Oct. 16, 1934. G. K. FORBES 1,977,180

HANDLE

Filed June 15, 1933

Fig. 1.

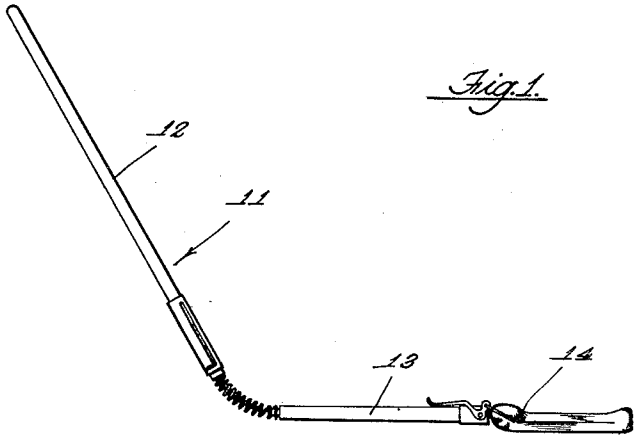



Fig. 2.

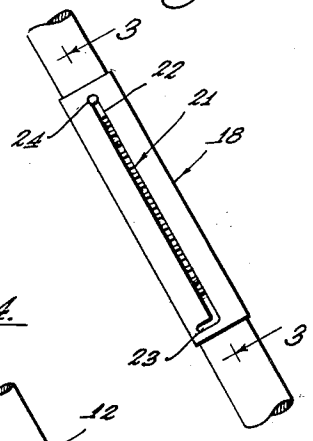



Fig. 3.

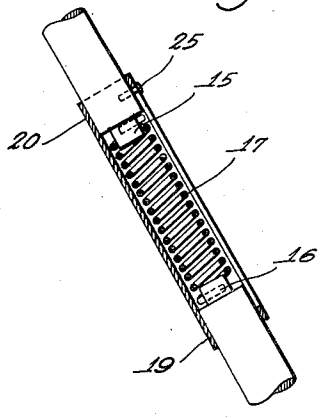
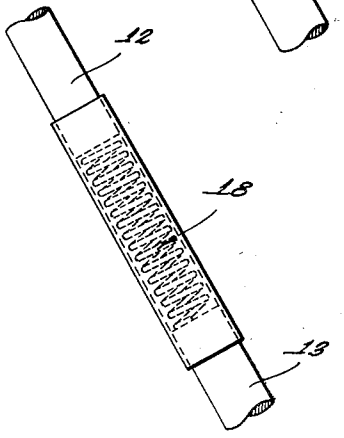



Fig. 4.

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1,977,180

# UNITED STATES PATENT OFFICE

1,977,180

## HANDLE

Gertrude K. Forbes, South Pasadena, Calif.

Application June 15, 1933, Serial No. 675,912

2 Claims. (Cl. 306—20)

My 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. An object of having the handle with the flexible section is to permit an angular bend of such handle so that a brush or mop may be used underneath low articles of furniture while the remaining part of the handle extends upwardly, thus making it unnecessary for the person using the mop to crouch near the floor.

A further object and feature of my invention is the construction of a handle which has two rigid parts connected by a flexible tension means holding these together, such tension means, preferably, being in the form of a coiled spring. Together with this I employ 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 spring and thus the sleeve when engaging both of the rigid handle portions forms a rigid straight handle.

Another detailed feature of my 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 position on the spring.

A further feature of my invention is forming the sleeve tapered, preferably with the 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.

My invention is illustrated in the accompanying drawing, in which:

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

Fig. 2 is an elevation of a section of the handle showing the sleeve rigidly connecting the two portions thereof.

Fig. 3 is a longitudinal section through the line 3—3 of Fig. 2.

Fig. 4 is an elevation reversed to that of Fig. 2.

In my construction I employ a handle 11 which has 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 dowel, 15 and 16, on the upper and lower sections, respectively, the dowels being of smaller diameter than the respective handle sections and a flexible helical coiled spring 17 has its opposite ends attached each to a dowel. The spring is of a tension type tending to draw the two ends inwardly or 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 is pulled upwardly into the position of Fig. 1, the wire may flex as shown in such figure, allowing the lower handle section 13 to be moved close to a floor or the like. This allows a mop or brush attached to the end of the handle to be readily thrust underneath low furniture.

In order to hold the sleeve in its uppermost position, it is provided with a bayonet type of slot 21. This slot has 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 is secured to the lower portion of the upper handle section 12 and projects through the slot. Such pin has an enlarged head 25. By this construction the sleeve may be pulled upwardly on the upper handle section, 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, the sleeve 24 may be partly rotated, the pin then occupying the end of the lateral offset slot and holding the sleeve in the upright position of Fig. 1. This exposes the coiled spring 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 from the lower handle section.

Various changes may be made in the details of construction without departing from the spirit or scope of the invention as defined by the appended claims.

I claim:

1. A handle having a pair of rigid upper and lower handle sections, a sleeve connecting said horizontal sections and having a slot with a longitudinal main portion and a right angular end, a pin in the upper section extending through the slot, the sleeve when housed and inoperative on the upper section having the right angular slot end engaging the pin, the said pin thereby retaining the sleeve in an inoperative position, said sleeve being movable to encase the spring and engage the lower handle section and thereby hold said handle section rigidly in alignment, the sleeve having a taper and the lower handle section being larger than the upper section whereby the sleeve when pressed over the lower section to an operative position wedges on the said lower section.

2. A handle having an upper and lower handle section each with a dowel at the end, a coiled spring connecting said dowels and forming a flexible connection between the handle sections, 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.

GERTRUDE K. FORBES.