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SHOE POLISHING MACHINE.

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900,825.

Patented Oct. 13, 1908.

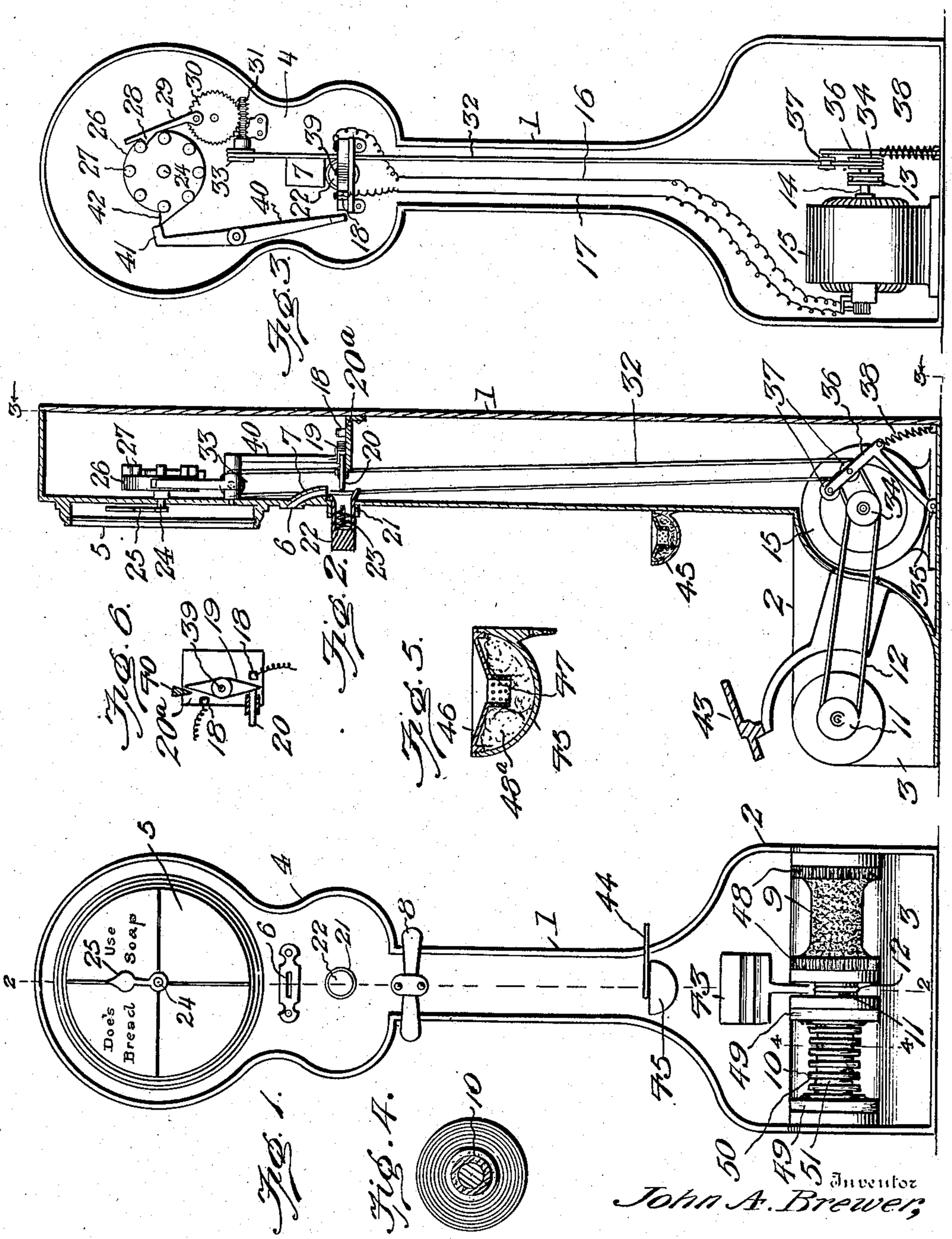

Fig. 1.

Fig. 4.

