Nov. 16, 1948. S. J. HEANEY 2,454,059

UMBRELLA

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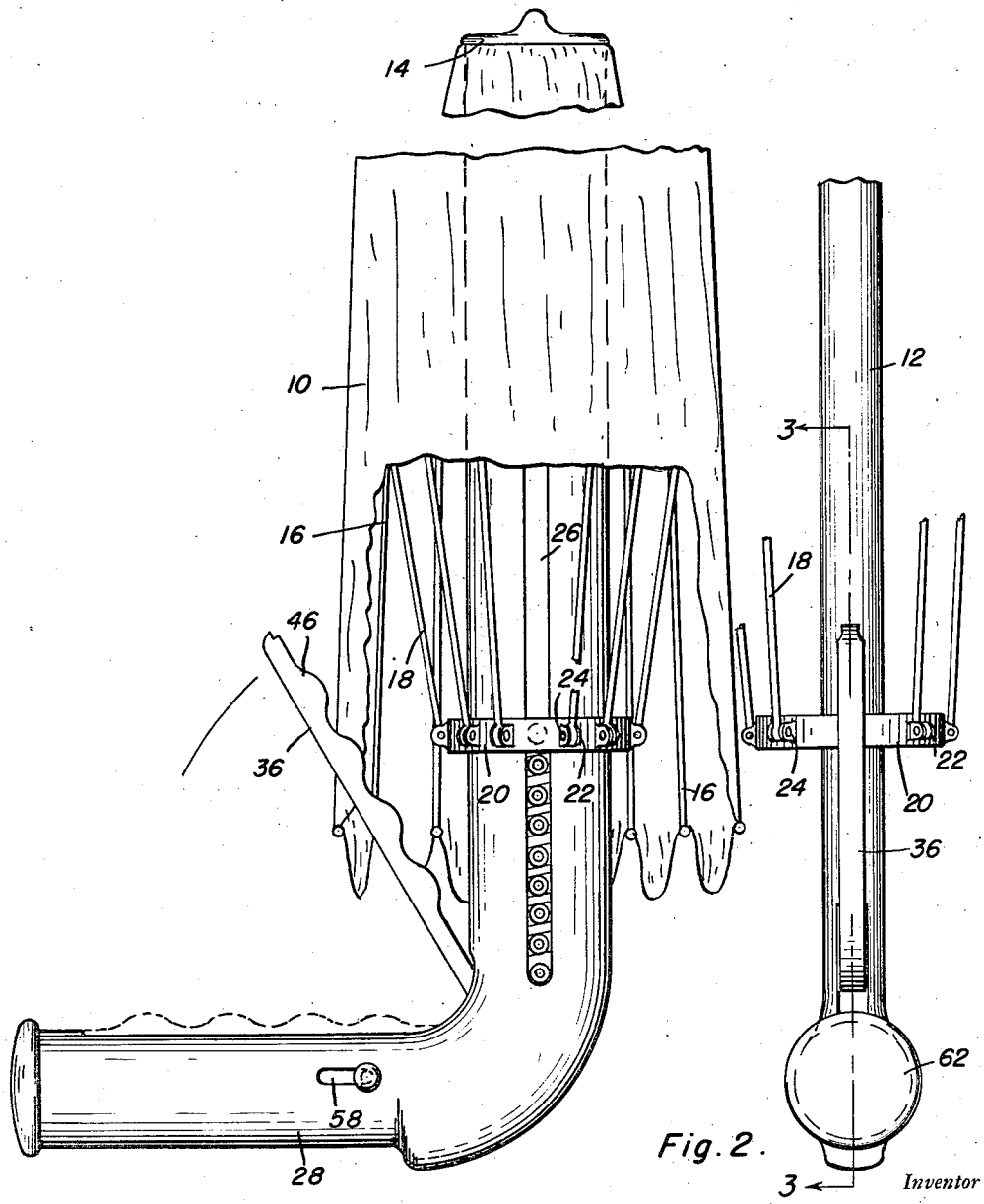


Fig. 1.

