J. CARLSON.

SURGICAL APPLIANCE.

APPLICATION FILED DEC. 22, 1913.

**1,149,341.** Patented Aug. 10, 1915.

Fig. 1.

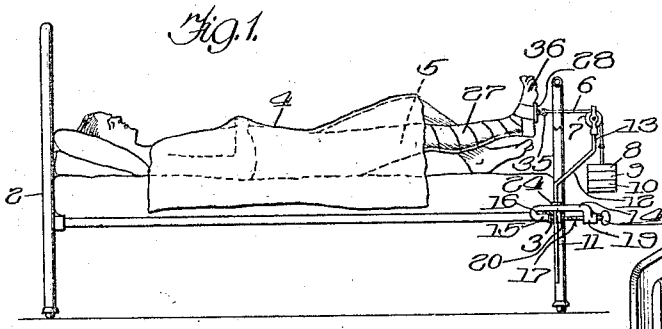


Fig. 7.

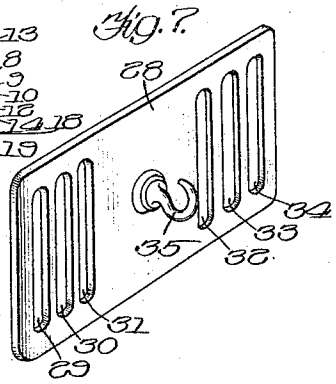


Fig. 3.

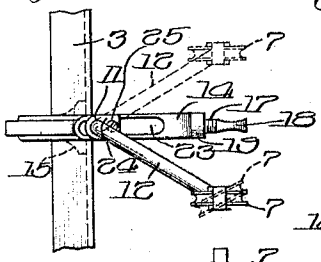


Fig. 4.

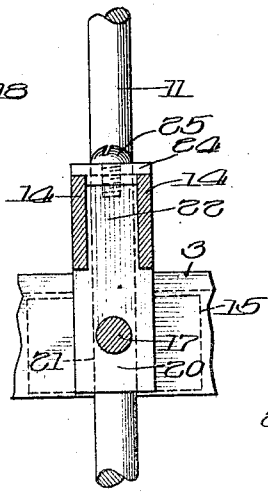


Fig. 6.

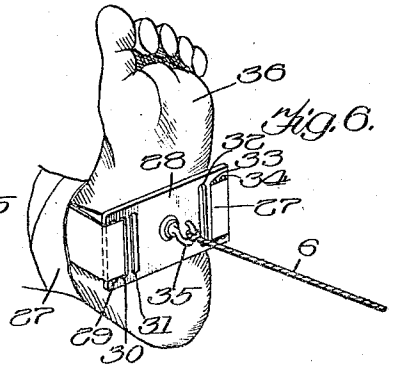


Fig. 2.

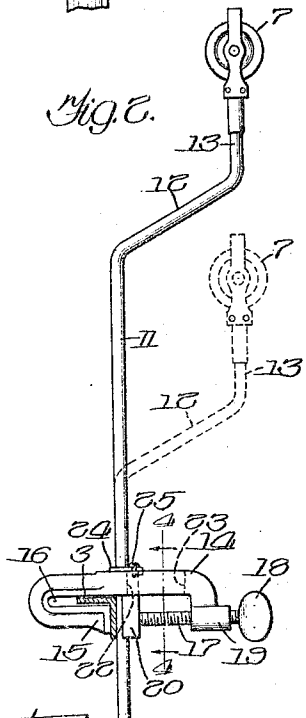
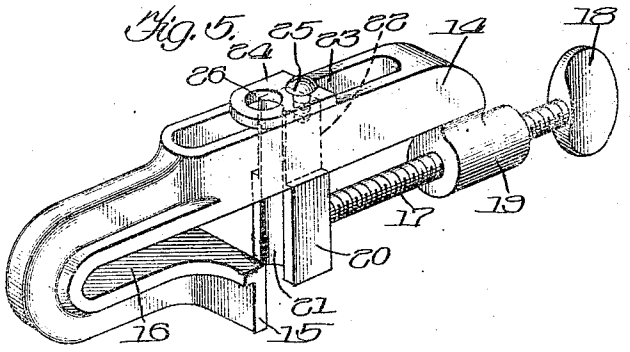


Fig. 5.



Witnesses:
Jno. B. Nelson Jr.
Edwin J. Nelson

Inventor:
Joseph Carlson
By Hamilton Cochran Atty.

# UNITED STATES PATENT OFFICE.

JOSEPH CARLSON, OF CHICAGO, ILLINOIS.

