H. D. NEFF.

BROOM HOLDER.

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1,367,753. Patented Feb. 8, 1921.

Fig. 1.

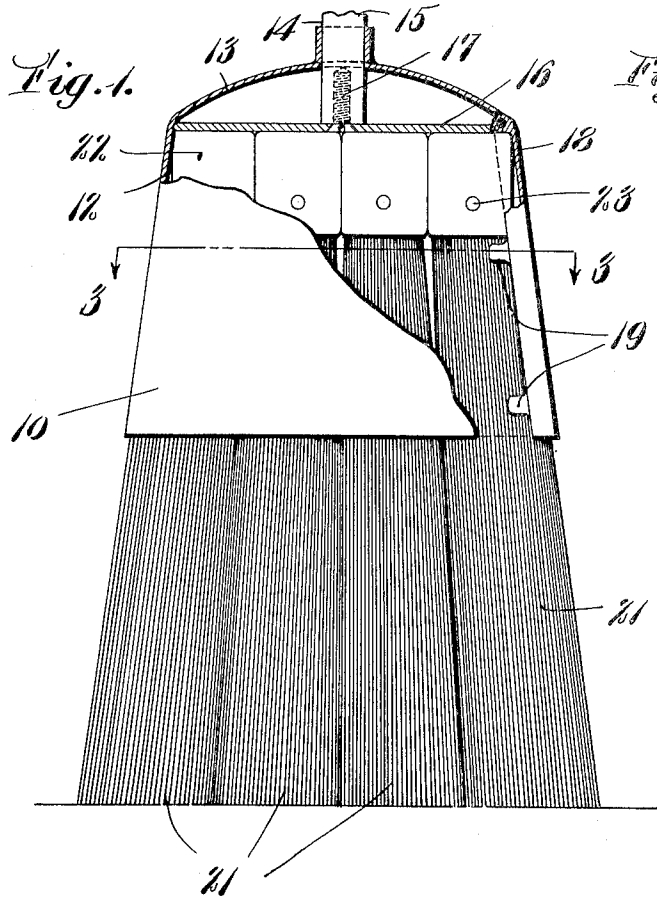


Fig. 2.

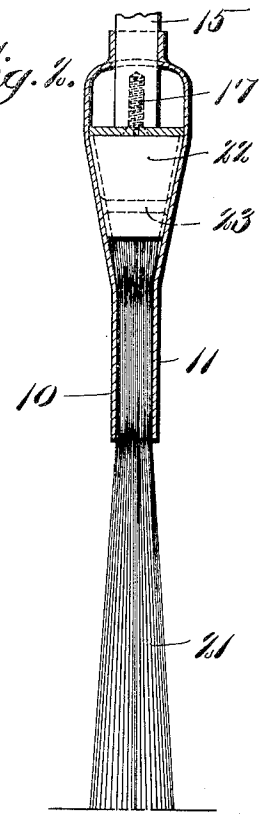
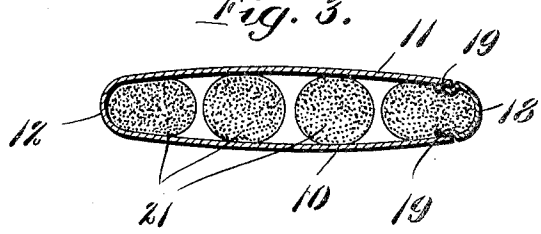


Fig. 3.



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BROOM-HOLDER.

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To all whom it may concern:

Be it known that I, HARRY D. NEFF, a citizen of the United States, and resident of Cambridge, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Broom-Holders, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My present invention relates to brooms, and more particularly to a holder for brooms and the like wherein a plurality of broom or brush elements may be removably held in operative position.

In brooms of this type, various methods have been employed to hold a broom or brush element in operative position within the holder, while yet allowing the broom or brush element to be removed therefrom. Such methods are successful in that the broom or brush element may be held in and removed from the holder, but are unsuccessful in that they do not carry out the real object sought for, viz., the ability to replace the worn out elements of the broom or brush unit. In all cases, the broom or brush unit is a unit, and as a broom invariably wears out first at the corners, the unit is thrown away while the fibers in the center of the unit are, for all practical purposes, as good as new.

I have endeavored to remedy the defects above pointed out, and to this end have devised a broom or brush unit composed of a plurality of separate and independent elements, and my improved holder is devised with a chamber in which the desired number of elements, to build up a broom or brush unit, may be placed. As the broom or brush will invariably wear out at the corners, leaving the center as good as new, it is only necessary for me to replace the worn out elements with new ones to be again in possession of a new broom. The chamber, above referred to, is arranged with its lower front and back walls defining a relatively narrow passage in which the bundles of fibers composing the broom or brush elements are compressed, this compressing action materially aiding in holding the broom or brush unit in position. To form a better element and to provide an element that will pack better into the chamber of the holder I surround the upper ends of the fibers of each element with a metallic sleeve, cap or ring and, in addition to the usual means of securing the fibers in the holder, I pass a bolt, rivet or staple through the walls of the sleeve or cap from side to side.

As the corners of the broom wear out first, and as to replace the worn out elements it is necessary to remove all the elements from the holder, I have provided a cover for the chamber of the holder, such cover being located at one end of the chamber, such cover, when open, allowing ready access to the chamber for the removal or replacement of the elements, and when closed, materially assists in retaining the elements in position.

