Feb. 4, 1941. H. CAVE 2,230,968

MOP AND PROCESS FOR MAKING THE SAME

Filed Feb. 5, 1938

Fig. 1.

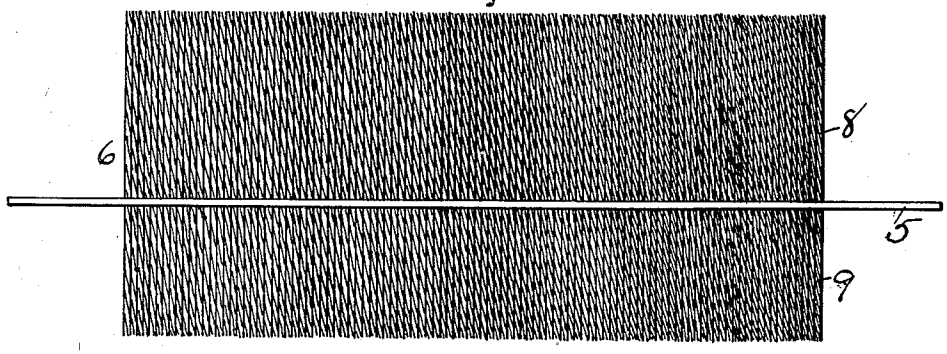


Fig. 2.

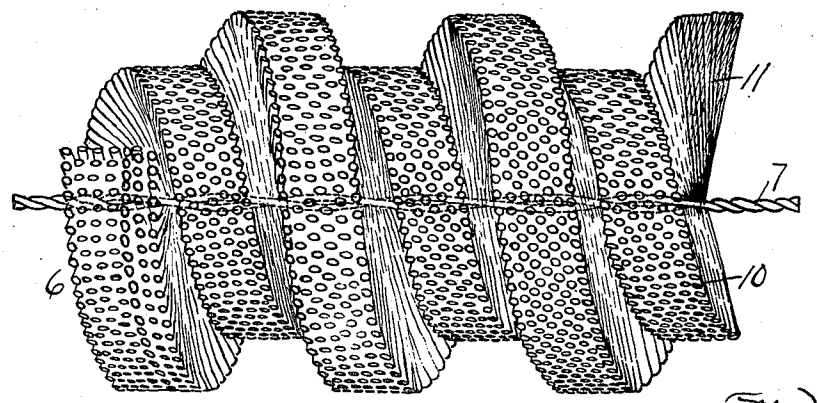


Fig. 3.

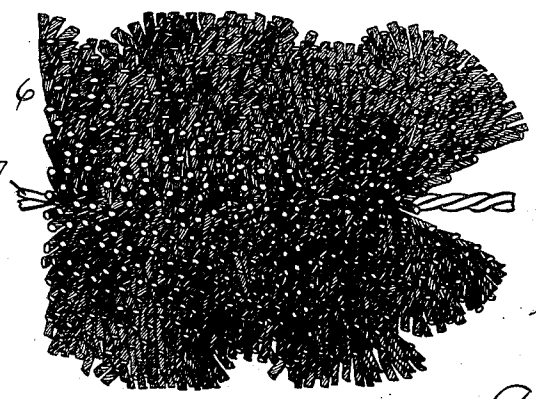
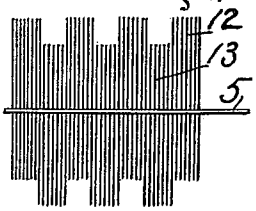


Fig. 4.



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MOP AND PROCESS FOR MAKING THE SAME

Henry Cave, Hartford, Conn., assignor to The Fuller Brush Company, Hartford, Conn., a corporation of Connecticut

Application February 5, 1938, Serial No. 188,881

1 Claim. (Cl. 300—21)

My invention relates to the class of devices which are employed for brushing, scrubbing, and similar cleaning purposes, and an object of my invention, among others, is the production of an implement of this class in which a minimum amount of mop material may be used, while at the same time the core shall be sufficiently covered to prevent marring of articles of furniture or the like in the use of the mop for cleaning such article; and a further object of the invention is to provide an implement of this class that shall be particularly efficient in the result obtained by its use.

