May 10, 1927. 1,627,634

A. E. COYNE

BRUSH

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FIG. 1

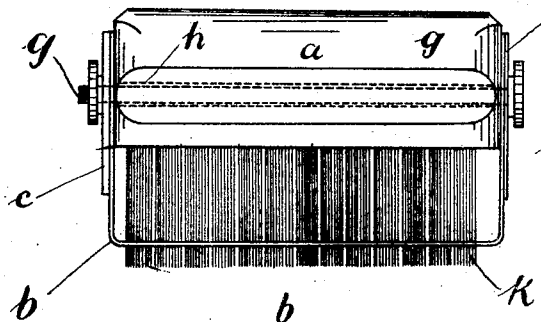


FIG 2

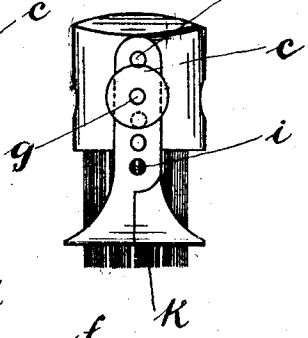


FIG. 3

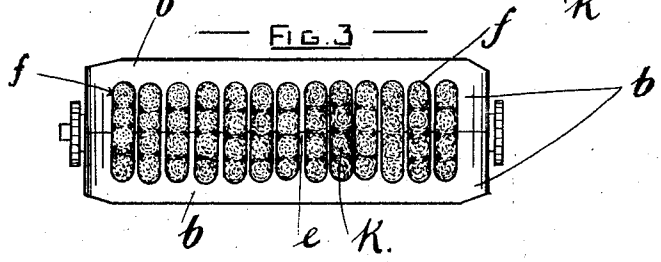


FIG 4

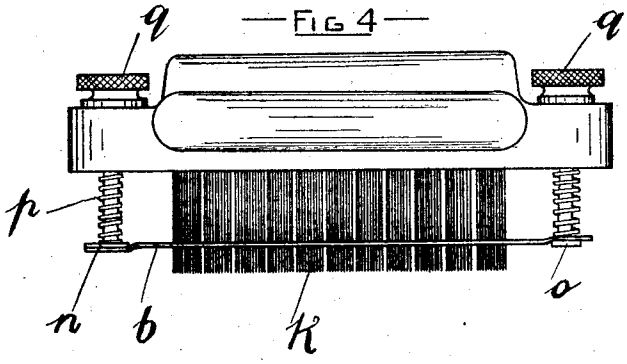


FIG 5

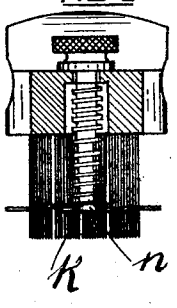
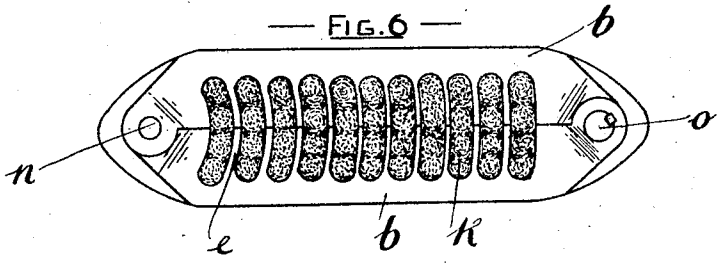


