C. E. GRAHAM.

ABRADING DEVICE.

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1,003,448.

Patented Sept. 19, 1911.

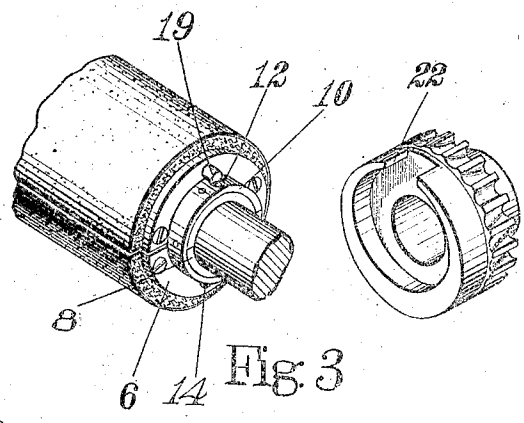

Fig. 3

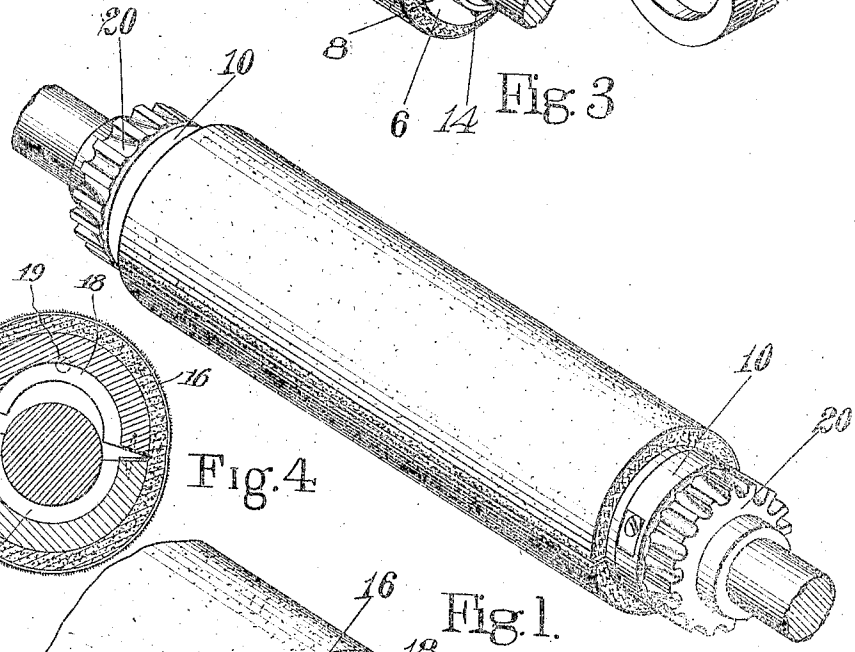

Fig. 1.

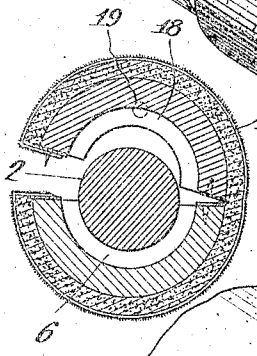

Fig. 4

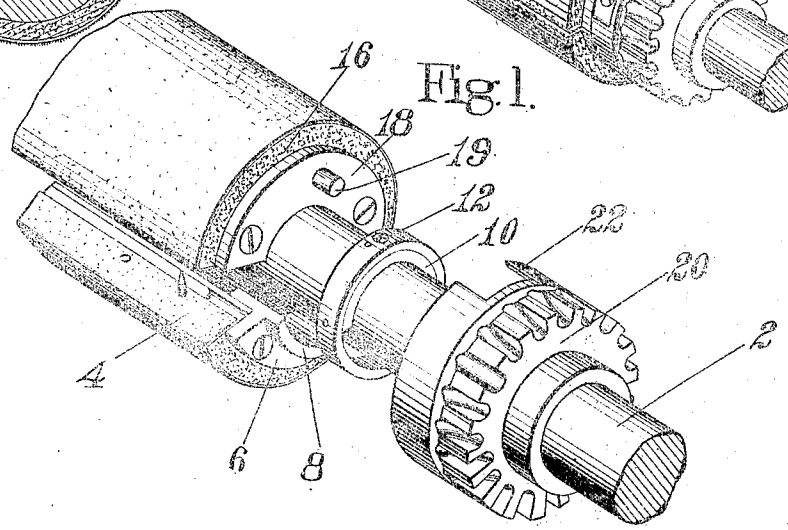

Fig. 2.

WITNESSES.

Edith C. Holbrook

Elizabeth C. Coupe

INVENTOR.

Charles E. Graham

By his Attorney

Nelson W. Howard

UNITED STATES PATENT OFFICE.

CHARLES E. GRAHAM, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

ABRADING DEVICE.