One form of a mop 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 plan view showing the disposition of the threads between wires before twisting of the latter to form a core.

Figure 2 is a view showing the disposition of the threads after the twisting operation.

Figure 3 is a view illustrating the disposition of the threads in the final form of the mop structure.

Figure 4 is a view on reduced scale showing a modified form of the invention.

In the manufacture of mops, prior to my invention, it has been common practice to secure the mop material composed of threads between two wires which are twisted to secure the threads in place, such threads being of even lengths. In order to sufficiently cover the metal comprising the core to prevent marring of articles of furniture and the like by contact of the metal with such articles threads of a certain length have been required and this produced a superfluous mass of material and more than was required for the purposes of the mop.

By an arrangement of threads as contemplated by my invention I have found that the mass of material may be reduced and at the same time the core will be sufficiently covered to prevent the injurious effects above described. This arrangement also enables better efficiency to be obtained in the use of the mops.

Thus my improved mop is illustrated in the drawing herein in which the numeral 5 denotes two wires which, in the operation of forming the mop, are placed on opposite sides of a row of threads 6 which are evenly spread upon one of the wires and the other wire is then placed upon the threads as shown in Fig. 1 of the drawing. The ends of the wires are then secured in chucks in a twisting machine which operates in a well known manner to twist the wires into a core 7 as shown in Fig. 2.

In the arrangement embodying my invention the threads are so placed upon the wires that a section 8 upon one side of the wires is somewhat longer than the section 9 on the opposite side of the wires. This results, in the twisting operation, in producing a helical arrangement comprising two coils 10 and 11 of different diameters, the coil 10 having the lesser diameter and appearing in successive turns between the coil 11 of greater diameter.

After the twisting operation the mass of threads is disarranged so that the short and long threads are promiscuously intermingled, as illustrated in Fig. 3, into a conglomerate mass, there being enough of the long threads in this mass together with the shorter threads to cover the core sufficiently to prevent injury to articles of furniture and the like in the use of the mop.

Another advantage results from this construction in the effects produced by the shorter threads. A short thread is stiffer than a longer thread and the shorter and therefore stiffer threads in this mass constitute a scouring or scrubbing element, the longer and consequently more flexible threads yielding to permit the action of the shorter and therefore stiffer threads so that there is combined in the mass both a scouring or scrubbing and a brushing element.

The mop thus produced has the feature of being composed of a minimum amount of mop material and also has increased cleaning effects owing to the action of the shorter and stiffer threads in the mass. In Fig. 4 of the drawing I have illustrated an alternative construction in which sections 12 and 13 are alternately arranged with a section of longer threads on one side of the wires disposed next to a section 13 of the shorter threads on this side of the wire. After the wires have been twisted as hereinbefore explained and the mass is disarranged, the latter will be substantially in the form shown in Figure 3.

In the structure shown in Figs. 1 to 3 the threads projecting from one side of the core are of a length substantially that heretofore employed in mops of this character, and consequently a saving of material in each mop is effected to the extent of the difference between the longer threads and the shorter threads on the opposite side of the core therefrom.

It is to be understood that the term "thread" as used herein is not limited to a twisted cotton

or woolen thread but is intended to include any length or strand of hair, fiber, or other material.

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 appended claim.

I claim:

The process of forming a substantially cylindrical mop that consists in placing a layer of threads of substantially equal lengths between two wires with each of the threads projecting to a greater distance from the wires on one and the same side than on the other side of said wires, and twisting the wires to produce a substantially cylindrical mop formation and spirals of threads alternately of different lengths with the shorter threads being of sufficient length to comprise part of the cleaning surface of the mop.

HENRY CAVE.