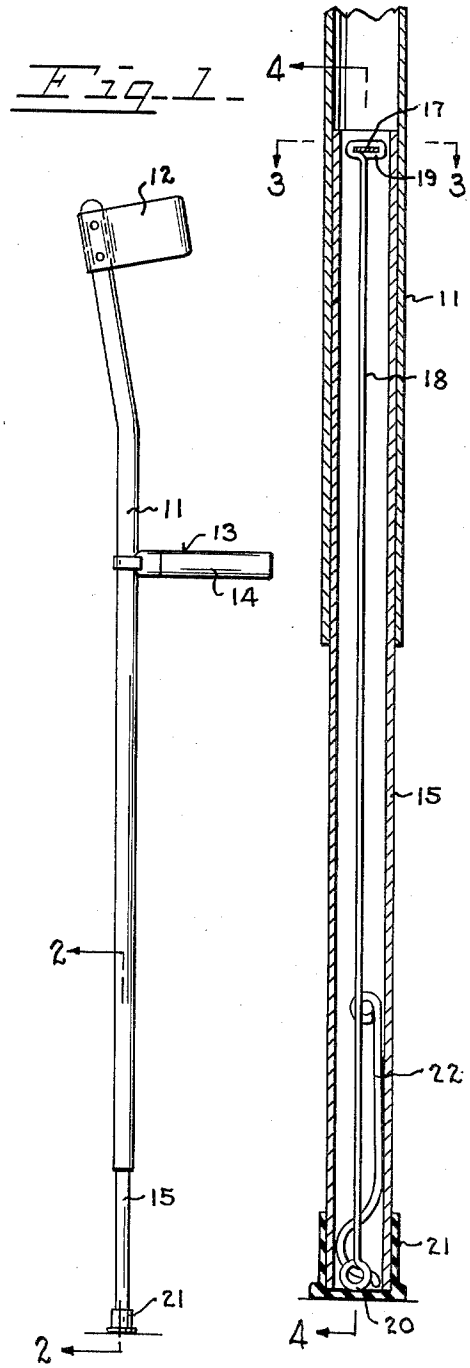
Feb. 1, 1955 E. F. RIES 2,700,979

CRUTCH

Filed March 8, 1952

Fig. 2. Fig. 3.

Fig. 1.



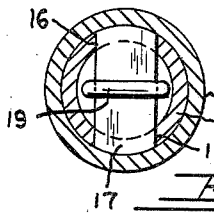
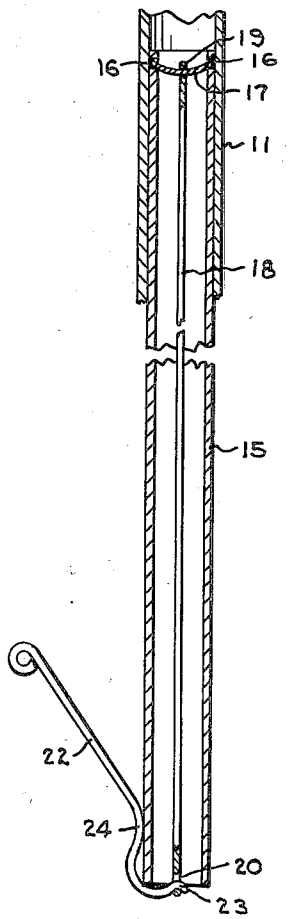


Fig. 4.



INVENTOR.
ELMER F. RIES.

BY

H. C. Ford.
ATTORNEY.

United States Patent Office

2,700,979

Patented Feb. 1, 1955

2,700,979

CRUTCH

Elmer F. Ries, Cincinnati, Ohio

Application March 8, 1952, Serial No. 275,527

3 Claims. (Cl. 135—50)

This invention relates to an improved crutch and more particularly to the provision of adjusting the length of the crutch together with adjusting the hand grip in relation to the arm support. Some users prefer to have the arm support rest against the forearm, while others prefer to have the arm support rest against the upper arm. With my improvement the leg of the crutch can be adjusted to place the arm support in the desired position against the arm. The hand grip is also adjustable to the proper position.

The object of this invention is to provide an adjustable leg for a crutch.

A further object is to provide means for locking the adjustable leg to the upright of the crutch in any position within the limits of adjustment.

A further object is to provide a tool for releasing the locking mechanism.

My invention will be further readily understood from the following description and claims, and from the drawings, in which latter:

Fig. 1 is a side view of my improved crutch.

Fig. 2 is a vertical enlarged detail section, taken in the plane of the line 2—2 of Fig. 1.

Fig. 3 is a horizontal section, taken in the plane of the line 3—3 of Fig. 2.

Fig. 4 is a detail section, taken in the plane of the line 4—4 of Fig. 2 with the disengaging tool in place.

My improved crutch comprises a tubular upright **11** with the lower end open. The upper end of the upright has an arm rest **12** attached thereto. An adjustable hand grip **13** is clamped to the upright and is adjusted up or down by turning the grip **14** to loosen the friction clamp.

A tube **15** is slidable in the lower end of the upright and has a pair of slots **16** adjacent to the upper end thereof in which a spring member **17** is received and is of a length to normally firmly engage the inner wall of the upright. In this postiion the member is arched so that the downward force of the upright when the crutch is in use will cause a tightening of the engagement. A rod **18** encompasses the center of the spring member **17** as at **19** and extends downwardly to the bottom of the tube **15** terminating in a loop **20**. A rubber cap **21** frictionally engages the lower end of the tube **15** to form a foot for the crutch.

A tool **22** having an engaging prong **23** is provided and is normally retained in the tube **15** when not in use,

as shown in Fig. 2. When it is desired to adjust the crutch, the prong **23** is engaged in the loop **20** with the tool bearing against the lower edge of the tube **15** to spring the member **17** from its engagement with the inner face of the upright to permit moving the tube **15** up or down to the desired position. The tool is provided with a bent portion **24** to abut the side of the tube and limit the movement of the rod **18** to prevent pulling the spring member **17** out of the slots. However it does permit sufficient movement of the member **17** to free the edges of the member **17** from the upright. Release of the tool causes the member **17** to engage the inner wall of the upright for firmly holding the tube **15** in adjusted position.

Thus the leg of the crutch can be quickly and easily adjusted to the desired height to place the arm rest in a comfortable position. After which the hand grip is adjusted to the proper position.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A crutch comprising an upright, an arm rest secured to the upper end of said upright, a hand grip on said upright, an extendable leg telescopingly connected to said upright, a transverse spring member in the upper end of said leg extending through slots in said leg for normally engaging the inner wall of said upright, and means for arching said spring member for disengaging said spring member from said upright for movement of said leg relative to said upright.

2. A crutch comprising an upright, an arm rest secured to the upper end of said upright, a hand grip on said upright, an extendable leg telescopingly connected to said upright, a pair of transverse slots in the upper end of said leg, a transverse spring member extending through said slots for engagement with the inner wall of said tubular upright, a rod connected to said spring member and extending to the base of said leg, and a tool for engagement with said rod for springing said spring member to release its engagement with said tubular upright.

3. A crutch comprising an upright, an arm rest secured to the upper end of said upright, a hand grip on said upright, an extendable leg telescopingly connected to said upright, a pair of transverse slots in the upper end of said leg, a transverse spring member extending through said slots normally engaging the inner wall of said tubular upright, a rod connected to said spring member and extending to the base of said leg, a loop in the end of said rod, a tool engaging the loop and bearable against the end of said leg for springing said spring member to release its engagement with said upright, and a removable cap for the base of said leg.

References Cited in the file of this patent

UNITED STATES PATENTS

1,022,608	Taplinger	Apr. 9, 1912
1,447,519	Schade	Mar. 6, 1923
2,172,047	Jacobucci	Sept. 5, 1939
2,516,852	Burry et al.	Aug. 1, 1950
2,568,654	Neptune	Sept. 18, 1951