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WALKER OR WALKER AID

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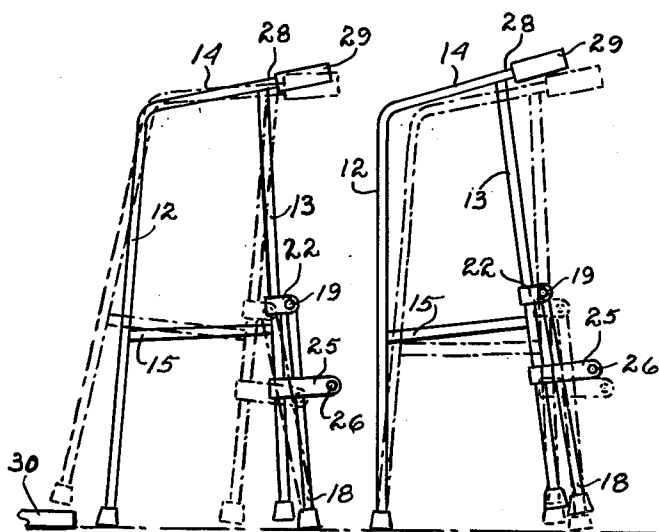
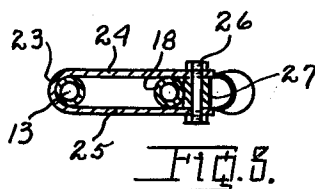
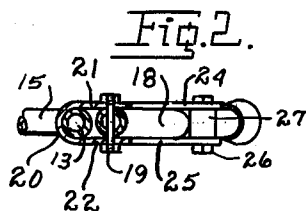
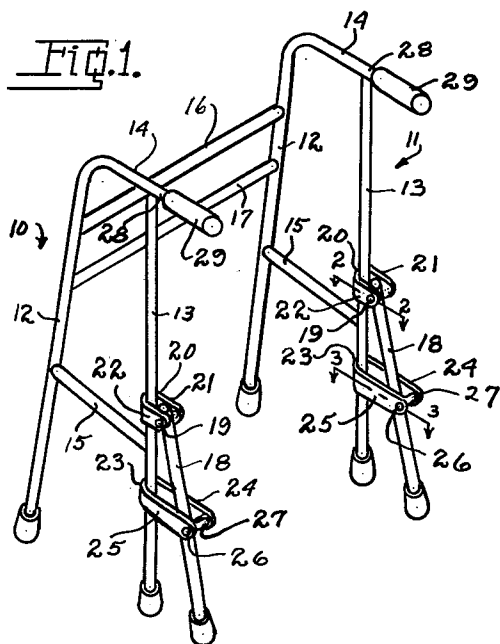


Fig. 6.

Fig. 5.

Fig. 4.
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WALKER OR WALKER AID

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6 Claims. (Cl. 135-45)

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

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 door-step 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

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frames 10 and 11 with each side frame including a forward upright or leg 12 and a rearward upright or leg 13 each joined to the other by a top transverse member 14. Each of the side frames has its forward and rearward legs joined by 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 and when in use the user stands between the said side frames 10 and 11 gripping 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 on and then forwardly shift the walker to a forward position before lowering the 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 supplying each side frame 10 and 11 with a third member or leg 18 substantially shorter than either of the forward or rearward legs 12 or 13. Each short member or leg 18 has its upper end pivoted at 19 to a bracket 20 welded or otherwise secured, respectively, to the rearward leg 13 of each side frame and with said brackets 20 projecting rearwardly of the said legs 13. Each bracket 20 conveniently takes the form of a U-shaped member including arms 21 and 22 joined by a base which is secured to its frame side upright or rearward leg 13 and between which arms 21 and 22 extends the pivot 19 for securing the short leg 18.

Each of said short legs 18 is adapted to oscillate or swing on its pivot 19 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 rearward leg 13 to have its parallel arms 24 and 25 rearwardly project from the said leg 13. The said arms 24 and 25 between their inner parallel surfaces define the path of movement or oscillation of the leg 18. The outer ends of the arms 24 and 25 are joined by a bolt or the like 26 on which is mounted a bumper 27, preferably formed of cushioning material, such as rubber, for a purpose subsequently made clear.

