Nov. 17, 1959 J. P. GERECKE ET AL 2,912,706

ELECTRIC PORTABLE SHOE POLISHER

Filed July 5, 1956 2 Sheets-Sheet 1

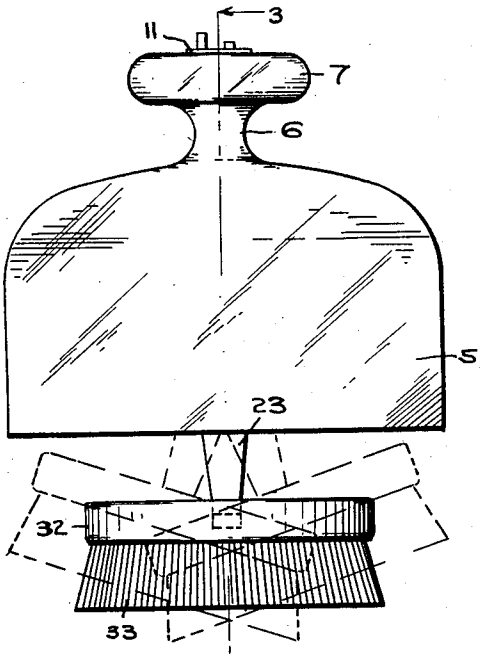


Fig. 1.

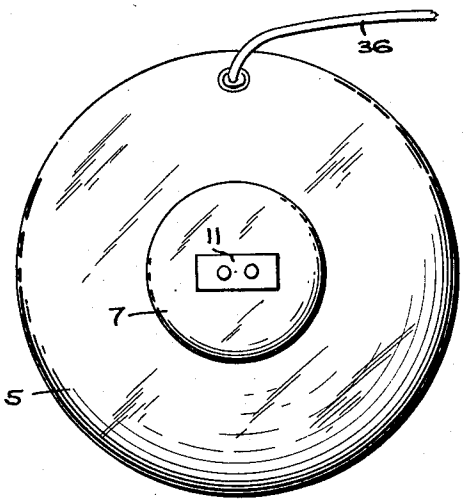


Fig. 2.

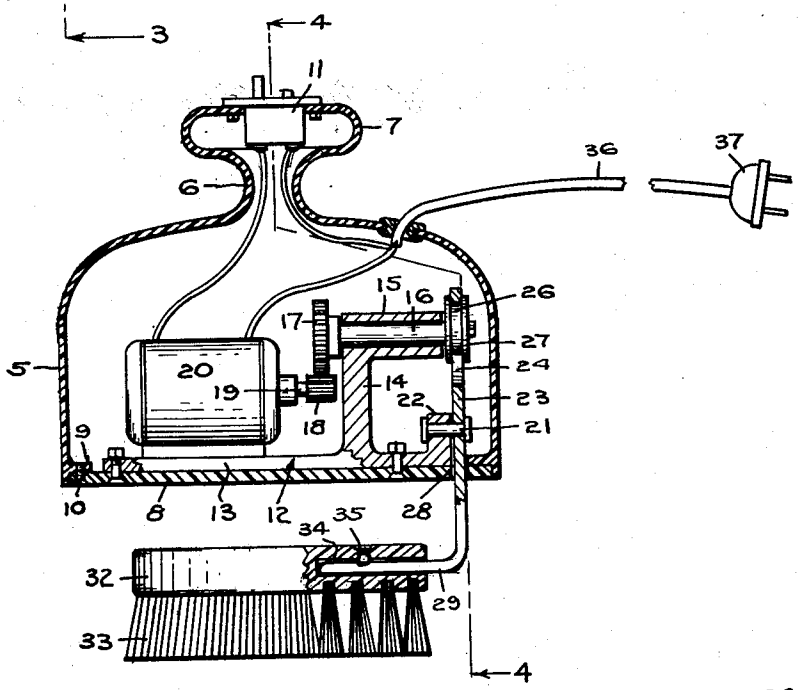


Fig. 3.

