Nov. 3, 1936. H. J. LAY 2,059,530

BROOM AND METHOD OF MAKING THE SAME

Filed Dec. 21, 1935

Fig. 1.

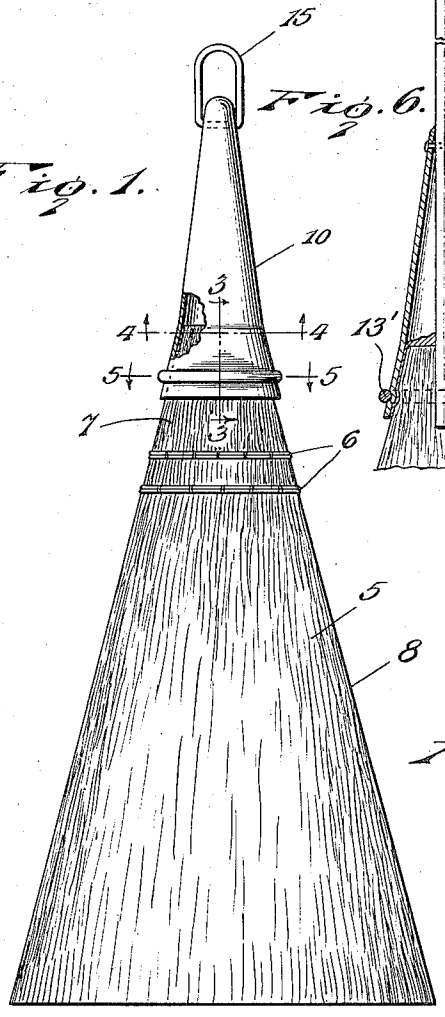


Fig. 6.

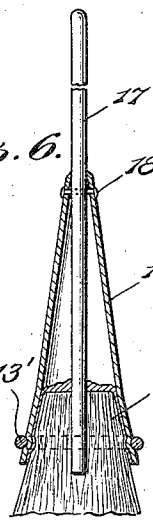


Fig. 2.

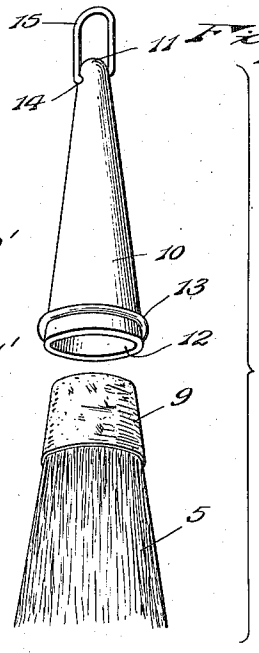


Fig. 3.

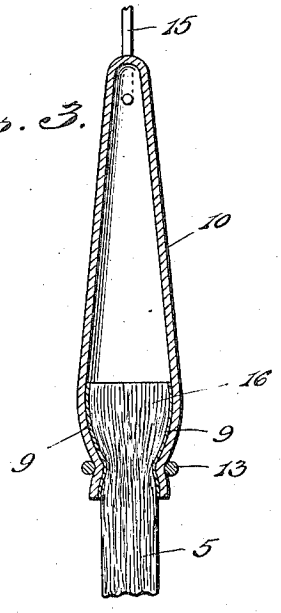


Fig. 4.

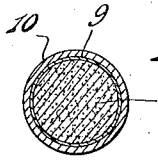
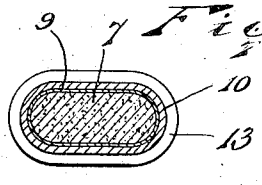


Fig. 5.



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2,059,530

BROOM AND METHOD OF MAKING THE SAME

Harry J. Lay, Portland, Ind.

Application December 21, 1935, Serial No. 55,643

7 Claims. (Cl. 300—21)

This invention relates to brooms, and more particularly to a whisk broom of the type commonly used in spinning mills, barber shops, shoe shining parlors and the like for brushing clothes and removing dirt, lint and other foreign particles therefrom.

