Aug. 10, 1965 E. F. RIES 3,199,521

WALKER OR WALKER AID

Filed Dec. 22, 1961

Fig. 1.

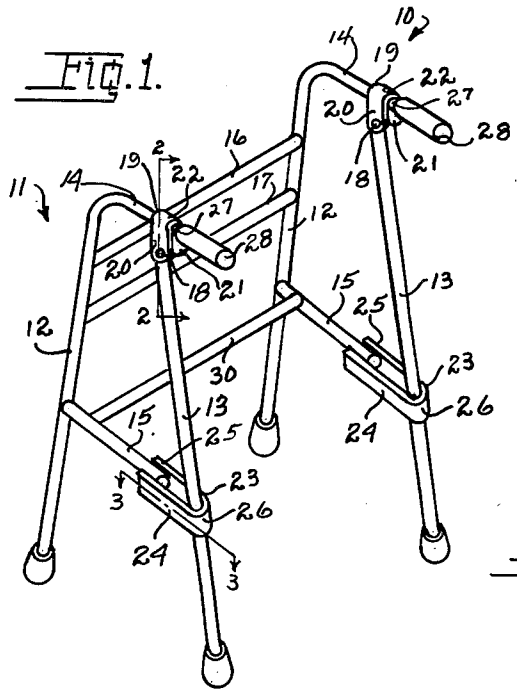


Fig. 2.

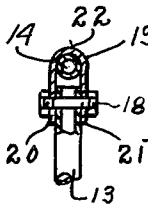
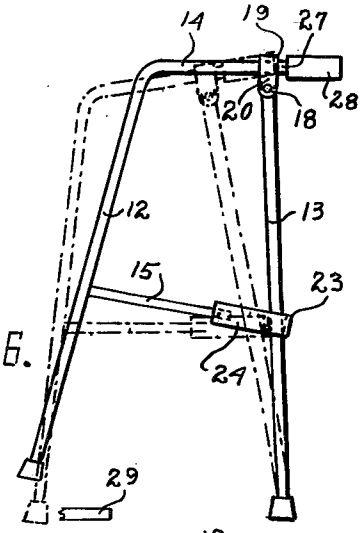


Fig. 6.



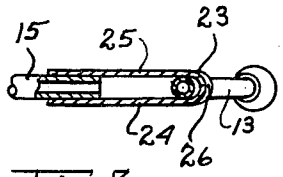


Fig. 3.

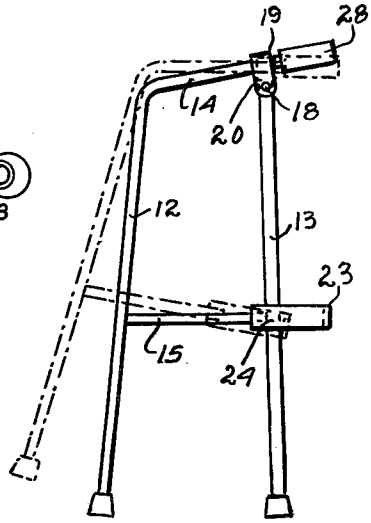


Fig. 5.

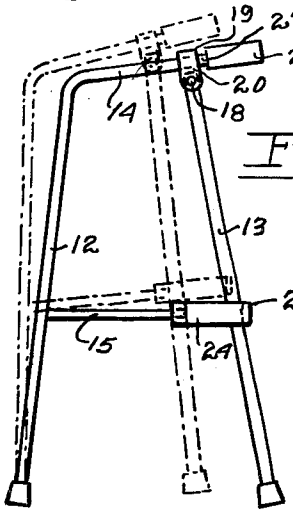


Fig. 4.

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WALKER OR WALKER AID

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2 Claims. (Cl. 135—45)

This invention relates to improvements in a walker, or, as it is sometimes called, a walker aid such as used by invalids in walking or moving above in the manner as with a cane.

This application is directed to a modification disclosed in the application of Elmer F. Ries, Serial No. 126,805, for Walker or Walker Aid, filed July 20, 1961.

As noted in said pending application, in the past walkers or walker aids have been so constructed that they were bodily slid along the surface or were bodily raised to just clear the surface in moving the same and the user. In the past considerable difficulty was frequently experienced in raising the walker to either go over obstructions, such as the edge of a carpet or a doorstep when indoors, or unevenness in walks or the like when outdoors, and which obstructions endangered the user, particularly if the user was sufficiently infirm on his feet to make lifting and moving of the walker a difficult problem.

By the present invention, there is being provided a walker or walker aid which is advanced step by step by the user without the necessity of either sliding the walker or lifting and bodily moving the same. At the same time the walker or walker aid of the present invention is readily stepped up onto or over obstructions or slightly higher elevations without depriving the user of a solid footing between the walker and himself.

The principal object of the present invention, therefore, is the provision of a walker or walker aid which is itself walked by the user and with the expenditure of a minimum of energy by the said user.

