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W. R. COIE

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CRUTCH

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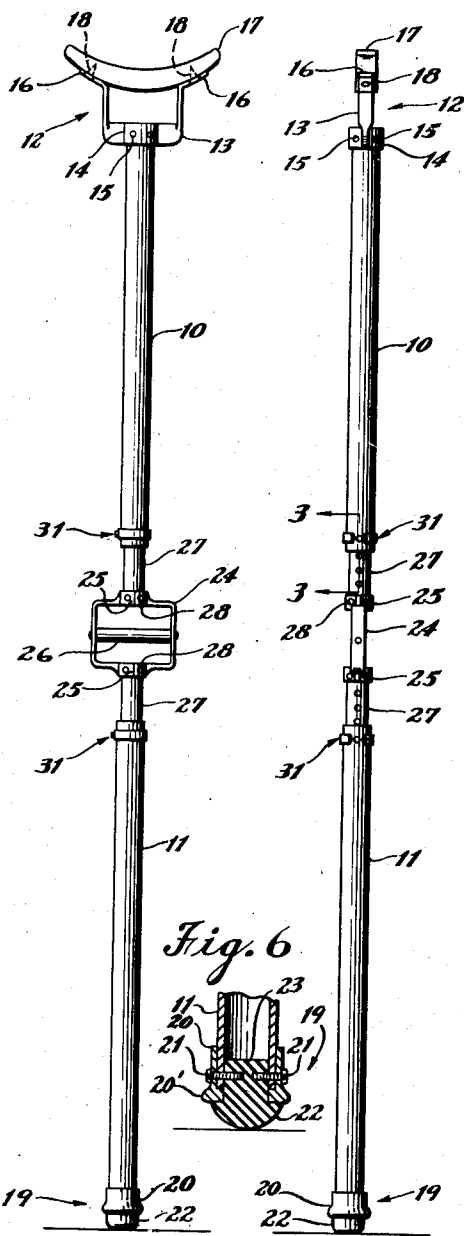


Fig. 1 Fig. 2

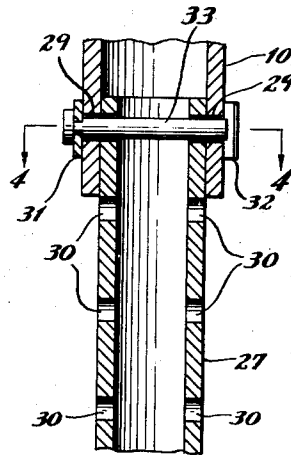


Fig. 3

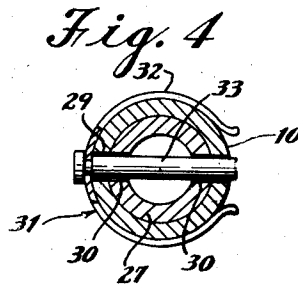


Fig. 4

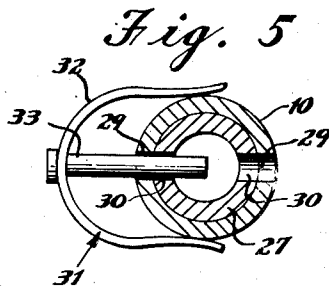


Fig. 5

Inventor  
William R. Coie

By *Alvanice W. Bion*  
*and Harvey B. Jacobson*  
Attorneys

# UNITED STATES PATENT OFFICE

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CRUTCH

William R. Coie, Des Moines, Iowa

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1 Claim. (Cl. 135-53)

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This invention relates to new and useful improvements and structural refinements in crutches, more specifically, to an adjustable and collapsible crutch, and the principle object of the invention is to provide a device of the character herein described, which is composed of a plurality of sections such as may be detachably and adjustably connected together by a novel connecting means.

A further object of the invention is to provide a crutch which, by virtue of the construction above outlined, may be adjusted both as to the arm length and the overall length thereof, to conform with the physical requirements of the person using the same.

Another object of the invention is to provide a crutch which may be readily disassembled into its major component parts, in order that the same may be easily and conveniently transported when the crutch is not being used.

An additional object of the invention is to provide a crutch in which such adjustment or disassembly may be speedily and conveniently undertaken without the use of any tools whatever and with the expenditure of the minimum of effort on the part of the individual performing the same.

