June 8, 1948. S. JOSEPH 2,442,896

CRUTCH

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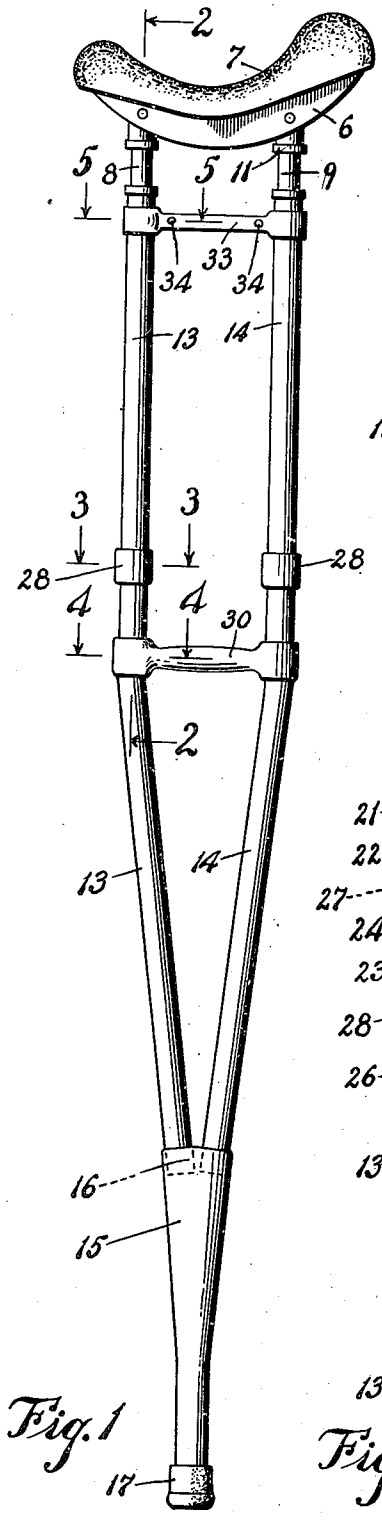


Fig. 1

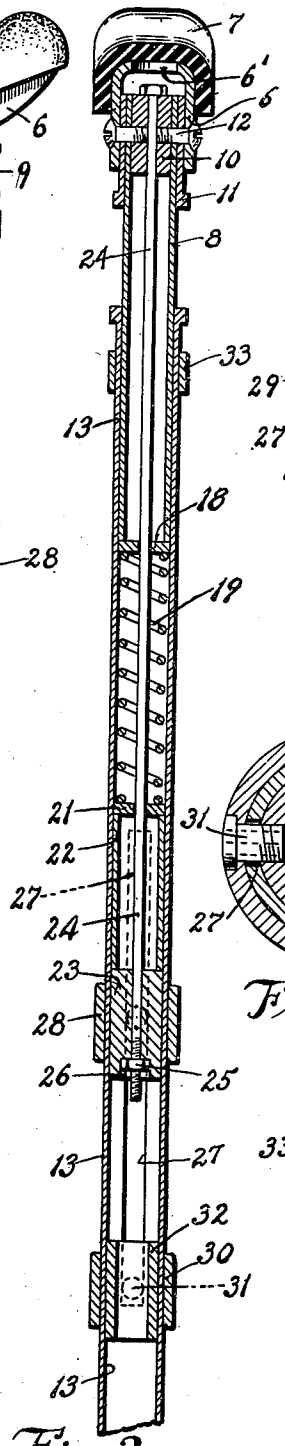


Fig. 2

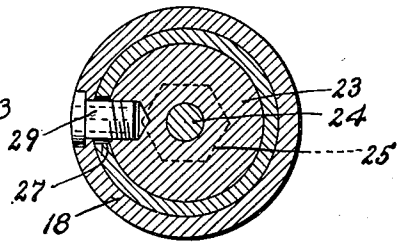


Fig. 3

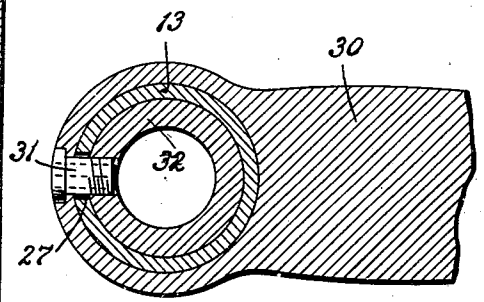


Fig. 4

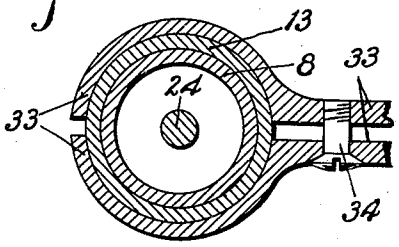


Fig. 5

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CRUTCH

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2 Claims. (Cl. 135—52)

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This invention relates to improvements in crutches, and it has among its salient objects to provide an improved crutch for veterans and others having use for crutches, wherein and whereby the crutch can be more perfectly adjusted to the person who is to use it, and wherein there is a flexibility, or yieldableness, which makes the use thereof more comfortable and restful.

Some of these improved features may be briefly referred to as follows: The shoulder saddle is constructed with the rearward end thereof a little higher than the forward end, whereby to fit more comfortably and naturally under the shoulder, under the arm. I have also provided a detachable soft rubber member to be fit over said saddle whereby to give a soft cushion support where it is most needed.

