E. P. SEGHERS.

SPRING BROOM HANDLE.

APPLICATION FILED OCT. 17, 1914.

1,289,010. Patented Dec. 24, 1918.

Fig. 1.

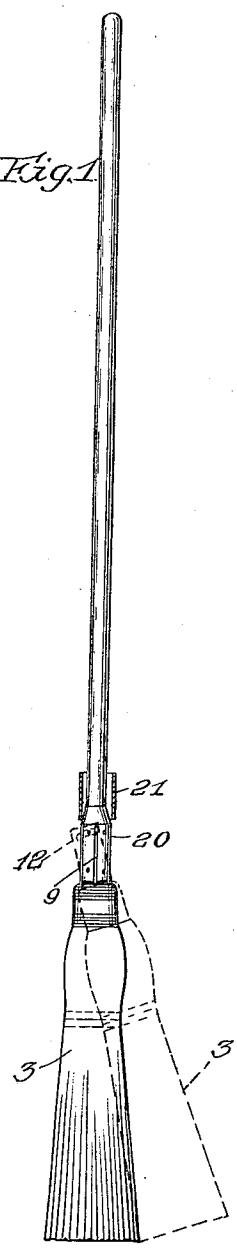


Fig. 2.

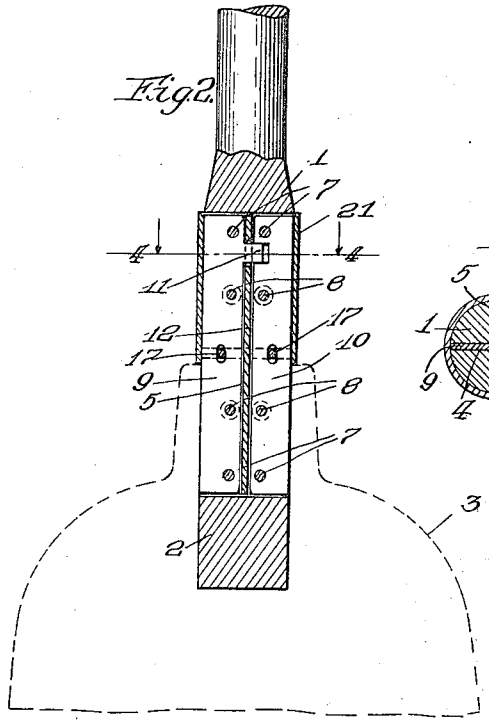


Fig. 4.

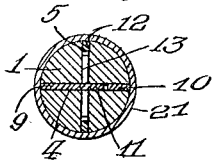


Fig. 3.

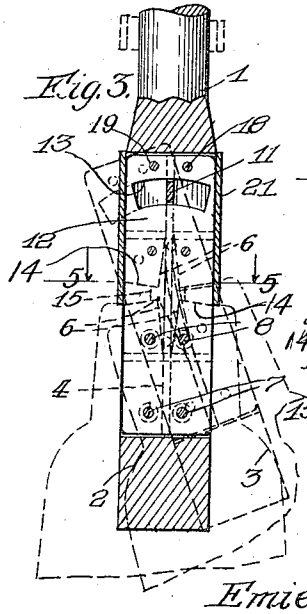


Fig. 5

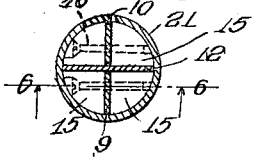
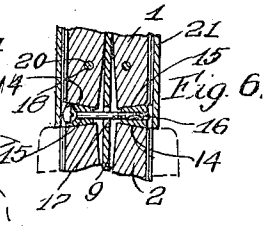


Fig. 6.



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UNITED STATES PATENT OFFICE.

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SPRING BROOM-HANDLE.

1,289,010. Specification of Letters Patent. Patented Dec. 24, 1918.

Application filed October 17, 1914. Serial No. 867,060.

To all whom it may concern:

Be it known that I, EMIEL P. SEGHERS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Spring Broom-Handles, of which the following is a specification.

This invention relates to a construction by means of which a rod or handle may be given a resilient action when desired, and is more particularly designed and constructed for use in connection with brooms. The principal object of the invention is to provide a construction in which a broom may be given a resilient or flexible action after the broom has become worn or when the bristles of the broom are too stiff for the purpose desired.

A further object of the invention is to provide improved means for locking the sections of the handle from resilient action with respect to each other.

For the attainment of these ends, and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts generally shown in the accompanying drawing and described in the specification, but more particularly pointed out in the appended claims.

