

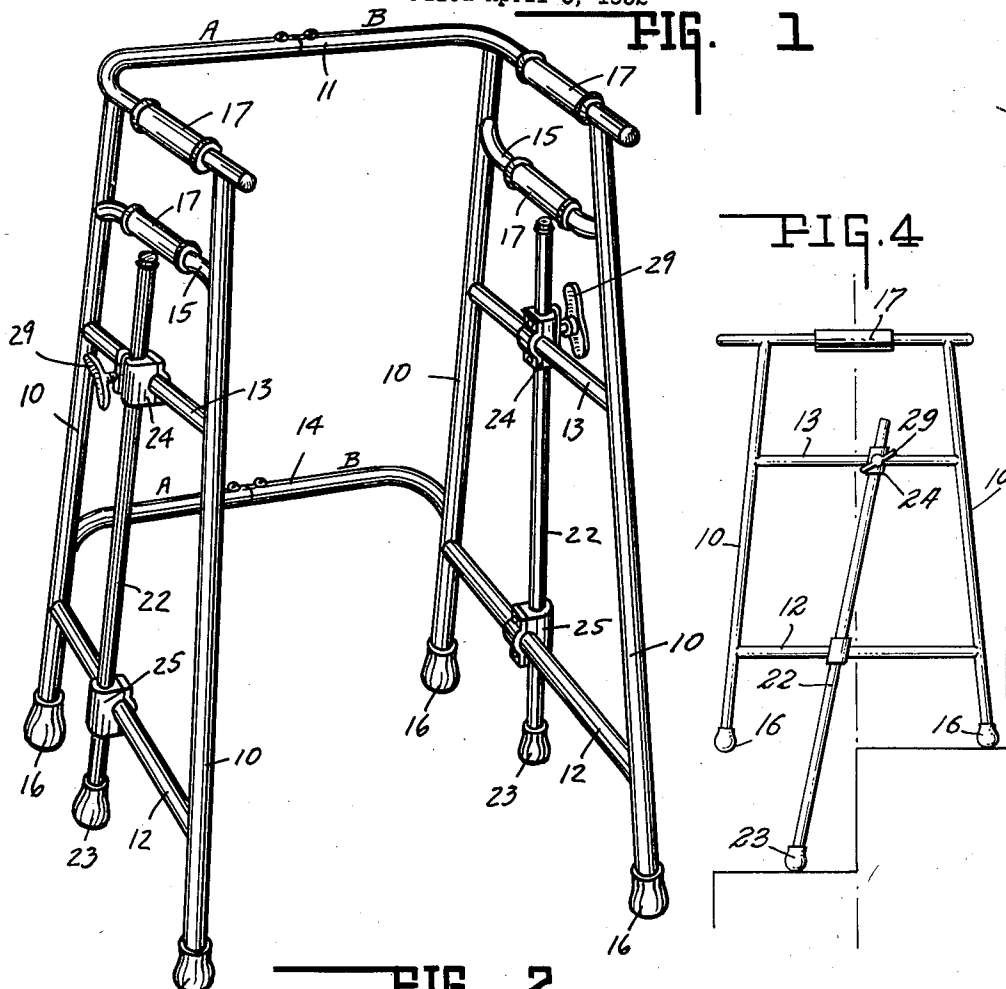
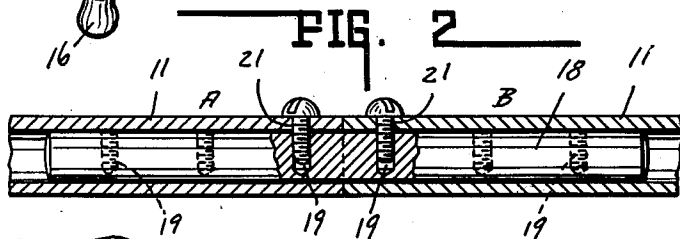
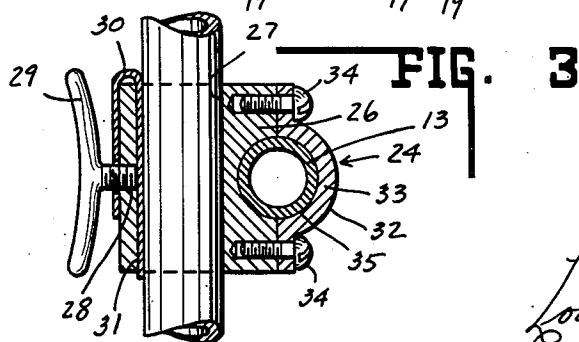
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INVALID WALKER

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2,708,473

INVALID WALKER

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4 Claims. (Cl. 155—22)

This invention relates to an invalid walker and more particularly to one that facilitates the climbing or descending of stairways by patients.