I have also provided a crutch structure in which spaced upper portions of the crutch have a telescoping connection with outer portions thereof, with spring means therein, whereby there is a yieldableness, which gives ease and comfort in use.

Other details of construction and arrangement will be referred to in the following detailed description, reference being had to the accompanying sheet of drawings in which one practical embodiment of my improved crutch is shown. In the drawings:

Figure 1 is a side elevation of a crutch embodying my invention;

Figure 2 is a longitudinal sectional view thereof, taken on the line 2—2 of Fig. 1; and

Figures 3, 4 and 5, are fragmentary cross sectional views taken, respectively, on the lines 3—3, 4—4 and 5—5, on Fig. 1.

Referring now in detail to the drawings, my improved crutch as here illustrated, includes a shoulder saddle 6, of inverted U-shape in cross section, as seen in Fig. 2, with a rubber cushion member 7 fitted thereover and detachable therefrom. The rearward end of said saddle structure, being the right side thereof as seen in Fig. 1, is shown to be a little higher and a little heavier than the front end thereof, whereby to more perfectly support and steady the user.

Pivotally connected at their upper ends to said saddle 6, are two spaced tubular members 8 and 9, each being provided in its upper end with an insert plug, as 10, and an outside flanged sleeve, as 11, with a through bolt, as 12, therethrough, as clearly illustrated in the sectional view in Fig. 2.

Said spaced tubular members 8 and 9, are telescopically operable in two spaced outer tubular

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members 13 and 14, converging at their lower ends, and secured to a common member 15, as at 16, said member 15 being provided with a non-slip cap, as 17.

The lower ends of the inner tubular members 8 and 9 are each closed, as with a disc or member 18, each having a coiled spring, as 20, thereunder, in said outer members 13 and 14, bearing at their upper ends against said members 18, and at their lower ends, said springs bear upon a similar disc or member 21 in each outer tubular member, as clearly shown. Under this disc or member 21, in each tubular member, 13 and 14, is a short tubular member insert, as 22, resting upon an insert plug 23, having a bore therethrough to receive a rod 24, with a nut 25 on its lower end, seated in a cavity in the lower end of said plug, as shown at 26, whereby said nut is held against turning but can move with said plug 23, and can also move in and out of the cavity. Said rods, at their upper ends, extend through insert plugs 10, in the members 8 and 9. It will be understood that each of said spaced members are the same. The saddle 6 has a top opening, as 6', through which said bolt or rod 24 can be inserted.

The outer tubular members 13 and 14, are provided on their outer opposite sides, with open slots, as 27, indicated in Fig. 2, and in the cross sectional views in Figs. 3 and 4.

Mounted on each of said outer spaced members 13 and 14, opposite the insert plugs 23, is a collar, as 28, each provided with an inset set screw, as 29, through the slot 27 and screwed into the inset plug 23, as will be clear from Figs. 2 and 3.

Mounted between said members 13 and 14, is a hand grip 30, also provided at its outer ends with a set screw as 31, through the slot 27, and screwed into an insert tubular piece 32, as seen in Figs. 2 and 4.

At the upper ends of said outer members 13 and 14, is a connecting brace 33, shown made in two parts, clamped together around said members 13 and 14, by means of screws 34, 34, and by reason of which said connecting brace 33 can be adjusted and then secured in place.

By reason of the pivotal connection of the spaced members 8 and 9 with the saddle 6, the rolling or rocking action under the arms is decreased and a more comfortable action is had.

It is also possible to provide coiled springs in the front or forward tubular members 13 of more tension than the springs in the rearward tubular members 14, thus making it possible to get better results.

If it is desired to adjust the handle or hand

grip **30** upwardly to better fit the length of arm of the user, it is only necessary to release the screws **31**, at the opposite ends of the grip, when the grip **30**, and the inside tubular piece **32**, can be moved upwardly, by reason of the slots **27** for the screws **31**, as will be understood from Fig. 2.

If it is desired to increase the tension of the springs **19**, by removing the cushion member **7** from the saddle **6**, it is possible to have access to the bolt or rod **24**, and by its head turn said rod which will operate to raise the insert block or plug **23**, it being understood that the set screw **29** will first be loosened.

While I have shown and described one embodiment of my invention, I am aware that changes in details of construction and arrangement can be made therein without departing from the spirit of the invention, and I do not, therefore, limit the invention to these details except as I may be limited by the hereto appended claims.

I claim:

1. In a crutch, the combination with a saddle to fit under the shoulder of the user, and two spaced supporting members converging at their lower ends into a common lower end member, of means providing yieldableness in said spaced members and consisting of telescoping portions for each supporting member, coiled springs therein between said telescoping portions, and means for regulating the tension of said springs, said telescoping portions being pivotally connected with said saddle, whereby said saddle can rock endwise as said telescoping portions move up and down together or independently of each other, and a hand grip connecting said supporting members.

2. In a crutch, the combination with a saddle

to fit under the shoulder of the user, and two spaced supporting members of tubular form converging toward their lower ends and connected with a common lower end member, with a hand grip connecting said spaced supporting members, of means providing a springing movement of said saddle relative to said supporting members, said means consisting of two pairs of telescoping members forming the upper portions of said spaced supporting members, two coiled springs interposed in said members to yieldingly resist the telescoping movements thereof, two of said telescoping portions being pivotally connected with said saddle, whereby to permit said saddle to rock endwise with the telescoping movements of said telescoping portions, and means operable through said saddle and down through said telescoping members for changing the tension of said coiled springs independently of each other.

SELIG JOSEPH.

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