## SURGICAL APPLIANCE.

1,149,341. Specification of Letters Patent. Patented Aug. 10, 1915.

Application filed December 22, 1913. Serial No. 808,128.

*To all whom it may concern:*

Be it known that I, JOSEPH CARLSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Surgical Appliances, of which the following is a specification.

My invention relates to surgical appliances and has particular reference to improvements in limb-stretching devices.

The object of the invention is to provide a device of this class that may be conveniently and quickly applied to a bed and patient, that shall be adjustable and self adjustable, and that shall be substantially universal in its applicability to the various forms of wood and metal bed frames in use.

With these objects in view the invention consists in the novel construction, combination and arrangement of parts, hereinafter described in detail, illustrated in the accompanying drawing, and incorporated in the appended claim.

In the drawing, Figure 1 is a side elevation of a bed with a patient thereon, and my invention applied to same. Fig. 2 is an enlarged view in elevation of my improved device removed from the bed. Fig. 3 is a top plan view of the parts shown in Fig. 2 and includes a section of the bed frame of the angle-iron type. Fig. 4 is an enlarged section taken substantially on the line 4—4 in Fig. 2. Fig. 5 is an enlarged perspective view of my universal clamp for fastening the device to either of the various forms of beds commonly in use. Fig. 6 is a perspective view representing my improved foot-plate attached to a patient's foot or bandage and a part of the cord connection with the weight of the stretcher. Fig. 7 is an enlarged perspective view of the plate itself.

In the several views 2 represents a bed, the spring and mattress supporting frame of which is composed of angle irons, such as the foot-rail portion 3 shown in the detail views. On the bed 2 is shown a person's body 4 with a bandaged leg 5 held extended or gently stretched by a cord 6 that passes over a pulley 7 to a series of suitably graduated weights 8, 9 and 10. Such arrangement as shown is, as is well known, for the purpose of preventing the shortening during the healing process of, say, a fractured leg or arm. In the present improvement the pulley 7 has an angular movement relative to the patient to make it self-adjustable to slight movements of the limb and prevent binding of the cord against the flanges of the pulley, or unequal pulling strain, as would be the case with a fixed pulley. The pulley is also laterally and vertically adjustable by being swiveled to the upper end of a rod 11 which has an outward and upward bent portion 12 and a vertical upper portion 13 to the end of which the pulley is swiveled in any suitable manner to turn at right angles to its axis of rotation. The outward bend 12 is for the purpose of providing a lateral adjustment relative to the holding clamp, as well as to clear the bed of the weight. The rod 11 is held for the various vertical adjustments indicated by dotted lines in Fig. 2 and lateral adjustments suggested by the dotted line in Fig. 3, by means of a clamp 14 which has a stationary jaw 15 having therein a slot 16 running parallel to a screw 17 provided with the usual thumb piece 18. This screw has threaded engagement with a head 19 on the clamp. 20 is a movable jaw swiveled to the end of the screw. Between the jaws 15 and 20 any ordinary frame-rail of a bed, such as, for instance, the rectangular form in cross section, may be clamped. This clamp, which I term a universal clamp for this purpose, is also specially adapted for the angle-iron forms of bed frames by the provision of the slot 16 which is engaged with the horizontal flange of the angle iron as shown. In the movable jaw 20 is a vertical groove 21 adapted to engage the rod 11 and clamp it between the jaws 20 and 15. The movable jaw 20 has a reduced socket portion 22 which fits slidably into a vertical slot 23 in the body of the clamp. This jaw is held against dropping out of the slot 23 by a plate 24 fastened by a screw 25, this plate being provided with a hole 26 through which the rod 11 passes and is supported laterally at the upper end of the clamp. To the bandage 27 is fastened a foot plate 28 with slots 29, 30, 31, 32, 33, and 34 therein. In this plate is a hook 35 for the cord 6. The plate is placed against the foot 36 of the patient and the slots are provided to adapt the plate to different widths of feet.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

The combination with a bed, of a stretcher comprising a supporting rod with cord, pulley and weight, and means for securing said rod to a bed frame, said means consisting of a clamp 14 having a movable jaw 20 and a stationary auxiliary jaw-portion 15, said portion 15 having a slot 16 therein adapted to engage the horizontal wing of an angle iron, said jaws 15 and 20 adapted to engage the vertical wing of an angle iron or opposite parallel sides of a bed frame rail.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOSEPH CARLSON

Witnesses:
CHAS A. EDWARDS,
CARL G. SWENSON.