May 19, 1931. H. CAVE 1,806,520

BRUSH

Filed April 17, 1929

Fig. 1.

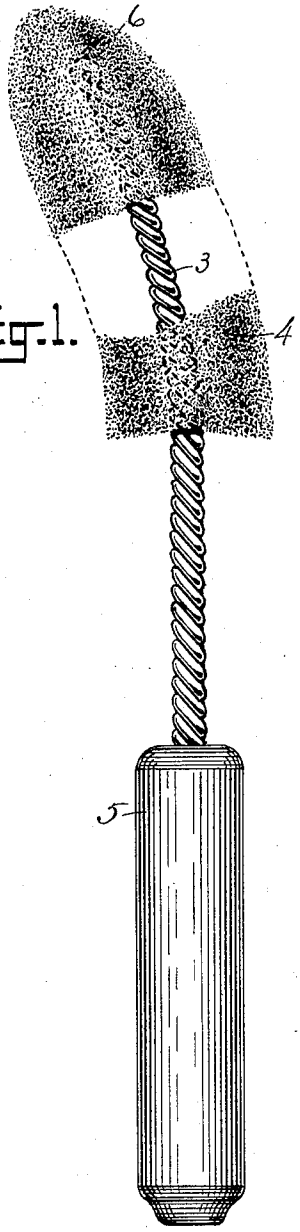


Fig. 2.

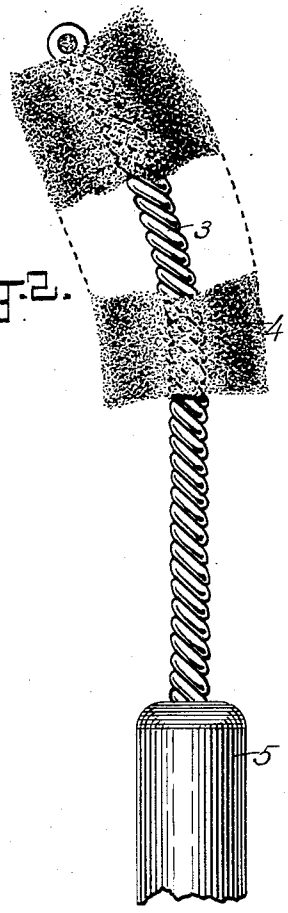
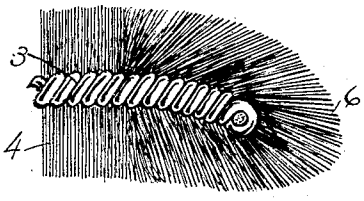


Fig. 3.



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UNITED STATES PATENT OFFICE

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BRUSH

Application filed April 17, 1929. Serial No. 355,885.

My invention relates more particularly to that class of brushes in which the brush projects from one end of the handle, the handle being located at one end and the brush at the opposite end of the structure, and an object of my invention among others, is the production of a brush of this type so composed and arranged that the outer end of the brush may be formed in an efficient and economical manner.

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 drawings, in which—

Figure 1 is a side view of a brush embodying my invention.

Figure 2 is a view of a portion of the brush illustrating a preliminary step in its formation.

Figure 3 is a view in section through the tip of the brush.

It has been a common practice in the art of brush making to secure bristles or other brush material to a core composed of twisted wire, the brush material being secured in the operation of twisting the wires. Brushes of this type have been made with a handle from the end of which the brush projected. In the construction of such brushes, in order to form the tip end of the brush so that the brush material will surround the core on all sides, it has been common practice to give to the tip a particular form for this purpose, in many instances the core being bent into various shapes, and in some cases, a separate tip being supplied.

By the use of my invention I am enabled to satisfactorily form this tip without requiring any bending operation on the core to form the tip, the brush material being simply twisted into the core in a manner as heretofore employed and then, either during the twisting operation or thereafter, the brush material is subjected to an operation to forcibly form the tip with such material projecting all around and about the tip. Such a structure is illustrated in the accompanying drawings in which the numeral 3 indicates the core of my improved brush that is composed, as hereinbefore mentioned, of a piece of wire bent backwardly upon itself and twisted to form a core. In this twisting operation bristles 4 are twisted into the core, these bristles being formed of wire preferably of a very fine gauge. A handle 5 receives the core at one end thereof, the latter being forced into an opening in the handle in a manner common to structures of this class.

In the formation of the brush the bristles are first twisted into the core in any suitable manner, such as will be well understood by those skilled in the art. These bristles, while being resilient to a certain degree, are, at the same time, of such character that they may be forced and thereby "set" to retain different forms when properly treated for such purpose. After the preliminary twisting operation, the bristles will be substantially in the form shown in Figure 2 and, as before stated, their resiliency will cause them to spring back and reassume that form whenever they may have been forced from it under ordinary conditions of use.

In the forming operation the bristles are pressed toward the end of the core under sufficient pressure to cause them to assume and retain the form shown in Figure 1, they having been "set" in this form. This shaping of the tip may be accomplished after the twisting operation is completed, and while the brush is under rotation in the twisting machine, or after it has been removed from such machine. The result is a rounded tip 6 at the end of the brush with the bristles entirely enveloping the end of the core.

I claim:

1. A brush comprising a twisted wire core, bristles of wire secured to and radially projecting from said core, and a tip having the bristles permanently set to surround, project forwardly and envelop the tip.

2. A brush comprising a twisted wire core, bristles of wire of resilient character secured to said twisted wire core and radially projecting therefrom, and a tip having its wire bristles permanently set in a shape to surround and envelop the end of the core and project outwardly thereof.

3. A brush comprising a twisted wire core,

and bristles of wire anchored to and projecting from the core, a forward zone of the bristles having a permanent set such that the angularity of projection thereof is varied relative to the bristles in rear of the zone, and with the bristles of the zone varied in angularity relatively such as to cause the zone to present a bristle-face rounded in contour and projecting from the advance end of the core and in continuation of the contour of the bristle-face in the rear of the zone.

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