April 4, 1944. W. H. MASON 2,346,038

PICKUP CANE

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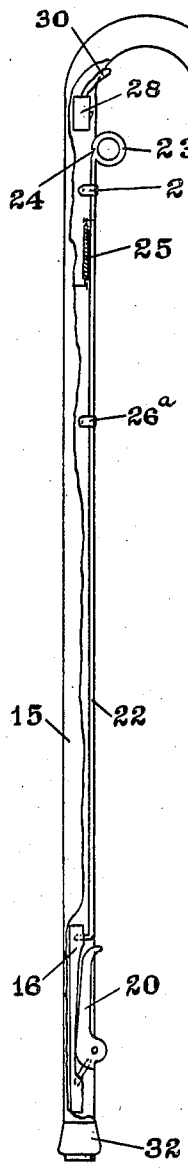


Fig.1.

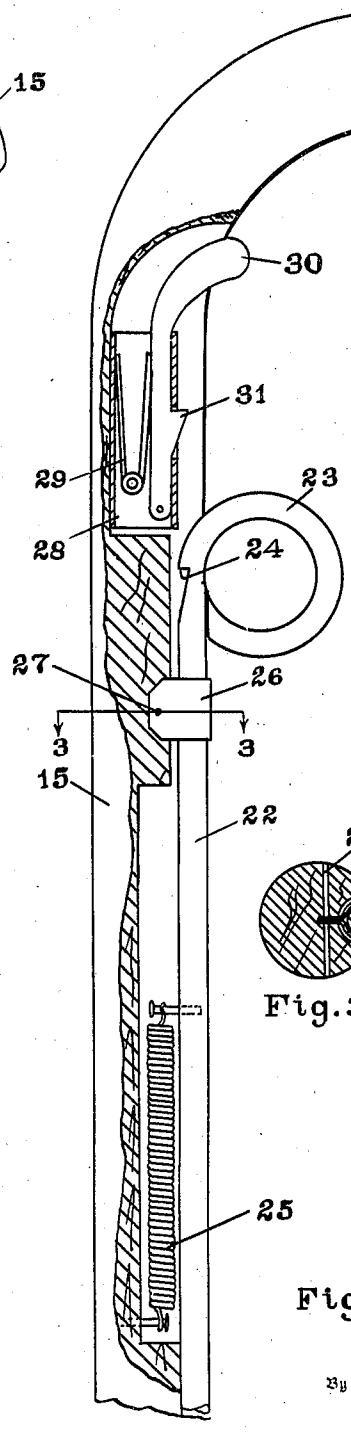


Fig.2.

Fig.3.

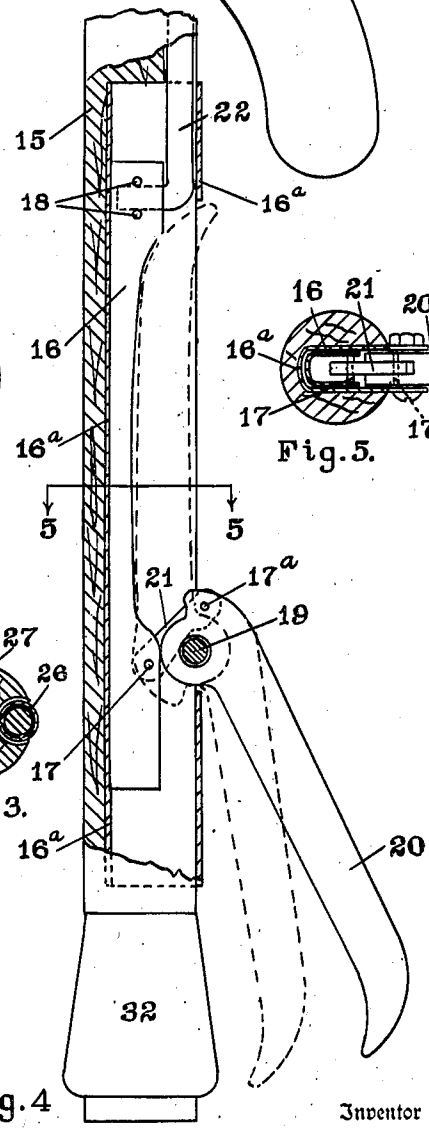


Fig.4

Fig.5.

