J. L. HITZ.

BRUSH.

APPLICATION FILED JAN. 15, 1910.

973,865. Patented Oct. 25, 1910.

Fig. 1

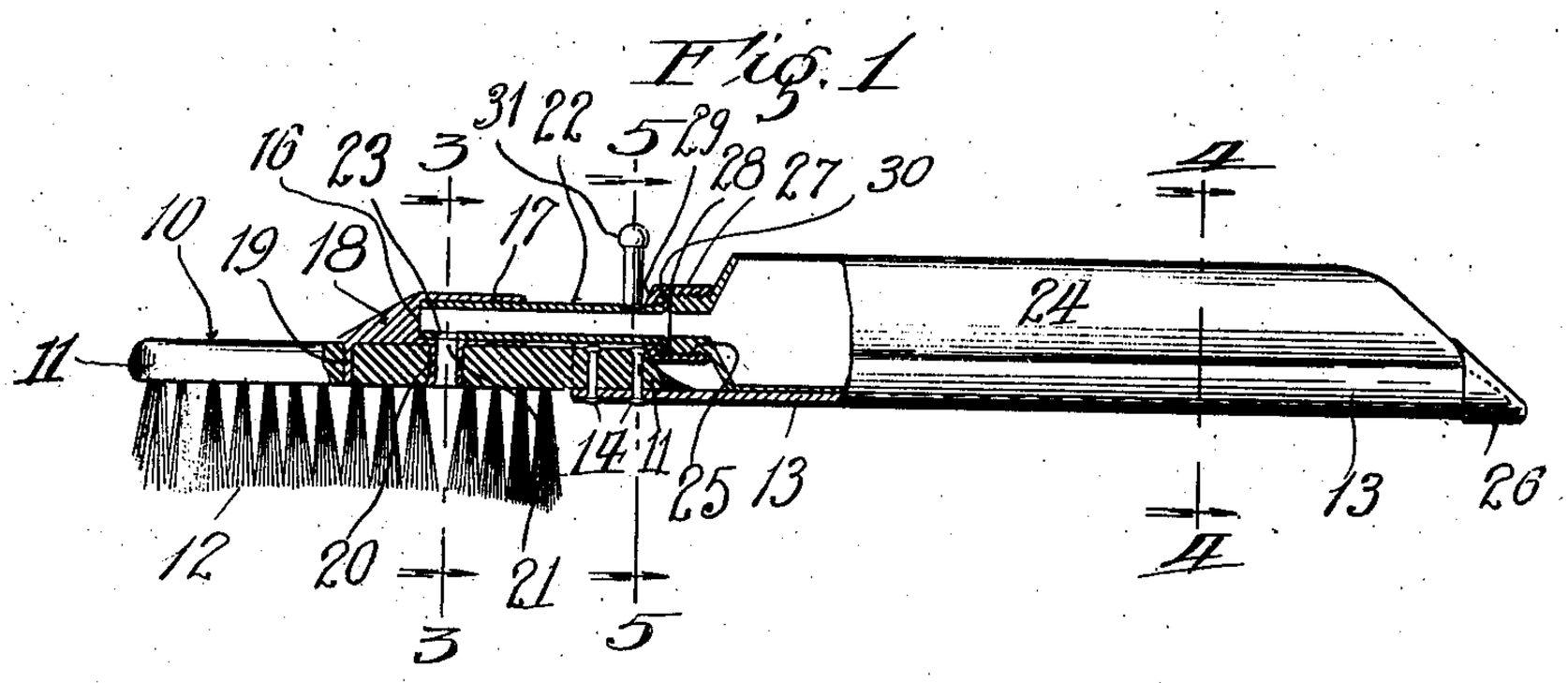


Fig. 2.

