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WALKING AID

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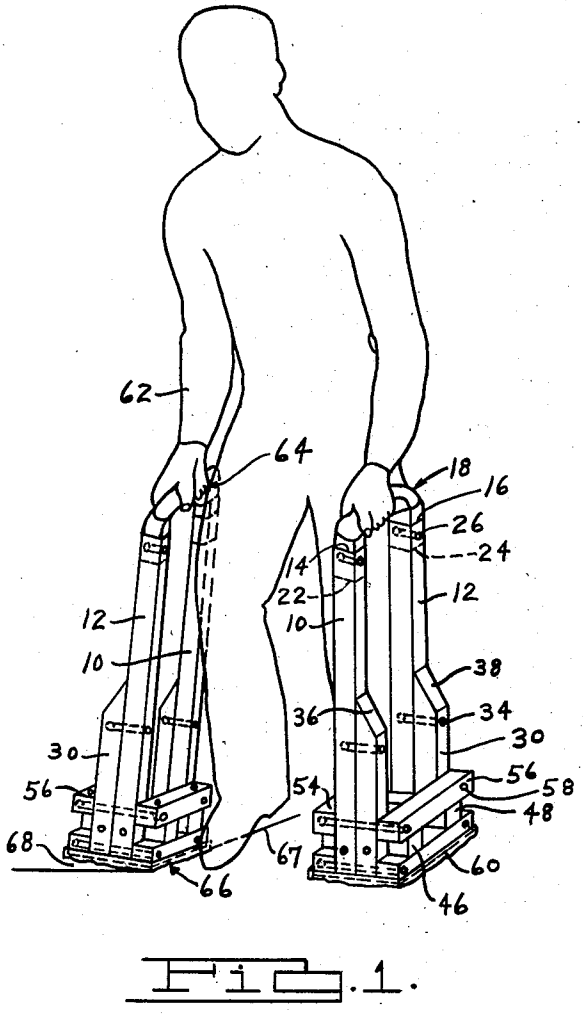


Fig. 1.

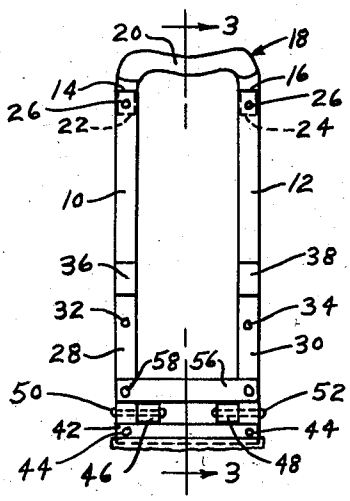


Fig. 2.

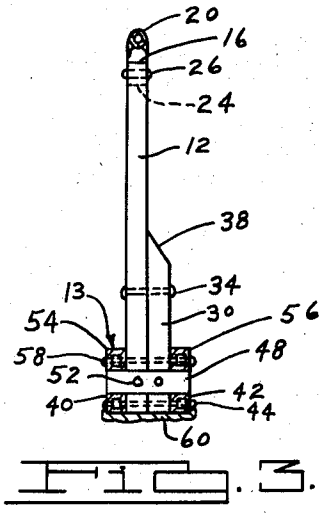


Fig. 3.

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WALKING AID

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1 Claim. (Cl. 135—45)

This invention relates to walking aids, and, more particularly, to a means for assisting and facilitating the walking of a person afflicted with a crippling disease as arthritis, or one recovering from a fractured bone injury, such as an injury to a hip, leg or foot.

Heretofore, various types of crutches have been employed for persons afflicted with the aforementioned physical disabilities, and, particularly, where the user has had one or both legs broken, and where it is necessary to learn to walk over again. In such cases, the prior art crutches have proved to be heavy, burdensome, and generally hard to use. Accordingly, it is the primary object of this invention, to provide a walking aid which is simple and compact in construction, light in weight, economical to make, and which may be used with a minimum of effort and great facility.

The most serious difficulty experienced heretofore with the prior art crutches is the lack of balance, inasmuch as the conventional crutches or variations thereof, make no provision against tilting or tipping.

It is another object of this invention to provide a walking aid characterized by means forming a part thereof for attaining a relatively high degree of balance and stability.

It is still another object of this invention to provide a walking aid normally usable in a pair, each of which consits of a pair of spaced apart vertical reinforced leg members, upon the bottom ends of which is formed a platform type foot member which is characterized by a supporting surface as distinguished from the point support of the conventional crutches.

