

*G.B. Wood,*

### *Fracture Apparatus.*

NO. 106,907.

Patented Aug. 30. 1870.

19.2.

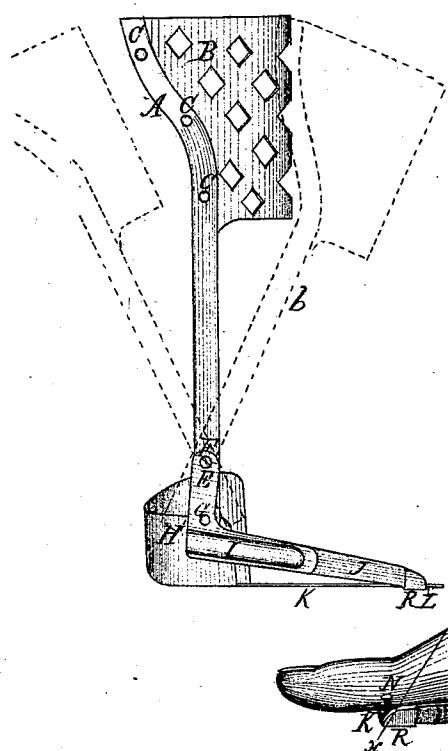


Fig. 1.

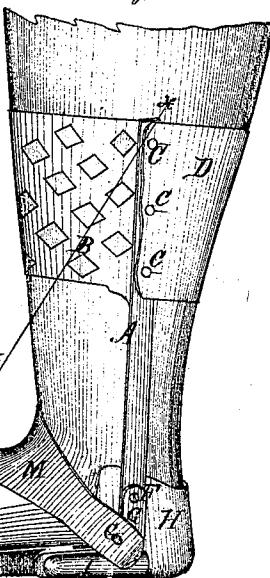


Fig. 3.

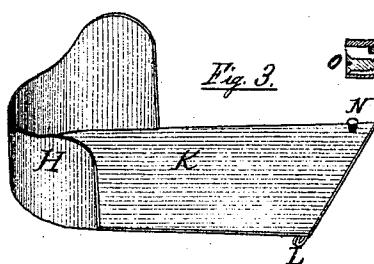


Fig. 4

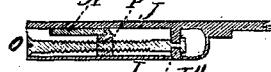


Fig. 5.

Witnesses.

Masses.  
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# United States Patent Office.

GEORGE B. WOOD, OF CHICAGO, ILLINOIS.

Letters Patent No. 106,907, dated August 30, 1870.

## IMPROVEMENT IN APPARATUS FOR TREATING CLUB FEET.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, GEORGE B. WOOD, of Chicago, in the county of Cook and State of Illinois, have invented an Apparatus for Straightening Club Feet; and I do hereby declare that the following is a full and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, and letters marked thereon making a part of this specification, in which—

Figure 1 is a representation of a human foot and part of the leg, with my apparatus attached.

Figure 2, the apparatus removed from the foot and leg.

Figure 3, a perspective representation of the foot-plate removed from the other part of the apparatus.

Figure 4, a section, *o*, showing the device for adjusting the straps which are attached to the leg.

Figure 5, a front or end view of the foot-plate, showing how it is adjusted to give the plantar surface of the foot the natural position.

The present invention relates to a new and improved surgical apparatus for treating club foot in its various forms, such as talipes equinas, talipes calcaneous, talipes varus, talipes valgus, or their combinations; and

Its nature will be fully understood from the following description.

*A* represents two straps, which are made of metal or any other suitable material, and which are fastened to the leg by a perforated metal plate, *B*, and strap *D*, or any other suitable means most convenient.

The lower parts of these straps *A* are pivoted at *F* to upright standards *G*, which are a part of a frame, *J J*.

Those parts of straps *A* projecting below the pivots *F* swing in slots formed between the parts *J J* and housings *I*, as shown more clearly in the section at fig. 4.

In these housings are placed screws *O*, which are held so as to rotate by means of fixed annular collars *J*, fig. 4, projecting into annular grooves formed in the inner parts of said screws.

*P* represents slides, which are provided with internal screw-threads, and which do not turn on the screws *O*, but have longitudinal movements on them back and forth when the said screws *O* are turned, and they are provided with lugs *x* on their sides adjoining the plate *J*, in order to form stops for the lower ends of the straps *A* to bear against.

This construction and arrangement is such that, while the foot can be readily elevated by an easy movement of the ankle-joint, it cannot fall below the point of adjustment made by the screws, the pivots *F* being placed in such positions as to be nearly opposite the axis of the ankle-joint.

A foot-plate, *K*, provided with a heel-support, *H*, is placed inside of the frame *J J*, and one of its cor-

ners at the front end is pivoted at *L* to that part of the frame *J J* shown at *R*, fig. 5, and the opposite part of the plate at *N* is adjusted by a screw, so as to give the plantar surface of the foot a natural position.

The straps *A* and frame *J J*, with standards *G*, may be put into a boot or shoe, as most convenient, so as to allow the same to have a free movement of the ankle-joint.

The foot-plate *K* may also conform to a boot or shoe, only so that the adjustment, by means of screw *N*, or its equivalent, is retained to treat talipes varus and talipes valgus, a condition of the foot where it is rotated inward or outward, the screw *N* and pivot *L* being changed to opposite sides of foot-plate *K* in treating talipes valgus.

To use the apparatus, the longitudinal curve of the foot is straightened on the plate *K*, by means of bandages, in the proper manner. The straps *A* are then swung forward, as shown by dotted lines *b*, and the plate *K*, with the foot secured as above stated, placed inside of the frame *J J*, and hooked onto the pivot at *L*.

After this, the straps *A* are secured to the leg, and the side of plate *K* elevated by screw *N* to bring the plantar surface of the foot to the natural position.

To raise the anterior of the foot, when treating talipes equinas, the screws *O* must be turned so as to shorten the distance between the points *x x* on line *Z*, fig. 1, the ankle, at the same time, being stayed by strap *M*. This can be done so gradually in most cases, taken in infancy, as to obviate the necessity of performing an operation.

As a whole, the apparatus is found to be better adapted to treating the difficulty named than any other device for a like purpose.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The straps *A*, acting as levers, when pivoted to the standards *G* of frame *J J*, and made to project below the pivot, so as to prevent the anterior part of the foot from dropping down, as set forth.

2. The combination of the straps *A*, frame *J J*, and adjusting-screws *O*, for adjusting the anterior part of the foot, as set forth.

3. The shoe-plate *K*, pivoted to the frame *J J*, and adjusted by means of a screw, *N*, or its equivalent, for bringing the plantar surface of the foot near its anterior part into position, substantially as set forth.

4. The combination of the plate *K*, frame *J J*, straps *A*, and strap *M*, arranged to treat club feet, as set forth.

GEORGE B. WOOD.

Witnesses:

G. L. CHAPIN,  
J. B. SKINNER.