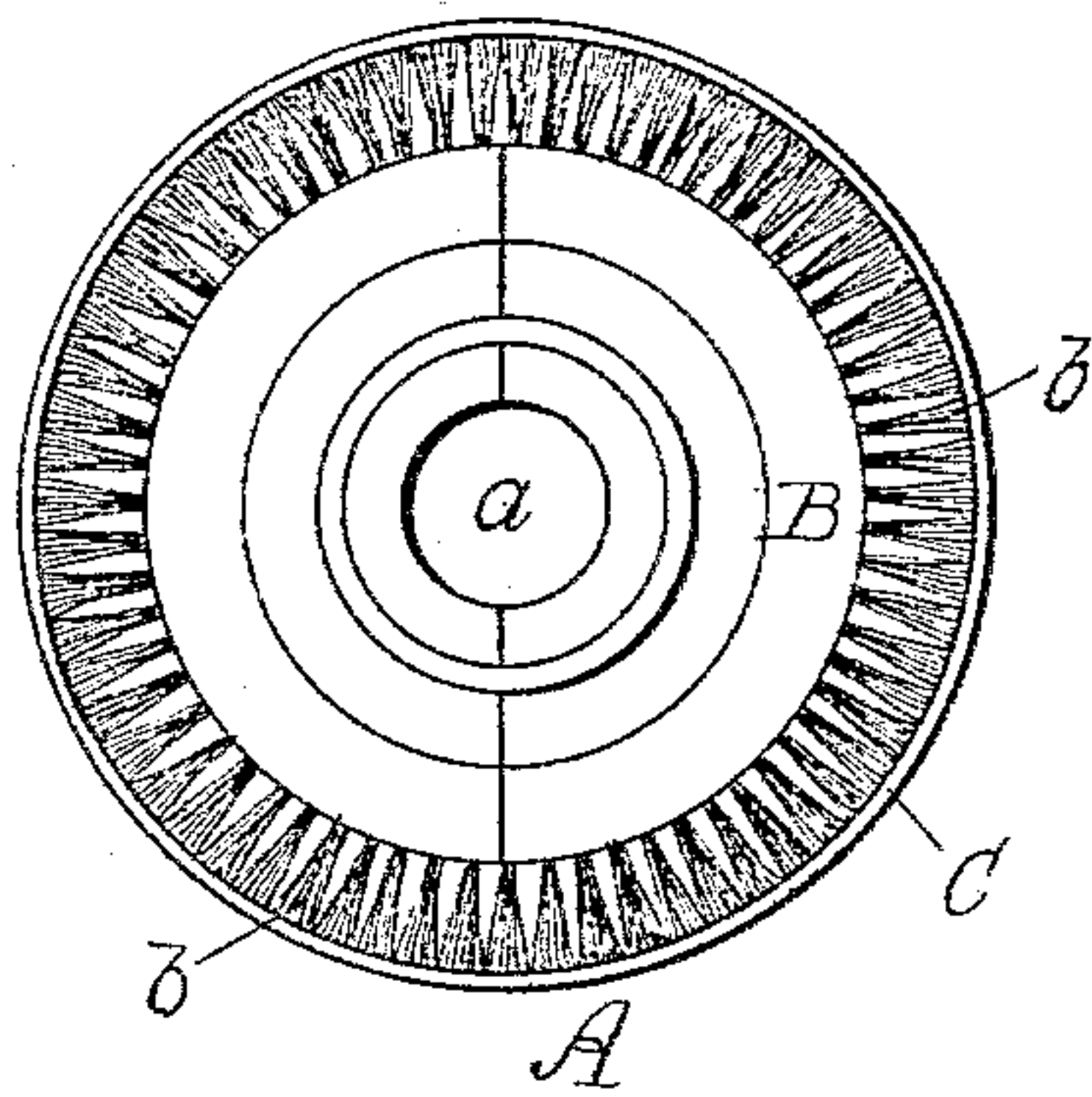


Fig. 1.

Fig. 4.

