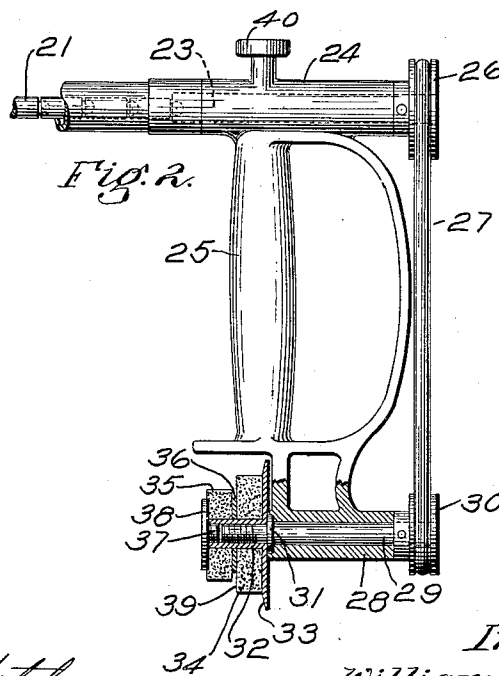
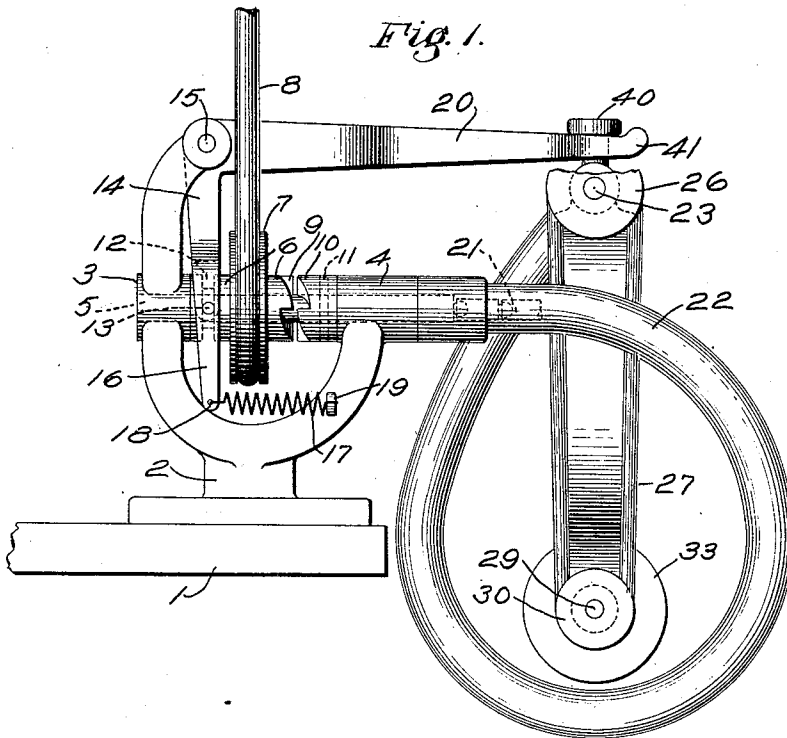


W. C. STEWART.
MACHINE FOR BRUSHING EDGES OF BOOT AND SHOE SOLES.
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Patented Oct. 10, 1911.



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UNITED STATES PATENT OFFICE.

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MACHINE FOR BRUSHING EDGES OF BOOT AND SHOE SOLES.

1,005,352.

Specification of Letters Patent.

Patented Oct. 10, 1911.

Application filed October 14, 1909. Serial No. 522,596.

To all whom it may concern:

Be it known that I, WILLIAM C. STEWART, a subject of the King of Great Britain, residing at Lynn, in the county of Essex and State of Massachusetts, have invented an Improvement in Machines for Brushing Edges of Boot and Shoe Soles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The invention to be hereinafter described relates to machines for finishing or brushing the edges of boot and shoe soles.

The aims and purposes of the invention are to provide a device of the above character which will be simple in construction and operation, convenient for use in connection with boots or shoes already mounted on a jack or other support where they have been treated, and wherein the brushing element is of special character and automatically made operative or inoperative by the simple act of taking the brushing element to the shoe for use or returning it to initial position.

In the drawings:—Figure 1 is a side view of a machine embodying the present invention; and Fig. 2 is a detached detail view on an enlarged scale of the brush handle and brushes, and associated parts, the brushes and their mountings being shown in section.

Rising from a suitable supporting base 1 is a standard 2 carrying suitable bearings 3, 4 for a shaft 5 on which is loosely mounted the sleeve 6 carrying a pulley 7 which may be driven from any suitable source of power by a belt 8, or otherwise. The sleeve 6 at one end is provided with a series of teeth 9 forming one member of a clutch, the other member 10 of which is secured to the shaft 5 by means of a pin 11. The sleeve 6, while loose on the shaft 5, is movable longitudinally thereof to cause engagement and disengagement of the clutch members.

As one means of effecting the longitudinal movement of the sleeve 6 on the shaft 5, said sleeve 6 is provided with a circular groove 12, Fig. 1, which is engaged by a pin 13 projecting laterally from an arm 14 pivoted at 15 to the upper portion of the standard 2. The arm 14 may be extended downward, as at 16, or the said downward extension 16

may be formed otherwise and secured so that said arm 14 and part 16 may move in unison. A spring 17, one end of which is connected at 18 to the arm 16 and the other end at 19 to the column 2, normally acts to move the arm 16, and perforce the arm 14 to the right, Fig. 1, to throw the clutch members 9 and 10 into operative engagement.

Projecting from the pivotal point 15 of the arm 14 is the carrying arm 20 which may be formed integral with the arm 14 or otherwise, the construction being such that said arms 14 and 20 and arm 16 may move in unison about the pivotal support 15, as will be readily understood.