A still further object of the invention is to provide a crutch which is simple in construction, light in weight, attractive in appearance, and which will not easily become damaged.

With the above more important objects in view, and such other objects as may become apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of the invention;

Figure 2 is a front view of the same;

Figure 3 is a cross sectional view, taken in the plane of the line 3-3 in Figure 2;

Figure 4 is a cross sectional view, taken in the plane of the line 4-4 in Figure 3,

Figure 5 is a further cross sectional view similar to that shown in Figure 4, and illustrating the manner in which the crutch may be disassembled.

Figure 6 is a cross sectional view showing the attachment of the resilient tip to the crutch body.

Like characters of reference are used to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, the invention consists of an upper tubular section 10 and the lower tubular section 11,

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the same being formed from any light weight material suitable for the purpose intended.

An arm rest assembly designated generally by the reference character 12 is positioned at the upper end of section 10, the assembly 12 consisting of a U-shaped yoke 13, provided in the mid-portion thereof with a tubular adapter 14, whereby it may be secured to the section 10 by the rivets 15. The arms of the yoke 13 are formed with out-turned end-pieces 16, to which the arm rest body 17 may be secured by means of suitable screws 18.

The lower end of the section 11 carries a resilient tip assembly designated generally by the character 19, the same comprising an adapter 20 formed at its lower edge with a thickened flange 20' and mounted upon the section 11 by means of suitable screws 21. A substantially semi-spherical shoe 22, formed from resilient material and intended to engage the ground, is provided with an integral stem 23 which extends into the crutch section 11 and is secured therein by the aforementioned screws 21.

A substantially rectangular frame 24 is provided in the opposite sides thereof with a pair of tubular adapters 25 hereinafter to be more particularly described, and a cylindrical hand grip 26 is suitably mounted between the remaining two sides of the frame, as will be clearly understood from the accompanying drawings.

A tubular extension 27 is secured at one end in each of the adapters 25 by suitable rivets 28, the remaining end of the extension being slidably telescoped into the aforementioned sections 10 and 11.

The adjacent ends of the sections are each formed with a pair of transversely aligned apertures 29 and the extensions 27 are provided with further pairs of vertically aligned apertures 30.

The means for detachably and adjustably connecting the extensions to the sections are designated generally by the reference character 31 and comprise strips of resilient material defining the clamps 32, the same being adapted for removable positioning on the sections 10 and 11, as is best illustrated in the accompanying Figure 4.

The clamp 32 is secured medially of its length to a pin 33, the latter extending diametrically with respect to the clamp, as will be clearly apparent from the accompanying drawings.

The pin 33 normally passes through the apertures 29 and is removably, that is, selectively receivable in any transversely aligned pair of the apertures 30, and as will be understood with reference to the accompanying Figure 5. By

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removing the clamp 32 from the sections, the pin 33 will be withdrawn from the aforementioned apertures and the relative sliding movement of the extensions 27 and the sections 10 or 11 will thus be facilitated.

When the invention is placed in use, the adjustment for arm length may be quickly and conveniently made by inserting the pin 33, in the manner already described, in a suitable pair of apertures in the upper of the extensions 27 associated with the section 10. The overall length of the crutch as a whole may be further varied by making a similar adjustment of the remaining of the extensions 27 with respect to the section 11.

It will be apparent that in this manner the longitudinal adjustment of the crutch may be simply and speedily undertaken and by removing the hand grip portion together with the extensions 27 from the associated sections 10 and 11, the entire crutch may be disassembled into three major components, as has already been set forth in the opening paragraphs of this specification.

While in the foregoing there has been shown and described the preferred embodiment of this invention it is to be understood that minor

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changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

5 What I claim as my invention is:

10 In a crutch including a tubular body portion, a resilient tip comprising an adapter positioned at the lower end of said body portion and formed at its lower edge with a thickened flange, a substantially semi-spherical shoe formed from resilient material and engaging said flange, a stem provided integrally on said shoe and extending into said body portion, and fastening elements extending through said adapter and through 15 said body portion into said stem.

WILLIAM R. COLE.

REFERENCES CITED

The following references are of record in the 20 file of this patent:

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