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 13, as at 28, with each extension preferably provided with a grip member 29, again, 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 user standing comfortably between the side frames 10 and 11 while engaging the handle grips 29. In desiring to forwardly advance the user merely effects a slight lift on the grips 29 thereby tilting the walker from the said solid line position thereof in FIG. 4

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to the phantom line position thereof. As the walker is so tilted each short member or leg swings or oscillates by gravity from its normal extended position to a position adjacent the walker sides rearward member or leg 13, as illustrated in said phantom lines in FIG. 4 or solid lines in 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 to the position thereof shown in phantom lines in FIG. 5 and in solid lines in FIG. 6. 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 short members or legs 18.

The user now merely slightly leans or presses on the handle grips 29 which automatically raises or pivots the walker on the lower ends of the said short members or legs for thereby swinging the entire walker frame on the pivots 19 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 29 whereupon the walker or walker aid descends from the phantom line position of FIG. 6 to the solid line position of FIG. 4, the initial or normal position of the walker.

The user advances himself with 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 short member or leg 18 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 short member or leg 18 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 29 and shift the walker forwardly toward the phantom line position thereof in FIG. 6.

From the foregoing, it will be obvious that should an obstruction, such as is illustrated in FIG. 6 at 30, be encountered in the path of movement of the walker or walker aid user, the lower ends of the side frames forward legs 12 can be raised sufficiently to be above or override the same.

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 the combination of a pair of similar side frames permanently laterally spaced from one another, each side frame including a top member, a front leg depending from said top member, a rear member depending from said top member rearwardly spaced from the front leg, each said side frame being spaced from the other and normally having the lower ends of the front legs and rear members thereof simultaneously on a supporting surface, and a separate rear leg having its upper end pivotally connected to each side frame rear member at a similar point above its lower end, said rear legs each of a length greater than the length of its rear member from the pivot thereon to its lower end and each rear leg extending downwardly, rearwardly, with its lower end on the supporting surface when the front legs of the side frames and lower ends of the rear members are on said supporting surface, said rear legs are each freely oscillatable toward and from its rear member so that upon forward tilting of the walker on the lower ends of its front legs the back legs oscillate by gravity toward and against said back members to have said lower ends of the back legs below the lower ends of the back members, and whereby reverse tilting of the walker will place

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the lower ends of the back legs on the supporting surface along with the lower ends of the front legs, and so that rearward tilting of the walker on the lower ends of the back legs will forwardly oscillate the walker on the pivots of the back members.

2. In a walker the combination of a pair of similar side frames permanently laterally spaced from one another, each side frame including a top member, a front leg depending from said top member, a rear member depending from said top member rearwardly spaced from the front leg, each said side frame being spaced from the other and normally having the lower ends of the front legs and rear members thereof simultaneously on a supporting surface, and a separate rear leg having its upper end pivotally connected to each side frame rear member at a similar point above its lower end, said rear legs each of a length greater than the length of its rear member from the pivot thereon to its lower end and each rear leg extending downwardly, rearwardly, with its lower end on the supporting surface when the front legs of the side frames and lower ends of the rear members are on said supporting surface, said rear legs are each freely oscillatable toward and from its rear member so that upon forward tilting of the walker on the lower ends of its front legs the back legs oscillate by gravity toward and against said back members to have said lower ends of the back legs below the lower ends of the back member, and whereby reverse tilting of the walker will place the lower ends of the back legs on the supporting surface along with the lower ends of the front legs, and so that rearward tilting of the walker on the lower ends of the back legs will forwardly oscillate the walker on the pivots of the back members, and grip means associated with each side frame top member for effecting the forward and rearward tilting of the walker.

3. In a walker the combination of a pair of similar side frames permanently laterally spaced from one another, each side frame including a top member, a front leg depending from said top member, a rear member depending from said top member rearwardly spaced from the front leg, each said side frame being spaced from the other and normally having the lower ends of the front legs and rear members thereof simultaneously on a supporting surface, a separate rear leg having its upper end pivotally connected to each side frame rear member at a similar point above its lower end, said rear legs each of a length greater than the length of its rear member from the pivot thereon to its lower end and each rear leg extending downwardly, rearwardly, with its lower end on the supporting surface when the front legs of the side frames and lower ends of the rear members are on said supporting surface, said rear legs are each freely oscillatable toward and from its rear member so that upon forward tilting of the walker on the lower ends of its front legs the back legs oscillate by gravity toward and against said back members to have said lower ends of the back legs below the lower ends of the back members, and whereby reverse tilting of the walker will place the lower ends of the back legs on the supporting surface along with the lower ends of the front legs, and so that rearward tilting of the walker on the lower ends of the back legs will forwardly oscillate the walker on the pivots of the back members, and the top members of said side frames each extending rearwardly of its rear member to provide handle and grip means for effecting the forward and rearward tilting of the walker.

