March 2, 1943. C. G. ROWLAND 2,312,591

BRUSH

Filed April 23, 1940

Fig. 1.

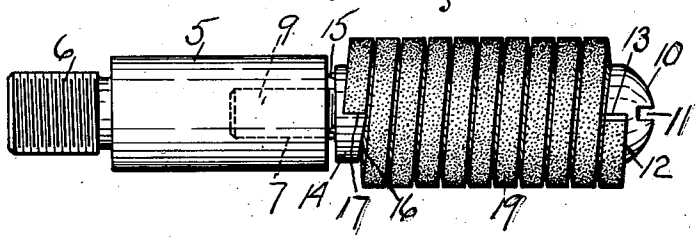


Fig. 2.

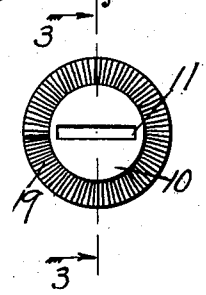


Fig. 3.

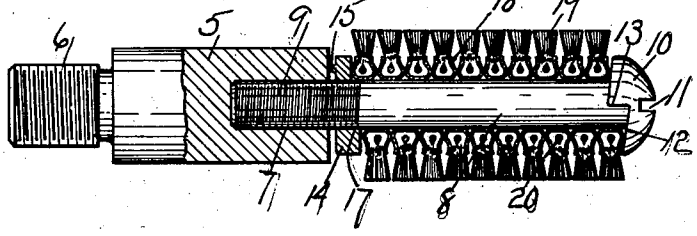


Fig. 4.

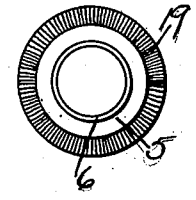


Fig. 7.



Fig. 6.

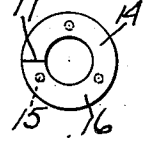
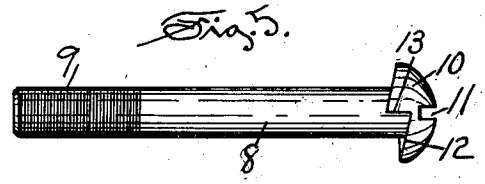


Fig. 5.



INVENTOR
Clarence G. Rowland.
by
Arthur B. Jenkins,
ATTORNEY

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UNITED STATES PATENT OFFICE

2,312,591

BRUSH

Clarence G. Rowland, Newington, Conn., assignor to The Fuller Brush Company, Hartford, Conn., a corporation of Connecticut

Application April 23, 1940, Serial No. 331,142

5 Claims. (Cl. 15—182)

My invention relates to brushes, more particularly of spiral form, and an object of my invention, among others, is the construction of a brush of this type in a most simple manner both as to simplicity of construction and as to efficiency in operation.

One form of a brush embodying my invention and in the construction and use of which the objects herein set out, as well as others, may be attained is illustrated in the accompanying drawing, in which—

Figure 1 is a side view of my improved brush.

Figure 2 is an end view of the same.

Figure 3 is a view in section on a plane denoted by the dotted line 3—3 of Fig. 2.

Figure 4 is a view of the end of the brush opposite that shown in Fig. 2.

Figure 5 is a side view of the stud.

Figure 6 is a face view of the retaining collar.

Figure 7 is a side view of the same.

While the brush embodying my invention is not to be restricted in any way to the uses to which it may be put, yet, as it is particularly adapted for the coarser or rougher and harder uses of cleaning and scouring, I have selected such type of brush for the purpose of disclosure of my invention herein.

In the accompanying drawing the numeral 5 denotes a holder having a screw threaded stem 6 and a threaded socket 7, the stem being adapted for engagement in a screw threaded socket in the end of a spindle or arbor or any other manually or mechanically operated type of support for the brush.

