

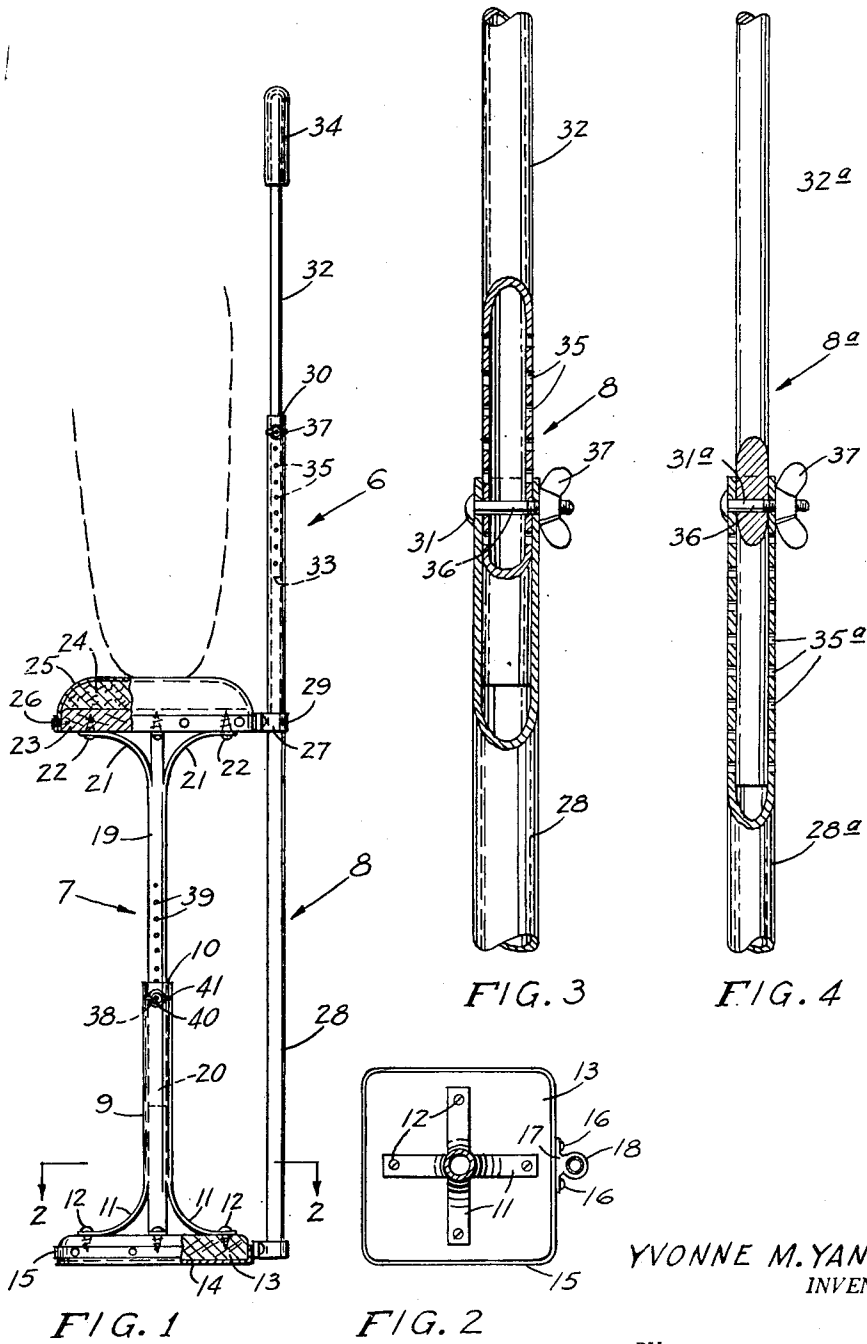
May 10, 1955

Y. M. YANDOW

2,707,962

KNEE CRUTCH

Filed Oct. 12, 1954



YVONNE M. YANDOW
INVENTOR.

BY

McMorrow, Berman & Davidson
ATTORNEYS

1

2

2,707,962

KNEE CRUTCH

Yvonne M. Yandow, North Ferrisburg, Vt.

Application October 12, 1954, Serial No. 461,762

6 Claims. (Cl. 135—50)

This invention relates to improvements in crutches, and more particularly to a novel knee crutch for use by persons having a foot or ankle injury.

