July 30, 1929. H. NICKELS 1,722,479

BRUSH

Filed April 2, 1928

Fig. 1.

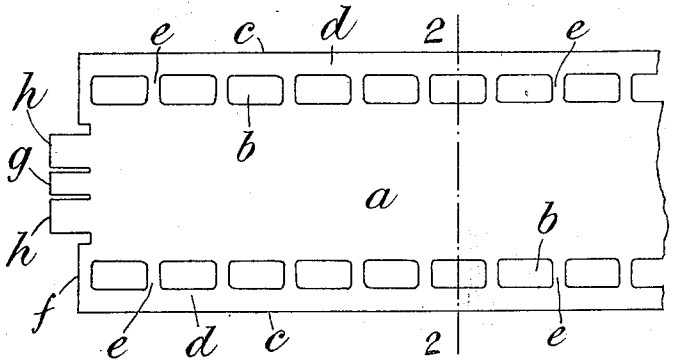


Fig. 2.

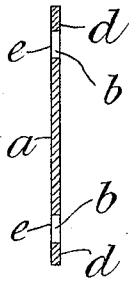


Fig. 3.

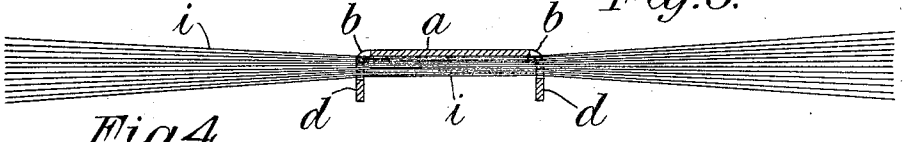


Fig. 4.

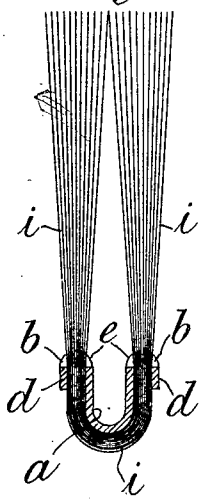


Fig. 5.

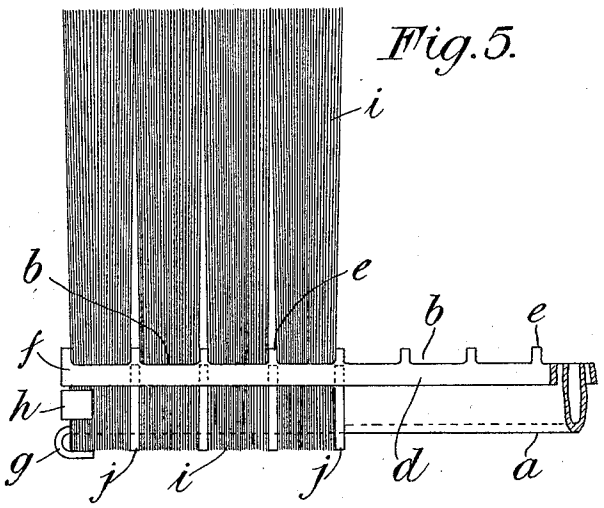
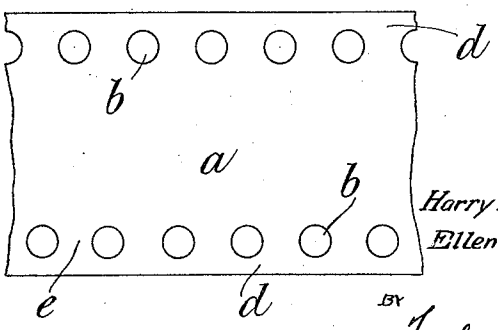


Fig. 6.



INVENTOR.
Harry Nichels, DECEASED.
Ellen Nichels,
ADMINISTRATRIX.

BY
Toulmin & Toulmin
Attorneys

Patented July 30, 1929. 1,722,479

UNITED STATES PATENT OFFICE.

HARRY NICKELS, DECEASED, LATE OF MIDDLESBOROUGH, ENGLAND, BY ELLEN NICKELS, ADMINISTRATRIX, OF MIDDLESBROUGH, ENGLAND.

BRUSH.

Application filed April 2, 1928, Serial No. 266,700, and in Great Britain April 8, 1927.

This invention relates to brushes of the type wherein the tufts of bass, hair, wire or the like are permanently secured in one or more deformable holders of U or channel cross-section.

The object of the invention is to provide an improved holder for this type of brush.

