No. 785,342. PATENTED MAR. 21, 1905.

W. A. WEIR.

COLLAPSIBLE BRUSH.

APPLICATION FILED DEC. 22, 1903.

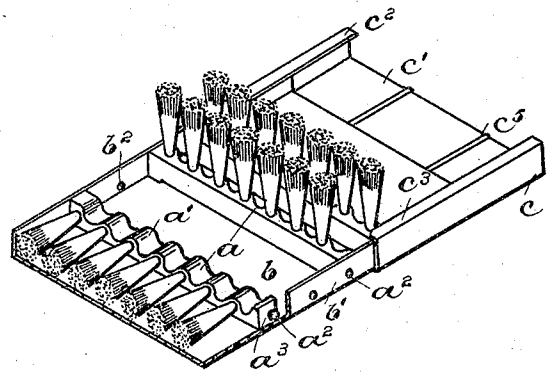


Fig. 1.

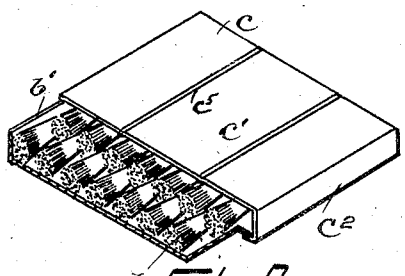


Fig. 2.

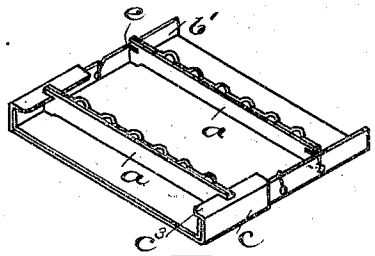


Fig. 3.

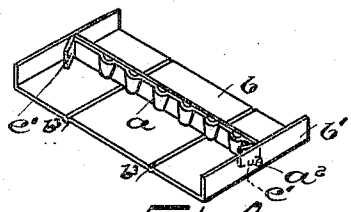


Fig. 4.

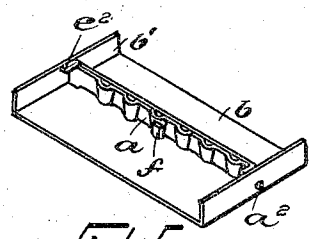


Fig. 5.

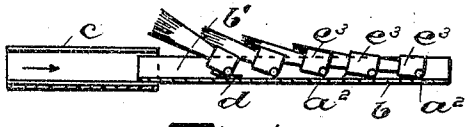


Fig. 6.

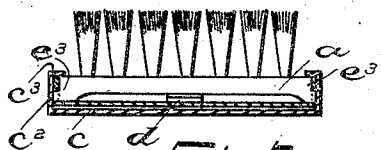


Fig. 7.

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PHOTO-LITHOGRAPHED BY SACKETT & WILHELMS LITHO. & PTG. CO. NEW YORK.

No. 785,342. Patented March 21, 1905.

UNITED STATES PATENT OFFICE.

WILLIAM A. WEIR, OF LONDON, ENGLAND.

COLLAPSIBLE BRUSH.

SPECIFICATION forming part of Letters Patent No. 785,342, dated March 21, 1905.

Application filed December 22, 1903. Serial No. 186,221.

To all whom it may concern:

Be it known that I, WILLIAM A. WEIR, a subject of the King of Great Britain and Ireland, and a resident of London, England, have invented certain new and useful Improvements in Collapsible Brushes, (for which I have filed an application for patent in Great Britain, No. 28,798, dated December 30, 1902;) and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention relates to improvements in collapsible brushes, and has for its objects to simplify and cheapen the construction of said brushes and to increase their compactness and durability.

This present invention more particularly consists in mounting a plurality of brush-strips, in which brush-forming bristles or the like are secured in the raised sides of a brush-back independently one of the other, so that each strip is individually free to be moved by hand or otherwise to assume a recumbent position in relation to the back for packing in the case or to assume a raised position for use as a brush. Furthermore, the construction is such that upon the strips being set up in their operative position each may be independently locked by means of the edges of the case upon sliding the case along the brush-back, as will appear from the following description.

In the drawings accompanying this specification and forming part thereof, Figure 1 is a perspective view of a brush embodying the present invention, wherein one row of bristles is shown in raised position locked by the case and two rows free to be moved, one raised and the other recumbent. Fig. 2 is a view showing the case partly closed, the brushes lying recumbent therein. Fig. 3 is a view of the device having a modified form of mounting the strips in the body. Fig. 4 is for the purpose of illustrating another method of mounting the strips and the formation thereof. Fig. 5 is a perspective view of part of a brush having a further modified form of strips therein. Figs. 6 and 7 are sectional views of a modification of the formation and structure of a brush embodying the present invention, showing means for raising each succeeding strip by the action of the one preceding, as well as locking the same, upon operation of the case.

a represents the brush-strips, which are pressed from sheet metal or cast in any convenient manner, with a series of bristle or the like holding recesses *a'* and integral at each end with a single pivot a^2 and a locking part a^3, located laterally of the pivot or otherwise, as hereinafter described, and adapted to engage with the adjacent locking edge of the case when slid thereover. The strips are mounted between the sides *b'* of backs *b* by engaging their pivots a^2 in holes b^2, so as to allow of their independent movement, as aforesaid, when not locked by the case.

c represents the case of the brush, which is made with a body part *c'*, side parts c^2, and locking edges c^3 and serves both as a cover for the bristles when recumbent and for locking the strips when raised in position for use.

Either the back *b* or the case *c* may be formed with longitudinal ribs b^3 c^5, adapted to bulge the case and increase the pressure of its locking edges on the locking parts of the strips when in their raised position.

Referring to Fig. 3, the strips *a* are provided with slots *e*, which are adapted to receive the locking edges c^3 of the case. These strips are raised into their operative position, the locking portions engaging the back of the body, and the case then slid onto the back, the edges c^3 passing into the slots *e*, thereby locking the bristle-holding strips.

As to the modified form of the invention as seen in Fig. 4, it is to be noted that the strips *a* are provided with inturned portions *e'*, which serve to support the same upon the body *b* when the strips are turned to their operative positions upon their pivots a^2. These portions *e'* are engaged by the locking edges c^3 in a manner similar to that illustrated in Fig. 1.

In Fig. 5 the strips *a* are provided with flange-like extensions e^2, formed at the top of the same and extending at right angles thereto. The body portion *b* in this form is provided with an upward projection *f*, against which the strip engages when turned to its operative position, and by means of its engagement therewith and the locking edges c^3

of the case the strip is securely held in locked position.

With reference to Figs. 6 and 7 a modification of the invention is shown in the structure of the locking parts e^3 corresponding to parts a^3 of Fig. 1, these parts being enlarged to extend upwardly beyond the sides b' of the back b. This arrangement permits the edges c^3 of the case to engage each strip separately and independently of the others, so as to raise and lock the strips consecutively. A spring d is positioned beneath the first brush-strip in this form, so that the same may be partially raised upon removal of the case, thus allowing the easy positioning of the strips in operative position.

When the brush is closed, the cover is slid over the front thereof, Fig. 2, and incloses the bristles. When the brush is desired to be used, the case is removed, the strips are set up by tilting the brush or by hand entirely or partly or after the first strip is partly set up by said spring, and the case is slid over the back, Fig. 1, whereupon its locking edges c^3 engage with the locking ends of the bristle-strips and complete their setting up, causing each respective strip successively to partly raise the succeeding strip, if not already completely raised, Fig. 6, and independently locking each strip in position, the case in the modification of Figs. 6 and 7 both setting up each strip separately and also locking each strip separately.

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

1. In a collapsible brush, in combination, a plurality of independently-movable and independently-lockable bristle-holding strips each having a plurality of recesses for holding bristles and a single pivot and a locking part at each end, and a brush-back in the sides of which such strips are pivotally mounted, as set forth.

2. In a collapsible brush, in combination with a plurality of independently-movable and independently-lockable bristle-holding strips each having a plurality of recesses for holding bristles and a single pivot and a locking part at each end and a brush-back in the sides of which said strips are pivotally mounted, means for arresting the strips in their usable position when raised from their recumbent position, and a reversible slidable case applied to the brush-back and adapted when slid thereon in the one position to engage the locking parts at the ends of the strips and to independently lock the strips in their usable position and when slid thereon in the other position to inclose and protect the strips, as set forth.

3. In a collapsible brush, in combination with a plurality of independently-movable and independently-lockable bristle-holding strips each having a plurality of recesses for holding bristles and a single pivot and a locking part at each end and a brush-back in the sides of which such strips are pivotally mounted, means for automatically partly raising one brush-strip, means for arresting the strips in their usable position when raised from their recumbent position, and a reversible slidable case applied to the brush-back and adapted when slid thereon in the one position to engage the locking parts at the ends of the strips and to raise and independently lock the strips in their usable position and when slid thereon in the other position to inclose and protect the strips as set forth.

4. In a collapsible brush, in combination with a plurality of independently-movable and independently-lockable bristle-holding strips each having a plurality of recesses for holding bristles and a single pivot and a locking part at each end and a brush-back in the sides of which such strips are pivotally mounted, means for automatically partly raising one brush-strip, means for arresting the strips in their usable position when raised from their recumbent position, a reversible slidable case applied to the brush-back and adapted when slid thereon in the one position to engage the locking parts at the ends of the strips and to raise and independently lock the strips in their usable position and when slid thereon in the other position to inclose and protect the brush-strips, and means for increasing the pressure of the locking parts of the cover on said strip-locking parts, as set forth.

5. In a collapsible brush, in combination with a plurality of independently-movable and independently-lockable bristle-holding strips each having a plurality of recesses for holding bristles and a single pivot and a locking part at each end and a brush-back in the sides of which such strips are pivotally mounted, means for arresting the strips in their usable position when raised from their recumbent position, a reversible slidable case applied to the brush-back and adapted when slid thereon in the one position to engage the locking parts at the ends of the strips and to raise and independently lock the strips in their usable position and when slid thereon in the other position to inclose and protect the brush-strips, and means for increasing the pressure of the locking parts of the cover on said strip-locking parts, as set forth.

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

WM. A. WEIR.

Witnesses:
CHARLES AUBREY DAY,
ALFRED CHARLES DAY.