1,003,448. Specification of Letters Patent. Patented Sept. 19, 1911.

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To all whom it may concern:

Be it known that I, CHARLES E. GRAHAM, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Abrading Devices, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to rotary abrading devices such as are commonly employed in the manufacture of boots and shoes.

The object of the present invention is to provide a buffing roll having improved means whereby it may be attached to a supporting shaft.

To this end the present invention consists in the improved buffing device hereinafter described and claimed.

In the drawings,—Figure 1 is a perspective view of a buffing device embodying the present invention; Fig. 2 is a perspective view illustrating the means for attaching the roll to its shaft; Fig. 3 is a detail view showing the sections of the roll in closed position upon the shaft, and Fig. 4 is a sectional view of the roll, and shows more particularly the hinge by which the sections are connected.

Referring to the drawings, 2 designates a shaft adapted to support the buffing roll. A section 4 of the roll is provided at each end with a semicircular block 6 secured thereto, the inner face of the block conforming to the transverse curvature of the shaft. Each of the blocks 6 is provided with an outwardly extending flange 8 which is curved to engage a portion of the circumference of the shaft. A pair of collars 10 adapted to be adjustably clamped upon the shaft as by means of set screws 12 are provided with slots arranged to respectively receive the flanges 8. A movable section 16 is hinged to the stationary section and is provided with semicircular blocks 18 at each end. Both the section 4 and the section 16 are covered with a layer of felt and in closed position they form a cylindrical cover supporting surface. The movable section is provided at each end with an outwardly projecting pin 19. A pair of circular locking members 20 rotatably mounted upon the shaft are employed to removably secure the ends of the two sections together. To this end each locking member is provided upon its inner face with a recess having an eccentric inner surface arranged to overlap and engage one of the pins 19, the arrangement being such that upon rotating the locking member said surface will engage the pin and clamp the sections together, the locking members being frictionally held in their operative positions. Each locking member is provided with a slot 22 in its circumference which is so arranged that when the locking member is in unlocked position the slot will register with one of the pins 19 so that the sections may be opened or closed without the necessity of moving the locking members along the shaft away from the roll.

In the use of the buffing roll shown the fixed section is placed upon the shaft and the two collars 10 are respectively slipped over the flanges 8. The collars are then secured firmly upon the shaft by the set screws 12. The covering of abrading material, such as sandpaper or the like, is applied in the usual way and the movable section brought into closed position and locked by rotating the locking members 20 as previously explained. Whenever it is desired to remove the roll from the shaft the locking members are turned until they are free from engagement with the pins 19 and are then moved away from the ends of the roll. The set screw upon one of the collars is then loosened so that the collar may be moved along the shaft until it is clear of its flange. The roll may then be moved longitudinally until the other flange is clear of its collar. As will be obvious from Fig. 2 the roll may then be removed transversely of the shaft. It will be observed in the construction shown that the roll may be adjusted circumferentially of the shaft so that where a number of rolls are mounted upon the same shaft they may be adjusted to balance the shaft so that it will run smoothly. It will be further observed that as one of the collars 10 remains fixed upon the shaft when the roll is removed that the roll may be replaced in its original position upon the shaft, thus rendering it unnecessary to adjust the roll circumferentially of the shaft.

every time that it is replaced upon said shaft.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:—

1. A rotary abrading device, having in combination, a plurality of sections pivotally connected and arranged to form a cover supporting surface, a supporting shaft, means for securing one of said sections to the shaft, including flanges projecting outwardly from the ends of said section and formed to engage portions of the circumference of the shaft, members carried by the shaft having slots arranged to respectively receive said flanges, said members being provided with means to secure them upon the shaft.

2. A rotary abrading device, having in combination, a plurality of pivotally connected longitudinal sections constructed to be secured around a supporting shaft, means for securing one of said sections rigidly to the shaft including flanges projecting from opposite ends of said section in the direction of the length thereof, and collars rotatably mounted upon said shaft having slots arranged to respectively receive said flanges, means for clamping said collars in operative positions, and means for clamping the sections together.

3. A rotary abrading device, having in combination, a section constructed for engagement with a supporting shaft, means for securing the section upon the shaft including a flange projecting from the end of the section in the direction of the length thereof, and a member carried by the shaft having a slot arranged to receive the flange, means for locking said flange in said slot, a second section pivotally connected to the first-named section and constructed to form with said section a cover-supporting surface and means for retaining the sections in closed position.

4. A rotary abrading device having in combination, a plurality of sections pivotally connected and arranged to form a cover supporting surface, a supporting shaft, members provided with means for securing them to the shaft in adjusted angular position, said members and one of said sections being provided with interengaging parts whereby said section may be rigidly secured to said shaft in adjusted angular position, and means for clamping the sections together.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES E. GRAHAM.

Witnesses;

ALLAN H. BARROWS,

ELIZABETH C. COUPE.