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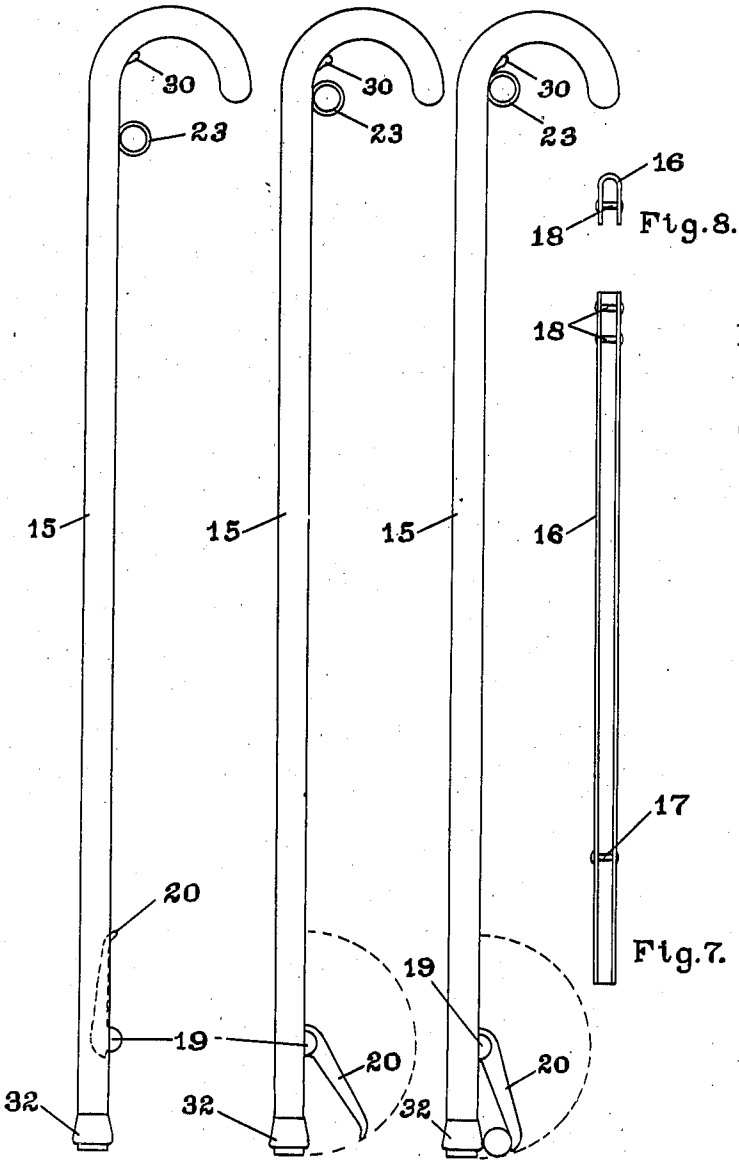


Fig.11.

Fig.12.

Fig.13.

Fig.7.

Fig.8.

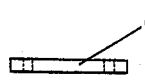


Fig.9.



Fig.10.

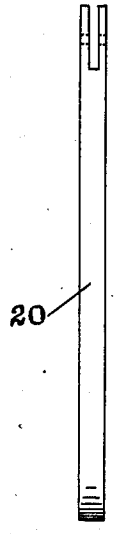


Fig.6.

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Patented Apr. 4, 1944

2,346,038

UNITED STATES PATENT OFFICE

2,346,038

PICKUP CANE

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Application November 11, 1942, Serial No. 465,219

9 Claims. (Cl. 294—19)

In the aggregate a large number of persons are so afflicted by disease such for example as arthritis, wounds, or old age that they cannot stoop to pick up from the floor or ground articles that they wish or need. Such persons usually carry ordinary canes.

The object of the present invention is to provide an improved and simplified construction of cane of light weight whereby it is not only useful as a walking stick, but is also capable of use by proper manipulation in picking up without stooping any of a large variety of articles that have fallen to a floor or ground.

A further object of the invention is to provide such a cane with a swinging pick-up finger that upon proper operation swings upward and preferably into the body of the cane so that the operating end of said pick-up member shall not be normally in the neighborhood of a regular ground contacting end or tip of the cane when in use as a walking stick and therefore said finger subject to damage or wear.

