

April 22, 1952

A. MCFARLAND ET AL

2,594,051

WALKING SUPPORT

Filed Oct. 7, 1946

2 SHEETS—SHEET 1

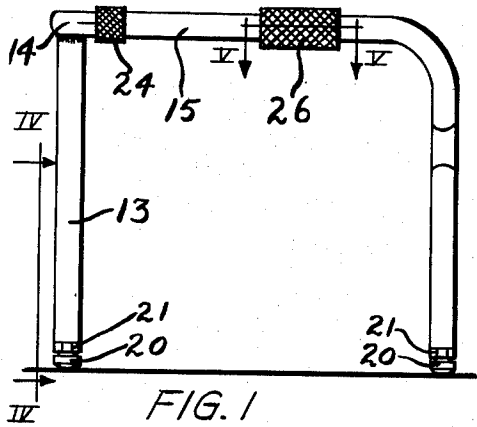


FIG. 1

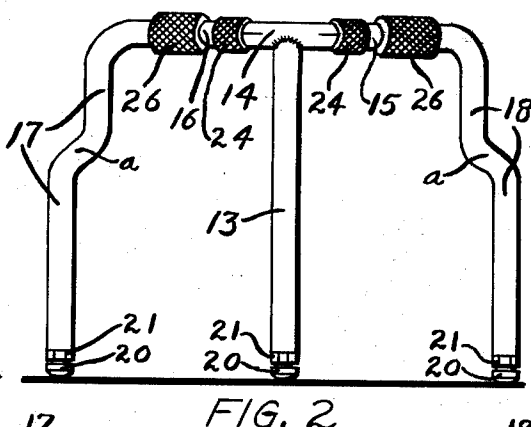


FIG. 2

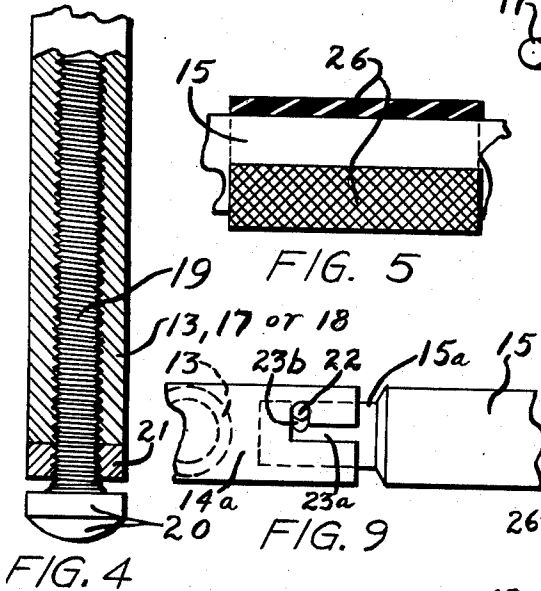


FIG. 4

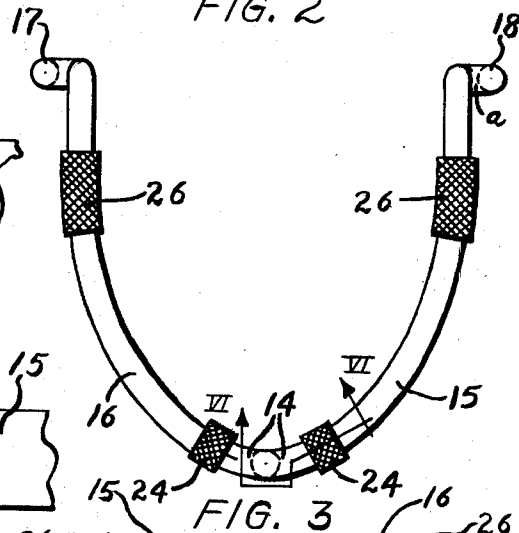


FIG. 3