Fig. 6.

Fig. 2.

Fig. 5.

Fig. 3.

Witnesses

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JOHN A. BREWER, OF JACKSON, MICHIGAN.

SHOE-POLISHING MACHINE.

No. 900,825. Specification of Letters Patent. Patented Oct. 13, 1908.

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To all whom it may concern:

Be it known that I, JOHN A. BREWER, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented new and useful Improvements in Shoe-Polishing Machines, of which the following is a specification.

This invention relates to shoe polishing machines which embodies a normally open circuit including a motor connected for operating the cleaning and polishing brushes, together with means for positively closing the circuit to start the motor and a circuit breaking means operated by the latter to automatically stop the machine upon completion of a cycle of movement of the controlling mechanism.

The invention has for its objects to provide a comparatively simple, inexpensive device of this character wherein the circuit may be readily closed and in which the circuit will remain closed for driving the motor and brushes throughout a predetermined period of time, and one in which the circuit will be automatically broken after each cycle of the controlling mechanism.

A further object of the invention is to provide a device of this character having a blacking receptacle designed to hold a dauber and in which a requisite quantity of blacking will be properly supplied to the dauber for application to the shoes.

With these and other objects in view, the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings: Figure 1 is a front elevation of a machine embodying the invention. Fig. 2 is a vertical, longitudinal section taken on the line 2—2 of Fig. 1. Fig. 3 is a vertical section taken on the line 3—3 of Fig. 2 and viewed in the direction of the arrow. Fig. 4 is a detail section of the polishing roller taken on the line 4—4 of Fig. 1. Fig. 5 is a detail view of the blacking receptacle. Fig. 6 is a detail view of the circuit closer.

Referring to the drawings, 1 designates a vertical box or casing having an enlarged base portion 2 open at its forward end, as at 3, and an enlarged upper portion 4 provided with a transparent panel 5 adapted to receive advertising matter, as shown, there being formed in the front wall of the casing immediately beneath the panel 5 a horizontal coin slot 6 leading into a coin chute 7, while fixed on the casing at a suitable point is a handle bar 8.

Journaled at the forward open end of the base portion 2 is a pair of brushes 9 and 10, the shaft of which is equipped with an intermediate pulley 11 connected by a belt 12 with a pulley 13 fixed on the armature shaft 14 of an electric motor 15 included in an electric circuit comprising a pair of wires 16 and 17 leading to fixed contacts 18 secured to a fixed bracket 20^a. A movable contact 19 pivoted upon the bracket 20^a is operated by a push-rod 20 slidably mounted in a bearing opening 21 formed in the front wall of the casing at a point immediately beneath the lower end of the chute 7 and in line with the rod 20 is a tubular push button 22 having a limited inward movement against the action of a spring 23 which normally holds the button 22 in projected position.

Journaled in the upper portion 4 of the casing at a point concentrically of the panel 5 is a stub shaft 24 carrying at its outer end a hand or pointer 25 and at its inner end a terminal disk 26 provided on its rear face with a series of equidistantly spaced pins or teeth 27 adapted to be engaged by the tooth 28 of an actuating pawl or dog 29 in turn eccentrically pivoted to a rotary worm gear 30 journaled in the casing and acted upon by a worm shaft 31 driven from the motor shaft 14 by means of a belt 32 arranged to travel on pulleys 33 and 34 fixed respectively on the shafts 31 and 14, while pivoted at a suitable point, as at 35, in the portion 2 of the casing is a substantially L-shaped belt tightening lever 36 carrying idle pulleys 37 over which flights of the belt travel and which is acted upon by a spring 38 for suitably tensioning the belt 32.

As seen in Fig. 6, the contact member 19 is preferably in the form of a metal bar pivoted between its ends as at 39 and having one end thereof disposed for movement to circuit closing position through the medium of the coöperating rod 20 and button 22, while arranged to act upon the other end of the contact piece 19 for moving the same to circuit breaking position is the lower end of a controlling lever 40 suitably pivoted between its ends in the casing and having at its upper end a finger 41 adapted to be acted upon by a projecting lug or tooth 42 formed at an appropriate point on the periphery of the controller wheel 26, it being noted in this connection that when the tooth 42 contacts

with the upper end of lever 40 the lower end of the latter will be swung inward over the adjacent end of the contact piece 19 for throwing the other end of the latter out of engagement with the contact 18.