A tuft holder made in accordance with this invention is channel shaped and made of aluminium, steel, or other suitable material, tufts of bass, hair, wire, or the like being disposed around the outer surface of said channel shaped holder, the ends being passed through holes or slots, in the holder near the outer longitudinal edges thereof, the borders of the holder outside the holes being adapted to be turned down outwardly so as to clip the tufts of bass, hair, wire, or the like in position, and means being provided whereby the said tufts are prevented from moving laterally along the holder.

The holder may be modified in detail construction as will be evident from the several figures of the accompanying drawings, wherein:—

Fig. 1 is a plan view of a plate of suitable material suitably cut out in one form before it is bent and otherwise formed into the holder.

Fig. 2 is a transverse sectional view on line 2—2 of Fig. 1.

Fig. 3 is a transverse sectional elevation of the plate shown in Fig. 1 and illustrating a further stage in the construction of the holder.

Fig. 4 is a transverse sectional view showing the brush unit in its complete state.

Fig. 5 is a side elevation, one part thereof showing the brush unit complete, whilst the other part shews the channel shaped holder only.

Fig. 6 is a plan view of a modified form of plate from which the holder is formed.

Referring to Figs. 1 to 5, a plate *a* of suitable material such as aluminium, steel, or the like is stamped or otherwise formed into the shape shown in Fig. 1, wherein *b* are holes or slots formed in two rows near each longitudinal edge *c* of the plate *a* so as to leave borders or margins *d*, *d*, and ribs *e*, *e*, between each adjacent hole *b* in a row. Each end *f* of the plate *a* is formed with three tabs, a central one *g*, and two outer ones, *h*, *h*, each outer tab *h*, *h*, being disposed between the central tab *g* and the corresponding row of holes *b*.

The holder is formed by bending each side *c c* of the plate *a* downwardly at right angles, the line of bending being approximately along the inner edges of the holes *b* so that the portions of the plate *a* containing said holes will project downwardly. A tuft *i* of bass, hair, wire or the like is then passed through each hole *b* in one side of the plate, then under the plate, and out through the holes *b* in the other side of the plate, as illustrated in Fig. 3. The plate *a* is then bent upwardly about its medial longitudinal line into a U or channel shape, and the borders or margins *d d* are bent further downwardly until they are approximately parallel to the arms of the U-shaped plate *a* when they are pressed so that the tufts of bass or the like *i* are gripped tightly between the borders *d*, *d*, and the arms of the plate or holder *a* as shown in Fig. 4. Before the borders *d* are pressed finally into position strips of cane *j* are placed between the tufts *i* on the outer face of the holder *a*, so as to prevent, together with the ribs *e e*, the tufts *i* from moving laterally along the holder *a*. The central tabs *g* at each end of the holder *a* are bent under the end tufts *i*, whilst the outer tabs *h h* are bent round the sides of the end tufts so as to retain them in position.

The holder *a* together with the tufts *i* of bass or the like are secured in the stock of the brush by any suitable means, for example, the channel shaped holder may be inserted into a correspondingly shaped longitudinal groove in the stock and pins or screws passed through the ends of the stock will project into the ends of the channel shaped holders and so prevent the holders from being withdrawn until said pins or the like are withdrawn.

The holes *b* may be rectangular as shown in Fig. 1, or circular as shown in Fig. 6, or any other suitable shape, and the holes in opposite rows may be exactly opposite each other as shown in Fig. 1 or staggered as shown in Fig. 6.

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

1. A tuft holder for brushes having a channel shape, and holes or slots near its outer longitudinal edges, tufts of flexible

material being disposed around the outer surface of said channel shaped holder, the ends being passed through the holes or slots in the holder near the outer longitudinal edges thereof.

2. A tuft holder for brushes having a channel shape, and holes or slots near its outer longitudinal edges, tufts of flexible material being disposed around the outer surface of said channel shaped holder, the ends being passed through the holes or slots in the holder near the outer longitudinal edges thereof the borders of the holder outside the holes being turned down outwardly so as to clip the tufts in position.

3. A tuft holder for brushes having a channel shape, and holes or slots near its outer longitudinal edges and means for preventing tufts from moving laterally of the holder, tufts of flexible material being disposed around the outer surface of said channel shaped holder, the ends being passed through holes or slots in the holder near the outer longitudinal edges thereof, the borders of the holder outside the holes being adapted to be turned down outwardly so as to clip the tufts in position, and having packing strips disposed between adjoining tufts to prevent said tufts from moving laterally of the holder.

In testimony whereof, I affix my signature.

ELLEN NICKELS,
Administratrix of Harry Nickels, Deceased.