Dec. 4, 1934. G. K. FORBES ET AL 1,982,910

MOP HANDLE

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Fig. 1.

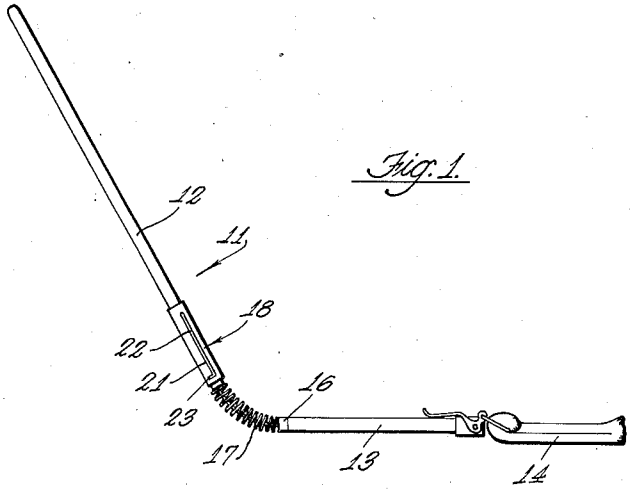


Fig. 4.

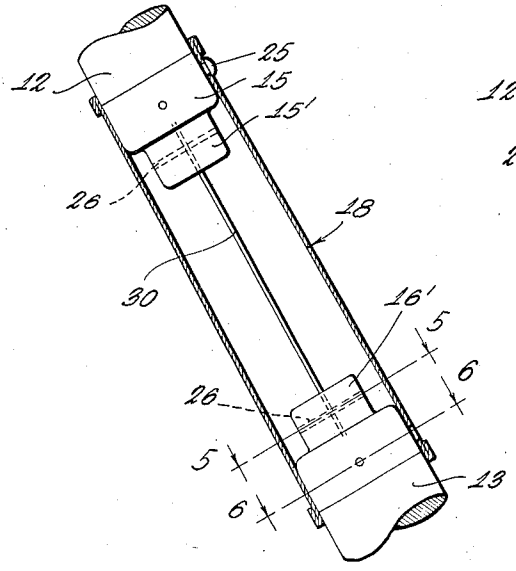


Fig. 2.

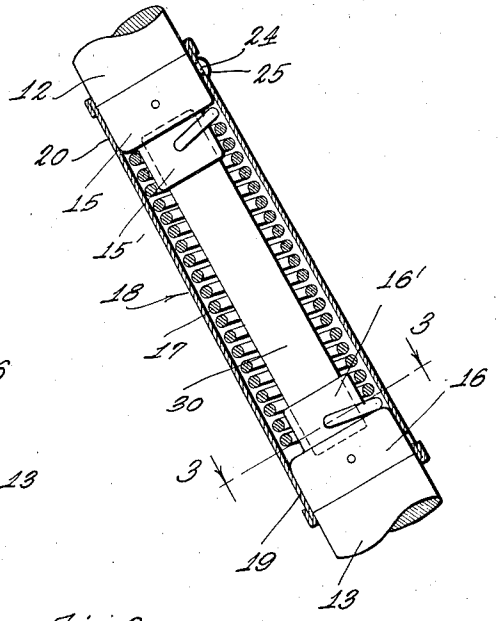


Fig. 5.

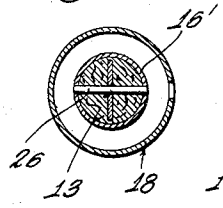


Fig. 6.

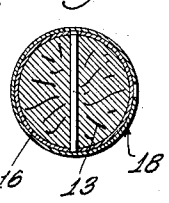
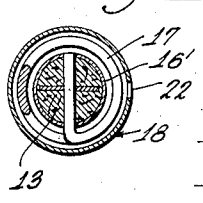


Fig. 3.



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MOP HANDLE

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3 Claims. (Cl. 287—86)

This invention relates to a combination rigid and flexible handle suitable for use with mops, brushes, or other appliances in which the handle may be changed from a rigid, straight construction to a flexible construction to permit a bend in the handle so that a brush or mop may be used underneath low articles of furniture, thus making it unnecessary for the person using the mop to crouch near the floor.

In particular, the invention contemplates the construction of a handle which has two rigid parts connected by a flexible tension means holding these together and associated with a rigid interconnecting structure between the two handle portions. This is preferably in the form of a sleeve which slides on one of the handle portions and may bridge or enclose the connecting flexible means and thus when engaging both the rigid handle portions to form a rigid, straight handle.

Another detailed feature of the invention is forming the sleeve with a bayonet type of slot and a pin on one of the rigid handle members extending through the slot so that the sleeve may be pulled longitudinally on one of the handle members, the sleeve partly rotated to engage the pin in a lateral section of the slot and thus hold the sleeve on one of the rigid handle sections removed from the enclosing portion on the flexible member.

A further feature of the invention is forming the sleeve tapered, preferably with a larger end downwardly to engage the lower section of the handle so that it has a wedging effect on the lower handle section which may be of slightly greater diameter than the upper section. The sleeve may then readily be pulled upwardly on the upper handle section and locked, if desired, by the interconnecting bayonet type slot and pin. The flexible member connecting the two rigid handle sections is preferably so constructed as to permit the bending of the handle in one plane only so that the mop or brush will always lie flat on the floor.

