Nov. 20, 1928. 1,692,744

M. KAPLAN

MOTOR DRIVEN BRUSH

Filed Sept. 22, 1926 2 Sheets-Sheet 1

Fig. 1.

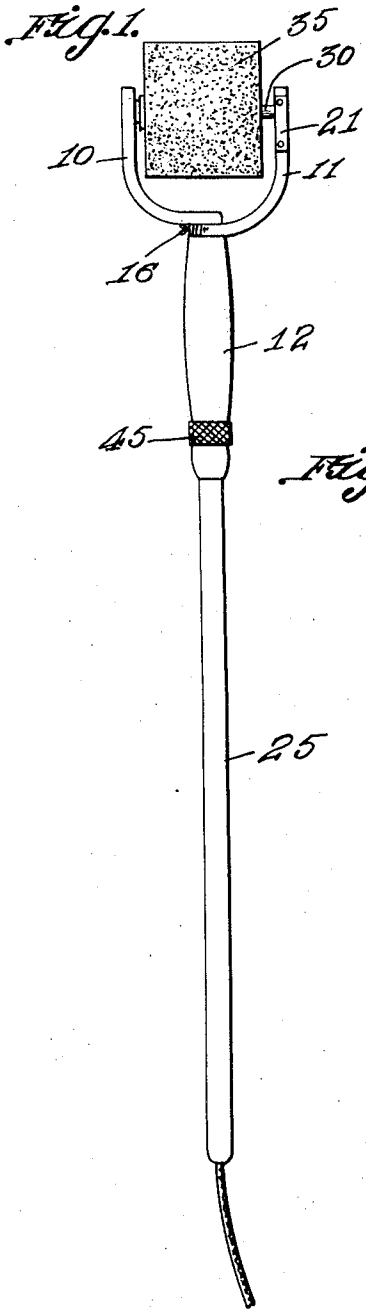
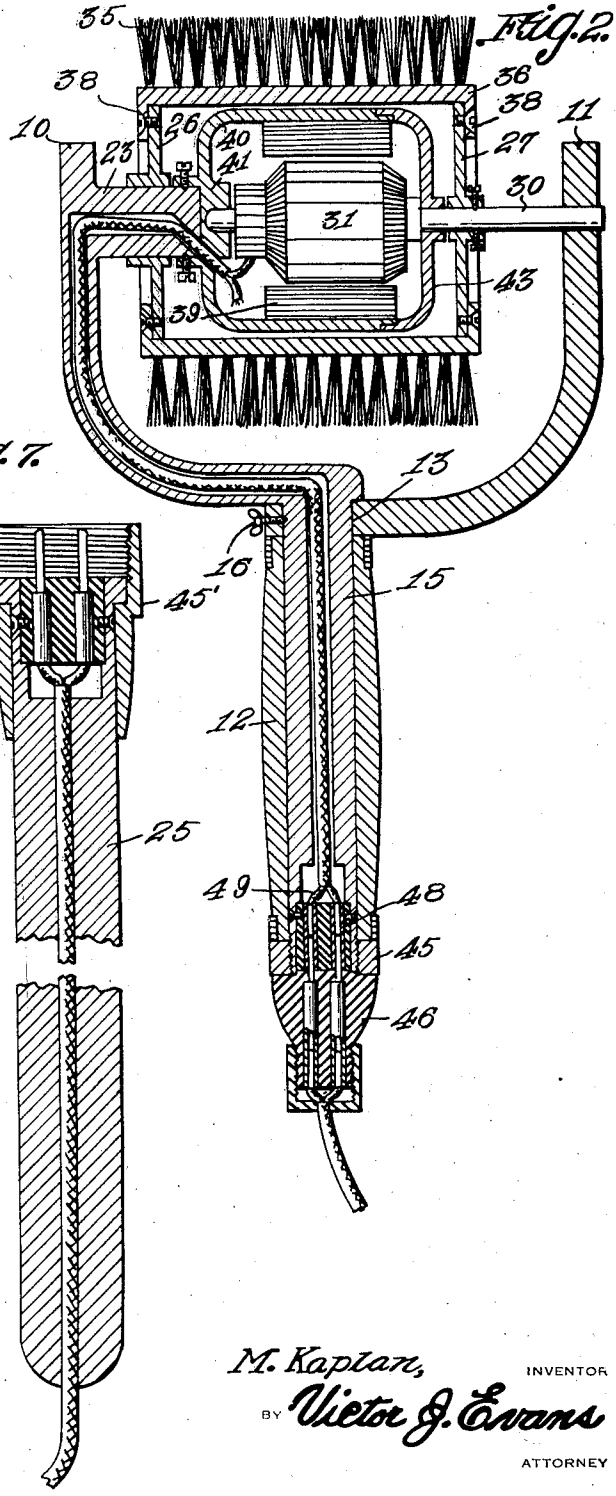



Fig. 2.




