July 26, 1932. H. T. LANG 1,869,157

BRUSH FOR VACUUM CLEANERS AND THE LIKE

Filed Aug. 10, 1931

Fig. 1.

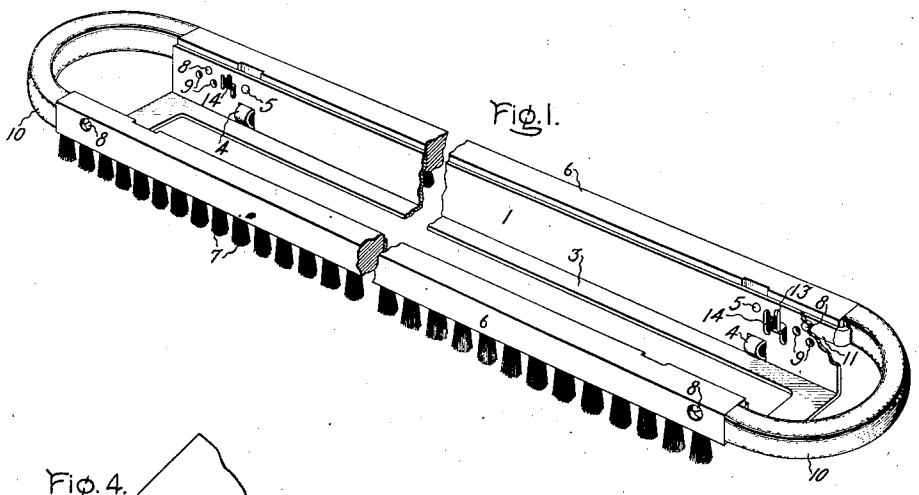


Fig. 4.

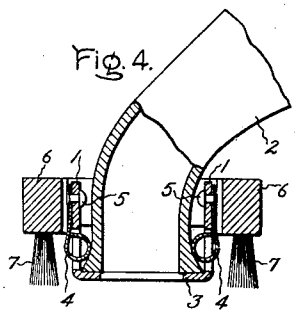


Fig. 2.

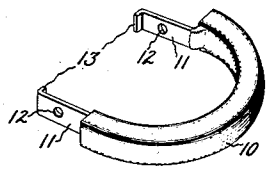
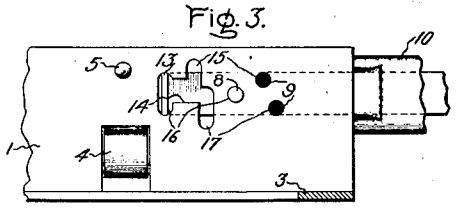


Fig. 3.



Inventor:
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UNITED STATES PATENT OFFICE

HENRY T. LANG, OF CLEVELAND, OHIO, ASSIGNOR TO ELECTRIC VACUUM CLEANER COMPANY, INC., OF CLEVELAND, OHIO, A CORPORATION OF NEW YORK

BRUSH FOR VACUUM CLEANERS AND THE LIKE

Application filed August 10, 1931. Serial No. 556,068.

The present invention relates to brushes such as are used on the nozzles of vacuum cleaners and especially to brushes of the type which comprise a frame which fits over and detachably engages the nozzle of the vacuum cleaner.

When such brushes become worn it is desirable to adjust them relatively to the nozzle of the vacuum cleaner, and the object of my invention is to provide an improved construction and arrangement in a brush of this type which is capable of being adjusted readily and which is held firmly in its adjusted positions.

For a consideration of what I believe to be novel and my invention, attention is directed to the following specification and the claims appended thereto.

In the drawing, Fig. 1 is a perspective view of a brush structure embodying my invention; Fig. 2 is a perspective view of a detail; Fig. 3 is an enlarged detail view of certain parts, and Fig. 4 is a sectional view showing the brush structure applied to the nozzle of a vacuum cleaner.