It is a further object of this invention to provide a walking aid of this class having a platform foot member on which is secured a corrugated rubber cap or covering, of any suitable friction producing substance, upon the bottom surface thereof, to facilitate movement and to insure against slipping.

It is a still further object of this invention to provide a pair of spaced apart vertical leg members having a foot or standard, flat surfaced member suitable secured thereto at the lower ends thereof, and, having a suitable handle adjustably mounted between the upper ends of said leg members.

Other objects, features and advantages of this invention will be apparent from the following detailed description and appended claims, reference being had to the accompanying drawing forming a part of the specification wherein like reference numerals designate corresponding parts of the several views.

In the drawing:

Fig. 1 is a perspective view of the walking aids as actually used by an individual;

Fig. 2 is a side elevational view of a walking aid made in accordance with the principles of the invention; and,

Fig. 3 is an elevational sectional view of the structure illustrated in Fig. 2, taken along the line 3—3, and looking in the direction of the arrows.

Referring now to the drawing, the walking aid consists

generally of a pair of spaced apart vertically extending elongated leg members 10 and 12 which have formed on the lower ends thereof a foot or platform support generally indicated by the numeral 13. The legs 10 and 12, as well as other parts of the walking aid may be made from wood, or from a lightweight metal, as a tubing either square or round in cross section. As illustrated, the various parts of the walking aids are shown as made from a lightweight hollow square metal tubing.

The top ends of the leg members 10 and 12 are open and indicated by the numerals 14 and 16. A suitable handle member generally indicated by the numeral 18 is adapted to interconnect the upper ends of the leg members. The central cross part 20 of the handle is preferably round in cross section to provide a suitable hand grip. Integral with the handle portion 20 are the downwardly turned end portions 22 and 24 which are adapted to be slidably mounted in the open ends 14 and 16 of the leg members. The handle portions 22 and 24 may be held in place in the leg members by any suitable means, as by the cross pins 26 which may have their ends peened over. Instead of the pins 26, suitable screws or rivets may be used. With the aforementioned construction a walking aid may be adjusted to fit a person smaller than what the aid was made for by merely cutting off some of the leg members from the upper ends thereof and inserting the handle portions in the shortened legs.

The vertical legs 10 and 12 are provided with short vertical reinforcing members 28 and 30 which are fixedly mounted to said legs by any suitable means, as by the pins or rivets 32 and 34, respectively. The upper ends of the reinforcing member 28 and 30 are tapered as shown at 36 and 38. The reinforcing members 28 and 30 would be similar in cross section to the legs 10 and 12. As shown in Fig. 3, the lower ends of the reinforcing members 28 and 30 terminate adjacent the lower ends of the legs 10 and 12. A longitudinally extending reinforcing member 40 is fixedly mounted between the legs 10 and 12 adjacent the lower end thereof on the outer faces thereof. An oppositely disposed longitudinally extending reinforcing member 42 is fixedly mounted between the vertical reinforcing members 28 and 30 adjacent the lower end thereof on the outer faces thereof. The reinforcing members 40 and 42 are fixed to the legs 10 and 12 by any suitable means, as by the peened over pins 44 which pass through the reinforcing members 28, 30, 40 and 42. The legs and vertical reinforcing members are further joined by a pair of fixedly mounted transverse reinforcing members 46 and 48 which are disposed between the vertical legs 10 and 12 and in engagement therewith. The reinforcing members 46 and 48 are fixed to the legs 10 and 12 and the reinforcing members 28 and 30 by any suitable means, as by the peened over pins 50 and 52, respectively. As best seen in Figs. 1 and 3, the transverse reinforcing members 46 and 48 are disposed with their ends resting on the longitudinal reinforcing members 40 and 42. A second pair of longitudinally extending reinforcing members 54 and 56, similar to members 40 and 42, are disposed in fixed engagement with the legs 10 and 12, and the vertical reinforcing members 28 and 30, respectively. The reinforcing members 54 and 56 rest on the ends of the transverse reinforcing members 46 and 48 and fixed to the vertical legs by any suitable means, as by the peened over pins 58. It will be seen, that the longitudinal and transverse reinforcing members coact with the lower ends of the vertical legs and the vertical reinforcing members to form the platform type foot supporting structure 13.

