I. M. & C. BRISCOE.

ADJUSTABLE CRUTCH.

APPLICATION FILED DEC. 22, 1914.

1,156,747. Patented Oct. 12, 1915.

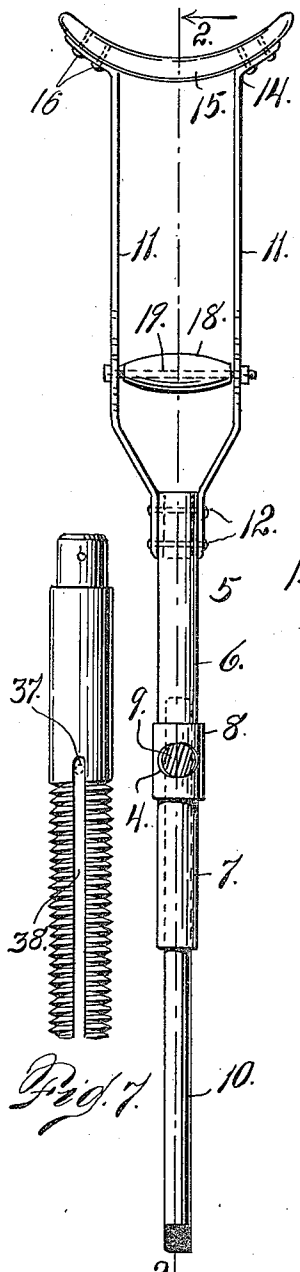


Fig. 1.

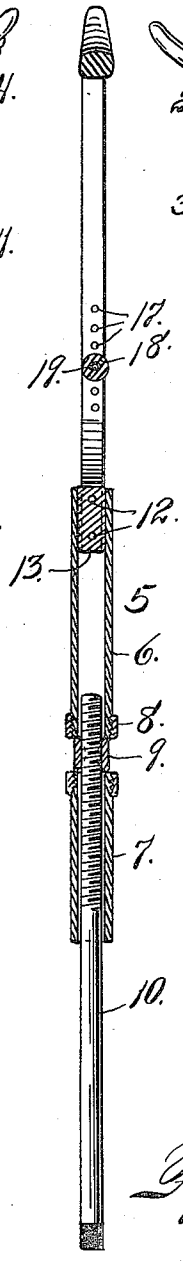


Fig 2.

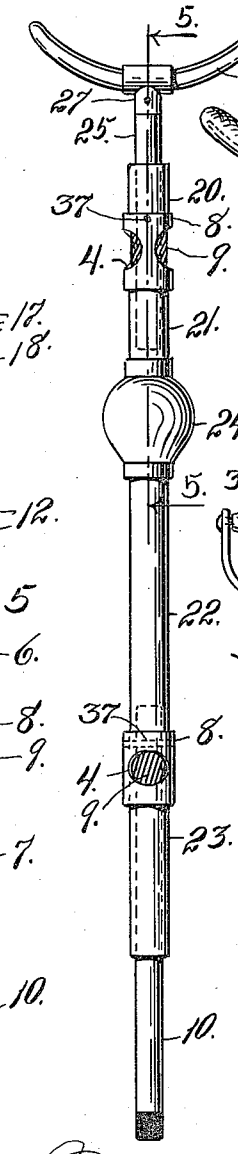


Fig. 3.

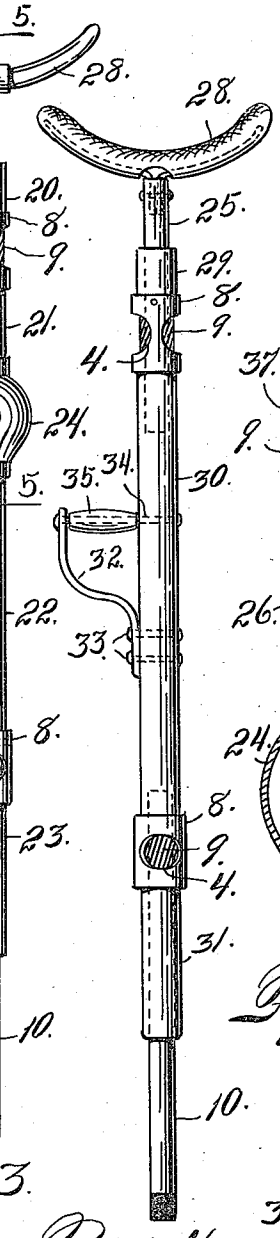


Fig. 4.

