W. B. FOSTER & A. H. DUWELIUS.

BRUSH.

APPLICATION FILED APR. 29, 1912.

1,072,322.

Patented Sept. 2, 1913.

Fig. 1.

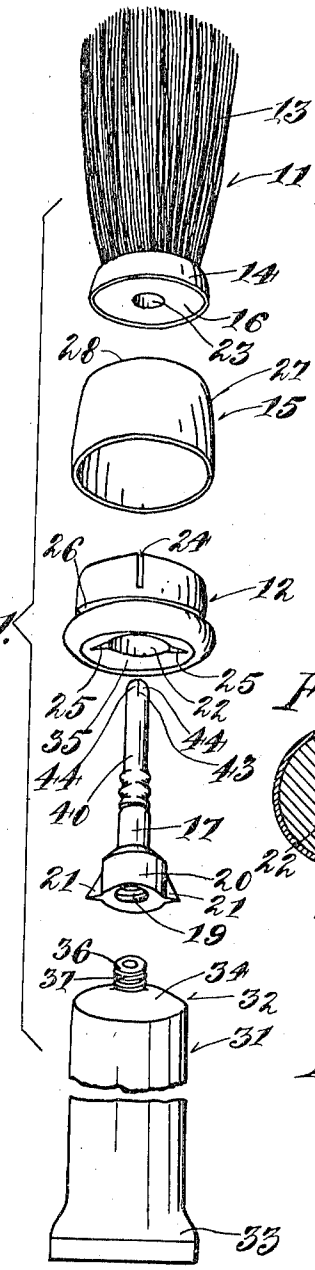


Fig. 2.

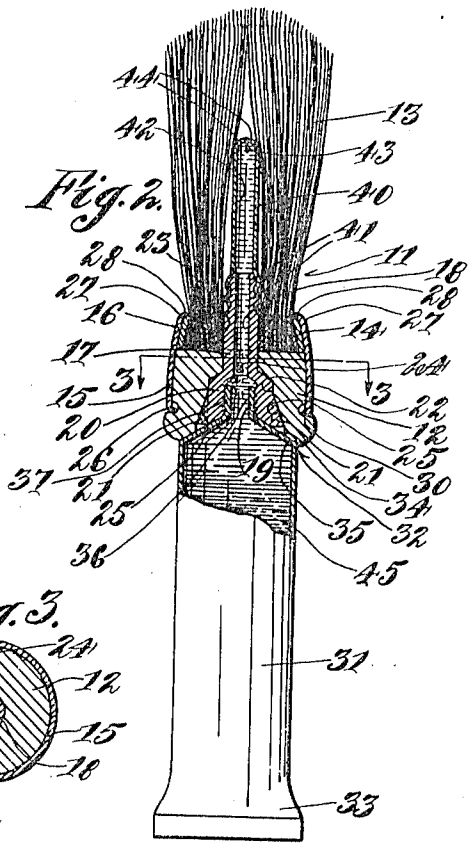


Fig. 3.

Fig. 5.

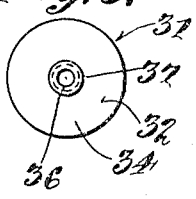
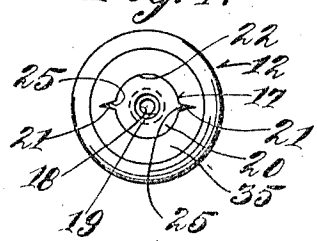


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

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BRUSH.

1,072,322. Specification of Letters Patent. Patented Sept. 2, 1913.

Application filed April 29, 1912. Serial No. 693,954.

To all whom it may concern:

Be it known that we, WILLIAM B. FOSTER, residing at Norwood, in the county of Hamilton and State of Ohio, and ALFRED H. DUWELIUS, residing at Cincinnati, in said county and State, have jointly invented certain new and useful Improvements in Brushes, of which the following is a specification.

It is the object of our invention to provide a simple and efficient brush having a collapsible handle by means of which the brush is manipulated and which is arranged to contain a preparation directed to the bristles through a feeding tube having connection with the collapsible handle, and the invention consists in the novel construction and arrangement of the parts and will be more readily understood from the following description and claim, and from the drawing, in which latter:

Figure 1 is a perspective view of the parts of our improved device in separated relation, the collapsible handle being partly broken away. Fig. 2 is a central axial section of the same. Fig. 3 is a cross-section on a line corresponding to the line 3—3 of Fig. 2. Fig. 4 is an end elevation of the inner end of the head of the brush, showing its conical end-abutment socket for the collapsible handle; and, Fig. 5 is an end elevation of the inner end of the collapsible handle, showing its conical abutting end coacting with the conical wall of said socket.