INVENTORS
JESSIE P. GERECKE
BY JOSEPH R. EMS,
James H. Ogden
ATTORNEY

Nov. 17, 1959 J. P. GERECKE ET AL 2,912,706

ELECTRIC PORTABLE SHOE POLISHER

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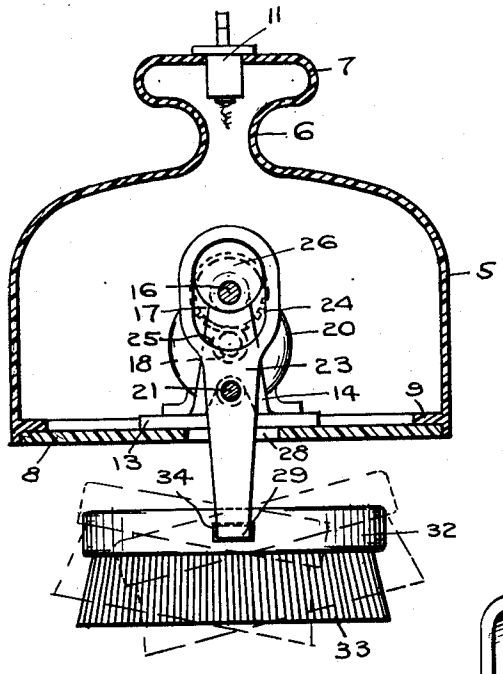


Fig.4.

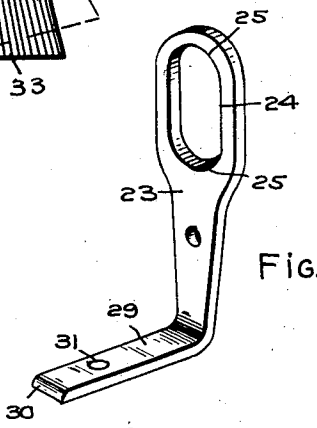


Fig.5.

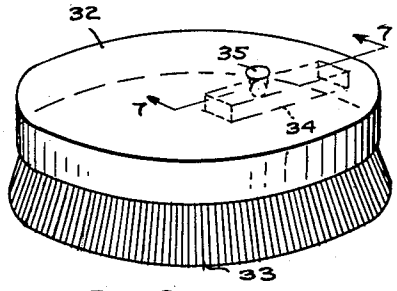


Fig.6.

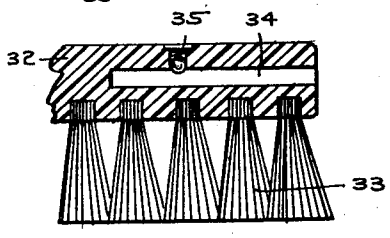


Fig.7.

INVENTORS
JESSIE P. GERECKE
BY JOSEPH R. EMS,
James H. Ryder
ATTORNEY

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ELECTRIC PORTABLE SHOE POLISHER

Jessie P. Gerecke and Joseph R. Ems, Miami, Fla.

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1 Claim. (Cl. 15—22)

This invention relates to electrically driven brushing devices and has particular reference to a device of such nature whereby to furnish a portable brushing device primarily for use in polishing shoes or the like.

The invention contemplates a preferably plastic housing supporting a prime mover driving an eccentric device for the oscillatory movement of a control arm whereby to shift a brush head in a reciprocatory arcuate manner.

The invention contemplates a cam actuated arm that is pivotally supported within the casing to be rocked back and forth in a continuous manner and with the arm projecting below the case for detachable connection with various forms of brushes, buffers or the like.

A novel feature of the device resides in a preferably plastic casing that is shaped to provide a hand grip and a removable bottom plate for the support of mechanism disposed within the casing and whereby to control the movement of a rocker arm that projects below the casing for engagement with brush elements or the like.