Referring to the drawing, the brush comprises a metal frame 1 adapted to fit over the nozzle 2 of a vacuum cleaner, the frame having a flange 3 which engages the bottom of the nozzle and against which it is held by spring fasteners 4. Spring fasteners 4 are fastened on the outer surfaces of the side walls of the frame by screws or rivets 5 and have rounded ends which project through openings in the frame and engage the nozzle. With this arrangement the frame may be readily sprung into position on the nozzle and removed therefrom.

Fastened to the side walls of the frame are brush bars 6 which may be formed of wood and which carry the brush bristles 7. They are fastened to the side walls by screws 8, one at each end of each brush bar, which pass through countersunk openings in the brush bars and thread into tapped openings 9 in the frame. The brush bars are connected together at their ends by U-shaped end pieces 10 which are formed of metal strips covered with a suitable substance such as rubber, thus providing buffers at the ends of the nozzle. The ends 11 of the metal strips project beyond the coverings and are located between the brush bars and the side walls of the frame. They are held by the screws 8 which extend through openings 12 in the ends 11 and by inturned flanges 13 which engage in openings 14 in the side walls of the frame.

To make the brush adjustable I provide a plurality of sets of openings 9 and 14 arranged at different distances from the horizontal edge of the frame. In the present instance three sets are shown, it being understood that an opening 9 for a screw 8 and the corresponding opening 14 for a flange 13 constitute a set. In Fig. 3 the three sets of openings are designated 15, 16 and 17, the highest set being 15, the intermediate set being 16 and the lowest set being 17. The screw 8 and flange 13 are shown as being in the intermediate set of openings. This gives one adjustment of the brush bars 6 on the frame. To change the adjustment, the four screws 8 are removed, the flanges 13 moved to other corresponding openings 14 and the screws 8 then reinserted in the corresponding openings 9. The frame occupies always a fixed position on the nozzle so that the brush bars when adjusted on the frame are adjusted relatively to the nozzle. For example, referring to Fig. 3, if it is desired to raise the brush relatively to the nozzle, the flanges 13 and screws 8 would be moved to the sets of openings 15, and if it is desired to lower the brush relatively to the nozzle, the flanges 13 and screws 8 would be moved to the sets of openings 17.

When in any adjusted position, the flanges 13, which engage the upper and lower edges of the openings 14 and the screws 8, serve to hold the brush bars firmly and keep them from slipping. At the same time, the brush bars can be readily and easily adjusted by the use of a screw driver. Also, the arrangement for effecting the adjustments is simple in structure and capable of being provided at low cost.

What I claim as new and desire to secure by Letters Patent of the United States, is:—

1. A brush for vacuum cleaners and the like comprising a frame, and a brush bar having openings to receive fastening screws

and inwardly projecting flanges, said frame being provided with a plurality of sets of openings spaced different distances from a longitudinal edge of the frame, each set comprising an opening adapted to receive a brush bar flange and an opening to receive a screw whereby the brush bar may be adjusted relatively to the frame by utilizing different sets of openings, and screws in openings of the brush bar and frame for fastening the brush bar to the frame.

2. A brush for vacuum cleaners and the like comprising a frame, brush bars on opposite sides of the frame having openings, fastening means in said openings for fastening the bars to the frame, and end pieces for the bars having ends located between the brush bars and the frame, said ends being provided with inturned flanges, said frame being provided with a plurality of sets of openings spaced different distances from a longitudinal edge of the frame, each set being adapted to receive the flanges and fastening means whereby the brush bars may be adjusted relatively to the frame.

3. A brush for vacuum cleaners and the like comprising a frame, brush bars on opposite sides of the frame having openings, fastening means in said openings for fastening the bars to the frame, and buffers at the ends of the bars having ends provided with inturned flanges located between the frame and brush bars, said frame being provided with a plurality of sets of openings spaced different distances from a longitudinal edge of the frame, each set being adapted to receive said flanges and fastening means, and said ends being provided with openings to receive said fastening means.

In witness whereof, I have hereunto set my hand.

HENRY T. LANG.