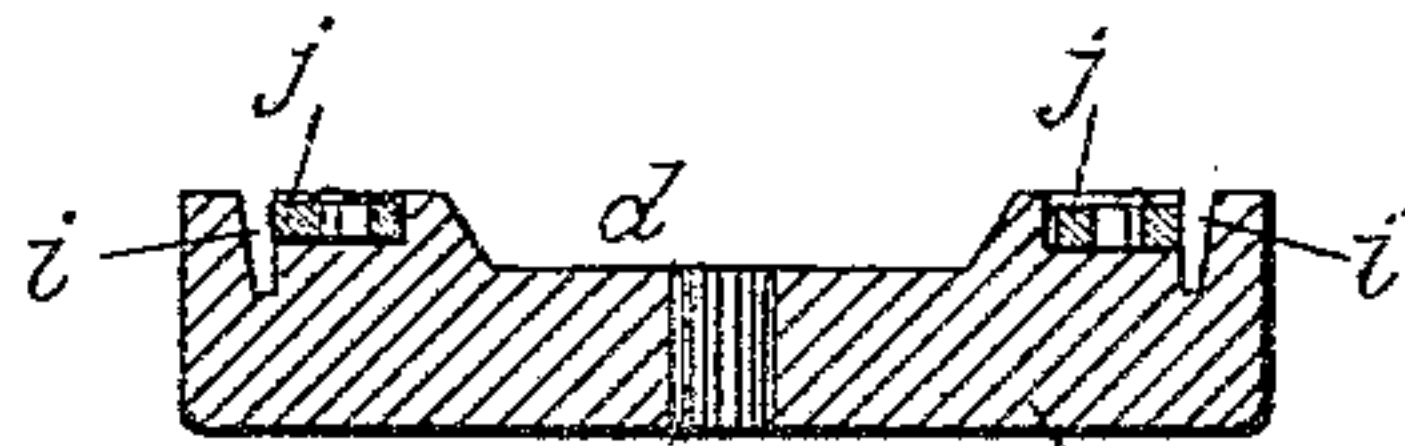
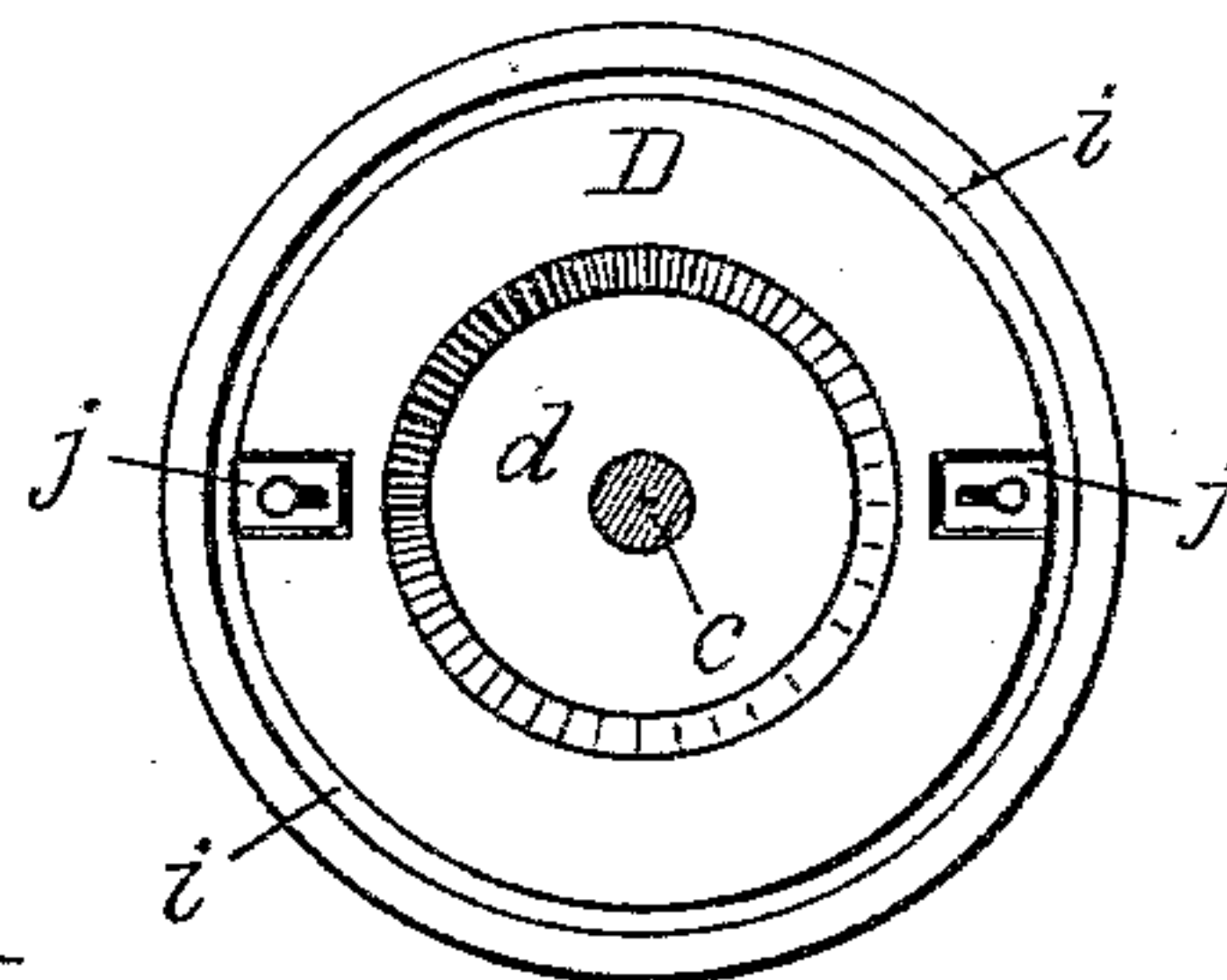


Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

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ROLL FOR BUFFING SHOE-SOLES.

SPECIFICATION forming part of Letters Patent No. 369,513, dated September 6, 1887.

Application filed April 25, 1887. Serial No. 235,997. (No model.)

To all whom it may concern:

Be it known that we, GEORGE H. FOX and FREDERICK H. POPE, citizens of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Implements for Buffing Boot or Shoe Soles; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to implements for buffing boot or shoe soles, particularly that class which rotate and are provided with a removable outer covering or abrading-surface.

The class of buffing implements before premised has generally been made from a section of a solid cylinder composed of wood or other substance divided longitudinally in halves. An outer abrasive surface is formed by means of a sheet of sand-paper, emery-cloth, or other analogous material, the ends of which are clamped and secured between the abutting faces of the cylinder. Elastic material is further interposed between the abrading or outer covering and the extremity of the cylinder.

In the above-mentioned construction several objections exist, prominent among which is the difficulty in removing the old and worn-out abrasive covering and the substitution therefor of a fresh one. To obviate this difficulty, as well as to render the perimeter of the buffing-tool somewhat elastic and yielding as its surface is presented to the sole of the boot or shoe, is the object of our invention.

The drawings accompanying this specification represent, in Figure 1, a sectional elevation of a machine furnished with a buffing implement which embodies our invention. Fig. 2 is a sectional elevation of one of the tools enlarged. Fig. 3 is an end view, and Figs. 4 and 5 are respectively a plan and section, of the fixed collar or plate, to be hereinafter more fully described.

In said drawings, A represents the implement as an entirety, composed of a cylinder,

B, divided longitudinally and formed of wood or other suitable material, which is bored at *a* to permit its introduction upon the driving-shaft. Hitherto the periphery of this cylinder has been covered with some elastic material, as felt, since it is essential that the abrasive material—such as sand-paper—should be cushioned or yielding. To provide for this contingency we have in the present instance covered the surface thereof with an assemblage of knots *b b* of bristles. Small wires, however, may be employed with equally good effect, since the inherent flexibility is somewhat diminished by the rapid rotary motion of the buffing-tool, but still the proper elasticity, which is very essential, is obtained. Thus, in fact, we take a cylindrical brush and cover it with abrasive material, C, which may be sand-paper, emery-cloth, or other analogous articles. This material is cut of the proper length and width and the sides are then united to form a continuous cylindrical band or covering, (see Fig. 3,) which is slipped over and about the bristles. The latter, as before stated, yield and render the abrasive covering elastic, while the ease and rapidity with which an old covering can be removed and a new one substituted will readily be appreciated by those skilled in the art.