Fixed on the casing 1 and to stand above the base portion 2 is a foot rest 43 on which the feet of the operator may be placed while applying the blacking, in performing which operation there is employed a hand dauber 44 which normally rests in a blacking holding receptacle 45 fixed on the front wall of the casing. The receptacle 45 is provided with a removable concaved cover 46, the upper face of which slopes downward to a central depending perforated cup 47 in which the dauber fits and which has perforated side and bottom walls through which the blacking may feed to the dauber from a packing of sponge or other absorbent material with which the receptacle is filled.

The brush 9, which is designed for cleaning the shoes, comprises a central portion which acts on the upper surface of the shoes and end members or heads 48, which act at the sides of the shoes, the central portion and end members being provided with rubbing surfaces formed of bristles, while the brush 10 which is employed for polishing the shoes has a central portion to act on the upper surface of the shoe and end members 49 to polish the sides of the shoe, this brush being composed of flannel or other appropriate fabric and having its central portion made up of a series of rubbing disks 50 spaced apart by means of smaller interposed spacing members or washers 51, as seen more clearly in Figs. 1 and 4, whereby the efficiency of the brush is materially increased and the discomfort resulting from the high friction between the brush and shoe minimized.

In practice, the motor circuit is normally broken owing to non-contact of the member 19 with the member 20 and under these conditions when it is desired to operate the machine for polishing a pair of shoes a coin is entered through the opening 6 into the chute 7 and travels downward in the latter to a position between the inner end of button 22 and the forward end of rod 20, whereby, when the button 22 is pressed inward, it will act through the medium of the coin upon the push rod 20 to carry the contact member 19 into engagement with the contact 18 for completing the circuit and starting the motor. As soon as the button 22 is released it will be returned to normal position through the action of spring 23 and the coin will fall downward into the casing.

While the motor is running the brushes 9 and 10 will be driven through the medium of the belt 12 and the operator inserts his feet one after another into the open end 3 of the casing beneath the brush 9 for cleaning dust and the like from the shoes, after which the dauber 44 is used for applying blacking to the shoes and the latter finally subjected to the action of the polishing brush 10, beneath which they are introduced into the forward end of the casing, as in the instance just explained.

While the parts are in operation the worm shaft 31 will be driven through the medium of belt 32 and will act upon the worm gear 30 for operating the pawl 28 to turn the controller wheel 26.

While the controller wheel is turning, the hand 25 will move therewith in rear of the panel 5 for attracting attention to the advertising matter thereon and when the wheel has made one complete revolution the tooth 42 will act upon the upper end of the lever 40 for throwing the lower end of the latter into engagement with the contact piece 19 for breaking the circuit, as heretofore explained.

It will be understood that when applying the blacking to the shoes the operator's feet will be placed upon the foot rest 43 and further that owing to the receptacle being filled with the absorbent material 48[a] from which the blacking feeds into the cup 47, the blacking will be properly supplied to the dauber. Furthermore, it is to be understood that under normal conditions, if the button 22 be pressed inward it will, owing to its tubular formation, pass over and without moving the button 20 and that in consequence it is essential to introduce a coin into the machine for closing the inner end of the push member 22 in order to render the same effective for moving the rod 20.

Having thus described my invention, what I claim is:

In a shoe polishing machine, a casing, a shaft mounted in said casing, a brush on said shaft, said brush comprising a series of fabric disks spaced apart by intermediate disks of less diameter than the fabric disks, end members or heads of greater diameter than the fabric disks, and the latter increasing in diameter from the center toward the ends, substantially as described.

In testimony whereof, I affix my signature in presence of two witnesses.

JOHN A. BREWER.

Witnesses:

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