Oct. 11, 1949. H. L. GIBSON, SR 2,484,406

FOLDING CRUTCH

Filed Sept. 17, 1947

Fig. 1.

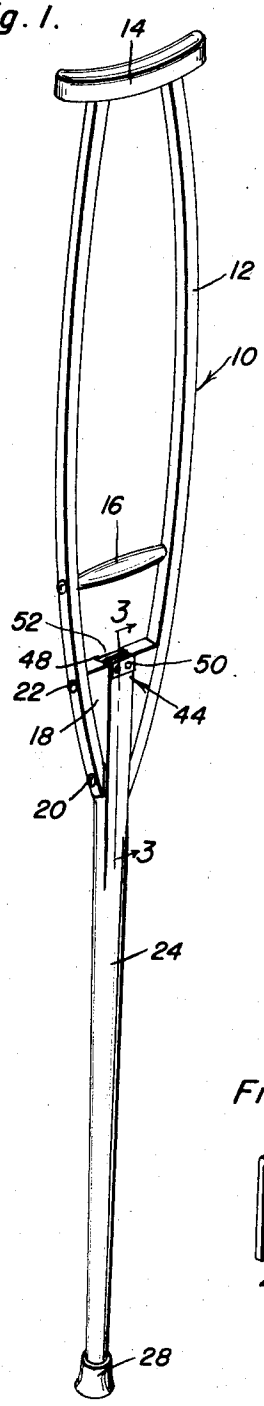


Fig. 2.

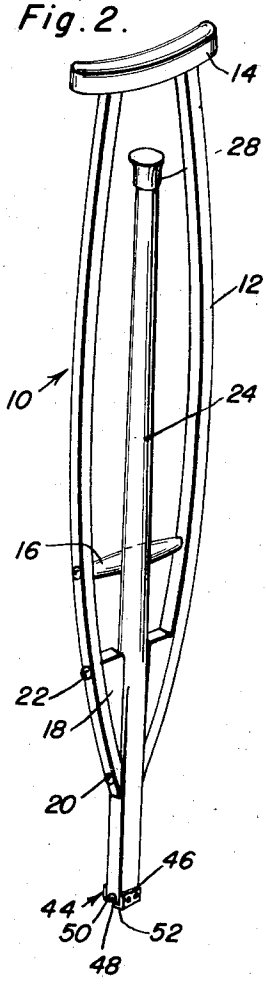


Fig. 4.

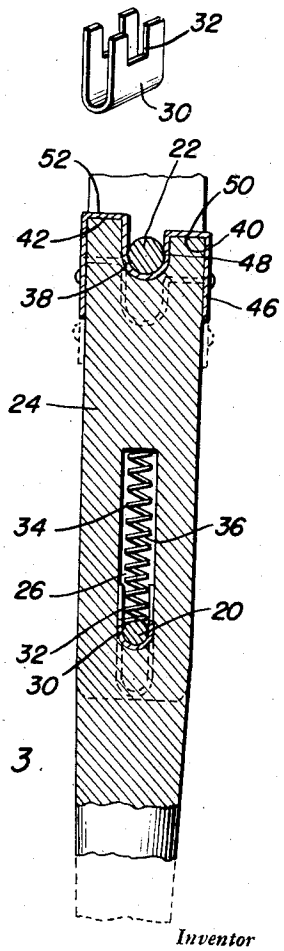
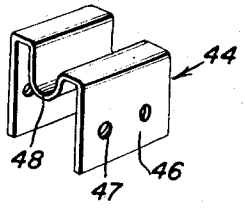


Fig. 3.

Fig. 5.



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FOLDING CRUTCH

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5 Claims. (Cl. 135—50)

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This invention relates to new and useful improvements in folding crutches and the primary object of the present invention is to provide a foldable crutch including a pivotal leg and novel and improved means for locking said leg in an extended position for use.

Another important object of the present invention is to provide a crutch which may be quickly and readily folded into a neat and compact article to occupy very little space when not in use.

A further object of the present invention is to provide a crutch so designed as to permit the same to be conveniently folded so that a person may place the same under a chair in theatres or the like in such a manner as not to obstruct the movement of other persons.

A still further aim of the present invention is to provide a folding crutch that is simple and practical in construction, strong and reliable in use, neat and attractive in appearance, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the present crutch, and showing the leg thereof in an extended position;

Figure 2 is a perspective view of the crutch, and showing the leg in a folded position;

Figure 3 is an enlarged longitudinal sectional view taken substantially on the plane of section line 3—3 of Figure 1;

Figure 4 is a perspective view of the friction reducing means used in conjunction with the present invention; and,

Figure 5 is a perspective view of the locking member used in conjunction with the present invention.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents the present crutch generally, comprising a pair of arcuate side members or supports 12, an under arm rest 14 carried by the upper terminals of the side members, and a handle 16 carried by the side members adjacent their lower terminals.

