Jan. 12, 1932. E. J. VEEDER 1,841,228

BROOM

Filed April 13, 1931

Fig. 1.

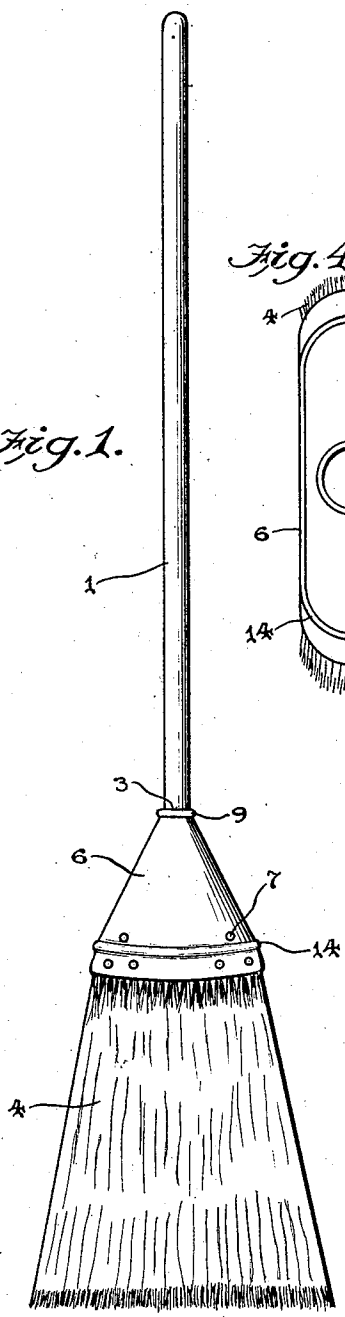


Fig. 4.

Fig. 2.

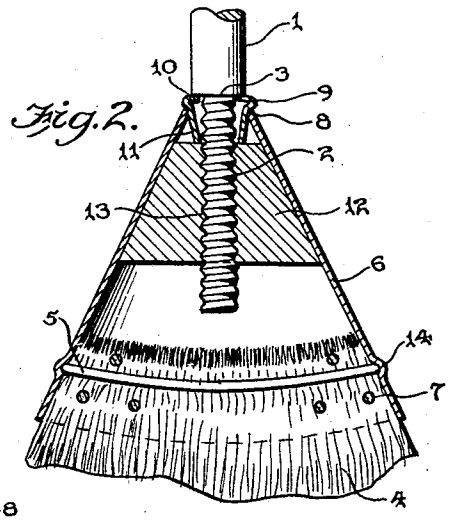
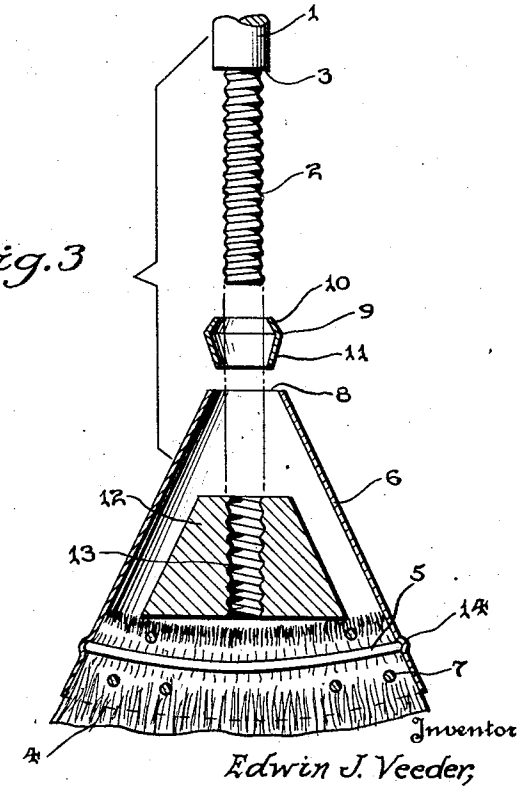


Fig. 3



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UNITED STATES PATENT OFFICE

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BROOM

Application filed April 13, 1931. Serial No. 529,778.

This invention relates to brooms, and more particularly to the means for securing the head to the handle to insure a firm, reliable and light connection without adding unnecessary weight and cost to the article.

A vital feature of the invention is the provision of a broom which is light, neat in appearance, sturdy, and capable of being economically manufactured.

In accordance with the invention the connection between the broom head and handle includes a sheet metal cap of tapered formation to present a neat finish and light structure, and a follower within the cap receiving the lower end of the handle with which it is connected by means of a screw thread whereby provision is had for maintaining a close joint and taking up any tendency to a loose joint resulting from any cause.

The accompanying drawings illustrate a preferred embodiment of the invention, but it is to be understood that in adapting the invention to different forms and conditions, changes may be resorted to within the scope of the hereinafter claimed novelty without departing from the nature and spirit thereof.

For a full understanding of the merits and details of the invention, reference is to be had to the drawings hereto attached and the subjoined description in which corresponding and like parts are referred to and designated in the several views of the drawings by like reference characters.

In the drawings:—

Figure 1 is an elevational view of a broom illustrative of an embodiment of the invention.

Fig. 2 is an enlarged fragmentary sectional view.

Fig. 3 is a detail view of the parts illustrated more particularly in Fig. 2, showing the same separated.