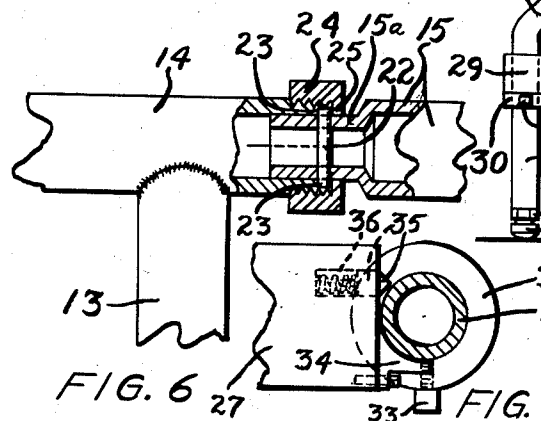


FIG. 6

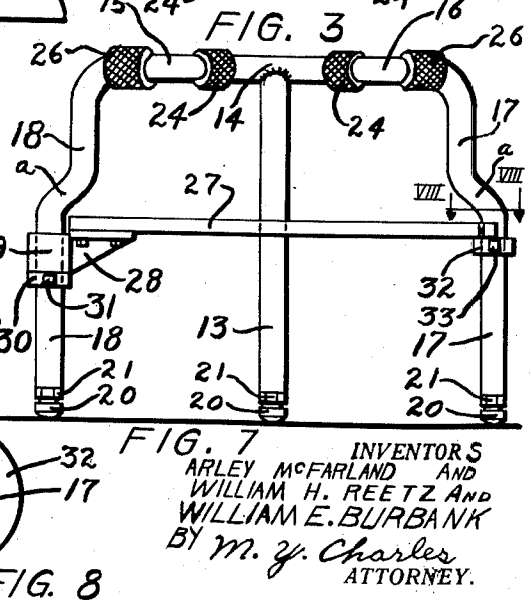


FIG. 7

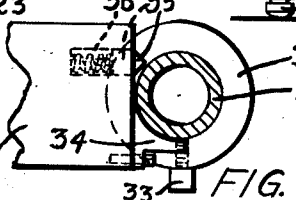


FIG. 8

FIG. 5

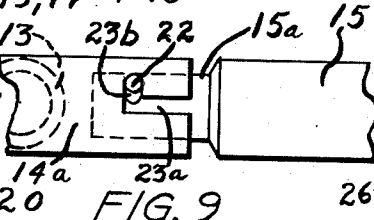


FIG. 9

INVENTORS
ARLEY MCFARLAND AND
WILLIAM H. REETZ AND
WILLIAM E. BURBANK
BY M. J. Charles
ATTORNEY.

