(No Model.)

G. A. FULLERTON.

ROLL FOR SOLE BUFFING MACHINES.

No. 352,087. Patented Nov. 2, 1886.

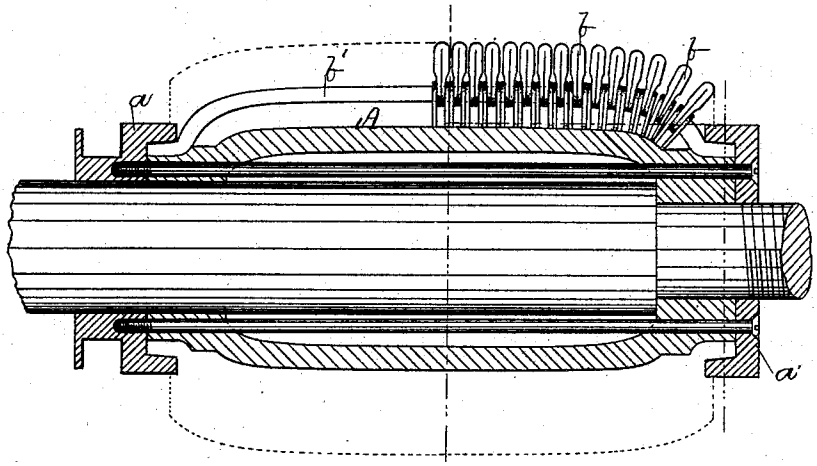


Fig. 1.

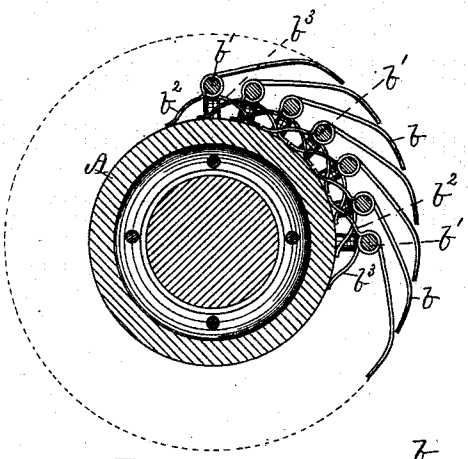


Fig. 2.

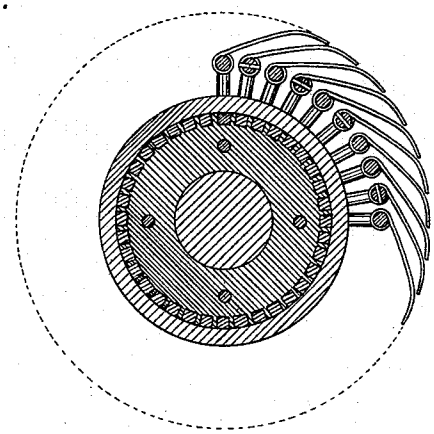


Fig. 5

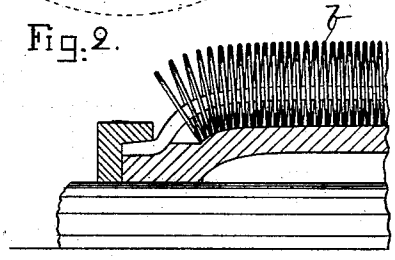


Fig. 3.

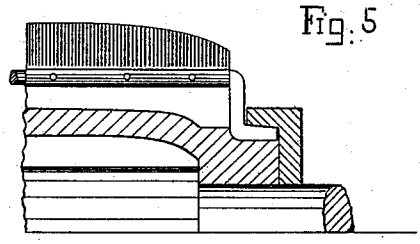


Fig. 6.