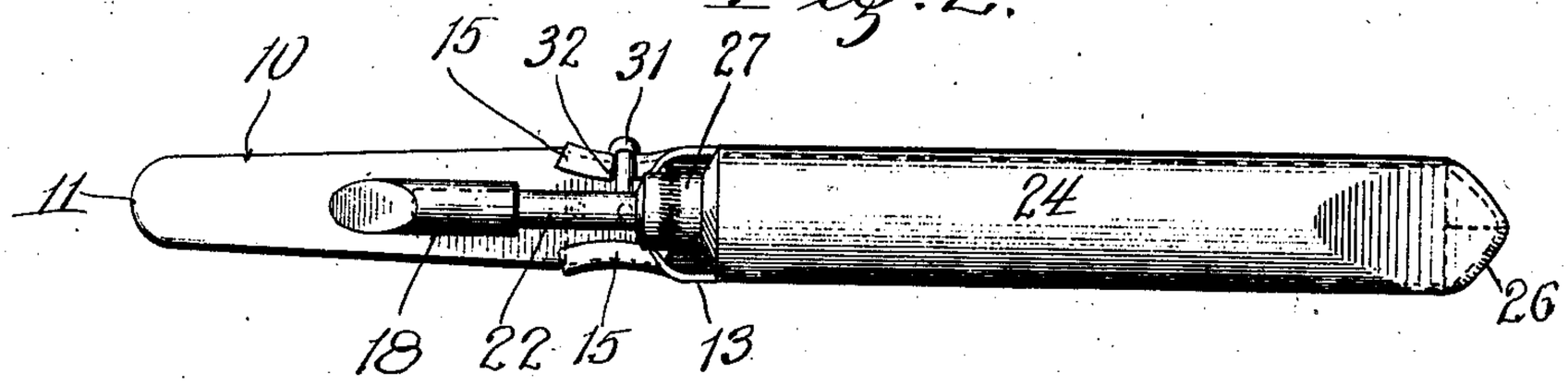


Fig. 3.

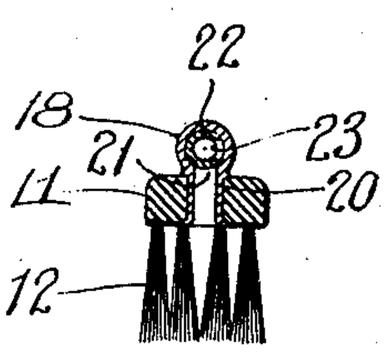


Fig. 4.

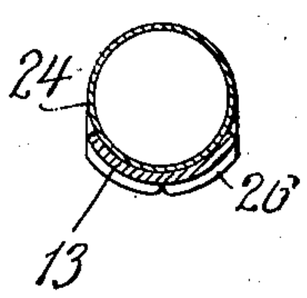
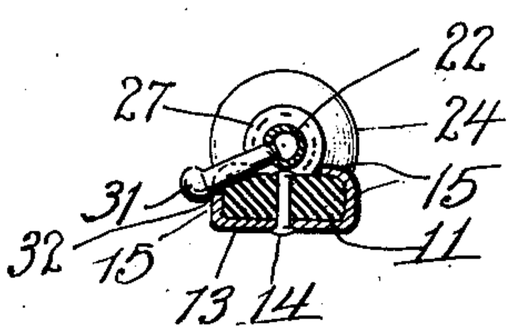


Fig. 5.



Witnesses:
Fannie F. Richards
Jean Agness.

Inventor:
Jesse L. Hitz,
by Charles O. Shorey
his Atty.

UNITED STATES PATENT OFFICE.

JESSE L. HITZ, OF CHICAGO, ILLINOIS.

BRUSH.

973,865. Specification of Letters Patent. Patented Oct. 25, 1910.

Application filed January 15, 1910. Serial No. 538,176.

To all whom it may concern:

Be it known that I, JESSE L. HITZ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Brushes, of which the following is a specification.

This invention relates to brushes, and more particularly to that class of brushes wherein the brush is provided with a magazine or reservoir for containing a supply of the material to be used with the brush.

The object of this invention is to provide an improved form of construction for brushes of this type; to provide means whereby the brush proper and the conduit and valve thereof may be readily cleaned.