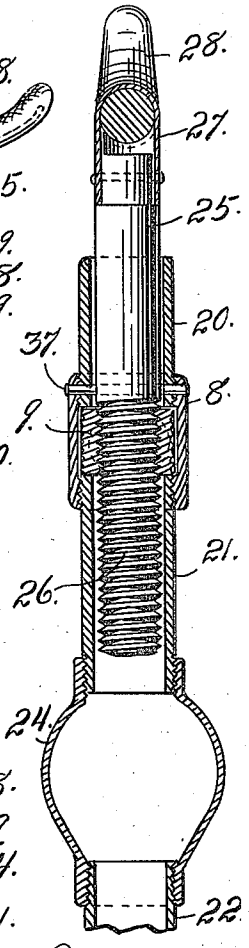


Fig. 5.

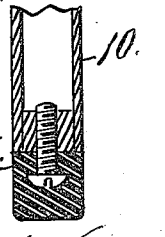


Fig. 6.

Witnesses

Otto E. Hoddick.

T. Ebert O'Brien

Inventors

Ina M. Briscoe and

Cole Briscoe.

By A. J. O'Brien, Attorney.

UNITED STATES PATENT OFFICE.

INA M. BRISCOE AND COLE BRISCOE, OF CASTLE ROCK, COLORADO.

ADJUSTABLE CRUTCH.

1,156,747. Specification of Letters Patent. Patented Oct. 12, 1915.

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To all whom it may concern:

Be it known that we, INA M. BRISCOE and COLE BRISCOE, citizens of the United States, residing at Castle Rock, county of Douglas and State of Colorado, have invented certain new and useful Improvements in Adjustable Crutches; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in crutches, our object being to equip a crutch with means whereby either extremity or both may be lengthened or shortened to meet the requirements of people of different heights, and furthermore, to have the upper extremity of said crutch adjustable, whereby it can be raised or lowered to conform to various arm lengths.

Having briefly outlined our invention, we will proceed to describe the same in detail, reference being made to the accompanying drawing, in which is illustrated an embodiment thereof.

In this drawing,—Figure 1 is an elevation of a crutch equipped with one form of our improvements. Fig. 2 is a section taken through line 2—2, Fig. 1, looking in the direction of the arrow. Fig. 3 is a view similar to Fig. 1, showing another form of our invention. Fig. 4 is a view similar to Fig. 1, showing still another form of our invention. Fig. 5 is a view taken through the line 5—5, Fig. 3, but on an enlarged scale. Fig. 6 is a detail view, showing a tip secured to the lower extremity of the crutch. Fig. 7 is a detail view of the upper extremity of the crutch, showing the slots therein.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the crutch in its entirety. In the construction disclosed in Figs. 1 and 2, the crutch is composed of a hollow sleeve divided into upper and lower sections 6 and 7, respectively. The adjacent extremities of these sections are exteriorly threaded for a short distance and are connected by a hollow member 8 having its opposite extremities interiorly threaded and into which the threaded extremities of the sections 6 and 7, respectively, are adapted to be screwed. Between the adjacent extremities of the sections 6 and 7 and within the connection 8 is located a nut 9, the latter being loosely mounted therein and the diameter of its interior being slightly less than that of the said sections. The wall of the connection 8 is provided with openings 4 through which the milled surface of the nut 9 is exposed, for reasons hereinafter stated. This nut is interiorly threaded and the upper extremity of a leg 10 is screwed therein, said extremity being exteriorly threaded for this purpose. Supporting bars 11 are secured at their lower extremities to the upper extremity of the section 6 by pins 12, which pass through registering perforations formed in the said bars, the section 6 and a wooden or other suitable filler 13, the latter being inserted in the upper extremity of said section. These bars project upwardly, diverging immediately above the section 6 and then extend parallel to each other, their upper extremities being bent outwardly at 14 to engage the under surface of an arm rest 15, the latter being secured to the said bars by suitable fastening means 16. A series of perforations 17 is formed in the parallel portion of each supporting bar 11, the perforations of each series being in alinement with those of the other.