The shaft 5, as indicated in Fig. 1, is extended from the bearings 3, 4, and has attached thereto at its end beyond the bearing 4 a flexible shaft 21 of any usual or desired character, the form indicated in the drawing being merely typical and being preferably covered by some yielding material, such as rubber 22, or the like, the construction being such that upon rotation of the shaft 5, through the means hereinbefore indicated, the flexible shaft 21 may be suitably rotated in a manner well understood.

Having reference more particularly to Fig. 2, the flexible shaft 21 has connected at its end remote from the supporting column 2 a shaft 23 which is extended through a bearing 24 formed in a hand piece or handle 25. The shaft 23 has secured to its end portion, as indicated in Fig. 2, a pulley 26 over which passes a belt 27. Mounted in a suitable bearing 28 at the other end of the hand piece 25 is a shaft 29, which, for identification, may be known as the brush shaft. Said brush shaft 29 has secured thereto a suitable pulley 30 over which passes the belt 27, the construction being such that upon rotation of the flexible shaft, regardless of the position of the hand piece 25, the brush shaft will be suitably rotated. The brush shaft 29 is extended to the left, Fig. 2, and provided with a collar 31 which rests against the end of the bearing 28 and limits endwise movement of the shaft. Beyond the collar 31 the brush shaft has secured thereto in any suitable manner the brush elements. In the present embodiment of the invention there is screw-threaded to the end of the brush shaft 29 the brush carrier comprising a cy-

lindrical portion 32 interiorly screw-threaded, and an enlarged circular flange portion 33, the edge of the flange portion 33 being preferably beveled, as indicated in Fig. 2.

5 Mounted upon the cylindrical portion 32 of the brush carrier are the forepart and shank brushes 34 and 35 respectively, said brushes being preferably separated somewhat by a washer or spacer 36 disposed between them.

10 Screw-threaded to the interior of the cylindrical portion 32 is the threaded portion 37 of a cap 38, the enlarged head of which bears against the face of the shank brush 35 and clamps the two brushes and their

15 spacing element 36 between itself and the enlarged circular flange 33, the construction being such that upon setting up the parts in the manner indicated, the brushes are clamped to the brush carrier which is itself

20 rotatable with the brush shaft, as will be clearly understood.

It will be noted that the brushes are of different sizes and may be of different characters, the one, 34, known as the forepart

25 brush, being adapted to treat the sole edge along the forepart of the shoe, and being guided in its operative relation thereto by the enlarged circular flange 33 which bears against the bottom surface of the

30 sole. The brush 35, known as the shank brush, is smaller than the forepart brush 34 and is adapted to treat the shank portion of the sole, the shoulder 39 between the two brushes acting as a guide and bearing

35 against the bottom surface of the shank of the shoe sole as the shank brush acts along the edge thereof.

From the construction hereinbefore described, which shows a good practical form

40 of the present invention, but which may be varied within the true scope thereof, it will be noted that the hand piece 25 may be moved into various positions and, by virtue of the flexible shaft 21, the brushes may be

45 suitably rotated in all positions of the handle and brushes.

Projecting upward from the bearing 24 of the hand piece is a headed stud 40 which is adapted to be engaged above the bifurcated end 41 of the carrying arm 20, when

50 the brushes are not in use and which may be readily removed from said carrying arm by merely grasping the hand piece 25 and drawing it outward to disengage the headed

55 stud 40 from the bifurcated end 41 of the carrying arm. When the hand piece 25 and its associated parts are hung upon the carrying arm 20, as indicated in Fig. 1, the weight of these parts overcomes the tension

60 of the spring 17, and moves the clutch members 9 and 10 out of operative relation,

but when the hand piece and its associated parts are removed from the carrying arm, the spring 17 at once throws the clutch members into operative relation. From this

65 it will be seen that when the brushes are not in use they will be made automatically inoperative by simply hanging them upon the carrying arm, and by simply removing them to operative position with respect to the shoe

70 sole and off of the carrying arm, said brushes will be made operative.

Changes may, of course, be made in the details of the device without departing from the true spirit of the present invention,

75 which is definitely pointed out by the claims.

What is claimed is:

1. In a machine for brushing the edges of boot and shoe soles, the combination of a freely movable hand piece, a brush shaft

80 carried thereby, a flexible shaft for driving the brush shaft, a forepart and a shank brush carried by said shaft, and a guiding flange to engage the shoe and guide the hand piece as the latter is moved about the edge

85 of the sole being treated.

2. In a machine for brushing the edges of boot and shoe soles, the combination of a hand piece 25, a flexible shaft connected to said hand piece and a brush shaft also con-

90 nected to said hand piece, driving connections between said shafts, a forepart brush and guiding flange carried by said brush shaft, and a shank brush of less size than the forepart brush also carried by said shaft.

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3. In a machine for brushing the edges of boot and shoe soles, the combination of a hand piece 25, a bearing 24 formed thereon, a flexible shaft extended into said bearing

100 24, a second bearing 28 formed on the hand piece, a brush shaft 29 mounted in said bearing 28, and driving connections between the flexible shaft and brush shaft for driving the latter from the former.

4. In a machine for brushing the edges

105 of boot and shoe soles, the combination of a hand piece 25, a bearing 24 formed thereon, a flexible shaft extended into said bearing 24, a second bearing 28 formed on the hand piece, a brush shaft 29 mounted in said

110 bearing 28, a hand grip disposed between and connecting said bearings 24 and 28, and driving connections between the flexible shaft and brush shaft for driving the latter from the former.

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

WILLIAM C. STEWART.

Witnesses:

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JEROME INGALLS.