

Sept. 16, 1924.

E. P. GAYETTY

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ADJUSTABLE CRUTCH

Filed Oct. 2, 1923

Fig. 1.

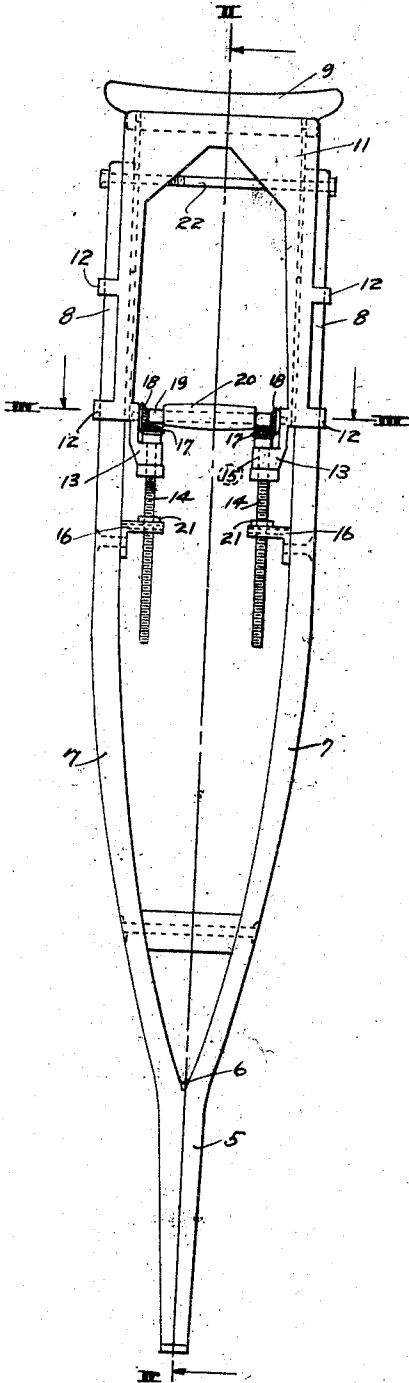


Fig. 2.

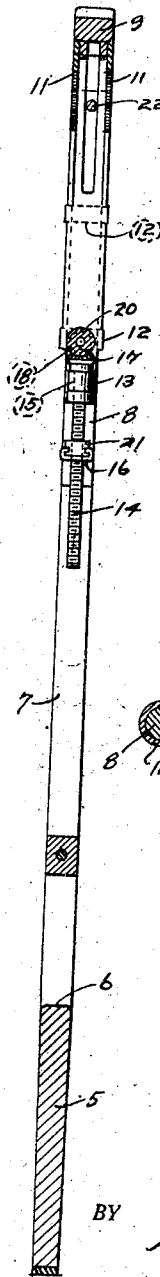


Fig. 3.

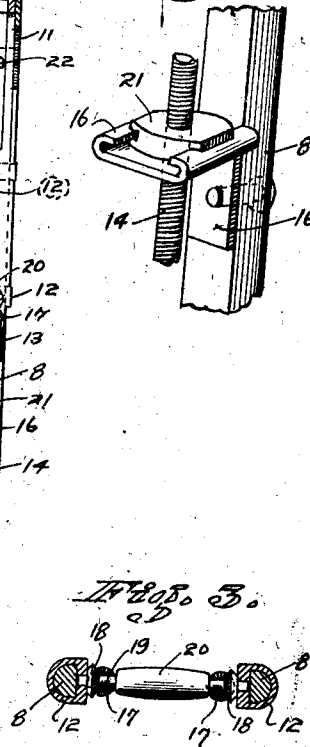
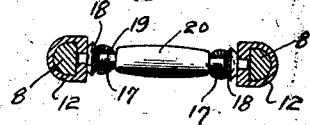


Fig. 4.



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ADJUSTABLE CRUTCH.

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To all whom it may concern:

Be it known that I, EDWARD P. GAYETTY, a citizen of the United States, and a resident of Dyerville, county of Humboldt, State of California, have invented a new and useful Adjustable Crutch, of which the following is a specification.

This invention relates to adjustable crutches and has for its primary object the provision of a device of this character embodying a novel form of adjusting mechanism whereby the length of the crutch can be adjusted at will to meet every requirement and convenience of the user and in a manner whereby adjustment can be made by the user while the arm rest and co-acting hand grip are in their intended relation to the arm and hand of the user.

A still further object of the invention is to provide a crutch having novel adjusting means whereby its length can be regulated quickly and the adjustment retained against accidental derangement.

A still further object of the invention is to provide means whereby an ordinary crutch staff can be quickly converted from a fixed form to an adjustable form.

A further object of the invention is to provide a structure of this character which will be strong and durable, simple and inexpensive of manufacture and one whose parts will afford maximum adjustment of the crutch to meet all requirements.

My invention, therefore, comprises certain new features of construction and arrangement and combination of elements hereinafter set forth and pointed out in the claims annexed hereto.

In the drawings:

Figure 1 is a view in side elevation of the crutch, Figure 2 a vertical section taken along line II—II of Figure 1, Figure 3 a horizontal section taken along line III—III of Figure 1 and Figure 4 a perspective detail view of a nut held in a bracket against rotation.

In carrying the invention into practice use is made of a well known form of staff (5) bifurcated at (6) so as to provide branches (7—7) having parallel upper portions (8—8).

The arm rest (9) may be of any suitable well known construction capable of attachment to the elevating and lowering frame. This frame comprises two plates (11) connected together by straps or loops (12) that

have sliding engagement with the parallel extensions (8—8).

The lower straps (12) are provided with bearing brackets (13) in which screws (14) are mounted to revolve. These screws are swivelled at (15) to said brackets (13) and same are extended through guide numbers (16) mounted on the inner surfaces of said branches (7—7) as clearly shown in Figure 1. The upper ends of these screws are provided with beveled gears (17) arranged in mesh with corresponding gears (18) fixed to the shaft (19) which carries an intermediate hand grip (20). This hand grip is positioned in constant relation to the arm rest (9) so that when grasped in the hand of the user of the crutch it may be revolved to thereby impart motion to the elevating and lowering screws (14). In order that these screws will move with the arm rest (9) and the hand grip (20) in such manner as will cause relative adjustments of the frame and the staff, the guides (16) are provided with fixed nuts (21) which co-act with the screws, as shown in Figure 1.

From the foregoing description it is manifest that means are provided whereby the crutch can be either lengthened or shortened to suit varying requirements and to cause the crutch to properly accommodate itself to the determined height of the person using it. It will be further understood that such range of adjustment can be had that will permit the crutch to properly accommodate itself to persons of different heights. It will further be appreciated from the nature of the construction of the adjustable frame that same is applicable to a staff of ordinary well known form and that such staff can be readily converted into one that is adjustable. This is particularly desirable for the reason that crutches of the fixed type now in use can be quickly converted into an adjustable crutch as the case demands.

I do not wish to be limited to the precise details of construction described herein and reserve the right to make such departures as may properly fall within the scope of the claims annexed hereto.

In order that the extensions (8—8) of said branches (7—7) will be held in perfect parallel relation to each other I connect these extensions together by a rod (22). While the screws (14—14) are intended to permit the two screws of the crutch to be

adjusted with respect to each other, the intermeshing gears (17) and (18) constitute means which through frictional action retain adjustments of the crutch sections.

5 I claim:

1. A crutch having a slidably extendible frame, an arm rest and a revolvable hand grip on one portion of the frame, and means revolvable with said hand grip adapted for
10 sliding the frame portions positively in either direction relative to one another.

2. A crutch comprising a staff having parallel extensions and a frame coacting with said extensions and slidable thereon,
15 the frame including an arm rest and a revolvable grip disposed in fixed relation to the arm rest, and means between the grip and the staff actuated upon revolving the grip adapted for effecting sliding adjustment of the frame on the extensions, and for
20 holding the frame in any adjusted position with the grip stationary.

3. A crutch comprising a staff having a slidably adjustable arm rest, a revolvable grip carried by the arm rest, and screw

means between the grip and the staff adapted for effecting sliding adjustment of the arm rest on the staff upon revolving the grip.

4. A crutch comprising a staff having a 30 bifurcated portion terminating in two upwardly extending free ends, an arm rest having two extensions slidably engaging the free ends and being adjustable therealong, and a tie member connecting the free ends 35 passing through a slot in the extensions.

5. A crutch comprising a staff having an adjustable arm rest, a revolving grip carried by the arm rest, and screw means between the grip and the staff for effecting 40 adjustments of the frame on said staff, a gear on the screw means, and a gear on the grip intermeshing with the first said gear.

6. A crutch comprising relatively separable sections, a revolving hand grip 45 mounted to rotate in one section, and gear means between the grip and the other section for sliding the sections relatively.

EDWARD P. GAYETTY.