Fig. 4 is a top plan view of the broom head, the handle and collar being omitted.

The broom handle is designated by the numeral 1 and its lower end is reduced and threaded, as illustrated at 2, providing a shoulder 3 at the base of the threaded end 2. The head of the broom is designated by the numeral 4 and the material may be confined at one end by means of a binder 5 which usually consists of a band or stout wire.

A cap 6 is fitted to the broom head 4 and lower end of the handle 1, and usually consists of sheet metal fashioned into a tapering form so as to snugly receive the broom head and handle. After the broom head 4 has its upper end introduced into the lower end of the cap 6, the latter is subjected to compressive force so as to conform to the binder 5 and obtain a close fit about the upper end of the head entering the lower end of the cap. Rivets 7 or like fastenings pass through opposite sides of the cap and through the end portion of the broom head fitted therein, and serve to firmly secure the parts. The opening 8 in the upper end of the cap 6 is of a size to receive the reduced threaded end 2 of the broom handle. A collar or ferrule 9 is fitted upon the reduced end 2 of the handle 1 and is disposed between the shoulder 3 and upper end of the cap 6. The collar 9 has its end portions reversely tapered, as indicated at 10 and 11, the tapered end 11 entering the opening 8 at the upper end of the cap 6 whereas the tapered end 10 is confined between the shoulder 3 and the contracted upper end of the cap 6.

A filler 12 is disposed within the upper end of the cap 6 and is provided with a central opening 13 which is threaded to match the screw threads of the reduced end 2 of the handle 1. The filler 12 conforms to the shape of the cap 6 to obtain a close fit therein. The filler 12 functions as a clamp element and coacts with the cap 6 to secure the same to the handle 1.

When assembling the component parts of the broom, the collar 9 is slipped upon the reduced end 2 of the handle 1 and the filler 12 is placed within the cap 6 and engaged with the threaded end 2 of the handle 1. The upper tapered end of the broom head 4 is introduced into the lower enlarged end of the cap 6 and the latter is subjected to lateral pressure to conform the sides to the binder 5, thereby resulting in the formation of a bead 14 which is disposed outwardly and conforms to and accommodates the binder 5. After the broom head has been fitted to the cap 6, the rivets

or like fastenings 7 are applied to firmly secure the parts. As the handle 1 is screwed into the threaded opening 13 of the filler 12, the latter is drawn upwardly into the cap 6 and the collar 9 is clamped between the shoulder 3 and cap, the lower tapered end 11 being pressed into the opening 8 and the upper tapered end 10 being deflected inwardly against the shoulder 3, as indicated most clearly in Fig. 2 of the drawings.

It will be understood from the foregoing, taken in connection with the accompanying drawings, that the invention results in the provision of a broom which is light, neat in appearance and capable of withstanding hard usage because of the firm and substantial connection between the broom head and handle, the construction being such as to admit of the article being readily assembled and economically manufactured.

It is observed furthermore, that the article may be shipped and stored in compact form since the parts may be separated. When the broom head becomes worn it may be easily and economically replaced by a new one without the necessity of procuring a new broom. The handle and attached parts may be nicely finished without entailing extra appreciable expense because of a replaceable feature of the head. Thus a neat and fine appearing article is maintained at about the cost of a cheap article. When the broom becomes worn a new head may be obtained and conveniently carried in a small package and subsequently attached to the handle from which the worn head has been removed. It is noted that the head is wide at the top and the length such as to assure great flexibility, longer life and rapid sweeping.

What I claim is:

1. A broom comprising a handle having its lower end reduced and threaded to provide a shoulder, a broom head, a cap having secured in one end the broom head and having an opening at the opposite end for receiving the lower end of the handle, a filler loose within the cap having a threaded opening to engage the lower threaded end of the handle, and a collar mounted upon the reduced end of the handle extending through said opening and confined between said shoulder, the end of the cap, and the upper end of said filler.

2. A broom comprising a broom head, a cap of tapered form secured thereto and having an opening in its upper end, a filler loose within the cap, a handle having its lower end in threaded engagement with the filler and provided with a shoulder, and a collar having one end entering the upper end of the cap through said opening and the other end engaging the shoulder of the handle, said collar being clamped between the shoulder of the handle and the upper end of the cap and the filler.

3. A broom comprising a broom head, a tapered cap secured thereto and having an opening in its upper end, a handle having its lower end reduced and threaded to provide a shoulder, a tapered filler loose within the upper end of the cap and receiving the threaded end of the handle, and a collar having its opposite ends reversely tapered and clamped between the shoulder of the handle and the upper end of the cap, the lower tapered end of the collar fitting within the upper end of the cap through said opening and in engagement with said filler.

4. A broom comprising a head, a binder encircling and confining the broom material, a tapered cap of sheet material secured to the broom head and having its sides compressed to provide an outwardly disposed bead in which is accommodated the binder of the broom material, a tapered filler loose within the upper end of the cap, the handle having its lower end reduced and threaded to provide a shoulder, and a collar having its ends reversely tapered and clamped between the shoulder of the handle and the upper end of the cap, the lower portion of the collar entering the cap and the upper part of the collar engaging the shoulder of the handle.

In testimony whereof, I have hereunto set my hand, this 6th day of April, 1931.

EDWIN J. VEEDER.