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2 SHEETS--SHEET 2

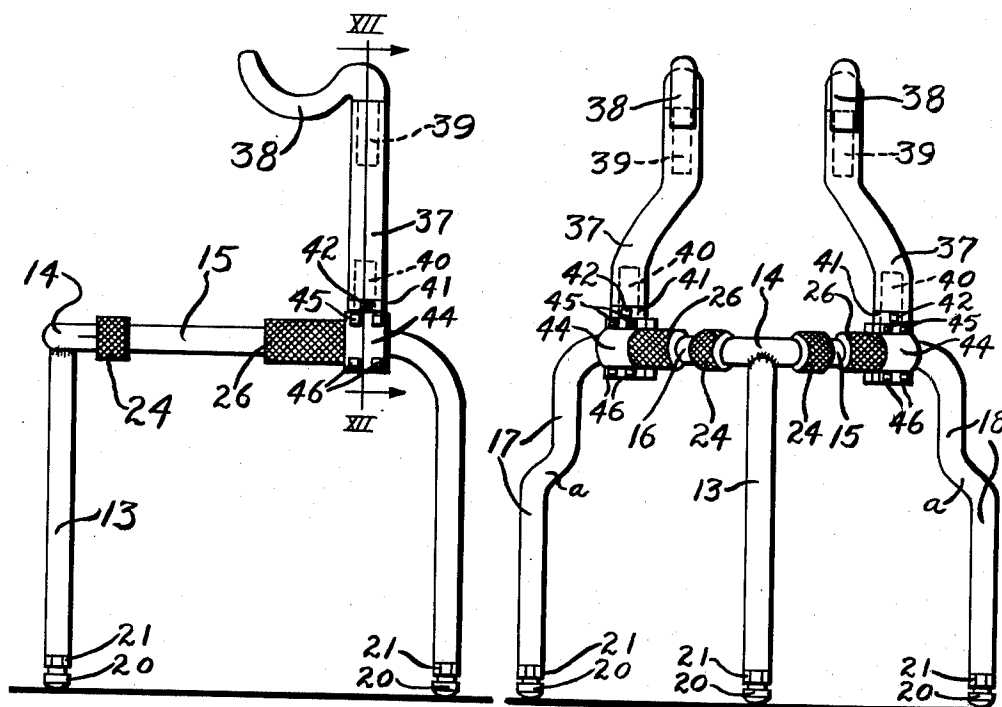


FIG. 10

FIG. 11

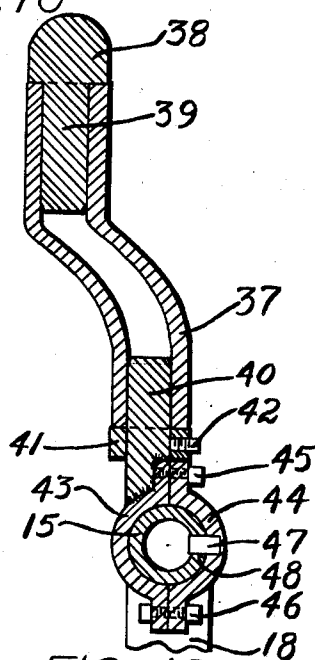


FIG. 12

INVENTORS
ARLEY MCFARLAND AND
WILLIAM H. REETZ AND
WILLIAM E. BURBANK
BY *M. Y. Charles*
ATTORNEY.

UNITED STATES PATENT OFFICE

2,594,051

WALKING SUPPORT

Arley McFarland, Augusta, William H. Reetz,
Wichita, and William E. Burbank, El Dorado,
Kans.

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5 Claims. (Cl. 155—22)

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Our invention relates to an improvement in walking supports.

Very often when people have had broken legs or other illnesses that impair their walking ability, it is necessary to provide some means of support so that the person may walk and move around.

Crutches have normally been used for this purpose but there are cases where the person feels insecure, even on crutches. Therefore to overcome this situation, we have provided our support for walking.

The object of this support is to provide a frame having a three point support and in which the person may stand and bear any portion of his weight, and steady himself by holding onto the frame with his hands.

A further object is to provide a support of the kind mentioned that will not easily tip, one that is strong and stable, and one that is light in weight so that it can be easily moved around.

A still further object is to provide a support of the kind mentioned that can be collapsed or taken apart and the pieces laid closely together for storage or shipping purposes.

Another object is to provide a support of the kind mentioned to which additional accessories may be attached, such as a seat or crutch elements to relieve the person using the device from bearing his weight on his hands and arms.

Another object is to provide a device of the kind mentioned, having friction skid supports therefor, whereby the device may be easily slid or moved along without the danger of possible skidding or slipping of the device as it might do if it were mounted on rollers or castors.

A still further object of the support is to provide a device of the kind mentioned, the height of which may be readily adjusted to fit the person using it.

These and other objects will be more fully explained as this description progresses.

Now referring to the accompanying drawings in which similar numerals of reference designate the same parts throughout the several figures of the drawings.

Fig. 1 is a side view of the assembled support.

Fig. 2 is a front view of the assembled support.

Fig. 3 is a top plan view of the assembled support.

Fig. 4 is an enlarged detail, sectional view through the height adjusting device contained in each leg of the support. The view is taken along the line IV—IV in Fig. 1 and looking in the

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direction of the arrows, and a portion of the leg element being broken away and shown in section to show the parts contained therein.

Fig. 5 is an enlarged detail view of the hand hold portion of the support, the view being taken along the line V—V in Fig. 1, and looking in the direction of the arrows.

Fig. 6 is an enlarged detail and sectional view of the joining device between the separable members of the frame, the view being taken along the line VI—VI in Fig. 3 and looking in the direction of the arrows.

Fig. 7 is a rear view of the support, illustrating a seat accessory which may be attached to the support.

Fig. 8 is an enlarged detail sectional view taken along the line VIII—VIII in Fig. 7 and illustrating a latch device employed for the seat shown in Fig. 7.

Fig. 9 is a top plan view of a modified form of the frame element connections such as would occur along the line VI—VI in Fig. 3.

Fig. 10 is a side view of the support, having crutch elements as accessories mounted thereon.

