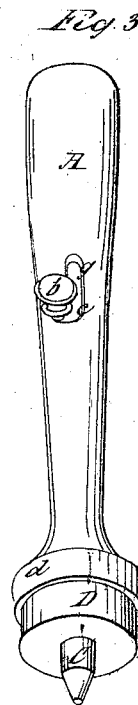
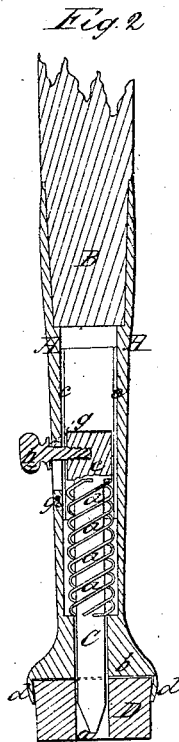
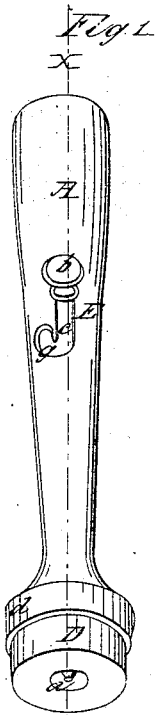


Allamby & Bugbee,

Crutch,

Nº 51,677

Patented Dec. 26, 1865.



**Witnesses.*
J. W. Porter
H. A. Mitchell

Inventors.
J. Allamby
John A. Bugbee

UNITED STATES PATENT OFFICE.

GEORGE T. ALLAMBY AND JOHN G. BUGBEE, OF BANGOR, MAINE.

IMPROVEMENT IN CRUTCHES.

Specification forming part of Letters Patent No. 51,677, dated December 26, 1865.

To all whom it may concern:

Be it known that we, GEORGE T. ALLAMBY and JOHN G. BUGBEE, of Bangor, in the county of Penobscot and State of Maine, have invented a new and useful Improvement in Crutches; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective with the spur withdrawn. Fig. 2 is a longitudinal section taken in the line *x x*, Fig. 1, and Fig. 3 is a perspective view with the spur extended.

This invention relates to an improvement on crutches and canes for which Letters Patent were granted to us, dated April 18, 1865.

The within-described invention consists in applying an elastic buffer or pad to a metallic crutch-foot provided with an adjustable or sliding spur, which passes down through the buffer, and is actuated by mechanism incased in the crutch-foot, whereby the crutch can be instantly changed from a sharp-pointed anti-slipping crutch to a cushioned crutch, which is harmless upon floors or carpets; also, in inserting a sliding tube in the socket.

A is a metal socket or tube.

B is the lower part of the crutch staff or rod, which is fitted into and firmly secured in the upper part of socket A, which is enlarged at this part to receive the crutch, as shown in Fig. 2.

C is a spur-spike, inclosed and sliding in socket A. This spur is formed with a head or thicker part, *c'*.

c is a short thin tube, which fits in socket A below crutch B. The head *c'* of spur C is fitted in this tube for purposes hereinafter explained.

b is a knob, which passes through a perforation in tube *c*, and is firmly fastened in spur C.

E is a hook-shaped slot cut in the shell of socket A. This slot has a short arm, *g*, (shown in Fig. 1,) and a long arm, *g'*, (shown in Fig. 3.)

a is a spiral spring, through which passes the smaller part of spur C. The lower end of this spring bears against the shoulder formed in socket A by the thicker part *b'*, and the upper part bears against the head of spur C.

D is an elastic rubber buffer or pad, formed with an aperture, *a'*, passing vertically through its center. A rim, *d*, at the bottom of socket A, receives and holds the buffer in place.

This rim is slightly contracted at its orifice, and increases its interior size from the edge of the rim inward. Thus, by compressing the rubber when inserting it and allowing it to expand in the rim, it is securely held in place. When the spur C is used it is slid downward through the aperture *a'* in the buffer C.

When it is desired to use the crutch upon ice or other slippery surfaces, the knob *b* is forced down into the short arm *g* of slot E, as shown in Fig. 3, where it is held by the pressure of spring *a* upon spur C, the spur projecting a sufficient distance through the buffer to give a firm hold to the crutch. When used upon floors or carpets or impenetrable surfaces, the knob *b* is turned free from arm *g* of slot E, when the spring *a* throws up the spur C and the knob *b* rests in the long arm *g'* of slot E, and the rubber D forms the bearing upon which the crutch rests, as shown in Fig. 1.

The tube *c*, fitting closely around knob *b* and sliding with spur C, serves to close slot E, thus preventing any substance from entering the interior of socket A and obstructing the working of the part inclosed therein. The rod or crutch B has its lower termination above tube *c*, thus having no connection with the mechanism contained in socket A.

By thus combining the buffer D with the adjustable spur C the user can instantly, by actuating knob *b*, change his crutch from a sharp-pointed to a cushioned one, and vice versa, and this without reversing or raising it, for the knob *b* may be actuated by bringing it in contact with any projecting object.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the buffer D with the adjustable spur C, inserted in a socket, A, placed on the lower part of a crutch, the spur C being provided with a spring, *a*, and knob *b*, the knob extending through a slot, E, in the socket A, all arranged to operate substantially as and for the purposes specified.

2. The sliding tube *c*, in combination with socket A, spur C, spring *a*, slot E, and knob *b*, when arranged to operate substantially as and for the purposes specified.

GEO. T. ALLAMBY.
JOHN G. BUGBEE.

Witnesses:

T. W. PORTER,
H. L. MITCHELL.