The value and utility of devices commonly called invalid walkers is well known. Heretofore, however, such devices have not been capable of safe use when the patient climbed or descended stairs. It is the primary object of this invention to provide a walker having means for making safe the use of stairs by a patient.

It is a further object of the present invention to provide a walker which is characterized by simplicity without sacrificing durability.

It is a still further object of the present invention to provide a walker formed of detachable parts, thereby making possible its ready disassembly for shipment or storage in a minimum of space.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims:

In the drawings,

Fig. 1 is a perspective view of my invention.

Fig. 2 is a section view of a portion of the front cross member.

Fig. 3 is a view, partly in section, of the clamping member that secures the stair walking construction to the invention.

Fig. 4 is a side elevation of the walker in the position it will assume when used in descending stairs.

In Fig. 1 of the drawings the walker is shown to comprise the legs 10, the U-shaped handle bar 11, the lower side bracing members 12, the upper side bracing members 13, the front outwardly bowed bracing member 14 and the hand rests 15. The various members are preferably but not necessarily formed of lightweight cylindrical tubing. Conventional leg boots 16 are provided for cushioning and sound muting purposes. In addition, the handle bar and hand rests are provided with rubber or other suitable gripping elements 17.

In order to make possible a disassembly of the invention and its transportation or storage in a minimum of space, the tubular handle bar and front bracing member are each formed in two symmetrical sections A and B. Freely slidable within the tubing of adjacent sections is the rod 18 which has a plurality of threaded apertures 19 for selective reception of screws 20 which are screw threaded through the apertures 21 formed in the two sections of the bar and member. As is apparent, the two pairs of adjacent sections may be spaced apart to widen the distance between the walker hand rests, or they may be arranged to abut as illustrated in Fig. 1. All that is necessary to do is to move the bar and member sections relative to the rod, align the apertures in each at the desired point of spacing and then secure the sections and rods through the medium of the screws. When it is desired to disassemble the walker, the screws will be removed permitting the removal of the rods whereupon the walker will be disassembled into two symmetrical sections for transportation or storage in a minimum of space.

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In order to provide means for facilitating the up and down stairs movements of the user, the invention is provided with auxiliary legs 22 having the boots 23. These legs are movable vertically relative to the walker, within the collars 24 and 25. As shown in detail in Fig. 3, collars 24 each comprise the body portion 26, having the bore 27 to slidably receive the auxiliary leg, and the aperture 28 to receive the set screw 29. A resilient element 30 closes the inner end of the aperture and bears against the auxiliary leg. As a result the end of the set screw does not engage, and thereby perhaps scratch the auxiliary leg. Instead, as is apparent, the screw engages the resilient element and forces it into frictional engagement with that leg.

The innermost extremity of the body portion has a concavity 31. When the end clamp 32 having concavity 33 is secured by the screws 34, to the body portion, the concavities define the bore 35 for reception of the upper side bracing member.

The lower collars 25 are similarly formed except for the set screw and resilient element. The bores formed therein for reception of the auxiliary legs, are sized to provide a relatively close, sliding fit. The clamping of those legs is accomplished, as aforesaid, by the upper collars.

In operation, when a person is climbing stairs, the auxiliary legs take the place of the rear or of the front legs as the case may be. The walker is, of course, normally in front of the user. The front legs are first placed on the first step while the user is standing on the landing. The set screws are then loosened to permit vertical sliding movement of the auxiliary legs. While the walker is held in its normal, horizontal position, each of the legs is successively lowered until it engages the landing. The set screws are then tightened to make certain that those legs will be retained in that position. Thereupon the user may mount the stairs, being assured that the walker will support him in its normal horizontal position. This will occur since the front legs will bear on one step while the auxiliary legs will bear on the landing or on the immediately lower step as the case may be.

