C. E. CAZEL AND J. W. LE CRAW.

BRUSH.

APPLICATION FILED NOV. 17, 1919.

1,340,931. **Patented May 25, 1920.**

Fig. 1.

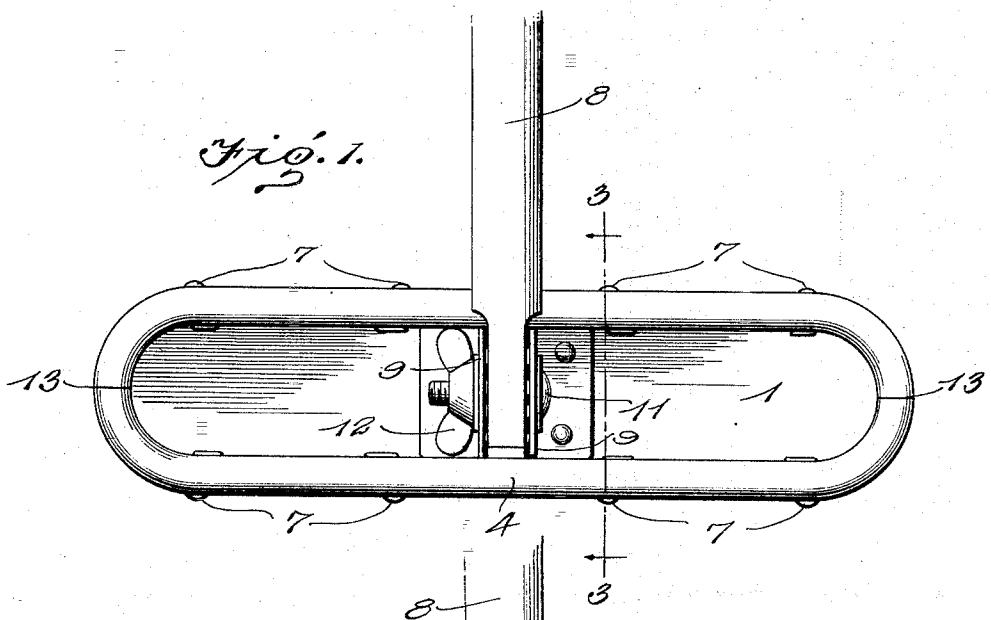


Fig. 2.

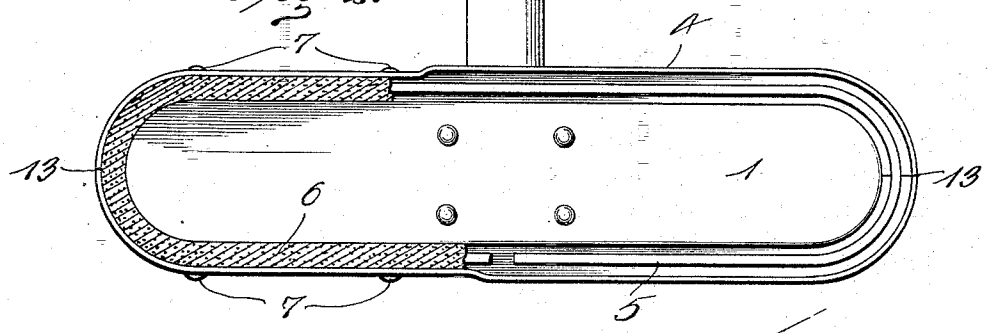
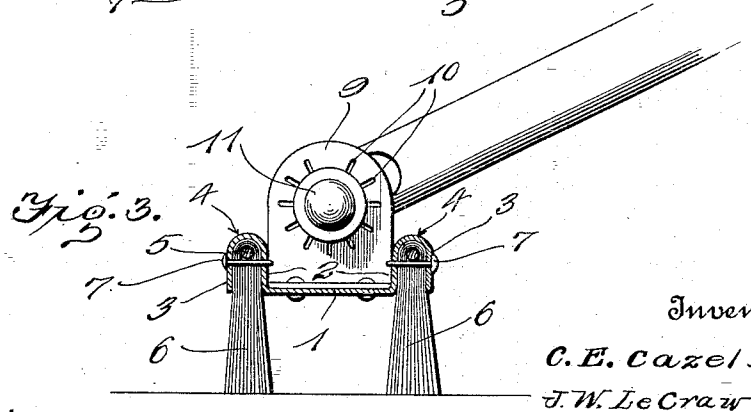


Fig. 3.