Another object is to provide a brush, having a fixed handle, with a reservoir or magazine which communicates with the bristles of the brush by way of a port and closure therefor, whereby the contents may be conducted to the bristles of the brush whenever the port is opened.

The invention consists in the several novel features of construction and arrangement of parts fully described in this specification and particularly pointed out in the claims.

The invention is clearly illustrated in the drawing furnished herewith, in which—

Figure 1 is a side view, partly in longitudinal section, of a brush containing my improvements, Fig. 2 is a plan view thereof, Fig. 3 is a cross section taken on the line 3—3 of Fig. 1, Fig. 4 is a cross section taken on the line 4—4 of Fig. 1, Fig. 5 is a cross section taken on the line 5—5 of Fig. 1.

The invention has been shown in the accompanying drawings as applied to a tooth brush, but it will be readily understood from this specification that the invention may be applied equally as well to brushes of other forms, such as hair brushes, paint brushes, marking brushes and the like, and I desire therefore to be understood as not intending to limit myself to tooth brushes alone.

In the drawings, 10, represents an ordinary tooth brush, having a back 11, in which the bristles 12, are secured and a handle 13, fixed to the back. The handle 13, may be formed integral with the back 11, if desired, or it may comprise a separate piece secured thereto, as for instance by means of rivets 14. The handle is preferably concavo-convex in cross section, in order to receive and accommodate the reservoir as will hereafter appear, and the forward end of said handle is bent up with overhanging flanges 15, that engage with the upper face of the back 11. This construction is preferably used where the back of a standard tooth brush is used and the handle fitted and secured thereto.

The back 11, is preferably provided with a lug or projection 18, which, if desired, may comprise a separate piece, secured thereto as for instance by a rivet 19, and a nipple 20, which extend through the back. The opening or port 21, of the nipple forms part of an L shaped duct or passageway 16, that extends from the bristles and out through the lug 18. Said port 21, communicates with the interior of a hollow stem 22, through a port 23, in said stem. The stem is removably seated in the longitudinal bore 17, which forms part of the L shaped duct 16, and by properly turning said stem 22, the port 23, may be brought into or out of register with the port 21, which leads to the bristles.

Resting in the hollow of the handle is a magazine or tube 24, which is adapted to contain the tooth paste or dentifrice when the invention is applied to a tooth brush, or to contain the substance which it is desired to apply to the bristles when the device is used upon any other kind of a brush. The tube or reservoir 24, may be of any well known form of soft metal tube, having the usual externally screw threaded neck 25, through which the contents are forced out by squeezing together the sides of the tube. In securing the tube upon the handle, the rear end of the tube is preferably flattened down and folded around the end of the handle as shown at 26, in Figs. 1 and 2. This provides a simple form of means for connecting this end with the end of the handle, although it is obvious that various other expedients may be provided for accomplishing this purpose.

The neck 25, communicates with the hollow stem 22, and an internally threaded coupling 27, is provided for securing the tube upon said hollow stem 22. In the form shown, said hollow stem is provided upon one end with an outwardly projecting flange 28, and the coupling 27, is provided with a flange 29, which overhangs the flange 28, of the hollow stem 22. If desired a washer 30, may be interposed between the flanges of the hollow stem and coupling to prevent leakage. The coupling 27, is screwed down

upon the neck 25, of the tube to connect the two parts, and the hollow stem 22, is left free to turn in the coupling. A pin or other projection 31, extends out from said hollow stem and forms a handle by means of which the stem may be turned to bring the port 23, into or out of register with the port 21. A stop is provided for the pin 31, and as shown, comprises a notch 32, formed in the flange 15, of the handle. The paste tube is positively prevented from any longitudinal movement upon the handle by the seating of the pin 31, in the notch, and consequently is secured thereon against accidental displacement. The folded end 26, of the tube which is wrapped around the end of the handle, assists in holding the ends of the tube and handle together.

