Sept. 25, 1945. E. BERNHEIM 2,385,490

BRUSH

Filed June 9, 1944

Fig. 1

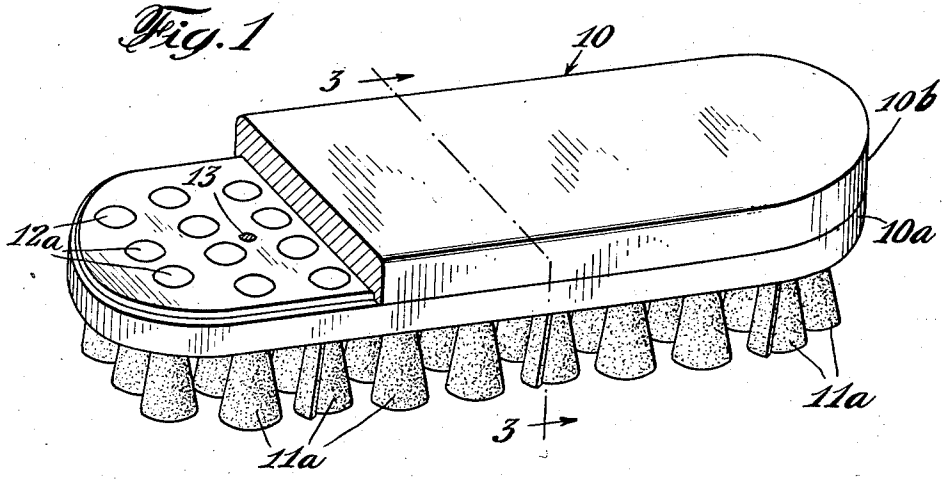


Fig. 2

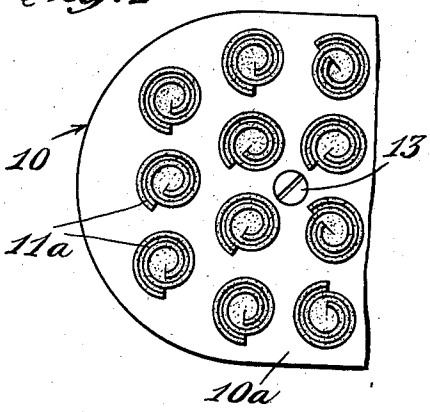


Fig. 3

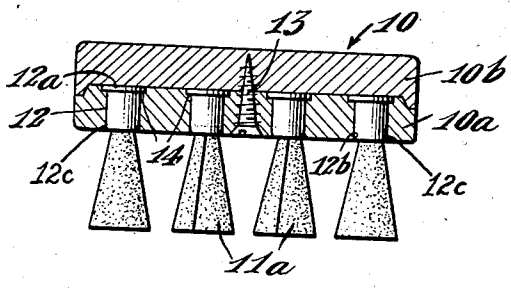


Fig. 4

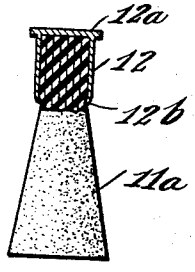
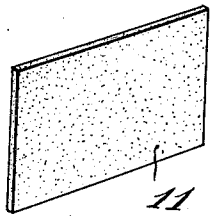


Fig. 5



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BRUSH

Emile Bernheim, New York, N. Y.

Application June 9, 1944, Serial No. 539,461

1 Claim. (Cl. 15—225)

My invention relates to brushes, and particularly of the kind that have an adaptability for multiple purposes or functions, such as for use as a scrubbing brush, a cloth brush, or as a brush for grooming the hair or fur of an animal.

An object of the invention is to provide a comparatively simple arrangement, whereby a full equivalent may be had of a bristle brush without the utilization of bristles, said bristles being substituted by a series of circular units having spirally rolled or affixed therein and projecting therefrom, a portion of sheet rubber or synthetic equivalent thereof, whereby such units at the spiralled edge section of said projected rubber portion are enabled to contact with or brush the surface of an article of wear or the like to be brushed; or a surface to be scrubbed, or hair or fur to be groomed, to draw therefrom dust, dirt or foreign substances and in a manner not possible with the ordinary bristle brush.

A further object of my invention is to produce a brush device, the surface contacting portion thereof having a sufficiently high di-electric quality as to attract and draw from a cloth or similar article of wear or utility lint that may have collected on the surface thereof, said lint or like adhering particles being difficult and sometimes impossible to remove by means of the ordinary bristle brush.

A further object of my invention is to produce an article comparatively easy of manufacture and convenient to handle and manipulate through the resiliency of the contacting or brushing portion of said units due to the novel construction thereof.

The foregoing and other advantages of my invention will be seen from the detailed description in the practical embodiment and in the novel construction thereof, as shown in the accompanying drawing, in which

Fig. 1 is a perspective view of the brush with a portion of the top section thereof removed.

Fig. 2 is a fragmentary detail view of the brush exposing the spiralled bottom ends of the rolled up units of the rubber or like synthetic sheeting material.

Fig. 3 is a detailed section of a number of the brush units insetted in the base of the brush proper on a line 3—3 of Fig. 1.