Fig. 11 is a front view of the support showing the crutch elements mounted thereon.

Fig. 12 is an enlarged detail sectional view through the crutch element and mounting thereof on the support and the view being taken along the line XII—XII in Fig. 10, and looking in the direction of the arrows.

In the drawings, the support is shown as having a front leg element 13, having a tubular transversely positioned cross head member 14, rigidly fixed, preferably welded thereon, and in the ends of which are detachably fitted, ends of curved and horizontally positioned supporting tubular elements 15 and 16, the rear ends of which are curved downwardly to form supporting legs 17 and 18, having outwardly directed curved portions a, to set the lower portions of the legs 17 and 18 outwardly from the supporting rails 15 and 16, so as to make the frame more stable and less susceptible to tipping when it is being used.

The lower end of each leg 13, 17 and 18 is internally threaded to receive a threaded shaft 19, the lower end of which is provided with a skid head 20 that will rest on the floor as a support for the device.

A lock nut 21 is threaded on the shaft 19 and adapted to engage the lower end of its respective leg 13, 17 or 18, so that the shaft 19 may be screwed in or out of its respective leg 13, 17 or 18 to adjust the height of the frame and when so adjusted the lock nut 21 may be turned on the

shaft 19 to tightly engage the end of its respective leg 13, 17 or 18 as a means of locking the shaft 19 in its adjusted position.

The inner ends of the tubular supports 15 and 16 are reduced in diameter as indicated at 15a so that it will snugly slip into the tubular cross head 14 and a pin 22 is passed through the tube portion 15a with the ends thereof projecting on either side of the tube portion 15a substantially the distance of half of the thickness of the wall of the tubular cross head 14.

The end of the tubular cross head 14 are provided with a pair of diametrically positioned notches 23 therein in which the ends of the pins 22 are seated. This prevents the ends of the tubular supports 15 and 16 from turning in the cross head 14 and therefore definitely and rigidly holds the supporting leg 13 in a vertical fixed position.

The ends of the cross head 14 are externally threaded to receive the internal threads of a collar 24, that is revolvably mounted on the reduced tubular end 15a of the tubular supports 15 and 16 and is provided with an inwardly extending flange portion 25 that is positioned behind the projecting ends of the pin 22, so that when the collar 24 is screwed on the end of the tubular cross head 14, the flange 25 will engage and press the ends of the pin 22 into the notches 23, whereupon the tubular support elements 15 and 16 are rigidly attached to the tubular cross head elements 14 and are rigidly held in a horizontal plane.

In Fig. 9 is shown a modified form of the attachment of the support members 15 and 16 to the attachment element 14a in which the notches 23 shown in Fig. 6 become slots 23a as shown in Fig. 9 and at the end of the slot 23a is a side wise directed continuation 23b of the slot 23a in which the ends of the pin 22 are received and turned as will be readily understood to prevent the end 15a from pulling out of the attachment element 14a.

The tubular support element 15 and 16 are each provided with a hand hold 26 that are preferably made of tubular rubber and slipped on the tubular supports 15 and 16.

If desired, the support may be provided with a seat element 27 that is rigidly attached to a bracket 28, having a sleeve 29 formed thereon that may be slipped on the frame leg 18 to the desired height and a collar 30 may also be slipped on the leg 18 and rigidly fixed thereon by means of a set screw 31 therein as a support for the sleeve 29, whereby the sleeve 29 and seat 27 may be horizontally rocked or swung about the leg 18.

A second collar 32 may be slipped on the leg 17 and rigidly fixed thereon by means of a set screw 33 therein, the collar 32 being set at such a height that the adjacent end of the seat 27 is provided with a stop 34 that will engage the leg 17 as a stop for the seat 27. The end of the seat is also provided with a latch pin 35 that is slidably carried in the end of the seat 27 and is urged to move outwardly by a spring 36 that is positioned in the end of the seat 27 and behind the latch pin 35, so that when the seat 27 is swung into position between the legs 17 and 18 the latch pin 35 will engage the leg 17 and be forced into the seat 27 against the pressure of the spring 36 and as the seat advances in its swinging motion the stop 34 will engage the leg 17, whereupon the latch pin 35 will engage the leg 17, whereupon the latch pin 35 has passed

the center of the curvature of the leg 17 and the spring 36 has moved the latch pin 35 outwardly behind the leg 17, whereupon the seat 27 is held in position solidly enough that the person using the support may sit down upon it. If it is desired to move the seat 27 so that the person using the support can move out of the support frame, the seat 27 may be pushed rearwardly, whereupon the latch pin 27 pushing against the curvature of the leg 17 will yield or move rearwardly against the pressure of the spring 36 and permit the swinging of the seat 27 so that it can be moved out of the way.