4. In a walker the combination of a pair of similar side frames permanently laterally spaced from one another, each side frame including a top member, a front leg depending from said top member, a rear member depending from said top member rearwardly spaced from the front leg, each said side frame being spaced from the other and normally having the lower ends of the front legs and rear members thereof simultaneously on a supporting surface, a separate rear leg having its upper end pivotally connected to each side frame rear member at

a similar point above its lower end, said rear legs each of a length greater than the length of its rear member from the pivot thereon to its lower end and each rear leg extending downwardly, rearwardly, with its lower end on the supporting surface when the front legs of the side frames permanently laterally spaced from one another, supporting surface, said rear legs are each freely oscillatable toward and from its rear member so that upon forward tilting of the walker on the lower ends of its front legs the back legs oscillate by gravity toward and against said back members to have said lower ends of the back legs below the lower ends of the back members, and whereby reverse tilting of the walker will place the lower ends of the back legs on the supporting surface along with the lower ends of the front legs, and so that rearward tilting of the walker on the lower ends of the back legs will forwardly oscillate the walker on the pivots of the members, and means carried by each rear member limiting the forward oscillation of the walker and positioning the rear leg in its ultimate downwardly and rearwardly extending position.

5. In a walker the combination of a pair of similar side frames permanently laterally spaced from one another, each side frame including a top member, a front leg depending from said top member, a rear member depending from said top member rearwardly spaced from the front leg, each said side frame being spaced from the other and normally having the lower ends of the front legs and rear members thereof simultaneously on a supporting surface, a separate rear leg having its upper end pivotally connected to each side frame rear member at a similar point above its lower end, said rear legs each of a length greater than the length of its rear member from the pivot thereon to its lower end and each rear leg extending downwardly, rearwardly, with its lower end on the supporting surface when the front legs of the side frames and lower ends of the rear members are on said supporting surface, said rear legs are each freely oscillatable toward and from its rear member so that upon forward tilting of the walker on the lower ends of its front legs the back legs oscillate by gravity toward and against said back members to have said lower ends of the back legs below the lower ends of the back members, and whereby reverse tilting of the walker will place the lower ends of the back legs on the supporting surface along with the lower ends of the front legs, and so that rearward tilting of the walker on the lower ends of the back legs will forwardly oscillate the walker on the pivots of the back members, and a U-shaped bracket including spaced parallel arms rearwardly extending from each rear member flanking the rear leg pivoted thereto and defining the path of movement of the said rear legs and walker relative to one another.

6. In a walker the combination of a pair of similar side frames permanently laterally spaced from one another, each side frame including a top member, a front leg depending from said top member, a rear member depending from said top member rearwardly spaced from the front leg, each said side frame being spaced from the other and normally having the lower ends of the front legs and rear members thereof simultaneously on a supporting surface, a separate rear leg having its upper end pivotally connected to each side frame rear member at a similar point above its lower end, said rear legs each of a length greater than the length of its rear member from the pivot thereon to its lower end and each rear leg extending downwardly, rearwardly, with its lower end on the supporting surface when the front legs of the side frames and lower ends of the rear members are on said supporting surface, said rear legs are each freely oscillatable toward and from its rear member so that upon forward tilting of the walker on the lower ends of its front legs the back legs oscillate by gravity toward and against said back members to have said lower ends of the back legs below the lower ends of the back members, and whereby reverse tilting of the walker will place the lower ends of the back legs on the supporting surface along with the lower ends of the front legs, and so that rearward tilting of the walker on the lower ends of the back legs will forwardly oscillate the walker on the pivots of the back members, and the top members of said side frames each extending rearwardly of its rear member to provide handle and grip means for effecting the forward and rearward tilting of the walker, and a U-shaped bracket including spaced parallel arms rearwardly extending from each rear member flanking the rear leg pivoted thereto and defining the path of movement of the said rear legs and walker relative to one another.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,165,112

January 12, 1965

Elmer F. Ries

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 4, lines 1, 29 and 58, column 5, lines 13 and 14, and 44, and column 6, lines 23 and 24, for "lower ends of the back legs" read -- back legs lower ends --; column 4, lines 27 and 28, for "member" read -- members --; column 5, line 6, for "frames permanently laterally spaced from one another," read -- and lower ends of the rear members on said --; line 17, after "the", third occurrence, insert -- back --.

Signed and sealed this 15th day of June 1965.

(SEAL)

Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents