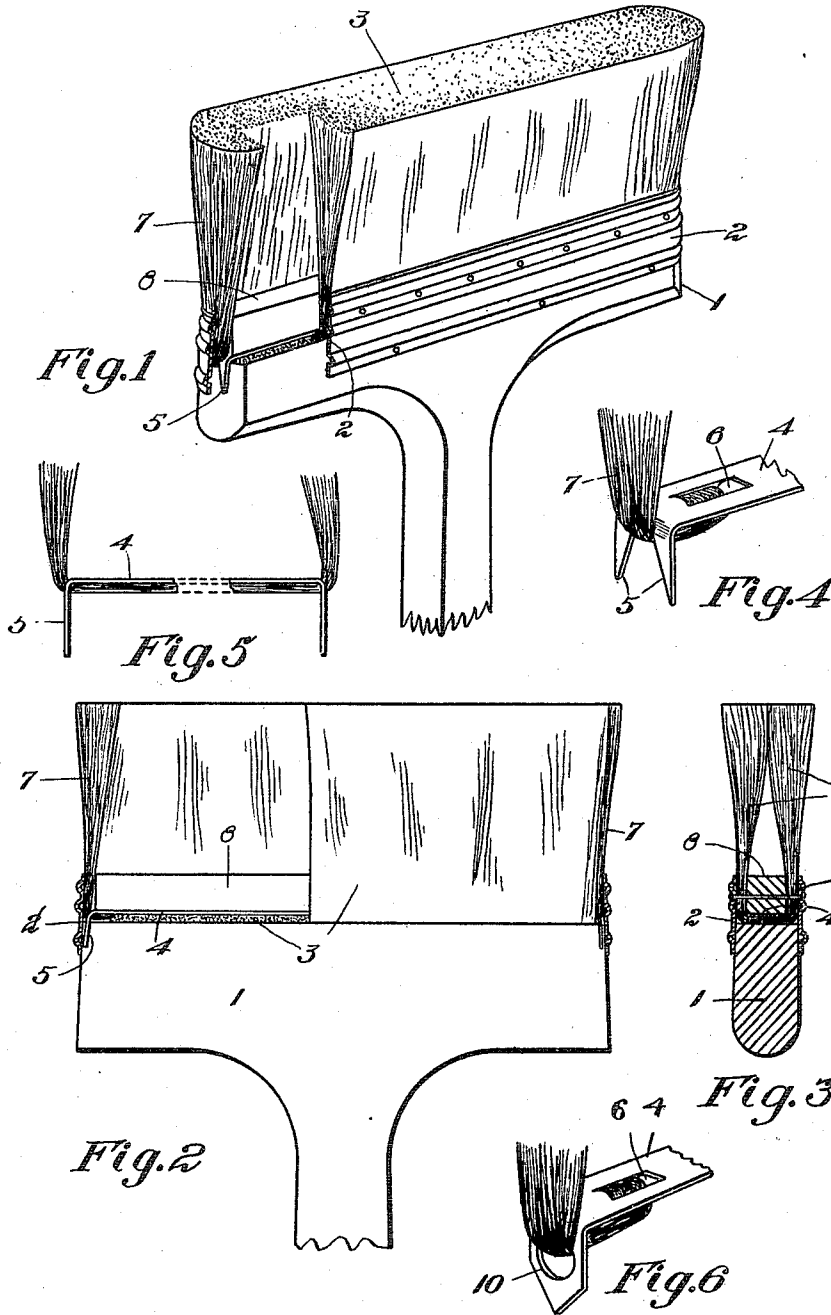


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BRUSH.

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964,707.

Patented July 19, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

HERBERT HENRY STEVENS, OF PORT ELGIN, ONTARIO, CANADA.

BRUSH.

964,707.

Specification of Letters Patent.

Patented July 19, 1910.

Application filed December 18, 1909. Serial No. 533,773.

To all whom it may concern:

Be it known that I, HERBERT HENRY STEVENS, a subject of the King of Great Britain, and resident of Port Elgin, in the
5 county of Bruce, in the Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Brushes, of which the following is a specification.

10 The invention relates to improvements in brushes, as described in the following specification and illustrated in the accompanying drawings that form part of the same.

15 The invention consists essentially in the novel construction and arrangement of parts whereby the fibers are disposed uniformly around the inner wall of the metal band surrounding the head of the brush and held
20 securely by a metal strip engaging the looped portion of the fibers.

The objects of the invention are to completely fill in the ends of a fiber brush, to facilitate the manufacture of such brushes
25 thereby cheapening the cost, and to devise a simple and secure means for holding the fibers in place.

In the drawings, Figure 1 is a perspective view of a brush constructed in accordance with this invention shown with a portion
30 of the metal band and some of the fibers broken away. Fig. 2 is a side elevational view of the brush, showing the metal band in section and also part of the fibers broken away. Fig. 3 is a cross sectional
35 view of the brush. Fig. 4 is an enlarged perspective detail of one end of the metal fastening strip, showing one method of securing the fibers for filling the brush end. Fig. 5 is a side elevational view of a modified
40 form of metal fastening strip broken intermediate of its length and showing the fibers running from end to end thereof. Fig. 6 is a detail of a further modified form of fastener.

45 Like numerals indicate corresponding parts in each figure.

Referring to the drawings, 1 is the head of the brush formed in the usual manner and having the metal band 2 secured thereto.

50 3 are the fibers bent double and inserted between the sides of the metal band 2 and extending upwardly and outwardly and forming the body of the brush.

4 is a flat metal strip having the ends
55 thereof cut to form the prongs 5, said prongs being bent downwardly at right angles to

the main portion. The strip 4 rests on the upper side of the looped portion of the fibers, the prongs 5 extending downwardly
60 between the ends of the metal band 2 and the head of the brush, said strip securing the fibers in place.

6 is a tongue forming part with the strip 4 and cut therefrom and adapted to be bent
65 downwardly to receive the looped portion of the bundle of fibers 7. The fibers 7 are looped around the tongue 6 and said tongue is then pushed back to its original position and the fibers then brought out from under
70 the strip 4, between the prongs 5. The bundle of fibers 7 arranged at each end of the strip 4 fit snugly in against the rounded end of the metal band 2 and form a continuation of the upstanding row of fibers arranged to each side of the brush, thus completing
75 the body of the brush and filling in the ends.

8 is a wood strip resting in the top side of the strip 4 and pressed tightly there-
80 against and secured by the nails 9 passing through the metal band 2.

In Fig. 5, the fibers are shown extending from end to end of the metal strip 4 and projecting through between the prongs 5. This method of placing the fibers for the
85 end of the brush does not require the tongue 6 to be punched in the said strip. In the manufacture of this brush, the head with the metal band thereon is placed in a machine and the fibers 3 are laid properly on the machine. The metal strip having the tufts
90 or bundles of fibers 7 secured thereto or with the long strips of fibers as shown in Fig. 5 arranged therein, is then placed over the fibers 3 centrally of their length. The
95 wood strip 8 is then placed on top of the metal strip and by a suitable mechanism of the machine, the metal and wood strips are forced downwardly into a narrow slot, thus bending the fibers upwardly. The head 1
100 is arranged in the machine immediately below this slot so that the said metal and wood strip and fibers are forced downwardly between the inner walls of the metal strip
105 2. The prongs 5 at the ends of the strips 4 are forced into the wood against the ends of the metal band 2 and while the said metal and wood strips are held securely, the nails 9 are placed in position securing the whole
110 together. The tufts or bundles of fibers 7 are as firmly secured in the brush as are the side fibers and said tufts are spread around

the outer ends of the brush giving a neat and compact appearance and as the said strips extend very close to the ends the said tufts are spread out to the very best advantage.

- 5 In the modified form shown in Fig. 6, the downwardly bent end of the metal strip is formed with a central point and an orifice 10 is cut therein above said point through which the tufts of fiber extend outwardly
10 and upwardly, said fiber being fastened either by the tongue 6 or the fibers passed longitudinally from one end of the strip to the other and in a similar manner to that shown in Fig. 5.

- 15 What I claim as my invention is:—

1. In a brush, the combination with the brush head and a band encircling said head and projecting therebeyond, of a plurality of fiber strips doubled and inserted between
20 the projecting sides of said band, a thin strip of metal formed with inwardly bent ends, said ends having openings cut there-through, and fiber tufts projecting outwardly through said openings and extend-
25 ing upwardly and disposed around the inner wall of the ends of said band.

2. In a brush, the combination with the brush head and a band encircling said head and projecting therebeyond, of a plurality
30 of fiber strips doubled and inserted between

the projecting sides of said band, a metal strip adapted to engage the looped portion of said fibers and hold them to said brush head and having prongs extending inwardly from the ends thereof and forming end
35 openings, and tufts of fiber secured between said head and said metal strip and extending outwardly through the openings formed by said prongs and completing the ends of the brush.

3. In a brush, the combination with the brush head, and a band encircling said head and projecting therebeyond, of a plurality of fiber strips doubled and inserted between
40 the projecting sides of said band, a flat metal strip having pairs of prongs arranged at each end thereof and a tongue portion adjacent to each end, tufts of fiber looped around said tongues and extending out-
45 wardly between the said prongs, and a block inserted into said brush between the rows of upstanding fibers and abutting said strip and secured to said encircling band.

Signed at the American consulate at Hamilton, Canada, this third day of Decem-
50 ber, 1909.

HERBERT HENRY STEVENS.

Witnesses:

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