In the accompanying drawing, Figure 1 is a view in elevation of a broom with a handle constructed in accordance with the principles of my invention. Fig. 2 is a sectional view parallel with the width of the broom. Fig. 3 is a view at right angles to the width of the broom. Fig. 4 is a sectional view on the line 4—4 of Fig. 2. Fig. 5 is a sectional view on the line 5—5 of Fig. 3, and Fig. 6 is a sectional view on the line 6—6 of Fig. 5.

When a broom becomes worn or when the bristles are too stiff for any particular use, it is frequently desirable to give to the broom a more resilient action. By giving a broom a more resilient action, a worn broom may be used much longer, thereby adding materially to its life and value. The present invention is designed and intended to provide a yielding or flexible handle structure by means of which the flexibility may be increased at will, thus not only increasing the life of the broom, but accommodating it to various uses and applications which it would not ordinarily possess.

In the accompanying drawing, a handle is formed with an outer section 1 constituting the hand-hold portion, and with a section 2 to which a brush 3 is attached. Both of the sections of the handle are formed at their adjacent ends with slits 4 and 5 at right angles to each other, of which the outer end of one slit in each section is formed with a widened portion 6. Secured in this slit 4 of each section by means of pins 7 and bolts 8, is a flat spring consisting preferably of a plate divided longitudinally into parts 9 and 10 and formed with a tongue 11 which is disposed in the slit of the section 1. The parts 9 and 10 are spaced apart and the tongue 11 extends across the space into the recess formed by cutting the material from the other part, the outside edges of the parts being flush with the outside edges of the handle.

Disposed between the parts 9 and 10 of the spring, and secured in the slit 5 of the section 2, but free in the other section of the handle, is a stop 12, preferably formed of strip metal as is the spring. In the upper or free end of the stop, it is formed with a slot 13 through which the tongue 11 of the spring extends and the slot is of such curvature that one section of the handle is oscillatable with respect to the other about an axis located at the base of the widened portion 6 in the handle section 2. The ends of the slot 13 act as a limit stop for the tongue 11 and the widened portions of the slits 4 in both of the sections are for the purpose of permitting the bending of one handle section with respect to the other, limited, of course, by the engagement of the tongue 11 with the ends of the slot 13.

The sections of the handle are held spaced apart by the spring and the ends of both of the sections are beveled outwardly at 14 from the widened edges of the slits 4, so that there will be no obstruction when one section is bent with respect to the other. The tongue 11 will contact with either end of the slot 13 before the edges of the handle sections will abut so that the action of the spring between the limits defined by the slot, will be free depending entirely upon the resiliency of the spring.

In order to lock the sections of the handle

in firm or solid position with respect to each other when the broom is new, or at any other time that it may be desired, blocks 15 are provided, which, in case the handle is round, are substantially in the form of a quarter of a circle and beveled slightly to conform to the beveled ends 14. These blocks 15 are held in place in any suitable manner, such, for example, as a screw 16 which is inserted through holes 17 in the spring parts 9 and 10. Another means is provided for assisting in holding the stop in fixed relation with respect to the handle section 1 when it is desired, comprising a number of pins 18 inserted through holes 19 in the stop 12 and through registering holes 20 in the handle section 1.

In the preferred construction, the stop 12 is the same width as the handle, so that the edges of the stop are flush with the sides of the handle and when the handle is used resiliently, the edges of the free end of the stop will project from the sides of the handle as shown in dotted outline in Fig. 1. In order to bind the stop in place with respect to the handle section 1, a sleeve 21 is provided which may be slipped in place over the slit end of this section, thereby covering the slits and binding the free end of the stop in fixed relation with respect to the handle section 1.

Thus it is seen that when desired, this handle may be held perfectly rigid and the broom used in the ordinary manner, but when it is desired to give to the broom a greater resiliency, and to make the action more flexible, it is necessary first to raise the sleeve, then to remove the pins 19 by pressing them out of the handle and to remove the blocks 15. The handle sections are then connected only by the spring and the movement of a section with respect to the other is limited by the engagement of the tongue with the ends of the slot 13 as previously set forth.

This construction is particularly designed and intended for use in connection with brooms and the like, but it is obvious, of course, that it may have a more general application and use wherever a resilient handle is desired.

What I claim is:

1. A spring handle comprising separated sections, a flexible member joining the sections, and another member disposed at an angle to the first member and constituting a stop for limiting the movement of the sections with respect to each other.

2. A spring broom handle comprising separated sections provided with slits in their adjacent ends, a flexible member secured to both sections of the handle in the slits thereof, and a stop member secured in the slit of one of the sections and having means for engaging the flexible member to limit the movement of one section with respect to the other.

3. A spring handle comprising separated sections formed with transverse slits at their adjacent ends, a spring secured to each of the sections in the slits thereof for spacing the sections apart, a stop comprising a member secured to one of the sections and projecting from its slit in the other section and constituting a limit stop for the spring, and means to secure the stop releasably to the section to which it is not attached for preventing the spring action of the handle.

