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2,123,277

DEVICE FOR OPERATING UPON SHOE SOLES

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Fig. 1.

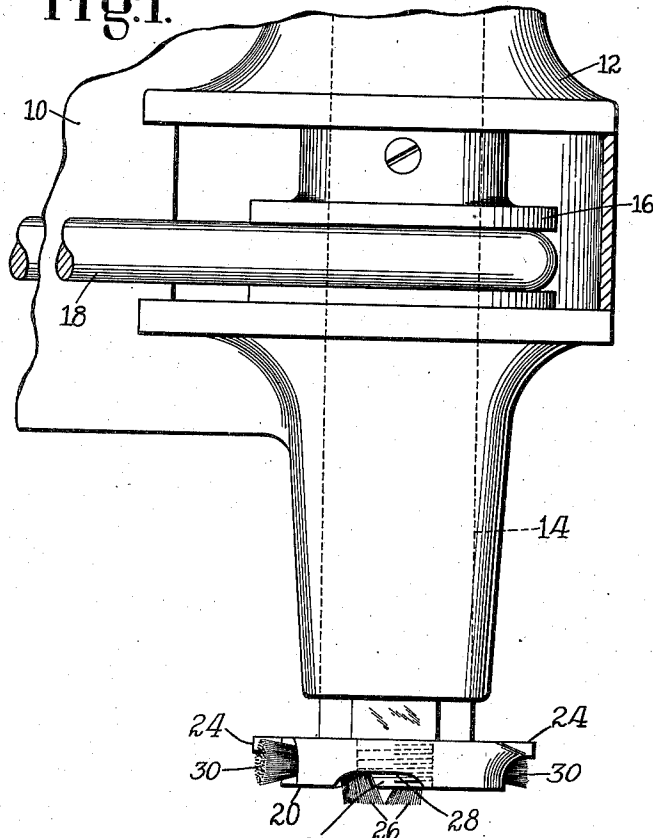


Fig. 3.

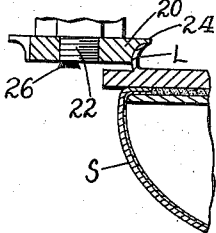


Fig. 4.

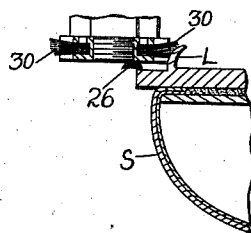
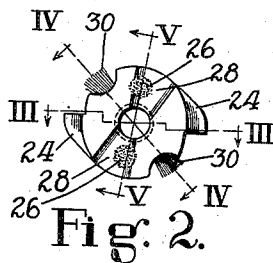
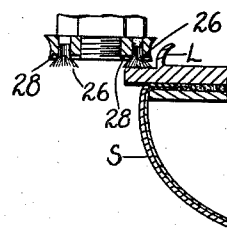


Fig. 5.



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UNITED STATES PATENT OFFICE

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DEVICE FOR OPERATING UPON SHOE SOLES

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4 Claims. (Cl. 12—17)

This invention relates to a device for operating upon shoe soles and is herein illustrated as embodied in a machine for simultaneously raising a channel lip and roughing the channel base and the under surface of the lip. Such roughing is commonly practiced to promote adhesion when the channel lips are to be cemented down after the stitching. Hitherto, however, the roughing has been performed as a separate operation.

It is an object of the present invention to provide a device for simultaneously performing both the lip-raising and roughing operations. The illustrated device, which constitutes a preferred embodiment of the invention, comprises a rotary lip-raising wiper or whirl having tufts of wire bristles extending from its face to roughen the base of the channel on the sole and having also tufts of wire bristles extending radially to roughen the under surface of the channel lip.

The invention will be described with reference to the accompanying drawing and pointed out in the claims.

In the drawing,

Fig. 1 is an enlarged view in side elevation of a machine provided with the improved device;

Fig. 2 is a bottom plan view of the device;

Figs. 3, 4, and 5 are sectional views taken on the lines III, IV and V, respectively, of Fig. 2.

In Fig. 1 is shown a support 10 in which is formed a bearing 12 for a spindle 14. Mounted on the spindle 14 is a pulley 16 over which passes a belt 18 driven from any suitable source of power for driving the spindle. The improved device comprises a disk 20 threaded upon a reduced extension 22 of the spindle 14. Extending beyond the normal periphery of the disk 20 in diametrically opposed relation to each other are a pair of wings or flanges 24 having their under surfaces helically tapered somewhat in the manner of a screw thread. As the device rotates, these wings operate to raise and to turn over a channel lip. In Fig. 3 is shown a shoe S the sole of which is provided with a lip L, which lip is in process of being raised and turned back by one of the wings 24 of the improved device. As so far described, this device constitutes a well-known form of channel-opening whirl.

Secured within suitable recesses in the disk 20 and extending downwardly from the under face

thereof in diametrically opposed relation to each other are a pair of tufts of wire bristles 26 suitable for performing a scouring operation upon sole leather. These bristles, as shown in Figs. 4 and 5, operate upon the base of the channel of the shoe S as the device is rotated. Formed in the under face of the disk 20 are substantially radial grooves 28. The tufts 26 are located within the grooves 28 and preferably adjacent to the leading edges of the grooves. These grooves make for greater flexibility of the bristles by increasing their unsupported length, thus rendering it unnecessary to extend the bristles unduly below the under face of the disk. A pair of similar bristles 30, which also are secured in suitable recesses formed in the disk 20, extend radially from the disk in diametrically opposed relation to each other and operate to roughen the under surface of the lip L as the device rotates.

It is evident that rotation of the device will cause the flanges 24 to raise the lip while the bristles 26 and 30 will scour and roughen the channel base and the lip, respectively, and that the lip-raising operation and both of the roughing operations will all take place simultaneously.

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

1. A device for operating upon soles comprising a channel lip-raising tool and a roughing tool arranged upon said lip-raising tool for operation upon a surface of a channel formed on a sole.

2. A device for operating upon soles comprising a rotary lip-raising wiper having bristles arranged to roughen a surface of a channel on a sole as the wiper rotates.

3. A device for operating upon soles comprising a rotary lip-raising wiper having tufts of wire bristles extending from its under face to roughen the base of a channel on a sole, said wiper having also tufts of wire bristles extending radially to roughen the under surface of the channel lip.

4. A roughing tool suitable for use on shoe channels comprising a rotary disk having a groove formed in its under face, and a tuft of downwardly extending bristles seated in a recess formed in the base of said groove.

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