We have found that the covering C during activity of the implement A shifts endwise upon the brush, and to prevent this is also one of the features of our invention.

The buffing-tools are mounted upon a driving-shaft, *c*, to which is secured a fixed collar, D, provided with a cone-shaped recess, *d*, while a similarly-constructed but oppositely-disposed loose collar, E, is removably mounted upon the outer extremity of the shaft, which is screw-threaded to receive the locking-nut *e*.

To retain the brush, which is longitudinally divided in halves, tightly upon the actuating-shaft, we have formed two conical-shaped hubs, *f f*, thereon, which fit the recesses; hence when the buffing-tool is slipped upon the shaft and the locking-nut screwed up the brush is held immovably in position and compelled to rotate with the shaft.

To prevent endwise shifting of the abrasive covering C, before premised, one of two meth-

ods may be adopted—either that represented in Figs. 1 and 2 or that delineated in Figs. 4 and 5. As shown in the two former figures, the diameter of the fixed collar D is larger than the buffing-tool and prevents endwise movement of the abrasive covering C in this direction, while to stop opposite travel a series of radially-disposed lugs, *h h*, are provided, which are flush with the perimeter of the collar E when the latter is at rest, but are forcibly kept projecting therefrom whenever the said collar is in rotation. The abrasive material contacts with them and is thereby maintained in position, while in the event of a new covering being required the shaft is stopped, when the lugs drop back and said covering is readily pulled off from over the collar. We find, however, in buffing the soles of boots or shoes, that it is advantages to leave the outer edge, 2, of the covering C unobstructed to buff a square corner, if required, in which event the radial lugs *h h* cannot be employed. As a substitute therefor and to prevent endwise shift of the covering we have adopted the following arrangement, (shown in Figs. 4 and 5,) wherein the fixed collar D is provided upon its inner face with an annular slot, *i*, preferably flared and of a diameter slightly larger than that of the covering C. Within this collar, and similarly disposed as in the removable collar E, are a series of centrifugally-actuated holding-lugs, *j j*. The new covering is now slipped over and upon the brush until its inner extremity, 3, enters and is seated in the bottom of the annular slot *i*. The shaft is then set in motion, when the rotation of the latter throws out by centrifugal action the lugs *j j*, which grasp and retain the covering in position until worn out.

We are aware that it is not broadly new to provide a burnishing-cylinder with an abrasive surface of sand-paper. We are also aware that it is not broadly new to provide a cylindrical brush with bristles. We are also aware that it is not broadly new to cover the ends of a brush with sand-paper for abrading purposes. We are also aware that it is not new to provide an abrading-cylinder with rolls arranged in circular series about the shaft, a rubber jacket surrounding said rolls, and sand-paper surrounding said jacket. These constructions, therefore, we do not claim.

We claim—

1. The removable brush B, bristles *b b*, and the covering C, in combination with the shaft *c* and the fixed and removable collars D E, substantially as specified.
2. The combination, with the brush B, its covering C, and the actuating-shaft *c*, with its fixed collar D, of the removable collar E, provided with the centrifugally-actuated lugs *h h*, operating substantially as set forth.
3. The combination, with the brush B, its covering C, and the actuating-shaft *c*, with the removable collar E, of the fixed collar D, with its annular slot *i* and the centrifugally-actuated lugs *j j*, operating substantially as set forth.

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

GEO. H. FOX.
FREDERICK H. POPE.

Witnesses:

H. E. LODGE,
F. CURTIS.