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Fig. 3.

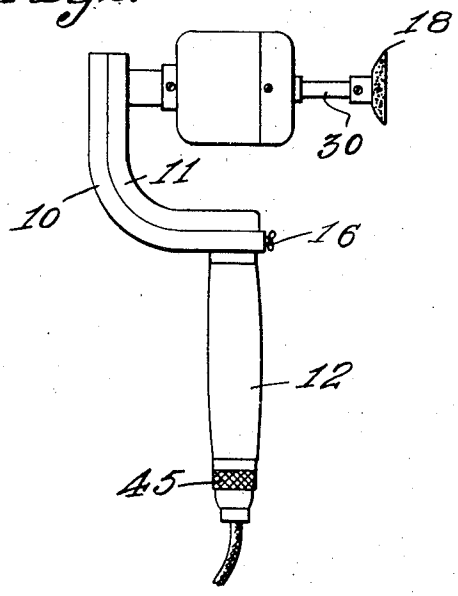



Fig. 4.

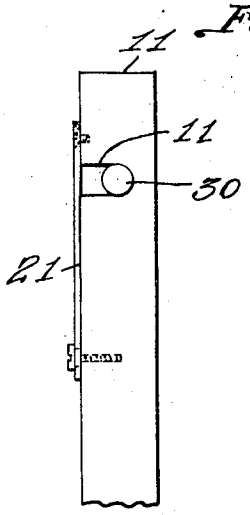



Fig. 5.

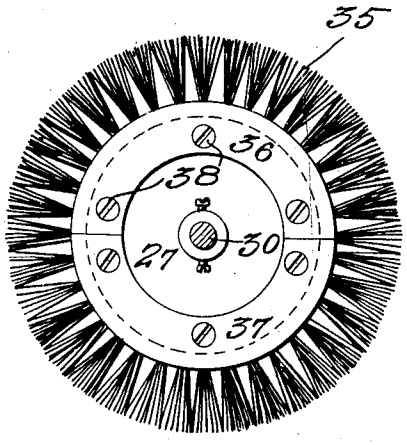
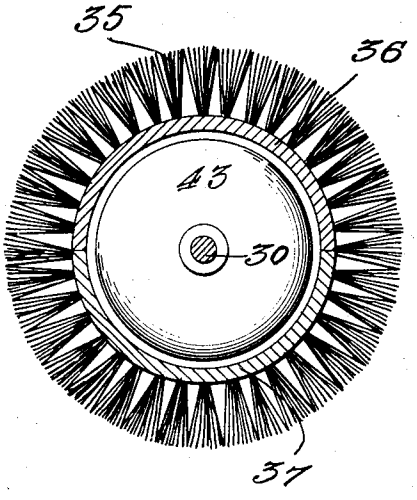



Fig. 6.




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Patented Nov. 20, 1928. 1,692,744

# UNITED STATES PATENT OFFICE.

MAX KAPLAN, OF PASSAIC, NEW JERSEY.

## MOTOR-DRIVEN BRUSH.

Application filed September 22, 1926. Serial No 137,094.

The object of this invention, is to provide a brush for use upon brushing clothing, but adapted for use, so far as the operative means are concerned, for various other purposes.

A further object is to provide driving means and mounting means adapted for use in connection with brushes designed for many different purposes, such as manicuring and shampooing, or substantially any purpose to which a motor driven brush may conveniently be applied.

A further object is to provide a construction in which a two-part brush may be mounted concentrically with reference to the shaft of the motor,—the elements of the two-part brush being removable, if desired, when the operator wishes to mount an element to be rotated directly on the armature shaft of the motor.

A further object is to provide special means for mounting the motor, these means including a forked frame and handle, one element of the frame being movable with reference to the other when one end of the motor shaft is to be left free.