We have illustrated our invention as contained in a shaving brush, the collapsible handle being arranged to contain a suitable shaving cream, and we have described our invention in connection with such exemplification thereof, it being understood that the same can be applied to brushes adapted for other uses without departing from the spirit of our invention.

11 represents the head of the brush, which is shown as comprising a supporting body 12, a body of bristles 13 set in a bristle-cap 14, and a ferrule 15. The body of bristles is suitably secured in the cap as by an adhesive composition shown at 16.

17 is a conveyer-tube provided with a conveyer-bore 18, the inner end of which is screw-threaded at 19, within the enlargement 20 of said tube, the enlargement being provided with fins 21. The conveyer-tube extends through the head into the body of bristles.

The supporting body is provided with a bore 22 and the bristle-body with a bore 23 through which the conveyer-tube 17 extends. The supporting body is preferably provided with a slot 24 meeting the bore 22 and extending part way of the length of said body from its outer end, and with incisions 25 in which the fins 21 are received. The supporting body is also preferably provided with an annular groove 26.

The ferrule preferably contacts toward its outer end as shown at 27, and is provided with an outer inwardly extending flange 28. The diameter of the outer end of the supporting body with relation to the inner diameter of the ferrule at its point of contact therewith is such, that when the inner end of the ferrule is spun into the annular groove 26 for forming an inner annular flange 30, for locking the parts together, the outer end-portions of the supporting body will squeeze against the conveyer-tube by reason of the reducing diameter of the contracting end of the ferrule, in order to firmly hold the conveyer-tube in place, the slots 24 permitting approach of the body-portion at the sides thereof against said tube. The fins further aid in preventing displacement of said tube.

31 is a collapsible handle having a head-end 32. This handle is formed hollow and is preferably cylindrical for the greater portion of its length and composed of a soft easily bent metal, the outer end of the tube being flattened as shown at 33, the collapsible handle being arranged to be rolled upon itself from its flattened end for gradually forcing the contents of the collapsible handle therefrom. The head-end of the collapsible handle is preferably conical as shown at 34, the inner end of the head 11 being provided with a similarly formed conical end-socket 35. The head end 32 of the collapsible handle is formed with a protruding conveyer-teat 36 having a screw-threaded periphery 37, arranged to be screwed into the screw-threaded portion 19 of the bore. When the conveyer-teat is screwed in place in the manner stated, the conical end-wall of the collapsible handle is seated against the conical bottom of the conical socket 35, whereby a rigid relation between the collapsible handle 31 and the head 11 is obtained, by reason of the distribution of the end-contacting force between the head-end of the collapsible handle and the conical

bottom-wall of the socket. These walls are firmly drawn together by the threaded connection between the threaded conveyer-teat and the threaded inner end of the conveyer-bore. By this means the collapsible handle forms a rigid connection with the body of the brush proper for being readily and effectively employed as a handle for the brush.

40 is a flexible conveyer-tube, for instance of rubber, extending outwardly from the conveyer-tube 17, to which it is shown conveniently secured, as by being passed over ribs 41, this flexible conveyer-tube being provided with a conveyer-bore 42 terminating in an outer conveyer orifice, shown as a slit 43, forming a mouth provided with resilient lips 44 normally closed. When sufficient collapsing pressure is exerted upon the collapsible handle, the shaving cream exudes from the mouth, which however will close and sever the exuded cream upon release of said pressure. Upon lateral pressure being brought against the bristles for abnormally flexing the same, the flexible conveyer-tube is flexed and the normal relation of the lips is changed so as to permit the passage of a slight quantity of shaving cream therethrough. The quantity of the preparation to be fed can thus be nicely regulated. The collapsible handle forms a collapsible receptacle for the preparation, for instance, a body of shaving cream 45.

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

In combination, in a brush, a supporting body provided with a bore and a slot in the outer end of said supporting body meeting said bore and extending part way lengthwise of said supporting body, a bristle-body, a conveyer-tube in said bore and extending into said bristle-body, and a ferrule contracting toward its outer end for squeezing the outer end-portions of said supporting body at the side of said slot therein toward said conveyer-tube, and thereby rigidly securing said tube in said supporting body, and means for rigidly connecting the inner end of said ferrule with said supporting body.

In testimony whereof, we have hereunto signed our names in the presence of two subscribing witnesses.

WILLIAM B. FOSTER.
ALFRED H. DUWELIUS.

Witnesses:
EDWARD SOUTHWORTH,
THERESA SILBER.