FIG. 6



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Fig 7

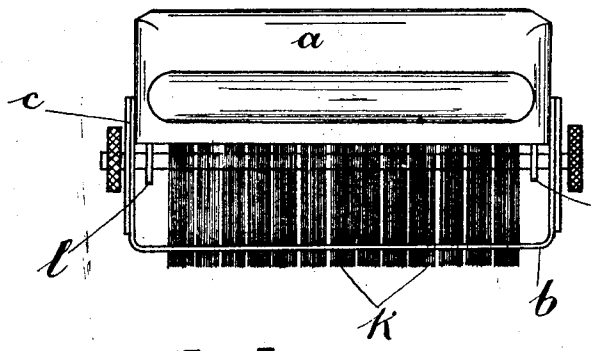


Fig 8

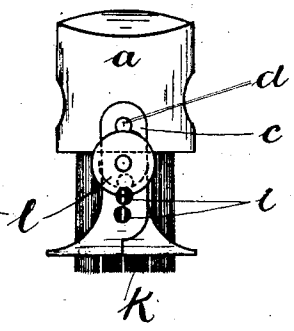


Fig 9

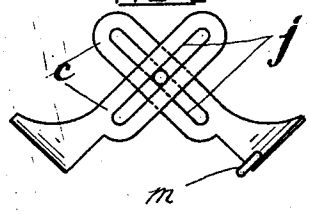


Fig 10

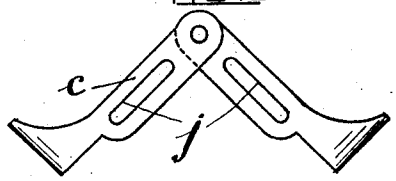
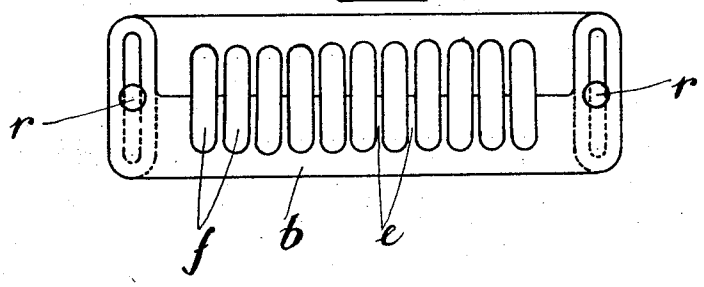


Fig 11



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UNITED STATES PATENT OFFICE.

ALBERT EDWARD COYNE, OF SHEFFIELD, ENGLAND, ASSIGNOR TO ANDREW PAGE, OF LEEDS, ENGLAND.

BRUSH.

Application filed June 9, 1925, Serial No. 35,921, and in Great Britain June 18, 1924.

This invention relates to brushes and to guards or bristle supports therefor, of the kind wherein the guard is adjustable relative to the back of the brush so that as the bristles become worn, the guard can be adjusted towards the back of the brush to present or afford a fresh and unused length of bristle, the chief object being to provide nail brushes with bristle guards of this type with a view to enabling refills to be readily fitted when the brush or bristles have become worn.

According to the invention the guard or support for the bristles comprises an adjustable comb-like member, the teeth of which are adapted to enter, sideways or laterally, the spaces between the rows or tufts of bristles. In an embodiment of the invention the comb-like member is made in two parts capable of being adjustably supported on the brush so as to enable the teeth of each part to be moved towards or away from each other between the spaces afforded by the bristles, the teeth of the two comb-like parts when closed affording slots through which the ends of the bristles project or protrude. The means for securing or holding the comb-like member in position are such as to permit of the member being adjusted to or away from the back or stock of the brush according to the length of the bristles.

In order that the invention may be clearly understood and readily carried into effect the same will now be more fully described with the aid of the accompanying drawings in which:—

Figure 1 is a side elevation of a brush fitted with a bristle guard or support according to the invention.

Figure 2 is an end view and Figure 3 an inverted plan of Figure 1.

Figures 4, 5 and 6 are similar views of Figures 1, 2 and 3 respectively of a modification, Figure 5 showing a section taken on line x—x of Figure 4.

Figures 7 and 8 are side elevations of a further modification hereinafter referred to.

Figures 9 and 10 are detail views showing modified forms of adjusting means.

Figure 11 is a plan view showing an alternative method of mounting the parts of the comb-like member relatively to each other.

Referring now to the drawings, a is the brush and b, b, are the comb-like members of which two are preferably provided, and in a convenient construction they are formed or provided with end flanges or brackets c at substantially right angles to their length. These end flanges c are pivoted together at each end of the device about a common axis d so that the teeth e of one member may be brought opposite to the teeth e of the other to form a series of slots f in the device when the two comb members b are brought edge to edge. The end flanges c are adapted to be clamped or otherwise fitted to the ends of the back of the brush a, conveniently by means of a rod g passing through a longitudinal hole h in the back of the brush and engaging holes i (see Figure 2) or slots j (see Figure 9) in over-lapping portions of the end flanges c. Or the clamping rod g may pass between the bristles k (see Figures 7 and 8) and be held to the back of the brush a by staples, brackets or the like l. If desired, the clamping rod g may also form the pivot connecting the end flanges c (see Figure 9).