With the foregoing and other objects in view, the invention consists in the novel construction and arrangement of elements described, illustrated and claimed, it being understood that modifications may be made within the scope of the claim without departing from the spirit of the invention.

In the drawings forming part of this application,

Figure 1 is a view of the device in elevation, showing the brush mounting means carried by a long handle.

Figure 2 is a view in vertical section showing the brush mounting means carried by a short handle.

Figure 3 is a view in elevation showing one arm of the fork for mounting the rotary element, swung to a position where it overlies the other arm of the fork, so that the element driven in this case from the armature shaft, may be entirely free for use.

Figure 4 is a fragmentary view in elevation of a portion of the forked frame, showing how one end of the motor shaft may be free from the fork.

Figure 5 shows the brush in end elevation.

Figure 6 is a section transversely of the main axis of the brush.

Figure 7 is a section showing a long handle with a portion thereof broken away, and showing a portion of the electrical connections.

Referring especially to Figure 2, the elements of a frame for mounting the brush and motor are designated 10 and 11, and one of these elements, namely that designated 10 is shown as extending into the handle 12, and it is to be assumed that it is fixed therein. The element 11 of the forked frame includes an apertured portion, as indicated at 13, and this portion is rotatable with reference to the shank portion 15 of fork member 10. The element 11 may however be secured in a fixed position by means of a thumb screw 16. This construction permits the frame mounting the motor and brush to be employed as in Figure 1, or as in Figure 3, wherein the element 11 has been swung to a position where it lies along side of element 10, so that one end of the armature shaft is free and may mount an element 18 such as a massaging device, or a form of brush differing from that of the other views,—and may in fact mount any element to be rotated in this class of machines or appliances. Element 11 of the forked frame is provided with a notch 11′ adapted to receive the end of the armature shaft, when the parts are in the position of Figures 2 and 4, but the shaft may be released from the notch by releasing plate 21, so that the elements of the frame may be caused to assume the position of Figure 3. Element 10 of the forked frame is provided with a lateral extension, which may be termed a boss, and which is designated 23. The conductors for the motor may lead through this element 23 and through element 10, if desired, and may also extend through shank portion 15, but on the other hand the conducting wires may be otherwise applied and may extend through the long handle 25 when employed or may extend partly outside of the handle, in accordance with well known practice.

The brush structure, and the mounting means therefor include the end members 26 and 27 each having a hub portion, the hub of element 26 being carried by the portion 23 of element 10, whereas end member 27 is provided with a hub directly mounted on the armature shaft 30 of the motor shown conventionally at 31.

The brush 35 includes a type of brush back comprising segmental elements 36 and 37 secured by screws such as 38 to the end members 26 and 27. These elements 36 and 37

are flanged as shown in Figure 2 and are mounted as illustrated. Field magnets for the motor are shown conventionally at 39.

The motor is provided with a two-part housing including the main portion 40 having hub 41 to be secured to the element 23 of element 10, and the cap plate or cover of the housing, designated 43, is apertured for the armature shaft 30, and is secured to the main portion of the motor housing 40, or fits tightly thereover.

In view of the construction specified, brush 35 including the segmental backs 36 and 37 may be removed, and likewise the end members 26 and 27 so that the motor may be employed as in Figure 3, the outer end of the armature shaft 30 being free.

Reference has been made to the fact that a long handle or a short handle may be employed, and the conducting wires may extend through or partly through the handle. Terminal connections including elements detachable from each other, and retained in part by internally threaded collar 45, are shown in the lower portion of Figure 2.

The element 45 is rotatable and has threaded connection with member 15 and abuts block or plug 46, permitting the terminal pins to be carried away from the stationary contacts 48, for breaking the circuit through the conducting wires 49. In Figure 7 sleeve 45′ is connected with a long handle 25 and is rotatable with reference thereto, for the same purpose.

Having described the invention, what is claimed is:

In a device of the kind described, a handle having at one end two spaced elements forming a fork, one of said elements being rigid with the handle and the other element mounted on the fixed element to rotate about the axis of the handle, said fixed element having mounted thereon a motor and housing therefor, the shaft of the motor having an extension beyond the housing for mounting in said rotatable element, and a brush detachably connected to said extension.

In testimony whereof I affix my signature.

MAX KAPLAN.