When the user is at the top of the stairs, the auxiliary legs will, of course, once again be adjusted so that all six legs once again are flush with the floor.

In descending the stairs, the auxiliary leg 22 will be so adjusted that its lower end will rest upon the first step of the flight when the frame of the walker is "leveled" or with the bars 12—13—17 substantially horizontally disposed with the rear legs resting on the top step, as shown in Fig. 4. The auxiliary leg 22 is so positioned that its lower end will be disposed forwardly beyond the vertical center of the frame as shown in Fig. 4. The weight of the user subjected to the frame will be borne by the rear legs 10 and the auxiliary legs 22 spaced in the manner shown so that this weight will be disposed behind the vertical center of the frame and thus obviate any tendency toward tipping forwardly. Usually, though not necessarily, the collars 24 carried by the transverse bracing members 12 and 13 are disposed one upon each side of the vertical center of the frame, however, these collars may be differently positioned so long as they dispose the lower end of the auxiliary leg 22 a sufficient distance forwardly of the frame to overcome any tendency toward tipping.

It is, of course, possible for the walker to be placed behind instead of in front of the user when steps are being either climbed or descended. Some users may prefer such use. If so, it is the rear legs and the auxiliary legs that are adjusted relative to each other, i. e. the auxiliary legs relative to the rear.

By reason of the fact that the width of steps fre-

quently varies from building to building, it is desirable that means be provided to enable the auxiliary legs to be adjusted horizontally. Such means are clearly shown in Figs. 1 and 3, they being in the form of the collars 24 and 25, the end clamps 32 and the set screws 29. The collars may be moved horizontally along the side bracing members 12 and 13 to the desired point. As mentioned, the walker may be used by some people by placing it behind rather than in front. At such times it is the rear legs and auxiliary legs which are employed rather than the front and auxiliary legs. It is, therefore, highly desirable that the auxiliary legs be capable of relatively easy horizontal adjustment so that the distance separating them from either the front or the rear legs, as the case may be, will approximate the width of the steps.

While the invention has been illustrated and described in detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character, it being understood that only the preferred embodiment has been shown and described and that all changes and modifications that come within the spirit of the invention and the scope of the claims are also desired to be protected.

The invention claimed is:

1. An invalid walker comprising a frame including two front and two rear invalid supporting legs and side bracing members connecting said legs, a pair of vertically and horizontally adjustable auxiliary invalid supporting legs for use selectively with said front legs or with said rear legs during stair climbing, means slidably connecting each of said auxiliary legs to said respective side members, and means locking each of said auxiliary legs in adjusted position.

2. An invalid walker comprising a frame including two front and two rear invalid supporting legs and upper and lower side bracing members connecting said legs, a pair of vertically and horizontally adjustable auxiliary invalid supporting legs, means slidably connecting each of said auxiliary legs to an upper and to a lower side

member, said means comprising a clamp having substantially vertical and substantially horizontal bores formed therethrough for sliding reception of said auxiliary leg and said member, and means locking said auxiliary legs in adjusted position.

3. An invalid walker comprising a frame including a pair of top parallel horizontally disposed weight supporting bars, a pair of downwardly diverging legs secured in spaced relationship at their upper ends to each of said bars, spaced bracing members connecting the legs of each pair, collars secured to each of said bracing members, said collars disposed one on each side of the center of each of said bracing members, an auxiliary leg slidable through said collars, and clamping means on one of said collars to hold said auxiliary legs in adjusted positions.

4. An invalid walker comprising a frame including a pair of top parallel horizontally disposed weight supporting bars, a pair of downwardly diverging legs secured in spaced relationship at their upper ends to each of said bars, spaced bracing members connecting the legs of each pair, collars mounted for sliding movement longitudinally upon each of said spaced bracing members, means for maintaining said collars in adjusted position upon their respective spaced bracing members, an auxiliary leg slidable through said collars in directions transversely of said spaced bracing members, and clamping means on one of said collars to hold said auxiliary legs in adjusted positions.

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