Invention consists in the construction and arrangement of parts hereinafter described and claimed.

In the accompanying drawing, which forms a part of this specification, preferred embodiments of the invention are illustrated, in which:

Fig. 1 is a side elevation of the handle used with a mop showing this in the flexed position for mopping on a floor.

Fig. 2 is a longitudinal section of the flexible connection between the two handle sections.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig. 4 is a view similar to Fig. 2 showing a slightly modified form.

Figs. 5 and 6 are sections, respectively, on lines 5—5, 6—6, of Fig. 4.

Referring to the drawing, the handle indicated as a unit at 11 comprises an upper section 12 to be engaged in the operator's hands and a lower section 13. A mop or other utensil 14 is illustrated as connected to the lower section. Each section is illustrated as being provided with a ferrule 15 and 16 on the upper and lower sections, respectively, terminating in bosses 15′ and 16′, respectively. A flexible, helically coiled spring 17 has its opposite ends attached each to a boss. The spring is a tension type tending to draw the two ends of the handle toward each other.

A sleeve 18 is slidably mounted on the upper section 12 of the handle and is of sufficient diameter to enclose the coiled spring 17. The sleeve may be extended partly over the upper end of the section 13 as indicated at 19, leaving when in this position a portion of the sleeve 20 still engaging the upper section 12. In this manner a rigid connection is made between the upper and lower sections of the handle and the spring has no flexing function. However, when the sleeve 17 is pulled upwardly into the position shown in Fig. 1, the wire may flex as shown in such figure allowing the lower handle section 13 to be moved close to a floor. This allows the mop attached to the end of the handle to be readily thrust underneath low furniture.

In order to limit the flexing action of the spring 17 so that the lower handle section 13 will be flexed in relation to the upper handle section 12 in one plane only, a flat spring 30 is provided which is mounted with its ends in the bosses 15′ and 16′, respectively. This flat spring 30 will permit flexing action in substantially one plane only, as will be understood, thus causing the mop to lie flat on the floor at all times.

In order to hold the sleeve 18 in its uppermost position it is provided with a bayonet type of slot 21, comprising a longitudinal section 22 and a lateral offset end section 23, the offset end being at the lower part of the sleeve. A pin 24 having an enlarged head 25 is secured to the ferrule 15 and projects through the slot. By this construction the sleeve 18 may be pulled upwardly on the upper handle sections 12, the pin in this action preventing rotation of the sleeve and when the pin is in alignment with the lateral section 23 of the slot 21, the sleeve may be partly rotated, the pin 24 then occupying the end of the lateral

offset slot 23 and holding the sleeve in the upright position shown in Fig. 1. This exposes the coiled spring 17 and allows it to be flexed as illustrated in Fig. 1.

It is preferable to taper the sleeve and, therefore, the lower handle section 13 should be of slightly greater diameter than the upper handle section 12. This taper causes the sleeve to wedge tightly on the lower section of the handle when enclosing the spring and also facilitates the free disengagement of the sleeve 18 from the lower handle section 13.

In Fig. 4 a slightly modified form of the invention is illustrated in which the spring 17 is dispensed with and the flexible connection is effected by the flat leaf spring 30—30, which also acts to limit the flexing movement in substantially one plane. It is necessary in this construction to anchor the leaf spring by means of pins 26 and the respective bosses 15′ and 16′. Furthermore, a somewhat heavier leaf spring is required than the one shown in Figs. 1 and 2.

Various changes may be made in the arrangement and construction of parts without departing from the spirit of the invention as claimed.

What is claimed is:

1. A handle having an upper and a lower section, a spring having a helical coil connecting said sections for flexing of one section in regard to the other, and a leaf spring mounted within said helical coil spring and connected to the upper and lower sections of the handle and limiting the flexing action of the helical spring to one plane only, and a rigid member movable to engage both of the sections and hold said sections in rigid relation one with the other.

2. A handle having an upper and a lower section, each having a ferrule and a flat leaf spring secured at its ends in each ferrule to confine flexing of the handle to a single plane, each ferrule having a reduced boss forming part of the means to secure the leaf spring, a coiled spring surrounding the leaf spring and attached at its ends to each boss, a sleeve mounted on one of the handle sections, means to retain the sleeve on the said latter section, the sleeve being slidable to engage both handle sections and form a rigid connection therebetween.

3. A handle having an upper and a lower section, each having a ferrule with a reduced boss at the end, a coiled spring surrounding the bosses and extending from one ferrule to the other and being attached to each boss, a flat leaf spring secured at its opposite ends to each boss and being housed internally of the coiled spring, thereby forming a flexible connection between the handle sections flexible only in one plane, the lower section being of larger diameter than the other section, a tapered sleeve slidable on the upper handle section to encase the spring and wedge the lower section thereby forming a rigid connection, said sleeve being slidable upwardly on the upper handle section to be housed thereon and expose the spring for flexing the handle, the said sleeve having a longitudinal slot with an offset end and the upper handle section having a pin engaging said slot and when said pin is engaged in the offset end, retaining the sleeve on the upper section in an inoperative position.

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