Another object of the present invention is the provision of a walker or walker aid which, in effect, automatically advances itself merely through a slight pressure in one direction on the walker or walker aid by the user or a slight lifting of one portion of the walker or walker aid by the user.

Another object of this invention is the provision of a walker or walker aid that enables the user to readily pass over an obstruction in his path or to readily rise to a slightly higher elevation in the said user's path.

Other objects and advantages of the present invention should be readily apparent by reference to the following specification considered in conjunction with the accompanying drawings forming a part thereof and it is to be understood that any modifications may be made in the exact structural details there shown and described, within the scope of the appended claims, without departing from or exceeding the spirit of the invention.

In the drawings:

FIG. 1 is a perspective view of a walker or walker aid embodying the principles of the present invention.

FIG. 2 is an enlarged, sectional view through a portion of the walker as seen from line 2—2 on FIG. 1.

FIG. 3 is an enlarged, sectional view through a further portion of the walker as seen from line 3—3 on FIG. 1.

FIGS. 4, 5 and 6 are a series of side elevational views of the walker in use with FIG. 4 showing the walker in its initial or normal position, FIG. 5 showing the walker in a position intermediate a forward step, and FIG. 6 showing the walker in an advanced or one step forward position just prior to the initial or normal position thereof in FIG. 4.

Throughout the several views of the drawings similar

reference characters are employed to denote the same or similar parts.

Specifically, as shown in the drawings, a walker or walker aid comprises a pair of substantially identical side frames 10 and 11 with each side frame including a forward upright or front leg 12 and a rearward upright or back leg 13 each joined to the other by a top transverse member 14. Each of the side frames has rearwardly projecting from its forward leg a cross member 15 located at a point intermediate the lower and upper ends thereof. The said side frames 10 and 11 have their forward legs 12 joined to one another as by braces 16 and 17 thereby providing, in effect, a rigid U-shaped frame since the rearward legs 13 of the side frames are not joined.

The foregoing description of a walker or walker aid is well known, particularly when the back leg of each side frame is connected to its cross member 15, and when in use the user stands between the said side frames 10 and 11 grabbing the top transverse members or bars 14 of said side frames for first forwardly moving or stepping within said frame and then slidably advancing the frame followed by a further forward movement or step of his body. In lieu of actually sliding the frame the user after making a short forward step may physically or bodily raise the walker to clear the surface being walked upon and then forwardly shift the walker to a forward position before lowering same to the said surface and taking a forward step. Obviously either method of using the walker or walker aid as heretofore known required considerable exertion on the user, frequently an enfeebled invalid.

The present invention contemplates, as set forth above, the, in effect, automatic forward movement of the walker or walker aid without any appreciable effort on the user's part in advancing the walker.

As shown in the drawings, the means for effecting the forward movement of the walker consists in each side frame 10 and 11 having the second or back leg of each side frame pivoted instead of fixed with respect to its front leg. Therefore, each back leg 13 has its upper end pivoted at 18 to a bracket 19 welded or otherwise secured, respectively, to the rear end of a top transverse member 14 of each side frame and with said brackets 19 projecting downwardly of the said transverse members 14. Each bracket 19 conveniently takes the form of a U-shaped member including arms 20 and 21 joined by a base 22 which is secured, preferably by welding, to its frame side transverse member 14 and between which arms 20 and 21 extends the pivot 18 for securing the back leg 13.

Each of said back legs 13 is adapted to oscillate or swing on its pivot 18 with the path of oscillation or swinging being defined as well as the amount of said oscillation or swinging being controlled. To accomplish this a second U-shaped bracket 23 is secured to each side frame cross member 15 to have its parallel arms 24 and 25 rearwardly project from the said cross member 15. The said arms 24 and 25 between their inner parallel surfaces define the path of movement or oscillation of the leg 13. The outer ends of the arms 24 and 25 are joined by a base member 26.

For a reason subsequently set forth the walker or walker aid of the present invention utilizes handle or grip portions other than the transverse members or top bars 14 of the side frames 10 and 11. Accordingly the said transverse members or top bars 14 are each extended rearwardly of its rearward vertical member or back leg 13, as at 27, with each extension preferably provided with a grip member 28, preferably, formed of comparably soft material such as rubber as distinguished from the above described parts which are generally formed of metallic tubing.

In use the walker or walker aid of the present invention has a normal position such as shown in FIG. 1 and

in solid lines in FIG. 4 with the the user standing comfortably between the side frames 10 and 11 while engaging the handle grips 28. In desiring to forwardly advance the user merely effects a slight lift on the grips 28 thereby tilting the walker from the said solid line position thereof in FIG. 4 to the phantom line position thereof. As the walker is so tilted each rearward vertical member or back leg swings or oscillates by gravity from its normal extended position to a position against the edge of its side frame cross member 15, as illustrated in said phantom lines in FIG. 4 or solid lines in FIG. 5, whereupon the walker or walker aid is lowered to have the same rest on all four legs, as illustrated in solid lines in said FIG. 5. This position of the walker parts may be considered as an intermediate position thereof in advancing a step.