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UNITED STATES PATENT OFFICE.

CASSIUS E. CAZEL AND JOHN W. LE CRAW, OF CINCINNATI, OHIO.

BRUSH.

1,340,931. Specification of Letters Patent. Patented May 25, 1920.

Application filed November 17, 1919. Serial No. 338,651.

To all whom it may concern:

Be it known that we, CASSIUS E. CAZEL and JOHN W. LE CRAW, citizens of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Brushes; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in brushes.

The principal object of the invention is to provide a brush which is exceedingly simple in construction, yet highly efficient in use, one in which the bristles of the brush are secured to the head in a novel manner, thereby, greatly reducing the cost of manufacture of the brush.

Other objects and advantages of the invention may become apparent during the course of the following description.

In the accompanying drawing, forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a plan view of a brush constructed in accordance with my invention.

Fig. 2 is a bottom plan view.

Fig. 3 is a transverse section on the plane of the line 3—3 of Fig. 1.

In the drawing, wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 1 indicates a head, which by preference is constructed from a substantially oval-shaped flat metal plate having its entire edge directed upwardly from its upper face as indicated at 2, then oxer and downwardly as indicated at 3, thereby forming a continuous upstanding rib 4. The interior of this rib forms a bristle receiving channel in which a substantially oval-shaped retaining wire 5 is seated. It is obvious that this wire 5 serves to retain the bristles 6 within the aforesaid channel, and in placing these bristles in the channel I fold them over and around the retaining wire in the manner shown. In order to retain the bristles and retaining wire within the channel at all times, I provide headed pins or bolts 7 which extend through the walls 2 and 3 of the rib, and by clenching the end of each pin against the inner wall 2 of the rib it will be seen that the walls of the rib will be moved inwardly toward each other and clamp the bristles tightly between them. With this construction it will be seen that the walls of the rib are substantially vertical and tend to keep the bristles tightly together so that they will not spread and will at all times remain stiff and will not easily become broken.

To complete the brush I employ a suitable handle 8 which may be of wood or any other suitable material and which may be secured to the head in any suitable manner. However, I have shown a pair of vertically disposed plates 9, which are riveted to the head 1 between its opposite ends at approximately the center. Each plate is provided with radial indentations 10 which are formed by stamping them inwardly, thereby providing ribs which bite into the the handle which is secured therebetween by means of the bolt 11 and wing-nut 12. Hence, it will be seen that the handle 8 may be readily adjusted to various angles with respect to the head of the brush as may be desired or required to promote effective use of the brush at all times.

In some instances I have found that in order to form the rib 4, that it will be desirable to provide the plate 1 with slits at its opposite ends as indicated at 13 so that this rib may be more easily stamped in the desired shape.

A brush of the foregoing construction is very simple in construction consists of a few parts, and the head may be stamped from suitable metal by use of dies, thereby greatly reducing the cost of manufacture. With the construction set forth it will also be seen that when the bristles become worn and broken they may be readily removed and replaced by new ones, thus saving the user the expense of buying a new brush. It is also to be noted that the oval shape of the head of the brush will permit it to be effectively used to clean dirt from the corners of the room or the place in which it is used.

The manner of assembling the parts of the brush is thought to be obvious in the foregoing description, therefore further description is deemed unnecessary.

I claim:

1. A brush comprising a head formed from a single sheet of metal stamped around its entire edge to form an endless channel,

a retaining wire seated in said channel, bristles disposed in the channel and folded over and around the retaining wire, and pins passing through the walls of the channel and beneath the retaining wire, whereby when the one end of the pins are clenched the walls of the channel will be bent inwardly toward each other and clamp the bristles tightly between them.

2. A brush comprising a head formed from a substantially oval-shaped flat metal plate having its entire edge directed upwardly from the body of the plate and then over and downwardly to form a continuous upstanding rib, the interior of which forms a bristle receiving channel, an oval-shaped retaining wire seated in the channel, bristles disposed in the channel and folded over and around the retaining wire, pins passing through the walls of said rib and beneath the retaining wire, each pin being clenched against the inner wall of the rib, whereby the bristles will be clamped tightly between the walls of the rib and means secured to the center of the plate to permit a handle to be secured thereto.

In testimony whereof we have hereunto set our hands.

CASSIUS E. CAZEL.
JOHN W. LE CRAW.