It is also contemplated that the device shall embody a prime mover, such as an electric motor and with the prime mover driving a cam shaft through the medium of reduction gearing and whereby the rocker arm may be oscillated at a predetermined speed, such speed being determined in accordance with the desirable rate of oscillatory motions to a particular brush head and whereby shoes may be polished and buffed with a minimum of effort.

The invention embodies a device having the above noted characteristics that is of extremely light weight, whereby to enable the operator to support the device with one hand and with the device having an electrical conductor that may be plugged into any conventional outlet.

Novel features of construction and operation of the device will be clearly apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated a preferred form of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

Figure 1 is a side elevation of a shoe polishing apparatus constructed in accordance with the invention,

Figure 2 is a plan view thereof,

Figure 3 is a substantially vertical section taken on line 3—3 of Figure 1,

Figure 4 is a vertical section taken substantially on line 4—4 of Figure 3,

Figure 5 is a perspective view of a rocker arm and brush support embodied in the device,

Figure 6 is a perspective view of one brush device employed with the apparatus and,

Figure 7 is a slightly enlarged fragmentary sectional view taken substantially on line 7—7 of Figure 6.

Referring specifically to the drawing, the numeral 5 designates a preferably molded bell shaped housing, having a constricted neck portion 6 and an enlarged, preferably circular hand grip 7. The housing 5 is open at its lower end and is normally closed by a plate 8, engaging an inner flange 9 formed upon the housing and with the plate 8 being fixed with respect to the housing by any suitable fastening devices, such as screws 10. It is contemplated that the housing 5, the associated neck 6 and hand grip 7 shall be molded as an integral unit and, while the closure plate 8 may be formed of plastic, it follows that for purpose of structure, this plate may be formed of aluminum or other light weight material. Mounted within the hand grip 7, substantially centrally thereof is a switch element 11, either of a push button type or of a toggle type.

Mounted upon the plate 8, to be disposed within the casing 5 is a preferably integral bracket 12, including a base plate 13, an upstanding arm 14 and a tubular bearing sleeve 15, formed integral with the arm 14. Journalled within the sleeve 15 is a shaft 16, carrying at one end a relatively large gear 17 that meshes with and is driven by a smaller gear 18, fast up the shaft 19 of a prime mover, such as an electric motor 20. The motor 20 is fixed with respect to the base plate 13. Rockable upon a pivot 21, carried by a lug 22, formed integral with the bracket 12, is a rocker arm 23, see particularly Figure 5. The rocker arm 23 at its upper end is enlarged and provided with a rectangular opening 24, the upper and lower ends of which are rounded as at 25 for the bearing reception of a cylindrical cam 26. The cam 26 is fixed upon the opposite end of the shaft 16 and engages the opening 24 whereby to rock the arm back and forth under the influence of the rotary motion of the cam 26. The cam 26 is provided with end plates 27 whereby to maintain the cam in accurate engagement within the opening 24. Under the influence of the prime mover 20, the cam is rotated at a predetermined number of revolutions per minute, causing the arm 23 to rock back and forth upon the pivot 21.

The arm 23, below the opening 24 is reduced in width and extends downwardly through a slot 28 formed in the closure plate 8. The arm 23 extends a predetermined distance below the plate 8 at its lower end and is bent at a right angle to provide a tongue portion 29, that is substantially parallel to the plate 8. The free end of the tongue 29 is bevelled at 30 and the upper surface of the tongue is provided with a recess 31.

As shown in Figures 3, 6 and 7, there has been illustrated one type of brush employed in the polishing operation, such brush embodying a head 32, formed of any desirable material and with the head being molded to securely anchor a plurality of closely arranged bristles 33. The brush here illustrated, may be one of a series of brush elements or buffer elements as may be required in a complete polishing operation. The head 32, inwardly from its circumferential edge is provided with a rectangular opening 34, of a dimension to receive the tongue 29 and whereby the brush may be quickly and easily engaged with the tongue in a manner that prevents the accidental disengagement of the brush during the rocking motion of the arm 23. A ball detent 35 is carried by the head 32 and projects slightly into the opening 34 for snapping engagement into the recess 31 of the tongue 29. It will thus be apparent that a selected brush or buffer head may be quickly and easily engaged with the tongue 29 without the use of separate fastening devices. The switch 11 and the motor 20 are connected to a source of electrical energy through the medium of a flexible conductor 36, having a conventional pronged plug 37 at its free end.