A further object of the invention is to provide a pick-up cane in which the body of it or a large portion of it is of wood or other material light in weight and having the characteristic that at the handle it is a poor conductor of heat so that when carried in the ungloved hand it will not in cold weather chill that member nor in hot weather annoyingly subject the uncovered hand to heat transference.

Other objects will appear from the disclosure herein.

In the accompanying drawings in which I have illustrated the preferred form of the construction—

Figure 1 is a view of the cane longitudinally broken out at one side to illustrate in a general way the mechanism therein.

Fig. 2 is a view on a larger scale of the upper portion of the cane illustrating the details of construction,

Fig. 3 is a cross section of the body of the cane on the line 3—3 Fig. 2 looking down.

Fig. 4 is a view on a larger scale of the lower portion of the cane illustrating details therein.

Fig. 5 is a cross section on the line 5—5 Fig. 4 looking down with a portion of the pick-up finger broken off.

Fig. 6 is an edge view of the pick-up finger.

Figs. 7 and 8 are edge and end views respectively of the extension of the pull rod with which extension the finger is linked.

Figs. 9 and 10 are edge and side views respectively of the link or connecting pick-up finger with its carrying case.

Fig. 11 is a side view of the cane showing the pick-up finger in inverted and normal or ordinary position.

Fig. 12 illustrates a side view of the cane showing the pick-up finger in a position to which it may be moved preparatory to a picking up operation.

Fig. 13 illustrates the pick-up finger pinching an object against the tip or foot of the cane preparatory to lifting it for removal by the hand of the user.

In the views the character 15 designates the cane or stick which is preferably of wood or its equivalent material for the reason stated. The cane along its side below and in the plane coinciding with the curved handle is cut with suitable recesses as shown of a depth to receive the casings and operating parts as best shown in Figs. 2, 3, 4 and 5.

In the lowermost recess of the cane there is lodged a metallic casing or carrier 16*a* in which slides a metallic bar or member shown at 16 in Figs. 4, 7 and 8. Said channel or bar member 16 has a cross pin 17 near its lower end and a pair of cross pins 18, 18, near its upper end.

Secured between projecting ears of the casing 16*a* is a suitable bearing 19 consisting, in the instance shown, of a shouldered screw secured by a nut as best shown in Fig. 5 on which bearing is journaled the pick-up finger 20 having at its base or hub portion eccentrically connected with the channel member 16 by means of a link 21 and pins 17 and 17[a] so that when the channel member 16 is raised or lowered the said pick-up finger is oscillated in its plane on its axis or bearing 19.

Between the pair of cross pins 18, 18, extends the bent end of a pull rod 22 that has at its upper end an exposed finger receiving ring 23 provided at the side thereof within the groove or recess of the cane a notch 24. Below the finger ring 23 the pull rod 22 has connected with it by means of an extended pin therein one end of a coiled spring 25, the other end of said spring being connected with a nail in the material of the cane so that when the pull rod 22 is lifted by a finger or digit of the hand and released from this position the tendency of said spring 25 is to draw said rod downward and swing the pick-up finger upward on its axis or bearing 19.

The pull rod 22 is held in a position parallel to the body of the cane and largely within the annular body of the cane by means of embracing metallic clips 26 and 26[a] each having lapped flanges extended into a cut in the material of the cane. Said clips can be fastened in position by

means of a pin 27 driven transversely through the material of the cane and a hole in the flanges of the clip as depicted in Fig. 3.

Suitably secured in a cut-out portion of the cane above the upper end of the pull rod 22 is a casing 28 mounted in which is a suitable spring 29 a leg of which latter presses against a pivoted trigger finger piece 30 having a tooth or catch 31 thereon that normally projects through a hole in the exposed wall of the casing 28 and held yieldingly in this position by said spring 29. Said tooth 31 stands in the path of movement of the notch 24 in the pull rod so that when said pull rod is drawn amply upward to cause the tooth 31 to enter the notch 24 and therefore swing the pick-up finger 20 into position for a further final upward pull on the pull rod to grip an object as shown in Figs. 12 and 13.

The cane is shown as preferably provided with a rubber resilient tip 32 the surface of which better cooperates with the pick-up finger in gripping some objects to be picked up.