Substantially wedge-shaped guide pieces 18 are rigidly carried by the opposing faces of the side member at their lower terminals. These guide

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pieces are retained in a fixed position, with their opposing faces spaced parallel, by a connecting bar 20 and a locking bar or pivot pin 22 that are carried by the side members.

The numeral 24 represents an elongated leg having a slot 26 formed adjacent its enlarged, preferably square terminal and a resilient floor-engaging cup member 28 frictionally engaging its preferably reduced circular terminal. This leg is interposed between the guide pieces 18 and the slot 26 provided in this leg loosely receives the connecting bar 20 for pivotal movement of the leg relative to the connecting bar.

A substantially U-shaped friction reducing member 30, having opposing finger receiving notches 32 formed in its legs, is mounted in slot 26 and embraces the connecting bar 20. A longitudinal bore or chamber 34 is provided in the leg 24 in communication with slot 26 and this bore receives a coil spring 36 that normally yieldingly bears against the bar 20. The terminal of the spring adjacent the bar is disposed between the legs of member 30, as shown best in Figure 3.

The enlarged preferably squared terminal of the leg 24, is provided with a notch or groove 38 and the outer face 40 of the terminal portion of the leg adjacent one side of groove 38, is spaced inwardly from the outer face 42 of the terminal portion of the leg adjacent the opposite side of the groove, for a purpose which will later be more fully described.

Attention is now directed to Figure 5, wherein there is disclosed a preferred embodiment of the locking member 44 for use in conjunction with the present invention. This member 44 is substantially channel shaped having legs 46 bearing on opposite sides of the enlarged square terminal of the leg 24, and these legs have apertures 47 that receive suitable fasteners for retaining the member in a fixed position relative to the leg 24. An arcuate detent 48 is provided in the web portion of the member 44 to seat in the groove 38 and so that the inner faces 50 and 52 of this web portion of the member 44 adjacent the detent 48 bear respectively on the faces 40 and 42 of the terminal of the leg 24, as shown in Figure 3.

In practical use of the device, the leg 24 being in an extended position as shown in Figures 1 and 3, the locking bar 22 is received in detent 48 and the member 30 bears against the normally lower wall of the slot 26. As pressure is normally exerted on the legs and side members in this position, the locking bar will remain in the detent 48, but even though pressure should be released

or reduced from the leg, the spring **36** biased within bore **34** would exert the necessary pressure to retain the locking bar **22** in position to the detent **48**.

To collapse the crutch, or more particularly to fold the leg, it is merely necessary to hold the handle **16** or one of the side members **12** with one hand while pulling downwardly or outwardly on the leg until spring **36** is compressed slightly and the locking bar is disengaged from the detent. The leg **24** may then be pivoted so that the portion **50** of member **44** catches under the locking bar. Obviously, when extending the leg from its folded position, the portion **50** of the member **44** is again extended beneath the locking bar so that when the locking bar engages the outstanding portion of the detent, adjacent portion **52**, the same is forced in place within the detent.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. In a crutch structure having a pair of side members, a locking bar carried by said side members, a pivot pin carried by said side members, a leg having a longitudinal slot adjacent one end for slidably and pivotally receiving said pivot pin, a transverse recess provided in one end of said leg for receiving said locking bar to retain said leg in an extended position, and means normally urging said leg to a raised position for retaining said locking bar within said recess.

2. In a crutch structure having a pair of spaced side members, a pivot pin carried by said side members, a leg having a longitudinal slot adjacent one end pivotally and slidably receiving said pivot pin, means carried by said side members guiding the pivotal and sliding movement of said leg, a locking bar carried by said side members, one end of said leg having a transverse recess for receiving said locking bar to retain said leg in an extended position, said leg having a blind bore therein communicating with said slot, and a resilient member mounted in said bore and engaging said pivot pin for urging the leg in one direction for reception of said locking bar into said recess.

3. The combination of claim 2 wherein said guide means includes a pair of guide members having opposed spaced parallel edges, said edges of said guide members being perpendicular to said locking bar.

4. The combination of claim 2 and a friction reducing member mounted in said slot and embracing said pivot pin.

5. In a crutch structure having a pair of spaced side members, a pivot pin carried by said side members, a leg having a longitudinal slot adjacent one end pivotally and slidably receiving said pivot pin, means carried by said side members guiding the pivotal and sliding movement of said leg, a locking bar carried by said side members, one end of said leg having a transverse recess for receiving said locking bar to retain said leg in an extended position, said leg having a blind bore therein communicating with said slot, a U-shaped friction reducing member positioned in said slot and embracing said pivot pin, and a coil spring mounted in said blind bore and biased between said pivot pin and the closed end of said blind bore for urging the end of said leg having said recess toward said locking pin.

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