In the use of the device, when the shoes are to be polished, paste or other forms of polish are applied to

the shoes in a conventional manner, after which a select brush 32 is engaged with the tongue 29. The operator then closes the switch 11, energizing the motor 20 and causing the cam 26 to rotate at a predetermined speed, imparting a back and forth rocking motion to the arm 23, such rocking motion causing the tongue 29 and its supported brush 32 to swing back and forth in an oscillatory arcuate path, and during such action, the brush is engaged with the shoes, imparting a polishing action thereto in an oscillatory manner similar to that normally employed by a hand brush. When the brushing has been completed, the operator disengages the brush 32 and engages a buffer type of brush to the tongue 29 and then again engages the shoes to create a high polish thereto. The movement of the brush or the buffer is identical and is clearly illustrated in dotted lines in Figures 1 and 4.

It will be apparent from the foregoing that a very novel form of power driven oscillatory brushing device has been provided and whereby shoes or the like may be quickly and easily polished with a minimum of effort. The brush or buffer partakes of a normal oscillatory movement similar to hand polishing and imparts a high lustre to the surface of the shoes. The structure is simple, cheap to manufacture, is ornamental in appearance, is strong, durable and most effective as a power driven polishing apparatus. Various types of brushes may be employed and may be quickly and easily connected to the tongue 29 of the rocker arm with a minimum of effort and the brush will be securely held against accidental displacement during the oscillation thereof.

It is to be understood that the invention is not limited to the precise form shown, but that changes are contemplated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claim.

Having described our invention, what we claim as new and desire to secure by Letters Patent is:

A power driven shoe polishing and buffing device that comprises a molded bell shaped housing that is open at its lower end, the housing at its upper end and centrally

thereof being constricted to form a hollow hand grip, an electrical switch device supported within the hand grip, a detachable cover plate for the lower end of the housing, a bracket device supported upon the upper side of the cover plate and enclosed within said housing, the bracket embodying a base plate having an integral upstanding standard that is provided at its upper end with an elongated cylindrical bearing, a shaft rotatable in the bearing and that projects beyond the opposite ends thereof, the shaft at one end being provided with a gear, an electric motor mounted upon the base plate and with the motor being provided with a pinion that has meshing engagement with the gear and whereby to rotate the said shaft, the shaft at its opposite end being provided with an eccentric, the base plate being also provided with an upstanding lug, a rocker arm that is pivotally connected to the lug, the rocker arm at its upper portion being provided with an elongated slot for the reception of the eccentric, the rocker arm also projecting downwardly from its pivotal point to extend through a slot formed in the cover plate, the lower extension of the rocker arm projecting downwardly below the cover plate and bent at a right angle to form a supporting tongue that is closely parallel with the cover plate, the said tongue being adapted to receive a buffing tool, the said rocker arm being rockable in a vertical plane under the influence of the eccentric and whereby to rock a connected tool in an arcuate path.

References Cited in the file of this patent

UNITED STATES PATENTS

738,357	Reade et al.	Sept. 8, 1903
1,494,162	Fitzgerald	May 13, 1924
1,553,456	Metrakos	Sept. 15, 1925
1,682,325	D'Mico et al.	Aug. 28, 1928
1,821,123	Stuart	Sept. 1, 1931
1,897,365	Duey	Feb. 14, 1933
2,158,738	Baker et al.	May 16, 1939
2,648,787	Smithson	Aug. 11, 1953
2,661,736	Schwartz	Dec. 8, 1953