The object of the invention is to provide a broom of simple and inexpensive construction, the handle of which is combined with the head of the broom in such a manner as to effect a material saving in the amount of broom corn or other brush fibers used and a consequent reduction in the cost of manufacture.

A further object of the invention is to provide a whisk broom in which the usual broom corn handle and reinforcing core is dispensed with and a hollow tapered handle employed in lieu thereof so as to decrease the weight of the broom and also to enable the user to obtain a better grip on the handle.

A further object is to provide a broom having a hollow or tapered handle which fits over the cemented end of a broom head and is provided with a clamping ring adapted to be pressed around and in engagement with the broom head whereby to hold the parts securely together without the employment of the usual binding wires, nails and similar fastening devices.

A further object is to provide a novel method or process of assembling the handle and broom head and clamping the parts together.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

In the accompanying drawing forming a part of this specification and in which similar numerals of reference indicate corresponding parts in all the figures of the drawing,

Figure 1 is a side elevation of a whisk broom embodying the present invention, a part of the handle being broken away to show the broom head.

Figure 2 is a perspective view of the handle and adjacent portion of the broom head prior to positioning the handle on the head and compressing the clamping ring.

Figure 3 is a detail vertical sectional view showing the position of the parts when the clamping ring is compressed.

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 1.

Figure 5 is a similar view taken along the line 5—5 of Figure 1.

Figure 6 is a vertical sectional view illustrating a modified form of the invention.

The improved whisk broom forming the subject-matter of the present invention comprises a body portion 5 formed of broom corn or any preferred kind of brush fibers connected by transverse binding wires or cords 6 to form a tapered head 7 constituting a continuation of the converging side walls 8 of said body, as shown. The broom corn or fibers at the upper end of the tapered head are coated or covered with cement or other adhesive material 9 and fitting over the cemented ends of the broom corn is a hollow member or handle 10. The handle 10 may be formed of any suitable material but is preferably formed of compressed paper to impart the desired strength and rigidity thereto, said handle being substantially conical in shape and having its small end 11 closed and its large end 12 open and adapted to receive the head of the broom. Fitting over the large end of the tubular handle 10 and frictionally engaging the walls thereof, is a clamping or compression ring 13 which, when compressed or deformed, serves to hold the large end of the handle firmly in engagement with the cemented ends of the broom fibers so that the handle will be securely held in position thereon. Extending transversely through the small end of the handle 10 is an opening 14 adapted to receive a split ring 15 by means of which the whisk broom may be conveniently suspended from a nail or other suitable support.

In manufacturing the whisk broom, the broom corn or other brush fibers are assembled or bundled together to form the body 5 and united by the binding cords or wires 6 after which the tapered head 7 is dipped into a vessel containing cement or other suitable adhesive material, or, if desired, the cement or adhesive material may be applied to the tapered end of the head with a brush or in any other suitable manner. The clamping ring 13 is then slipped over the small end of the handle 10 and forced downwardly thereon until said ring frictionally engages the large end of the handle and in which position the handle with the ring in position thereon is fitted over the cemented end of the tapered head 7 and pressed downwardly thereon until the large end of the handle entirely covers the cement. The whisk broom is then placed in a vise or clamp and the clamping ring deformed or compressed so as to cause the ring and large end of the handle to assume a substantially elliptical shape in cross section, as best shown in Figure 5 of the drawing, thereby compressing the broom corn at the tapered end of the head and forcing the handle in contact with the ad-

hesive coating thereon so that the parts are securely fastened together. If desired, instead of placing the broom in a vise, the clamping ring may be compressed or distorted with a hammer or in any other suitable manner.

It will thus be seen that the large end of the handle 10 is normally circular in cross section and that the ring and the adjacent broom corn or other fibers will assume a substantially elliptical shape when pressure is applied to the ring to distort the same. Furthermore, when pressure is applied to the clamping ring 13, the broom corn at the upper end of the head will be flared laterally in engagement with the inner wall of the hollow handle, as indicated at 16 in Figure 3 of the drawing so as to further assist in preventing accidental displacement of the handle. Inasmuch as the handle is hollow, the whisk broom will be lighter in weight than the ordinary whisk broom and the tapered surface will present a better and more comfortable grip for the hand. It will, furthermore, be noted that inasmuch as the handle 10 is substantially conical in shape, the exterior walls of the handle will form a continuation of the tapered or converging walls of the body of the broom so that all shoulders, offsets and other surface obstructions are entirely dispensed with.