The primary object of the invention is to provide a practical and efficient device of the character indicated above which will enable a person having a foot or ankle injury to support the weight of the body upon the knee of the injured leg and upon the uninjured leg, while standing and while walking, and at the same time leave the hands and arms free.

Another important object of the invention is to provide a readily adjustable device of the character indicated above, which is comparatively simple in construction, is composed of only a few simple parts, and which can be made in rugged serviceable and attractive forms at relatively low cost.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, for purposes of illustration only, a specific form of the invention is set forth in detail.

Figure 1 is a side elevation, partly broken away to show structure;

Figure 2 is a horizontal section taken on the line 2—2 of Figure 1;

Figure 3 is an enlarged fragmentary side elevation of one form of the standard, partly broken away; and

Figure 4 is a similar view of another form of standard.

Referring in detail to the drawings, wherein like numerals designate like parts throughout the several views, and first to Figures 1 to 3 thereof, the numeral 6 generally designates the knee crutch therein shown.

The knee crutch 6 comprises a knee support 7 and a standard 8, associated as hereinafter described.

The knee support 7 comprises a pedestal composed of a lower vertical tubular member 9 having an open upper end 10 and split at its lower end to provide preferably four inwardly and downwardly diverging arms 11, traversed at their lower ends by fasteners, such as screws 12.

The screws 12 are threaded into the top of a preferably wooden rectangular plate or foot 13 which has secured to its underside a pad 14, of such as roughened rubber, to cushion contact with and prevent skidding on a floor or other walking surface. A protective band 15, of such as rubber, surrounds and is secured to the four edges or sides of the plate 13.

Fixed to one side or edge of the plate 13, as by screws 16, and projecting laterally from the plate 13, is a bracket 17 which includes an eye 18.

The knee support 7 further comprises a tubular upper member 19 having a lower portion 20 telescoped into the upper end 10 of the lower member 9 and being split at its upper end to provide preferably four upwardly and inwardly divergent arms 21 which are traversed at their outer ends by fasteners, such as screws 22.

The screws 22 are threaded into the lower side of a knee pad plate 23, preferably of wood, and of the same dimensions as the foot plate 13, the plates 13 and 23 being registered with each other.

A compressible pad 24 is disposed upon the upper side of the plate 23 and is held in place by a flexible cover 25 which is secured to the edges of the plate 23, as indicated at 26.

5 A bracket 27, similar to the bracket 17 is secured to an edge of the plate 23 in vertical alignment with the bracket 17.

The standard 8 of the crutch 6 comprises a lower tubular member 28 having a lower end 29 secured in the eye 18 of the bracket 17. The upper part of the member 28 passes slidably through the eye 29 of the upper bracket 27 and has an upper end 30 spaced above the bracket 27. The upper end of the lower standard member 28 is provided with a single hole 31.

The standard 8 further comprises an upper member 32, which is preferably tubular, and has its lower end 33 telescoped into the upper end 30 of the lower member 28. Telescoped into the upper end of the upper standard member 32 is a compressible material hand grip 34.

10 The lower part of the upper standard member 32 is provided with a row of vertically spaced holes 35 which are adapted to be registered with the single hole 31 of the lower standard member 28, to adjust the height of the standard 8. A wing bolt 36 and nut 37 traverse the registered selected holes and secures the adjustment.

25 In the knee support 7, the lower member 9 has a single hole 38 at its upper end and upper member 19 has vertically spaced holes 39, respectively, which provide for height adjustment of the knee support, and a wing bolt 40 is used in selected and registered ones of the holes 38 and 39, together with a nut 41 to secure the adjustment.

It is to be noted that height adjustments of the knee support 7 and standard 8 are independent of each other in order to accommodate persons of different sizes. The hand grip 34 is intended to be adjusted to such a height that the hand of the user can comfortably grasp the same with the arm in pendent position, as in grasping a walking cane.

35 Referring now to Figure 4 of the drawings, a different form of the standard 8a is shown, the lower standard member 28a is provided near its upper end 30a with a row of vertically spaced holes 35a. The upper standard member 32a is solid instead of tubular, and has a single hole 31a at its lower end, and a wing bolt 36 and nut are employed through the single hole 31a and a selected one of the holes 35a to secure the adjustment. The standard 8a is otherwise similar to the standard 8.