The user now lowers the rear end of the walker or walker aid, using the lower ends of the rearward members or back legs as a pivot, to the position thereof shown in solid lines in FIG. 5. As illustrated the walker or walker aid is now being supported by the lower ends of the walker sides forward vertical members or legs 12 and the lower ends of the rearward vertical members or back legs 13 when in their nearest positions.

The user now merely slightly leans or presses on the handle grips 28 which automatically raises or pivots the walker on the lower ends of the said rearward vertical members or back legs 13 and simultaneously swings the entire walker frame with the exception of said rearward members or back legs 13 on the pivots 18 to advance the same a full step ahead of the point of the walker in FIG. 4. The user now releases the pressure on the handle grips 28 whereupon the walker or walker aid descends from the solid line position of FIG. 6 to the phantom line position thereof or to the solid line position of FIG. 4, the initial or normal position of the walker.

The user advances himself within the walker in the solid line position of FIG. 4 or the phantom line position of FIG. 6, and which positions are the same.

It should be noted that while the above description advances the walker a full step, so called, between the solid line position of the rear vertical members or back legs 13 in FIG. 4 and the phantom line position thereof in said FIG. 4, obviously the user can control this advance since the walker or walker aid may be raised merely sufficiently to permit the forward sliding of the bottom of the rear vertical member or back leg 13 on the supporting surface and can stop this advance merely by lowering the walker or failing to further raise the same and which movement of the walker or walker aid then enables the user to downwardly press the handle grips 28 and shift the walker forwardly toward the phantom line position thereof in FIG. 5.

From the foregoing, it will be obvious that should an obstruction, such as is illustrated in FIG. 6 at 29, be encountered in the path of movement of the walker or walker aid, the lower ends of the side frames forward legs 12 can be raised sufficiently to be above or override the same.

To insure rigidity in the walker or walker aid, the cross members 15 are retained in definite relation to one another by a brace member 30, preferably, having its opposite ends respectively welded to said cross members.

From the foregoing, it is believed now evident that there has been provided a walker or walker aid that accomplishes the desired ends as set forth in the objects above.

What is claimed is:

1. In a walker or walker aid the combination of a pair of side frames, each side frame including an upstanding front leg slightly rearwardly inclining and each front leg having a bottom end and a top end with said top end having integral therewith a rearwardly extending frame top, a rear leg for each side frame having a bottom end and a top end, each rear leg having its top end pivotally connected with its side frame top at a point rearwardly spaced from the top end of its front leg, said rear legs each being free of the other and each adapted to swing by gravity through a given arc toward and from its front legs wherefore the bottom ends of said front and rear legs are relatively close and relatively remote from one another at the opposite ends of the arc of swing of the rear legs but with said front and rear legs simultaneously having their bottom ends on a supporting surface at each end of the arc of swing of the rear leg, a rod carried by and rearwardly extending from each side frame front leg to be engaged by its back leg limiting the swinging movement of said rear leg toward its front leg so that the position of the rear leg is such that it has a position toward its front leg substantially vertically from its pivot, means associated with each side frame limiting the swinging movement of its rear leg from its front leg, and means spacedly joining the front legs of said frames to rigidly connect and space said frames laterally of one another and forming a space therebehind corresponding to the rearward spacing of the rear leg pivots from the front leg tops and laterally between the said rear legs.

2. In a walker or walker aid the combination of a pair of side frames, each side frame including an upstanding front leg slightly rearwardly inclining and each front leg having a bottom end and a top end with said top end having integral therewith a rearwardly extending frame top, a rear leg for each side frame having a bottom end and a top end, each rear leg having its top end pivotally connected with its side frame top at a point rearwardly spaced from the top end of its front leg, said rear legs each being free of the other and each adapted to swing by gravity through a given arc toward and from its front leg wherefore the bottom ends of said front and rear legs are relatively close and relatively remote from one another at the opposite ends of the arc of swing of the rear legs but with said front and rear legs simultaneously having their bottom ends on a supporting surface at each end of the arc of swing of the rear leg, a rod carried by and rearwardly extending from each side frame front leg to be engaged by its back leg limiting the swinging movement of said rear leg toward its front leg so that the position of the rear leg is such that it has a position toward its front leg substantially vertically from its pivot, a U-shaped member carried by each side frame front leg rod, said U-shaped member comprising a base and arms from the base straddling its rear leg and having the free ends of the arms secured to the rod to space the U-shaped member base from the rod end and with said U-shaped member base limiting the swinging movement of its rear leg from its front leg, and means spacedly joining the front legs of said frames to rigidly connect and space said frames laterally of one another and forming a space therebehind corresponding to the rearward spacing of the rear leg pivots from the front leg tops and laterally between the said rear legs.

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