In Figure 6 of the drawing there is illustrated a modified form of the invention particularly adapted for sweeping or other domestic use. In this form of the invention, the broom is provided with a relatively long thin rod or handle 17 which extends through an opening in the apex of the hollow member 10' and is secured thereto by a pin or rivet 18, the lower end of the rod being embedded in the broom corn or fibers constituting the tapered head 7' and cemented thereto so that when the clamping ring 13' is deformed or compressed the rod will be securely anchored in the tapered broom head.

It will thus be seen that there is provided a broom of simple and inexpensive construction, the manufacture of which will effect a material saving in the amount of broom corn or other brush fibers employed and, consequently, a corresponding reduction in the cost of manufacture over brooms now in general use. It will, of course, be understood that the brooms may be made in different sizes and shapes and that any well-known brush fibers may be employed instead of broom corn.

Having thus described the invention, what is claimed as new is:

1. The method of making brooms which consists in assembling bundles of fibers to form a broom having a tapered head, coating the head with adhesive material, fitting a hollow member having a compression ring thereon over the adhesive covered end of the head and subsequently deforming the ring to force the tubular member in engagement with the adhesive covered portion of the head.

2. The method of making brooms which consists in assembling a bundle of fibers to form a broom having a tapered head, coating the head with adhesive material, forming a hollow tapered member, fitting a compression ring over the small end of said member and causing it to frictionally engage the exterior walls at the large end of the member, fitting the hollow member with the compression ring thereon over the adhesive covered end of the tapered head and subsequently deforming the ring so as to compress the tapered head and force the walls of the hollow member in engagement with the adhesive material covering the head.

3. The method of making brooms which consists of assembling a bunch of fibers to form a broom having a tapered head at its upper end, coating the head with an adhesive material, disposing about the head a hollow member encircled by a stiff compression ring, and subsequently applying pressure to the ring to deform the ring and the hollow member and the head of the broom and force walls of the hollow member into close contacting engagement with the adhesive covered portion of the head and also crimp the walls of the hollow member to form a circumferentially extending crimped portion defining an external seat for receiving the ring and an internal bead gripping the head of the broom.

4. A broom comprising a tapered head, adhesive material covering the small end of the head, a hollow upwardly tapered and transversely distorted handle fitting over the adhesive covered portion of said head, and a transversely distorted clamping ring of stiff material fitting tightly about the large end of the handle and maintaining the walls of the handle in tight gripping engagement with the head.

5. A broom comprising a head, cement covering the upper end of the head, a transversely distorted hollow member fitting over the cemented end of the head, and a distorted clamping ring of stiff material fitting about the hollow member and maintaining the walls of the hollow member in binding engagement with the cemented end of the head with the portion of the hollow member about which the ring fits providing an external seat to receive the ring and also providing an internal rib tightly gripping the head.

6. A broom comprising a body having upwardly converging surfaces and terminating in a tapered head, adhesive material covering the small end of the head, a transversely distorted hollow member having its lower portion fitting about the adhesive covered portion of the head and having the exterior surfaces of its walls forming a continuation of the converging surfaces of the body, and a transversely distorted clamping ring of stiff material fitting about and tightly gripping the larger end of the hollow member and maintaining walls of the hollow member distorted inwardly in tight gripping engagement with the adhesive covered end portion of the head.

7. A broom comprising a tapered head, adhesive material covering the small end of the head, a transversely distorted hollow member fitting over the adhesive covered head, an elongated handle embedded in said head and projecting through the small end of the hollow member, and a transversely distorted clamping ring of stiff material encircling the large end of the tubular member and maintaining the hollow member distorted and in binding engagement with the head whereby to hold the handle within the head and clamp the hollow member about the head.

HARRY J. LAY.