Fig. 2.

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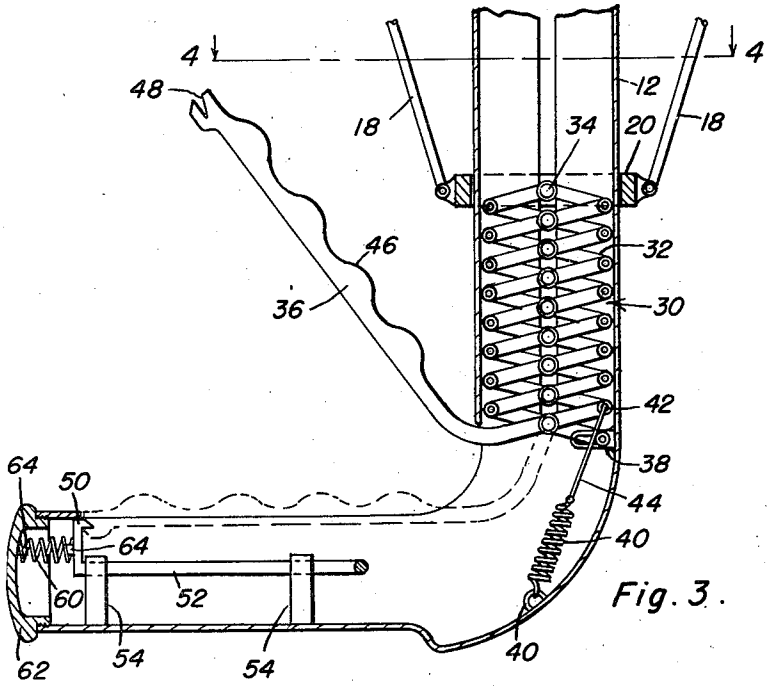


Fig. 3.

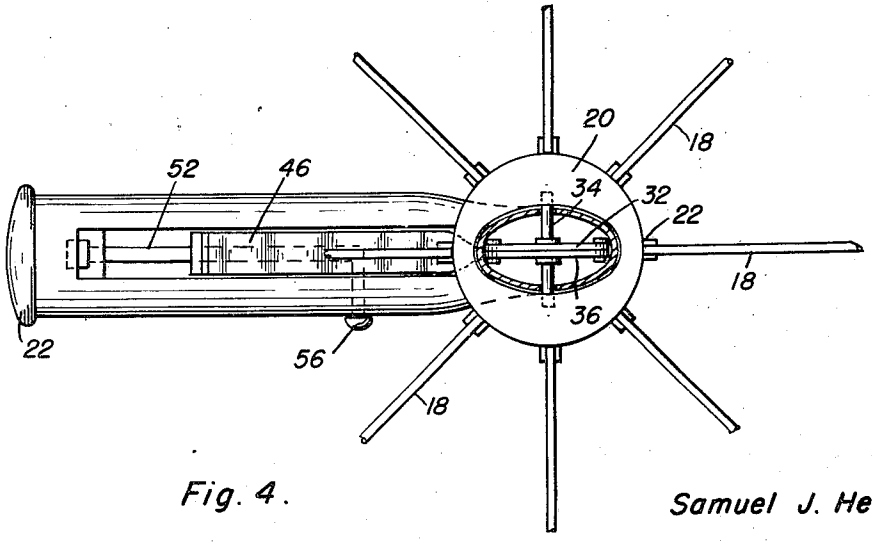


Fig. 4.

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UMBRELLA

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Application July 29, 1947, Serial No. 764,503

3 Claims. (Cl. 135—22)

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This invention relates generally to umbrellas, and more particularly to an umbrella handle including a tubular standard having a slot and a system of lazy tongs operatively mounted within said standard and connected to a sleeve on the standard by a pin extending through the slot, together with a finger lever adapted for actuation of the lazy tong system, whereby the umbrella can be opened and closed.