A hand grip 18 is employed having an opening extending lengthwise therethrough and through which opening, together with two oppositely disposed perforations, is inserted a bolt 19, its threaded extremity extending beyond one of the bars 11 and having a nut screwed thereon, whereby the said handle is secured in place.

It will be readily understood from the above description that the hand grip 18 may be raised or lowered to conform to the arm length of the user and also by gripping the nut 9, through the openings 4 in the member 8, and by turning the leg 10, the crutch may be lengthened or shortened to correspond to the height of the user.

In the construction disclosed in Fig. 3, the hollow sleeve of the crutch is composed of four sections, 20, 21, 22 and 23, the adjacent extremities of the sections 20 and 21 being connected in the same manner as the adjacent extremities of the sections 6 and 7 and having a similar nut 9 located loosely between them. The same is true regarding the adjacent extremities of the sections 22

and 23, while the adjacent extremities of the sections 21 and 22 are connected by a hand support 24, said extremities being respectively screwed into the opposite extremities of said support. A post 25 having its opposite sides slotted at 38 is inserted in the sections 20 and 21, the section 20 having a pin, extending therethrough and also through the connection 8, which engages the said slots, thereby preventing the post from turning within the sections. A portion 26 of the post is exteriorly threaded and engages the interiorly threaded surface of the nut 9, which as before mentioned, is located between the adjacent extremities of said sections. This construction is best illustrated in Figs. 5 and 7. The upper extremity of the post 25 is equipped with a T fitting 27 adapted to retain an arm rest 28 securely in place. In this construction the nut 9 is turned to raise or lower the post 25 to vary the distance between the arm rest 28 and the hand rest 24 to conform to the arm length of the user.

In the construction disclosed in Fig. 4, the hollow sleeve of the crutch is composed of three sections, 29, 30 and 31, their adjacent extremities being also connected in the same manner as the sections 6 and 7 and the post 25 adapted to be locked from turning within the sections 29 and 30 in a manner similar to that in which the post 25 is locked within the sections 20 and 21, Fig. 3.

A bracket 32 is rigidly secured at 33 to the section 30, the upper extremity of the said bracket having a perforation therein. The section 30 is provided with perforations which are in alinement with the perforation in the bracket and a pin 34 is inserted through said perforations, the said pin being upset at its extremities and having a hand grip 35 mounted thereon between the said section and the bracket 32. A rubber tip 36 is secured to the lower extremity of each leg 10, as disclosed in Fig. 6.

Attention is called to the fact that the leg 10 may be locked to prevent its turning within the lowermost sections of the sleeve in the same manner as the post 25 is locked within the uppermost sections.

Fig. 3 of the drawing is intended to show and must be understood to include the features disclosed in Figs. 5 and 7, which prevent the shank members 10 and 25 from rotating independently of the tubular sleeve. The pins 37 are shown applied to the collars 8 of both joints, and these are the only features of the construction above noted that would be visible in this figure, inasmuch as it is an elevation only.

Having thus described our invention, what we claim is,—

1. A support for walking comprising a tubular sleeve including two sections, adjusting means located between the sections, and a shank inserted in said sleeve and adapted to coöperate with said adjusting means, whereby the length of the support may be varied.