What is claimed is:

1. In a knee crutch, a knee support and a standard, said knee support comprising a foot for engaging the ground, a pedestal fixed to and rising from the foot, a knee rest fixed on the upper end of said pedestal, brackets fixed on and projecting laterally from the foot and the rest, said brackets having vertically registered eyes, a standard having a lower end secured to the eye on the foot and extending through the eye of the rest and extending thereabove, said standard having an upper end, and a hand grip on the upper end of the standard.

2. In a knee crutch, a knee support and a standard, said knee support comprising a foot for engaging the ground, a pedestal fixed to and rising from the foot, a knee rest fixed on the upper end of said pedestal, brackets fixed on and projecting laterally from the foot and the rest, said brackets having vertically registered eyes, a standard having a lower end secured to the eye on the foot and extending through the eye of the rest and extending thereabove, said standard having an upper end, and a hand grip on the upper end of the standard, said knee rest comprising a plate, and a compressible pad secured upon the plate.

3. In a knee crutch, a knee support and a standard,

3

said knee support comprising a foot for engaging the ground, a pedestal fixed to and rising from the foot, a knee rest fixed on the upper end of said pedestal, brackets fixed on and projecting laterally from the foot and the rest, said brackets having vertically registered eyes, a standard having a lower end secured to the eye on the foot and extending through the eye of the rest and extending thereabove, said standard having an upper end, and a hand grip on the upper end of the standard, said pedestal comprising slidably engaged upper and lower members, and securing means for locking the upper and lower members in selected vertical adjustments relative to each other.

4. In a knee crutch, a knee support and a standard, said knee support comprising a foot for engaging the ground, a pedestal fixed to and rising from the foot, a knee rest fixed on the upper end of said pedestal, brackets fixed on and projecting laterally from the foot and the rest, said brackets having vertically registered eyes, a standard having a lower end secured to the eye on the foot and extending through the eye of the rest and extending thereabove, said standard having an upper end, and a hand grip on the upper end of the standard, said pedestal comprising slidably engaged upper and lower members, and securing means for locking the upper and lower members in selected vertical adjustments relative to each other, said standard comprising a lower member slidably engaged through the bracket eye on the knee rest, an upper standard member slidably engaged with the lower standard member and rising thereabove, and securing means for locking the upper and lower standard members in selected vertical adjustments relative to each other.

5. In a knee crutch, a knee support and a standard, said knee support comprising a foot for engaging the ground, a pedestal fixed to and rising from the foot, a knee rest fixed on the upper end of said pedestal, brackets fixed on and projecting laterally from the foot and the rest, said brackets having vertically registered eyes, a standard having a lower end secured to the eye on the foot and extending through the eye of the rest and extending thereabove, said standard having an upper end, and a hand grip on the upper end of the standard, said pedestal comprising slidably engaged upper and lower members, and securing means for locking the upper and lower members in selected vertical adjustments relative to each other, said standard comprising a lower member

4

slidably engaged through the bracket eye on the knee rest, an upper standard member slidably engaged with the lower standard member and rising thereabove, and securing means for locking the upper and lower standard members in selected vertical adjustments relative to each other, said lower standard member and said upper standard member being tubular and said upper standard member being telescoped into said lower standard member, a single hole traversing said lower standard member, a row of vertically spaced holes traversing said upper member, and said securing means comprising a bolt extending through said single hole and a selected hole of said row of holes.

6. In a knee crutch, a knee support and a standard, said knee support comprising a foot for engaging the ground, a pedestal fixed to and rising from the foot, a knee rest fixed on the upper end of said pedestal, brackets fixed on and projecting laterally from the foot and the rest, said brackets having vertically registered eyes, a standard having a lower end secured to the eye on the foot and extending through the eye of the rest and extending thereabove, said standard having an upper end, and a hand grip on the upper end of the standard, said pedestal comprising slidably engaged upper and lower members, and securing means for locking the upper and lower members in selected vertical adjustments relative to each other, said standard comprising a lower member slidably engaged through the bracket eye on the knee rest, an upper standard member slidably engaged with the lower standard member and rising thereabove, and securing means for locking the upper and lower standard members in selected vertical adjustments relative to each other, said lower standard member being tubular and being traversed by a row of vertically spaced holes, said upper standard member being traversed by a single hole, and said securing means comprising a bolt extending through said single hole and a selected one of said row of holes.

References Cited in the file of this patent

UNITED STATES PATENTS

751,942	Renno	Feb. 9, 1904
1,197,375	Hoff	Sept. 5, 1916

FOREIGN PATENTS

118,989	Sweden	June 10, 1947
---------	--------	---------------