A primary object of this invention is to provide an umbrella handle having mechanism incorporated therewith to allow the umbrella to be opened and closed by one hand, while this same hand is used to support the umbrella.

Another object of this invention is to provide a handle structure which may be incorporated with various types of umbrellas, parasols and the like, the umbrella or parasol being provided with means to lock the same in opened position, and being held in closed position by spring means.

Another salient object of this invention is to provide an umbrella handle with a hand grip disposed normally to the standard of the device, and to incorporate the finger lever which is disposed in parallel relation with this hand grip when the umbrella or parasol is in opened position.

And a last object to be specifically mentioned is to provide a device of this character which is relatively inexpensive to manufacture, completely practical in design, extremely convenient and easy to operate and to use, and which will give generally efficient and durable service.

With these objects definitely in view, this invention resides in certain novel features of construction, combination and arrangement of parts and portions as will be hereinafter described in detail in the specification and more clearly pointed out in the appended claims and illustrated in the accompanying drawings which form a material part of this specification, and in which:

Figure 1 is a side elevational view of an umbrella featuring the instant invention, the figure being foreshortened and broken away in part to show the underlying structure, in order to more fully disclose the nature of this invention;

Figure 2 is another side elevational view of the major portion of the structure shown in Figure 1, the view being taken as from the left hand side of Figure 1;

Figure 3 is a vertical sectional view, taken on the line 3—3 in Figure 2; and,

Figure 4 is a view of the major portions of this

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invention, the standard being shown in horizontal cross-section and the view being taken from the line 4—4 in Figure 3.

Similar characters of reference designate similar or identical parts and portions throughout the several views of the drawings.

Referring to the drawings in detail, this invention includes the usual complement of an umbrella or parasol comprising a cover 10 constructed of any suitable flexible material, the spider terminal of conventional design which will be secured to the upper end of the standard 12 underneath the cover 10, as indicated at 14, together with a suitable number of conventional stays 16 and links 18 secured at the outer ends thereof pivotally to the intermediate portions of the stays 16.

The lower or inner ends of the links 18 are pivotally secured in regularly spaced relation to a spider sleeve 20 which is provided with a plurality of paired bracket members 22 and pins 24 which are inserted through the said lower or inner ends of the links 18. This spider sleeve 20 has an internal opening conforming in shape and size with the exterior cross-sectional dimensions of the standard 12. The drawings illustrate the standard 12 which is tubular and ellipsoid in cross-section, as best illustrated in Figure 4, and the sleeve 20 is illustrated with a central opening conforming with this shape of standard. The standard is longitudinally slotted as at 26 and is then bent at right angles adjacent one end thereof to provide a hand grip 28. If the standard is of a reasonably small cross-sectional size, the hand grip 28 may be of a greater diameter than the standard and the enlargement of the hand grip may be accomplished by provision of a hand grip member secured to the right angularly bent portion of the standard. The drawings illustrate a hand grip member 28 of a cross-sectional size comparable to the size of the standard, but the relative sizes of these parts is a matter of individual preferment and mechanical expediency.

A lazy tong system is mounted within the lower end of the standard 12, the lazy tongs being indicated generally at 30. The component levers 32 may each be of a length only slightly less than the corresponding internal dimension of the standard. It is preferred that this dimension be the dimension of the longer of the two major axes when a standard of ellipsoid cross-section is used. The center pivot pins 34 are of a length greater than the dimension of the shorter of the major axes of the standard so that the ends of these pins extend through the slots 26 in the

