

F. W. R. BRADFORD.
 COMBINED BRUSH AND CAP FOR BOTTLES AND SIMILAR CONTAINERS.
 APPLICATION FILED SEPT. 8, 1910.

988,544.

Patented Apr. 4, 1911.

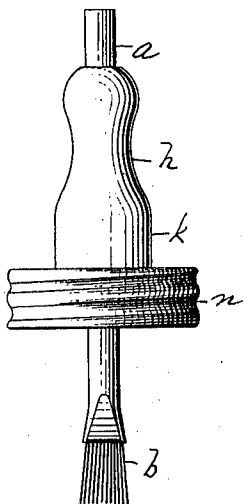


FIG. 1.

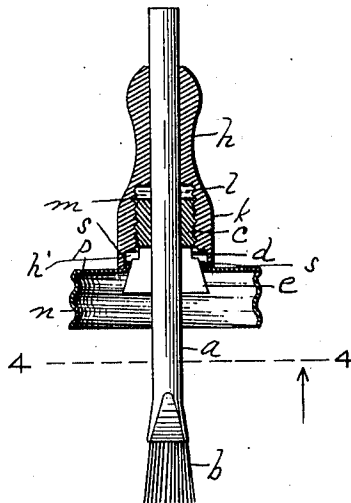


FIG. 2.

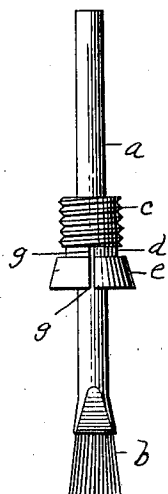


FIG. 3.

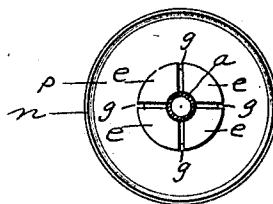


FIG. 4.

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FRED W. R. BRADFORD, OF MELROSE, MASSACHUSETTS.

COMBINED BRUSH AND CAP FOR BOTTLES AND SIMILAR CONTAINERS.

988,544.

Specification of Letters Patent.

Patented Apr. 4, 1911.

Application filed September 6, 1910. Serial No. 580,591.

To all whom it may concern:

Be it known that I, FRED W. R. BRADFORD, a citizen of the United States, residing in Melrose, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Combined Brush and Cap for Bottles and Similar Containers, of which the following is a specification.

This invention relates to a combined brush and cap intended particularly, but not necessarily exclusively, for use in connection with bottles for containing mucilage or other adhesive substance, and the invention relates specifically to that class of combined brushes and caps in which the brush is longitudinally adjustable and in which the brush may be locked at any desired height with relation to the cap, whereby the degree of dip with relation to the adhesive contained in a bottle may be regulated or controlled.

The invention consists in the novel construction and arrangement of parts fully described below, and illustrated in the accompanying drawings, in which:—

Figure 1 is an elevation of a combined brush and cap embodying my invention. Fig. 2 is a vertical section of the same, the brush and stem being shown in elevation. Fig. 3 is an elevation of the brush, the stem thereof, and the sliding clamp on the stem. Fig. 4 is a section taken on line 4—4, Fig. 2, looking upward.

Similar letters of reference indicate corresponding parts.

The device comprises a brush, cap, locking-handle, and clamp. The brush consists of a smooth stem *a* to which the brushing portion *b* is secured in any suitable manner, such brushing portion being of any suitable style, that illustrated consisting of bristles. The clamp consists of a circular screw-threaded portion *c*, the annular plain or unthreaded portion *d* next below the screw-threaded portion, and the flaring or cone-shaped portion *e*, the three portions *c*, *d* and *e* being preferably integral or of a single piece, and being tubular, and of suitable size and shape to fit normally slidably on the circular stem *a*. Below the threaded portion the clamp is provided with a plurality of vertical and radial slits or kerfs *g* which extend to the lower end and entirely through the clamp, preferably four in number, said kerfs being made of sufficient width to allow the conical portion *e* to be contracted until said portion is rendered friction-tight on the

stem *a*. The locking-handle or locking-nut comprises the handle portion *h* centrally bored to receive the sliding stem *a*, and the portion *k* provided with a recess *l* and screw-threaded at *m*, whereby the locking-handle may engage with the threaded portion *c* of the sliding clamp. The cap, which is adapted to rest on the upper end of the neck of a mucilage bottle, consists of the screw-threaded sides *n*, and the top *p*, said top being provided with a central opening which is surrounded by an annular upturned and preferably slightly inturned, lip *s*. This opening is of such a diameter as to allow the lip *s* to rest normally on the conical portion *e* next or near its upper end and just below the plain portion *d* of the locking-slide.