From the construction shown and described it will be observed that the spring 25 normally tends to hold the pull rod down and the pick-up finger elevated and practically concealed as depicted in Figs. 1 and 11 and by broken lines in Fig. 4.

In operation the latching means 31 is designed to hold the pull rod 22 up and therefore the pick-up finger 20 down to stand about 160 degrees from its closed position or about 20 degrees to the lower portion of the cane and in a position preparatory to operating the pick-up on the article to be lifted as indicated in Fig. 12. When the article is to be picked up a lifting of the pull rod 22 from its said latched position is required to throw the pick-up finger into article-gripping position as indicated in Figs. 4 and 13. The latching means for the pull rod can be omitted or by operation the latching means can be by-passed with a continuous pull upward and the pick-up finger swung from its uppermost or concealed position directly to engage the article to be picked up.

The handle of the cane is shown as preferably of the "Prince-of-Wales" style, but said handle and the forms and materials of the other parts can be changed without departing from the gist of the invention as claimed.

What I claim is:

1. A pick-up cane having pivoted thereto near its lower end a pick-up finger, said cane having a longitudinal recess in which said finger is substantially concealed and means connected with the cane for causing said finger to swing in an arc approximately of 180 degrees in the plane of the cane.

2. A pick-up cane including a pick-up member pivoted to the lower end of the cane, a slidable member in the bar of the cane to which said pick-up member is linked, a pull rod connected with said slidable member, a spring tending to hold said pull rod in a down position and said pick-up member in an up position in the cane, and means for latching said pull rod in an up position with the pick-up member at an angle of approximately 20 degrees to the lower portion of the cane.

3. A pick-up cane of wood or similar poor conductor of heat having a longitudinal recess therein, a bar slidable in said recess, a pick-up finger swingably connected to said bar, a pull rod for actuating said bar adapted to swing said pick-up finger from said recess into pick-up position, and upward into said recess.

4. A cane having a pick up finger pivoted to the lower portion thereof, a longitudinally slidable means in the cane with which said pick up finger is operably connected, a digitally operable pull means connected with said slidable member, a coiled spring connected with the cane and said pull means tending yieldingly to hold said pick up finger normally in inverted position on its pivot adjacent to the cane, and means for latching said pull means for downward movement of the pick up finger on its pivot beyond an angular position of approximately twenty degrees to the lower portion of the cane preparatory to a pick-up operation.

5. A cane having a pick up finger pivoted to the lower portion thereof, a longitudinally slidable means in the cane with which said pick-up finger is operably connected, a digitally operable pull means connected with said slidable means, a coiled spring connected with the cane and said means tending yieldingly to hold said pick up finger normally in inverted position on its pivot adjacent to the cane, and means for temporarily latching said pull means from downward movement of the pick up finger on its pivot beyond an angular position of approximately twenty degrees to the lower end of the cane preparatory to a pick-up operation, said latching means being by-passable for a further digital upward movement of the pull means to cause pick up movement of said finger from its said preparatory position.

6. A cane having a longitudinal recess in its lower portion, a pick up finger pivoted to said lower portion at said recess, a longitudinally slidable member in said recess operably connected with said pick up finger, a digitally operably pull means connected with said slidable member, a coiled spring connected with the cane and said pull means to hold the pick up finger on its pivot in said recess in a normally inverted position.

7. A cane having a pick up finger pivoted at one end to the lower portion of the cane, longitudinally slidable pull means in the cane for said finger, a link connecting the pivoted end of said pick up finger with said pull means above the axis of the link's pivot and spring actuated means connected with the cane and longitudinally slidable pull means tending to hold said pick up finger yieldingly in a normally inverted position.

8. A cane having a pick up finger pivoted at one end to the lower portion of the cane, a spring actuated means extended longitudinally through the cane connected with said pick up finger for yieldingly holding said pick up finger in an inverted position next to the cane, and means in the cane at the upper end of said spring actuated means for digitally actuating the same to swing the pick up finger from said inverted position to pick up position.

9. A cane having a pick up finger pivoted to the lower portion thereof, a longitudinally slidable means in the cane with which said pick up finger is operably connected, a digitally operable pull means connected with said slidable member, a coiled spring connected with the cane and said pull means tending yieldingly to hold said pick up finger normally in inverted position on its pivot adjacent to the cane.

WILLIAM H. MASON.