In the use of the brush, the tube or reservoir 24, is coupled with the hollow stem 22, by means of the coupling 27, the stem slid into the bore 17, the pin 31, swung down into the notch 32, and the rear end secured to the end of the handle. By lifting the pin 31, and thereby turning the hollow stem 22, until the port 23, registers with the port 21, communication is established between the interior of the tube and the bristles of the brush. By pressing upon the tube near its rear end, the contents may be forced out through the hollow stem, port 21, and in between the bristles of the brush. When sufficient material has been fed to the bristles, the pin 31, is swung back into the notch 32, thereby closing the port to the bristles and locking the tube to the handle. Whenever it is desired to clean the brush, the pin 31, is lifted out of the notch and the connected paste tube and hollow stem withdrawn from the bore 17, whereupon water may be passed through the ports in the brush.

I am aware that various alterations and modifications of this device are possible without departing from the spirit of my invention, and I do not therefore desire to limit myself to the exact form of construction shown and described.

I claim as new and desire to secure by Letters Patent:

1. The combination with a brush having a fixed handle, and provided with a duct having a port communicating with the bristles of the brush, of a collapsible reservoir carried by said brush, a hollow stem secured upon and extending from said reservoir to said duct and arranged to open and close said port.

2. The combination with a brush having a fixed handle, of a reservoir removably secured thereto against relative movement, and a hollow stem communicating with the interior of said reservoir and with a duct in the brush which leads to the bristles, and arranged to open and close said port.

3. The combination with a brush having a fixed handle and provided with a duct having a port communicating with the bristles, of a reservoir removably secured to said handle against relative rotatory movement and having an externally screw threaded neck, a hollow stem communicating with the interior of said reservoir and arranged to cover and uncover said port and a coupling for securing said hollow stem upon the neck of the reservoir.

4. The combination with a brush having a fixed handle and provided with a duct having a port communicating with the bristles, of a collapsible reservoir removably secured to said handle against relative rotatory movement and having an externally screw threaded neck, a hollow stem in communication with the interior of the reservoir and having a port adapted to register with said port and a coupling for connecting said hollow stem with the neck of the reservoir.

5. The combination with a brush having a fixed handle and a lateral projection formed with a duct having a port communicating with the bristles of the brush, of a collapsible paste tube, one end of which is removably secured to the handle, and the other end of which is provided with an externally screw threaded neck, a hollow stem seated in said duct and arranged to open and close said port and a coupling threaded upon said neck and arranged to connect the hollow stem therewith.

6. The combination with a brush having a fixed handle, and provided with a duct having a port communicating with the bristles of the brush, of a collapsible tube held upon said handle and having a screw threaded neck upon one end, and a hollow stem connected with said neck and removably seated in said duct, said stem being arranged to open or close said port.

7. The combination with a brush having a fixed handle, and a projection on its back provided with an L shaped duct having a port leading to the bristles, of a tube resting in said handle and having a screw threaded neck, a rotatory hollow stem, one end of which is coupled to the neck of the tube and the other end of which is removably seated in the L shaped duct and arranged to open and close said port.

8. The combination with a brush having a fixed handle and provided with a duct having a port leading to the bristles of the brush, of a collapsible tube resting in said handle, and having a neck on one end, a hollow stem rotatively connected to said neck, and removably seated in said duct and adapted to open and close said port, a pin projecting from said hollow tube, and a stop on the handle coöperating with said pin to lock the tube against longitudinal movement upon the handle.

9. The combination with a brush having an L shaped duct leading to the bristles of the brush, of a hollow stem seated in one arm of said L shaped duct and having a lateral port adapted to be brought into or out of register with the other arm of said L shaped duct and a paste tube coupled with said stem and detachably secured to said handle.

In witness whereof, I have hereunto subscribed my name at Chicago, Cook county, Illinois, this 12th day of January A. D. 1910.

JESSE L. HITZ.

Witnesses:
CHARLES O. SHERVEY,
FANNIE F. RICHARDS.