4. A spring handle comprising separated sections formed with transverse slits at their adjacent ends, a spring secured to each of the sections in the slits thereof for spacing the sections apart, a stop comprising a member secured to one of the sections and projecting from its slit in the other section and constituting a limit stop for the spring, and means comprising pins inserted through the stop in that section of the handle to which it is not connected, for preventing the spring action of the handle.

5. A spring handle comprising separated sections formed with transverse slits at their adjacent ends, a spring secured to each of the sections in the slits thereof for spacing the sections apart, a stop comprising a member secured to one of the sections and projecting from its slit in the other section and constituting a limit stop for the spring, and means comprising a sleeve movable over the slit section to which the stop is not fixed, for holding the stop flush with the sides of the section and preventing the spring action.

6. A spring broom handle comprising sections each formed with slits at right angles to each other, a spring secured in one slit of each member and spacing the sections apart, a stop member secured in the other slit of one of the sections and free from fixed connection in the other slit of the other section, the spring and the stop dividing the handle longitudinally into four parts and blocks insertible between the sections of the handle for preventing the spring action of one section with respect to the other.

7. A spring broom handle comprising sections each formed with slits at right angles to each other, a spring secured in one slit of each member and spacing the sections apart, a stop member secured in the other slit of one of the sections and free from fixed connection in the other slit of the other section, the spring and the stop dividing the handle longitudinally into four parts, blocks insertible between the sections of the handle for preventing the spring action of one section with respect to the other, and additional means for preventing the spring action of the handle.

8. A spring handle comprising sections

split at the adjacent ends with the outer extremity of each slit gradually widened, a flat strip of resilient material secured in the slit of each member within the widened portion of the slit and spacing the sections slightly apart so that one section is free to bend with respect to the other, and a stop inserted in the sections to engage the said strip.

9. A spring handle comprising sections each formed with slits at right angles to each other, a flat spring secured at its ends in the slits of the sections and being formed with a central longitudinal division slit with a tongue connecting the divisions in the slit of one of the sections and a flat stop secured in the other slit of one of the sections and having a slot which is disposed in the slit of the other section through which the tongue of the spring extends.

10. A spring handle for brooms comprising separated sections with slits in each section at right angles to each other, one of the sections being secured to the broom with its slits parallel and at right angles to the broom, a spring secured in the slits of each section parallel with the broom having a tongue in the section not secured to the broom, and a stop plate secured to the broom section with a slotted end in the slit of the other section through the slot of which the tongue projects to limit the movement of this other section in a direction transverse to the broom.

11. In a device of the class described, the combination with two flat strips, one of which is resilient and formed with a tongue, and the other of which is disposed at right angles thereto with a slot at one end to engage the tongue, a sectional handle of which the adjacent ends are formed with right angled slits, and means for securing the ends of both of the strips in one of the sections and for securing only the resilient strip in the other section, whereby the other section may be sprung in either direction to the extent permitted by the slot.

12. In a device of the class described, the combination with two flat strips, one of which is resilient and formed with a tongue, and the other of which is disposed at right angles thereto with a slot at one end to engage the tongue, a sectional handle of which the adjacent ends are formed with right angled slits, means for securing the ends of both of the strips in one of the sections and for securing only the resilient strip in the other section, whereby the other section may be sprung in either direction to the extent permitted by the slot, thereby permitting the free end of the flat strip to project beyond the sides of the other section, and means to releasably engage the free end of the strip to hold both handle sections against springing movement with respect to each other when desired.

13. A spring broom handle comprising sections with right angled slits at the adjacent ends, one of which is secured to the broom with a slit parallel thereto, a flat spring secured in the slit parallel with the broom and in a slit of the other section spacing them apart, the spring being formed with a longitudinal division and with a tongue connecting the divisions in the section not connected to the broom, a stop substantially the width of the handle fixed to the broom section and having a curved slot through which the tongue projects in the other section, blocks disposed between the sections to prevent the movement of one section with respect to the other, means to lock the free end of the stop in connection with the outer end of the handle and a binding sleeve movable over the slit end of the outer section of the handle to assist in holding the stop in position and in preventing the spring action of the handle when desired.

14. A spring broom handle comprising sections, a resilient flat strip connecting the sections, a stop for the strip connected to one of the sections and movable outwardly from the edges of the other section when the handle is used resiliently, and a sleeve movable over the said other section to engage the edges of the stop to hold the handle against spring action.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 12th day of October A. D. 1914.

EMIEL P. SEGHERS.

Witnesses:
THOMAS COLSON,
KENT W. WONNELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."