An object of my invention therefore, is the provision of an improved holder for a sectional brush unit.

Another object is the provision of an improved brush element.

In the accompanying drawing, illustrating the preferred embodiment of my invention,—

Figure 1 is a front elevation, partly in section,

Fig. 2 is a vertical sectional view, and

Fig. 3 is a section on the line 3—3 of Fig. 1.

Referring to the drawings, my holder comprises front, back and end walls, 10, 11 and 12, respectively, attached to a rounded upper portion 13, having an opening 14 for the reception of the usual broom handle 15. The end wall 12 flares outwardly and downwardly from its point of engagement with the rounded portion 13. The front and back walls 10 and 11, respectively flare inwardly and downwardly from the point of engagement with the rounded portion 13 to a point intermediate their ends, and then extend straight downwardly from such intermediate point and parallel to each other, as clearly shown in Fig. 2. At the point of engagement of the front, back and end walls with the rounded upper portion is a wall or diaphragm 16, which may be secured to the rounded portion in any suitable manner, as by welding, or said diaphragm may be loose. In either event, this wall or diaphragm 16 is perforated for a holding screw 17 for the handle 15. The front, back and end walls 10, 11, and 12 respectively, and the rounded upper portion 13 are preferably formed of a single piece

of sheet metal, hard rubber, fiber or the like though they may be formed each of a separate piece of metal and joined together in any suitable manner, as by soldering, brazing or welding.

Pivotally mounted on the rounded upper portion at the junction thereof with the front and back walls 10 and 11 respectively, and at the end remote from the end wall 12, is a cover or closure 18, which when in position to cover the end of the chamber above defined, flares downwardly and outwardly in a manner similar to the end wall 12. Again, the contour of the cover or closure 18 is similar to the end wall 12. The cover or closure 18 is provided with a plurality of inwardly projecting curved lips 19, which engage with the inner faces of the front and back walls 10 and 11 respectively, and aid in holding the cover or closure in closed position, as clearly shown in Fig. 3.

The front, back and end walls, 10, 11 and 12 respectively, together with the wall or diaphragm 16, define an elongated chamber, in which may be positioned a plurality of broom or brush elements, each comprising a bundle 21 of broom corn or other suitable fibers, held together at the upper or stalk end by a metallic sleeve 22. This sleeve is formed so that the end walls, as viewed in Fig. 1, are parallel to each other, while the front and back walls, as viewed in Fig. 2, are tapered to conform with that part of the chamber defined by the downwardly and inwardly sloped portions of the front and back walls 10 and 11. The cap, ring or sleeve is made from a section of metallic tubing, and after the section is slipped over the stalk end of the fibers, a rivet 23 is passed through the section of tubing and through the fibers, the tubing being at the same time slightly flattened. This reduces what may be termed the lower front and back dimensions of the tubing, to allow the brush element to fit into the chamber defined by the front, back and end walls. The length of the sleeve 22 is considerably less than the length of that part of the chamber defined by the downward and inward sloped portions of the front and back walls 10 and 11, and therefore the diameter of the lower end of said sleeve or cap is greater than the width of that portion of the chamber defined by the parallel portions of the front and back walls. The bundle of fibers therefore, of an element must be compressed to fit within said last named portion of the chamber, and the lower portions of the front and back walls thus aid in holding the elements in the chamber.

By swinging the cover or closure 18 to expose the end of the chamber, I may insert a plurality of elements within the chamber, as shown in Fig. 1, or if the outer ones of the group of elements are worn, new elements may be substituted therefor.

The provision of the cover or closure on the end of the chamber aids in securing the plurality of elements within the chamber, and protects such elements from injury, as well as rendering the broom holder more sightly.

While I have described my invention somewhat in detail, it is to be understood that I may vary the size, shape and arrangement of parts shown within wide limits without departing from the spirit of the invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A holder for a plurality of compressible brush elements adapted to be removably and replaceably confined therein, comprising a casing open at the bottom end and having a brush receiving compartment and an end opening through which the brush elements may be inserted into said compartment, said casing below said compartment providing a brush clamping portion against which the brush elements may expand, and a pivoted closure for said filling opening adapted to engage the front and back walls.

2. A holder for a plurality of brush elements adapted to be removably and replaceably confined therein, comprising a rounded upper portion, front and back walls attached to the lower edges thereof and extending inwardly and downwardly from their upper end to a point intermediate their ends and from thence downwardly parallel to but spaced apart from each other, an end wall attached to the upper rounded portion and the front and back walls, a diaphragm at the point of engagement of the rounded upper portion with the front, back, and end walls, and a closure for the end of the chamber pivotally mounted at the lower edge of the rounded upper portion at the end remote from the end wall.

3. In combination with a broom holder having an elongated chamber at its upper end having inwardly tapering side plates, of a plurality of broom elements each comprising a bundle of fibers bound together at their upper or stalk end by a metallic sleeve substantially circular in shape at its upper end and having its opposite sides flattened to conform with the tapered upper end of the elongated chamber, whereby the broom elements are held against rotation in the holder.

In testimony whereof, I have signed my name to this specification.

HARRY D. NEFF.