(No Model.)

J. R. BROOKS.

CRUTCH.

No. 320,621. Patented June 23, 1885.

Fig. 1

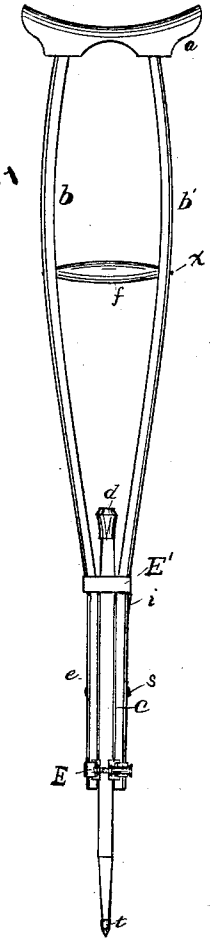


Fig. 2

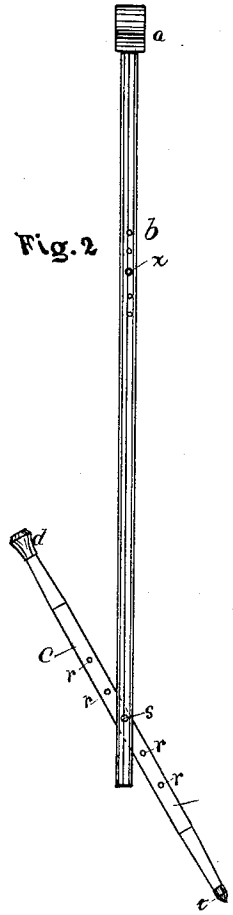


Fig. 6

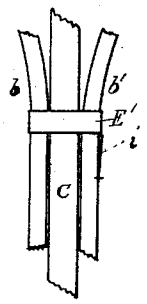


Fig. 5

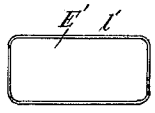


Fig. 3

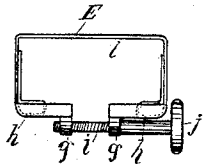
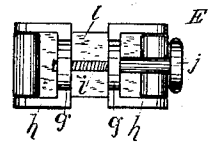


Fig. 4



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CRUTCH.

SPECIFICATION forming part of Letters Patent No. 320,621, dated June 23, 1885.

Application filed March 23, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. BROOKS, a citizen of the United States, residing at West Springfield, in the county of Hampden and State of Massachusetts, have made a new and useful Improvement in Crutches, of which the following is a specification.

The object of my invention is to provide a simple and strong crutch capable of longitudinal adjustment to suit the height of different persons; also, one capable of a ready change in the lower extension from a rubber or similarly tipped end, adapted to use upon a floor, to an end provided with a spike, adapted to use on ice or hard snow.

My said invention consists of the parts fully represented in the accompanying drawings, in which Figure 1 is a front elevation of my crutch. Fig. 2 is a side elevation showing displacement of reversible shaft C; Figs. 3 and 4, plan and elevation of clasp; Fig. 5, plan of band; Fig. 6, section of crutch showing band and band-spring.

In Fig. 1, *b* and *b'* are the side bars; *a*, arm-rest, and *f* handle forming the upper portion of a trussed crutch of usual form. Between and parallel with bars *b* and *b'*, at their lower extremities, is the extension and reversible shaft C, of the same breadth as the bars *b* and *b'*. Through said bars and shaft passes the pin or bolt *s*. This pin serves to hold the shaft C from longitudinal displacement with reference to the bars *b* and *b'*, and also serves as a pivot upon which the shaft may be turned in order to bring one or the other of the ends in contact with the ground. The shaft C is further provided with a series of perforations, *r*, as shown. By shifting the pin *s* from one to another of said holes the length of the crutch may be changed. Upon one end of the shaft C is placed a rubber cap, *d*, of usual shape. Upon the other end is fixed a spike, *t*. It will be readily seen that by turning said shaft on the pivot *s* the rubber or spike end may be brought into use at the option of the user.

In Figs. 3, 4, and 5 are shown the clasp E and band E'. The clasp E is made of strong flexible metal strip *e*, with solid terminals *g h*. Through these terminals passes set-screw *j*, by means of which the periphery of the clasp can be contracted so as to tightly grasp the bars *b* and *b'* and firmly hold the included shaft C.

In Fig. 5 E is a continuous band of strong flexible metal, adapted to slip over the lower end of the crutch and engage the bars *b* and *b'* at their point of divergence. Bars *b* and *b'* are somewhat flexible, and by grasping them with the hand they can be drawn together, so that the band may be pushed slightly above the point of normal divergence. When the grasp is relaxed, the leverage resulting from the recoil of the bars against the band compresses the bars and shaft C firmly together, and usually with sufficient force to hold, by friction, the band from displacement; but to guard against accident I have attached to the bar *b'* a spring-catch or band-spring, *i*, similar to devices commonly employed on umbrellas and on old-fashioned muskets to hold in position the bayonet.

In my drawings I have shown a crutch with both band E' and clasp E. I have found, however, in practical use, that the single band E' is sufficient for the purpose for which both E' and E may be employed. Handle *f* is held in position by means of bolt *x*, passing through it and bars *b* and *b'*. By shifting this bolt to higher or lower perforations in the bars the height of the handle may be changed to suit the user. To reverse the ends of the shaft C it is only necessary to press the band-spring *i* and loosen the set-screw *j* in the clasp and temporarily slip them over the end of the crutch, restoring them when the desired change is made.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An extension-crutch consisting of the common trussed frame *b b' a*, and a reversible shaft, C, pivoted to the lower end of said frame, substantially as described.

2. An extension-crutch consisting of the common trussed frame *b b' a*, with extension-shaft C pivoted thereto and provided with a series of perforations, *r*, for longitudinal adjustment, substantially as described.

3. An extension-crutch consisting of a common trussed frame with perforated shaft C pivoted thereto, and held in position by one or more clasps, E and E', substantially as described.

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