In fitting the device to a brush, the bristles of which are disposed in parallel transverse rows (Figures 1 to 8), the two comb members a are moved apart about their pivotal connection d and then brought edge to edge with their teeth e entering the spaces between adjacent rows of bristles k. The comb members b are then adjusted the desired distance from the operative ends of the bristles k and are locked together and clamped to the back of the brush a by means of the clamping rod g engaging the holes i or slots j in the over-lapping portions of the end flanges c and passing through the longitudinal hole h in the back of the brush a.

When the clamping rod g forms the pivot of the end flanges or brackets c means are preferably provided for preventing relative movement of the comb members after adjustment. Such means may comprise a spring clip, or catch m (see Figure 9) with a pin engagement or otherwise as may be found convenient. In some cases the clamping rod g may be disposed in a slot or recess in the back of the brush instead of a hole.

As shown in Figures 4, 5 and 6, the comb members b are provided with extensions and are movable about a pivot n parallel to the bristles k. In this case they are pivoted at

one end only, their other ends being locked together by a stud or other suitable projecting member *o* from the back of the brush *a*. The device in this example will preferably be supported by springs *p* holding it against heads on the pivot *n* and locking stud *o*, adjustment being effected by moving these heads towards or away from the back of the brush *a*, which may conveniently be effected by screwing, both the pivot *n* and the locking stud *o* being in the form of bolts engaging nuts *q* which may be recessed into the back of the brush. With this modification the bristles *k* are preferably arranged in a series of arc-shaped rows concentric with the pivot *n* (see Figure 6). If desired, however, the pivotal movement may be replaced by a sliding motion of the comb members *b* towards and away from one another, as indicated at Figure 11, by means of over-lapping extensions which are slotted and engaged by bolts, studs or the like *r* projecting from the back of the brush parallel to bristles.

What I claim as my invention and desire to secure by Letters Patent is:—

1. The combination with a brush, of a guard having teeth adapted to enter spaces between the bristles of the brush, and means connecting the guard with the brush and permitting bodily movement of the guard to and from the brush back and also movement of the guard teeth into and from spaces between the bristles of the brush.

2. The combination with a brush, of a guard comprising two members, each having a body provided with teeth, adapted to enter spaces between the bristles of the brush, and provided with lateral extensions which are adjustably connected to the ends of the brush back, whereby the guard may be bodily adjusted toward and from the brush back and the members thereof can be moved relative to each other to cause the teeth thereof to enter or be withdrawn from spaces between the bristles in any adjusted position.

3. The combination with a brush, of a guard comprising two members, each having a body provided with teeth, adapted to enter spaces between the bristles of the brush, and provided at its ends with lateral extensions, and a rod connecting the brush back and said extensions, whereby the members of the guard may be rocked about their connection with said rod to move the teeth thereof into and from spaces between the bristles.

4. The combination with a brush, of a guard comprising two members, each having a body provided with teeth, adapted to enter spaces between the bristles of the brush, and provided at its ends with lateral extensions which overlie the ends of the back of the brush, and pivotal connections between the said extensions of the guard members and the back of the brush.

5. The combination with a brush, of a guard comprising two members, each having a body provided with teeth, adapted to enter spaces between the bristles of the brush, and provided at its ends with lateral extensions which overlie the ends of the back of the brush, and having apertures therein, and a rod connected with the brush back and extending through aligned apertures in the said extensions on the guard members, for the purpose described.

6. The combination with a brush, of a guard and support for the bristles thereof, comprising members having teeth which project between the brush bristles, said members having extensions, and means associated with the extensions for securing the members to the body of the brush and permitting adjustment of the members toward and from the brush back, said means also permitting adjustment of the toothed members toward and from each other.

ALBERT EDWARD COYNE.