In practical operation, the dip of the brush into the bottle is regulated as to height by raising or lowering the stem *a* and then screwing the locking-handle *h*, *k* down on the thread *c*, whereby the bottom of the portion *k* of said handle is brought snugly against the part *p* of the cap around the lip *s*, forcing said lip downward for a short distance on the surface of the conical portion *e*, causing said portion *e* to contract by reason of the slits or kerfs *g* and thus be pressed firmly against the surface of the stem *a*, whereby the locking-slide *c*, *d*, *e* is held rigidly upon said stem by friction and the opening in the cap closed practically air tight. When the stem is to be raised or lowered in the cap for the purpose of increasing or diminishing the length of the dip, the locking-handle *h* is turned and raised on the thread *c*, thus lifting its lower end from engagement with the top *p* of the cap around the lip *s*, and when a suitable height is reached the locking-handle is again turned down upon the cap, contracting the portion *e* of the locking-slide and setting it rigidly against the stem of the brush. The plain annular portion *d* permits the conical portion or plug *e* to move up and down freely in the enlarged recess *h'* at the lower end of the handle *h*, without clamping action against the upper end of said enlarged recess.

It is evident that setting or locking the slide against the stem by means of the locking-handle occupies but an instant of time, as the handle travels but a slight distance down, the relative vertical movement of the slide within the lip *s* and locking-handle necessary to lock the slide into engagement with the stem being very slight.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is:—

1. In a combined brush and cap of the character described, a cap provided with an opening and having a flange surrounding said opening, a brush whose stem is adapted to extend through said opening, a sliding clamp on said stem comprising a tubular externally screw-threaded portion and a tubular conical portion provided with slits or kerfs extending from its end said conical portion extending into the opening in the cap and engaging said flange, and a handle-nut sliding on the stem and in engagement with the screw-threaded portion of the sliding clamp.

2. In a combined brush and cap of the character described, a cap provided with an opening, a brush whose stem is adapted to extend through said opening, a tubular conical externally screw-threaded sliding clamp on the stem provided with radial slits or kerfs extending from its outer surface through to the passage therein, and a handle-nut sliding on the stem and in engagement with the screw-threaded portion of the conical clamp, said conical clamp being adapted to extend up through the opening in the cap whereby said opening is practically closed air tight.

3. In a combined brush and cap of the character described, a cap provided with an opening and with an upturned lip at the edge of said opening, a brush whose stem is adapted to extend through said opening, a sliding clamp on said stem comprising a

tubular externally screw-threaded portion and a tubular conical portion provided with slits or kerfs extending from its end said conical portion extending into the opening in the cap, and a handle-nut sliding on the stem and in engagement with the screw-threaded portion of the sliding clamp.

4. In a combined brush and cap of the character described, a cap provided with an opening, a brush whose stem is adapted to extend through said opening, a tubular sliding clamp on said stem and intermediate of the stem and the cap said clamp comprising a screw-threaded portion, a conical portion provided with substantially radial slits or kerfs and an intermediate annular portion between the screw-threaded portion and the conical portion, and a handle-nut sliding on the stem and in engagement with the screw-threaded portion of the clamp.

5. In combination with a perforated cap adapted to be secured to the neck of a bottle and a brush-stem adapted to extend through said cap, a tubular externally screw-threaded contractible sliding clamp on the stem and within the opening in the cap, and means for contracting said clamp into rigid and friction-tight and practically air tight relation with the stem and with the cap.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRED W. R. BRADFORD.

Witnesses:

HENRY W. WILLIAMS,
M. A. ATWOOD.