A stud 8 has a screw threaded end 9 for engagement in the screw threaded socket 7 in the holder and this stud has a head 10 with a slot 11 for the reception of a screw driver as a means for attaching the stud to the holder in a manner that will be readily understood. The under side of the head has a cam 12 spirally formed and terminating in a shoulder 13. A collar 14 is placed over the stud 8 near its inner end, this collar having gripping points 15 to engage the holder 5 or indentations therein to retain the collar from rotation. A cam 16 in the form of a spiral terminating in a shoulder 17 is formed on the collar, as shown in Figure 7.

The brush proper comprises a grooved base strip 18 with bristles 19 projecting from said groove. These bristles may be composed of any suitable material, those shown herein being of wire. They are doubled within the groove with a core wire 20 located in the fold and the whole being secured by a pinching action of the sides of the strip, the groove being enlarged at the bottom and the sides converging toward the outer edges of the strip in a manner common to this type of a brush. This strip is wound into spiral shape in a manner to retain its spiral form and the ends abut the shoulders 13 and 17, the cam 12 on the under surface of the head 10 of the stud enabling the latter to be turned sufficiently by compressing the brush coil to tightly engage said coil and firmly retain it in place. The shoulder 17 on the retaining collar 14 acts in opposition to the shoulder 13 on the head of the stud to hold the brush from rotation in either direction.

In accordance with the provisions of the patent statutes I have described the principles of operation of my invention, together with the device which I now consider to represent the best embodiment thereof; but I desire to have it understood that the device shown is only illustrative and that the invention may be carried out by other means and applied to uses other than those above set out within the scope of the claims.

I claim:

1. A brush comprising a stud, a head on the outer end of the stud, a spirally extending cam surface terminating in a radially disposed shoulder on the back of said head, an initially completely spirally formed grooved brush strip adapted to be positioned in its complete form on said stud with the back of the strip resting against the stud that is rotatable within the strip, bristles projecting from the outward facing mouth of the strip and with the end of the strip abutting said shoulder as a means for securing the strip to the stud, and means finally for securing the brush strip on said stud.

2. A brush structure comprising a holder, a stud adapted to be secured to said holder, a head on the outer end of said stud, a cam surface terminating in a shoulder on the back of said head, a spirally formed grooved brush strip positioned on said stud with the back of the strip resting against the stud, bristles projecting from the outward facing mouth of the strip and with the end of the strip abutting against said shoulder, and means in addition to the shoulder for preventing turning movement of the brush on the stud.

3. A brush comprising a holder, a stud provided with means for attachment to said holder, a head on the outer end of said stud, a spirally extending cam surface terminating in a radially disposed shoulder on the back of said head, a collar with a shoulder mounted on said stud adjacent said holder, an initially completely spirally formed grooved brush strip adapted to be posi-

tioned in its complete form on said stud with the back of the strip resting against the stud that is rotatable within the strip, and bristles projecting from the outward facing mouth of said strip and with opposite ends of the strip abutting both of said shoulders, to finally secure the brush strip on said stud.

4. A brush comprising a holder, a stud provided with means for attachment to said holder, a head on the outer end of said stud, a cam surface formed on a spiral terminating in a radially disposed shoulder facing in one direction on the back of the head, a collar with a radially disposed spiral surface terminating in a shoulder facing in the opposite direction from the first mentioned shoulder, said collar being mounted on the stud adjacent said holder, an initially completely spirally formed curved brush strip adapted to be positioned in its complete form on said stud with the back of the strip resting against said stud that is rotatable within said strip and bristles projecting from the outward facing mouth of said strip and with the opposite ends of said strip abutting said shoulders, and means for preventing movement of said collar.

5. A brush comprising a stud, a head on the outer end of the stud, a shoulder on the back of said head extending in the direction of depth of said head and parallel with the axis of said stud, a spirally formed grooved brush strip adapted to be positioned in its complete form on said stud with the back of the strip resting against the stud that is rotatable within the strip, bristles projecting from the outward facing mouth of the strip and with the end of he strip abutting said shoulder as a means for securing the strip to the stud, and means for finally securing the brush strip on said stud.

CLARENCE GEO. ROWLAND.