standard. It is within the purview of this invention to provide only one such slot 26 and to shorten certain of the center pins 34. The essential feature of this portion of the invention is that a sufficient number of pivot pins 34 are slidably associated with the standard 12 to guide the lazy tongs axially of the standard 12 when the same are actuated. The lowermost of the center pins 34 is pivotally secured to a finger lever 36, and one end of this lever is pivotally secured to one of the pivots at the ends of the levers 32, as clearly indicated in Figure 3. The lowermost of the levers 32 is secured to a slotted bracket 38 provided internally of the standard 12, and a helical spring 40 is tensioned between another bracket member 42 on the handle portion of the standard and the adjacent pivot pin joining the end of the lever 36 to the lazy tong system, as at 42. In order that the spring will not foul the lazy tong system when the same is in expanded position, the link 44 may be inserted between the pivotal connection 42 and the corresponding end of the spring 40.

The lever 36 may be constructed with an undulating surface 46 to fit the fingers of the user and the outer end of the lever is notched as at 48 for engagement with a hook 50 on the end of a rod 52 slidably mounted within the hand grip 28 by means of brackets 54 or any other suitable means. The inner end of this rod 52 is outwardly bent and knobbed as at 56 and this outwardly bent portion is accommodated by a slot 58 in the hand grip 28. The knob 56 is, of course, disposed exteriorly of the slotted portion. In order that the hook 50 may be biased into lever locking position, in engagement with the slot 48 on the end of the lever, a spring 60 is compressed between the end of the rod 52 and a cap 62 which is secured in any suitable manner to the outer end of the hand grip 58. Spring-locating pins 64 are provided on the rod 52 and on the interior surface of the cap 62 to prevent the mis-alignment of the spring 60.

The operation of this invention will be clearly understood from the foregoing description of the mechanical details thereof, taken in connection with the above recitation of the objects sought to be achieved by this invention, but in recapitulation, it should be noted that when the lever 36 is in the position indicated in Figure 3, the lazy tongs 30 are compressed under the action of the spring 40, while the spider sleeve 20 is moved into a position holding the umbrella or parasol in closed position. When the lever 36 is pulled by the fingers of the user into parallel relation with the hand grip 28 the lazy tong system is extended, forcing the sleeve 20 in a direction to cause the links 18 to distend the stays 16 and the cover 10.

When the lever 36 is in parallel relation with the hand grip 28 the hook 50 will be snapped into engagement with the lever by means of the spring 60, and releasing of this lever in order to allow the umbrella or parasol to close is accomplished by movement of the knob 56 as to the left in Figure 1.

Though there has been shown a particular embodiment of the present invention, this application is not limited to this particular embodiment, but it is desired to include in the scope of this invention, the construction, combination and arrangement of parts and portions substantially as set forth in the appended claims.

Having described the invention, what is claimed as new is:

1. An umbrella handle including a tubular standard having a slot, a sleeve on said standard, lazy tongs operatively mounted within said standard and connected to said sleeve by a pin extending through said slot, means to actuate said lazy tongs to slide the sleeve along the standard, said means including a finger lever pivoted on said standard, and spring means connected to said standard and to said lazy tongs to bias the lazy tongs into collapsed position.

2. An umbrella handle including a tubular standard having a slot, a sleeve on said standard, lazy tongs operatively mounted within said standard and connected to said sleeve by a pin extending through said slot, means to actuate said lazy tongs to slide the sleeve along the standard, said means including a finger lever pivoted on said standard, spring means connected to said standard and to said lazy tongs to bias the lazy tongs into collapsed position, said standard having a hand grip, and said lever being disposed parallel to said hand grip when in one position.

3. An umbrella handle including a tubular standard having a slot, a sleeve on said standard, lazy tongs operatively mounted within said standard and connected to said sleeve by a pin extending through said slot, means to actuate said lazy tongs to slide the sleeve along the standard, said means including a finger lever pivoted on said standard, spring means connected to said standard and to said lazy tongs to bias the lazy tongs into collapsed position, said standard having a hand grip, and said lever being disposed parallel to said hand grip when in one position, and locking means to releasably hold said lever in said position.

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