2. A support for walking including a tubular sleeve composed of two sections, a collar, into the opposite extremities of which the sleeve sections are fitted, the extremities of the sections within the collar being spaced, a nut located within the collar and between the spaced extremities of the sections, and a shank threaded into the nut for purposes of adjustment.

3. A support for walking including a tubular sleeve composed of two sections, a collar, into the opposite extremities of which the sleeve sections are fitted, the extremities of the sections within the collar being spaced, a nut located within the collar and between the spaced extremities of the sections, and a shank threaded into the nut for purposes of adjustment, said shank having a longitudinal slot and a device supported from the sleeve and engaging the said slot in the shank to prevent rotation of the latter within the sleeve.

4. A support for walking composed of upper, lower and intermediate sleeve sections, collars respectively connecting the upper and lower sections with the adjacent extremities of the intermediate section, nuts located within the respective collars and shanks threaded into the respective nuts for purposes of adjustment.

5. A support for walking composed of upper, lower and intermediate sleeve sections, collars connecting the upper and lower sections with the adjacent extremities of the intermediate section, nuts located within the respective collars and fitted into the space between the sections, and shanks entering the sleeve sections and having threaded parts engaging the respective nuts for purposes of adjustment, the nuts being free to rotate within the collars and the latter being open to give access to the nuts.

6. A support for walking composed of upper, lower and intermediate sleeve sections, collars connecting the upper and lower sections with the adjacent extremities of the intermediate section and within which the extremities of the sections are spaced, nuts located within the collars and fitted into the spaces between the extremities of the connected sections, whereby the nuts are free to rotate within the collars, which are open to permit access to the nuts, shanks entering the sleeve sections and having threaded parts engaging the respective nuts for purposes of adjustment, the shanks being longitudinally slotted and pins supported from the adjacent sleeve sections and entering the slot to prevent rotation of the shanks within the sleeve sections.

7. A support for walking including a tu-

bular sleeve composed of two sections, a collar whose opposite extremities are threaded to coöperate with threads on the connected extremities of the sections, a nut mounted to rotate within the sleeve and locked against longitudinal travel, and a shank inserted in the sleeve and threaded into the said nut for purposes of adjustment.

8. A support for walking including a tubular sleeve composed of two sections, a collar whose opposite extremities are threaded to coöperate with threads on the connected extremities of the sections, a nut mounted to rotate within the sleeve and locked against longitudinal travel, a shank inserted in the sleeve and threaded into the said nut for purposes of adjustment, and an operative connection between the sleeve and the shank to permit longitudinal but prevent rotary travel of the shank within the sleeve.

9. A support for walking comprising a tubular sleeve including two sections, adjusting means located between the sections, a shank inserted in said sleeve and adapted to coöperate with said adjusting means whereby the length of the support may be varied, said adjusting means comprising a collar into which the extremities of the sections are fitted and spaced, a nut located within the said space and rotatable between the sections to permit lengthwise adjustment of the shank, and an operative connection between the sleeve and the shank to prevent rotary movement while permitting longitudinal movement of the shank within the sleeve.

10. A support for walking comprising upper, lower and intermediate sleeve sections, collars connecting the upper and lower sections with the adjacent extremities of the intermediate section, nuts located within the collars and fitted into the spaces between the sections, and shanks entering the sleeve sections and having threaded parts engaging the respective nuts for purposes of adjustment, the upper portion of the intermediate section of the support being equipped with a hand piece, for the purpose set forth.

11. A support for walking including an upper adjustable member composed of two sleeve sections, a collar connecting said sections, a nut located within the collar, and a shank inserted in the sleeve sections and threaded into the nut, the sleeve section below the collar being provided with a hand piece.

In testimony whereof we affix our signatures in presence of two witnesses.

INA M. BRISCOE.
COLE BRISCOE.

Witnesses:
MAZE KIRBY,
A. EBERT O'BRIEN.