Fig. 4 is a detail of a "brush" unit into which a section of rubber sheeting or equivalent material is rolled and swaged or forced into a shouldered ferrule piece, and

Fig. 5 is a perspective view of rubber sheeting or equivalent resilient material which is rolled up in the manner shown at 11*a* in Figs. 2 and 4, and which is preferably crimpled or creped to effect numerous holding surfaces on said sheet material to hold particles of foreign materials that may be drawn thereto by the brushing process of the brush device upon surfaces to be brushed or cleaned.

Referring to the drawing:

In Fig. 5 there will be seen a perspective view of a piece of rubber sheeting 11, or equivalent resilient material. The surface of this sheeting is preferably rimpled or creped as stated in order to provide temporary storage spaces for the settling of foreign material that may be brushed up by the device 10; also to assist in the smoothing operation while the device is passed over the surfaces to be brushed; and furthermore, to increase the di-electric qualities of the material by offering greater surface area for exposure to and rubbing contact with the material to be brushed, thereby increasing the efficiency of the brushing operation of clearing and absorbing from the fabric or fur material of foreign particles or substances.

The sheeting 11 is rolled up in the manner shown in Fig. 3, and is then forced through the opening 12*c* from the top of the base member 10*a*.

The process of forcing the rubber sheeting 11 in the manner described results in a compact spiralled roll of said sheeting tightly compressed in the ferrule 12, and said sheeting below said ferrule forming an angular contour or petticoat 11*a*, as shown in Fig. 4. The bottom edge of said petticoat is illustrated in Fig. 2. The top edge portion of the brush units in plan view can be seen in Fig. 1 and which are designated as 12*a*. The side view of said top edge is shown in Fig. 4.

The spiral shaping of the brush units as described combines effectively both stability and flexibility and also enables efficient "lower edge" contacting of the spiralled rubber sheeting of said brush units with the material or surfaces to be brushed.

A greater angular spread formation of said rubber sheeting other than the contour or petticoat shaping described, would tend to a "doubling" or "turning up" of the bottom edging of the sheeting 11 during the brushing function of the device and would therefore tend to reduce the brushing or efficient contacting with the materials to be brushed. As long as the lower spiralled edge of the rubber sheet material contacts directly with the material to be brushed, the operation is effective and successful in removing dust, dirt, et cetera therefrom; and is the full

equivalent of, if not superior to, the contacting edge of the best of brush bristles, and in addition thereto having di-electric and other adhering properties for extracting dirt, dust and lint from articles of wear and like surfaces.

The brush in its function is operated similar to that of the hand bristle brush, viz., by the movement of the brush over the surface of material or cloth to be brushed with a horizontal movement, said brush being generally moved crosswise over the article being brushed.

After the material 11 is placed into said ferrule 12 the lower edges thereof at 12b are bent inward to further lock and secure the swaged portion of the material 11a in the ferrule 12.

The ferrule 12 is provided with a shoulder 12a, said shoulder fitting into a circular recess in the base 10a, as shown in Fig. 3.

The units 12 are assembled and mounted in the lower base 10a of the brush 10. The assembled units 11a are shown in Fig. 1.

After the units aforesaid are assembled in the lower base 10a of the brush device, the top portion 10b of the brush is mounted in position over the base portion 10a and secured thereon by means of screws 13. About three screws 13 are considered sufficient to firmly secure the top section 10b to the lower section 10a. Other means may be employed to secure said sections 10a and 10b into one integral piece.

The sections 10a and 10b may be made of wood, plastic composition or other suitable material, and as shown in Fig. 3, and is shaped in a manner to be easily and conveniently held by the hand.

It will be seen that the assembled device as described provides a brush of novel and unique construction, and for the efficient utilization of brushing all manner of articles of wear, of cloth, fur and fur hair and for added utility as a scrubbing brush. The brush may be made up in different sizes and styles for the purposes intended and still retain the novel features of my invention. A long handle may also be attached to the device 10 when used as a scrub brush.

While the invention has been described in detail with specific examples, such examples are illustrative and are not given as limitations, since other modifications within the spirit and scope of the invention will be apparent to those skilled in the art. Hence, the invention is to be understood as limited only as indicated, in the appended claim, in which the intent is to set forth all the novelty over the prior art.

Now, having described my invention, what I claim is:

In a device of the class described comprising a brush having a top and a base member respectively, a plurality of brush units mounted on said base member, each of said units comprising a portion of soft resilient sheeting material rolled into a spiral scroll, the top portion of said scrolled material being confined into a ferrule and secured therein and thereby forming said brush unit, the protruding portion of said spiralled sheeting forming an angular flare or petticoat shaping and the bottom edge thereof being formed into a compact planar spiral scroll, said bottom edge for directly contacting with the article or surface to be brushed in unison with like units mounted on said brush base, said shaping of said spiralled sheeting affording a degree of yield and spread to permit a resilient contacting of said bottom edge of said spiralled sheeting whereby said bottom edge is constantly in resilient contact with said article or surface upon said brushing thereof.

EMILE BERNHEIM.