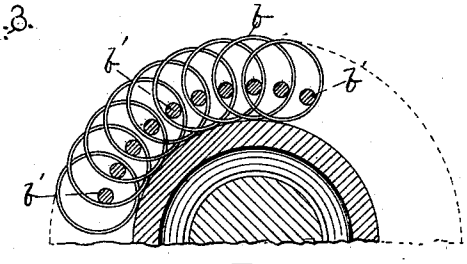


Fig. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE A. FULLERTON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO GEORGE H. P. FLAGG, TRUSTEE, OF SAME PLACE.

ROLL FOR SOLE-BUFFING MACHINES.

SPECIFICATION forming part of Letters Patent No. 352,087, dated November 2, 1886.

Application filed February 23, 1883. Serial No. 85,904. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. FULLERTON, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Roll for Machines for Buffing Boot and Shoe Soles, of which the following is a specification.

My invention relates, mainly, to the roll used in that class of buffing-machines described in Patent No. 247,315, of September 20, 1881. to F. W. Coy; and the object of my invention is to provide a novel elastic surface for the buffing-roll of that machine, although my invention is applicable, of course, to the rolls of buffing-machines generally, suitable means being provided to secure the sand paper on the roll.

The accompanying drawings illustrate rolls embodying my invention.

Figures 1 and 2 illustrate a roll whose surface is covered with springs of wire strung on rods. Figs. 3 and 4 show a similar metallic cushion made up of spirals; and Figs. 5 and 6 illustrate another form of spring, formed of sheet metal sawed to form teeth, bent as shown.

Heretofore in buffing-machines the buffing-roll has been cushioned with felt, rubber, or like elastic material; and my invention consists in a metallic cushion for such rolls.

In Figs. 1 and 2 I have shown devices, *b*, of wire, bent as shown in Fig. 2, strung on a series of rods, *b'*, parallel to each other and to the crowning face of the body A. These rods *b'* are secured at their ends to the body A by the cap *a*, as shown. The legs b^2 b^3 of the springs *b* are turned in opposite directions and bear on the surface of the body A, thereby holding the springs from turning on the rods *b'*.

In Fig. 3 the cushion is formed of spirals *b*, each secured by two rods, *b'*.

I prefer to have each metallic device *b* complete in itself, and to use a large number of such devices, so attached as to form the outer or bearing surface of the roll; but other forms of metallic devices *b* may of course be used in embodying my invention, the main feature of which is a buffing-roll having its surface formed of a metallic cushion, instead of the usual felt, blanket, rubber, or the like.

The advantages arising from the use of a metallic cushion are that the metallic cushion will greatly outwear the cushion of felt usually used, and the devices *b* can be cheaply made and be readily replaced without much loss of time; but the main advantage is the quality of elasticity afforded by such metallic cushion, which may not be due so much to the spring of the metal as to the effect of centrifugal force on that portion of the metal which is free to move toward and from the center. This is a matter as to which no very satisfactory theory has yet been advanced, although it seems likely that centrifugal force is largely concerned in giving the elasticity; but whatever the true theory may be, a roll having this metallic cushion not only lasts much longer than one with a felt or rubber cushion, but is more desirable in other respects.

I am aware of Patent No. 258,315, May 23, 1882, to F. Pease, in which is shown a hand-tool for burnishing the edges of shoe-soles, having a burnishing-face composed of a series of springs placed side by side. I am also aware of rolls covered with card clothing; but such rolls are incapable of use to support an abrading or buffing surface, because the ends of the wire must necessarily be farther from the axis than any other part of the wire, while the curved parts of the wire form the surface of my roll.

I claim as my invention—

1. A roll consisting of a rotary hub provided with a series of metal loops or coils adjacent to each other, extending around and bearing on the exterior circumference of said hub, substantially as set forth.

2. The combination of the roll and its journal, a series of rods, bent-wire springs strung on the rods, and caps, whereby the rods are secured at their ends to the roll, so that the bent-wire springs form a cushion, substantially as set forth.

GEORGE A. FULLERTON.

Witnesses:
J. E. MAYNADIER,
J. R. SNOW.