The lower end of the foot structure 13 is covered with a corrugated rubber cap 60 to increase friction and prevent slipping of the walking aid when in use. It will be obvious, that the friction cap 60 may be made of any other suitable material which will increase the frictional

relationship between the ground or floor and the bottom of the platform support 13.

As distinguished from the point support of a crutch, the platform 13 provides a plurality of points, i.e., a surface support to maintain a high degree of stability to members 10 and 12. The user is thus able to balance himself with his walking aids inasmuch as said surface support prevents slipping and undesirable tilting.

In the use of the walking aid, a pair of said aids are used in the manner as illustrated in Fig. 1. The walking aids are used with the vertical reinforcing members 28 and 30 facing outwardly, whereby the user may direct his weight straight downwardly by means of the vertical leg members 10 and 12. With the instant walking aids it is not necessary for the user to raise his body as in the use of crutches, but it is only necessary to more or less pivot his body around the walking aids in an alternate succession of right and left forward movements. For example, as shown in Fig. 1, the right arm is substantially straight downwardly as indicated by the numeral 62. The walking aids are fitted for each person so that the handle comes to the hand level of the user when his arms are hanging free. In order to move his left foot forward, the user shown in Fig. 1, tilts the walking aid against the leg as at 64 and the lower inner edge of the foot 13 engages the ground along the line 66 and the rest of the foot is slightly raised off the ground as at 68. By this action, the user's weight may be substantially directed downwardly through the arm 62 to the point 64 where the walking aid and right leg of the user coact as a fulcrum point, and the user's weight is directed partially through the walking and the right leg to the ground, while simultaneously the user is swinging his body to bring the left foot forward and place the other walking aid in a forwardly disposed position. The same action will take place with the left hand, and such action is thus repeated alternately to aid the user in moving about without the drudgery and trouble of lifting his body as when using crutches.

During the aforementioned pivotal action, the walking aid may be pivoted so that the flat surface of the foot 13 comes into contact with the ground, but initially it is desirable to slightly tilt the walking aid inwardly as prevously described to get the benefit of the coaction of the user's arm, leg, and the walking aid. The instant walking aids may, of course, be used with other techniques, but the aforementioned is desirable.

It will be seen, that the present construction will aid a user with very little or no practice to start right out learning to walk over again, walking either on one or both feet. The broad platform member 13 assures against falling backward or forward, and gives the user the assurance needed to get around without fear of falling. The instant walking aid is designed to insure against tilting and tipping, slipping and sliding, and provides a high degree of balance which overcomes the prior art outmoded assistances used heretofore. The present walking aid also eliminates swinging of the user's body, as on a crutch, and gives confidence to persons encumbered with casts where healing is essential. With this walking aid, a user may easily ascend stairs, arise from a chair or bed, and so forth, without assistance. The structural arrangement of the two vertical legs 10 and 12 being disposed at right angles to the foot 13 permits the user to lift the walking aid and advance it to a new position with a minimum of arm and wrist movement.

While it will be apparent that the preferred embodiment of the invention herein disclosed is well calculated to fulfill the objects above stated, it will be appreciated that the invention is susceptible to modification, variation and change without departing from the proper scope or fair meaning of the subjoined claim.

What I claim is:

A walking aid of the class described, comprising: a pair of spaced apart vertically extended elongated legs; a handle member interconnecting the upper ends of said legs; a vertical reinforcing member fixedly mounted on each of said legs on one side face thereof adjacent the lower end thereof; a first pair of elongated vertically spaced apart horizontal reinforcing members fixedly mounted between said vertical reinforcing members and being fixed to the outer side faces thereof; a second pair of elongated vertically spaced apart horizontal reinforcing members fixedly mounted between said vertical legs and being fixed to the other side faces thereof opposite to said one side faces; a third pair of horizontal reinforcing members disposed between said legs and being disposed in a direction transverse to said first and second pairs of horizontal reinforcing members and being fixedly mounted to said legs and said vertical and first and second pairs of reinforcing members and having the ends thereof disposed between each of said first and second pairs of horizontal reinforcing members; said vertical legs and vertical reinforcing members being disposed at right angles to said horizontal reinforcing members; the lower ends of said legs and said vertical reinforcing members, and the lower one of each of said first and second pairs of horizontal reinforcing members coacting to form a supporting platform; and, the lower surface of said platform being covered with a friction producing means to prevent slipping of the walking aid when in use.

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