Now if the person using the support is in need of support further than that he receives by holding onto the hand holds 26, the support may be further provided with crutch supports that may be attached to the support tubes 15 and 16.

The crutch supports are made preferably of tubular elements 37 that are curved so that the lower ends may be supported by the tubular supports 15 and 16, and the upper ends are swung inwardly and provided with arm pit supports 38 that are positioned the proper distance apart to comfortably fit under the arms of the person using the support.

The lower end of the tubular element 37 is revolvably mounted on a pin 40 and rests on a collar 41 that is rigidly fixed on the pin 40 by means of a set screw 42 that passes through the collar 41 and bears against the pin 40.

The lower end of the pin 40 is welded to or integrally formed on a clamp member 43 which is associated with a second clamp member 44. The two clamp members 43 and 44 being positioned around their respective tubular support elements 15 and 16 and are bolted together by means of bolts 45 and 46, so as to hold the crutch support elements thereon.

The clamp elements 44 are provided with a pin 47 and project inwardly therefrom and are received in a hole 48 in their respective tubular support element 15 or 16 to prevent the dropping or swinging of the crutch elements 37 about their respective tubular support 15 or 16 when the support is not in use or during the time when the person using the support is entering or leaving or even while using the support.

Such modifications of our invention may be employed as lie within the scope of the appended claims without departing from the spirit and intention of the invention. Now having fully described our invention, what we claim is:

1. In a support device of the kind described; said device having a pair of horizontally positioned and opposingly curved support members, one portion of each support member being bent downwardly to form a leg element, said leg elements having outwardly directed curves therein to increase the distance between the bearing points of the legs, a third leg element, each curved support member being detachably attached to an attachment element that is rigidly fixed on the upper end of the third leg element, and means carried by each leg element for adjusting the height of the leg element.

2. In a support device of the kind described; said device having a pair of horizontally positioned and opposingly curved support members, each support member having a downwardly extending leg element formed thereon and as a part thereof, said leg elements having outwardly directed curves therein to increase the distance between the bearing points of the legs, a third leg

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element each curved support member being detachably attached to an attachment element that is rigidly fixed on the upper end of the third leg element, and means carried by each leg element for adjusting the height of the leg element, said means for adjusting the height of each leg element being a shaft threaded into each leg element, and means on each shaft for locking the shaft in adjusted positions.

3. In a support device of the kind described; the structure as defined in claim 1, said attachment element having means for receiving one end of each of the said curved support members, and means for rigidly and detachably holding the ends of the curved support members in the said attachment element.

4. In a support device of the kind described; the structure as defined in claim 2, said curved attachment element having means for receiving one end of each of the said curved support members, and means for rigidly holding the curved ends of the support members in the said attachment element, said means for rigidly holding the ends of the support members in said attachment element comprising the ends of the curved support members being seated within the attachment element, and notches formed in the ends of the attachment element, a pin passing through the curved ends of the support members and seated in said notches, and collar means around the ends of the support members and engaging the pin and also being threaded on the ends of the attachment element as shown.

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5. In a support device of the kind described; the combination of a pair of opposingly curved support members, said support members having leg portions formed on one end thereof, the other ends of the opposingly curved support members being directed toward each other said curved members lying in the same horizontal plane, a third leg portion, the third leg portion having attachment means on the upper end thereof for receiving the other ends of the curved support elements, the said other ends of the curved support members being rigidly and removably received and held in the said attachment means, and screw means on the lower ends of the three legs for adjusting the height of the legs, and rigid skid means integrally formed on the lower end of each of said screw adjustment means.

ARLEY McFARLAND.

WILLIAM H. REETZ.

WILLIAM E. BURBANK.

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