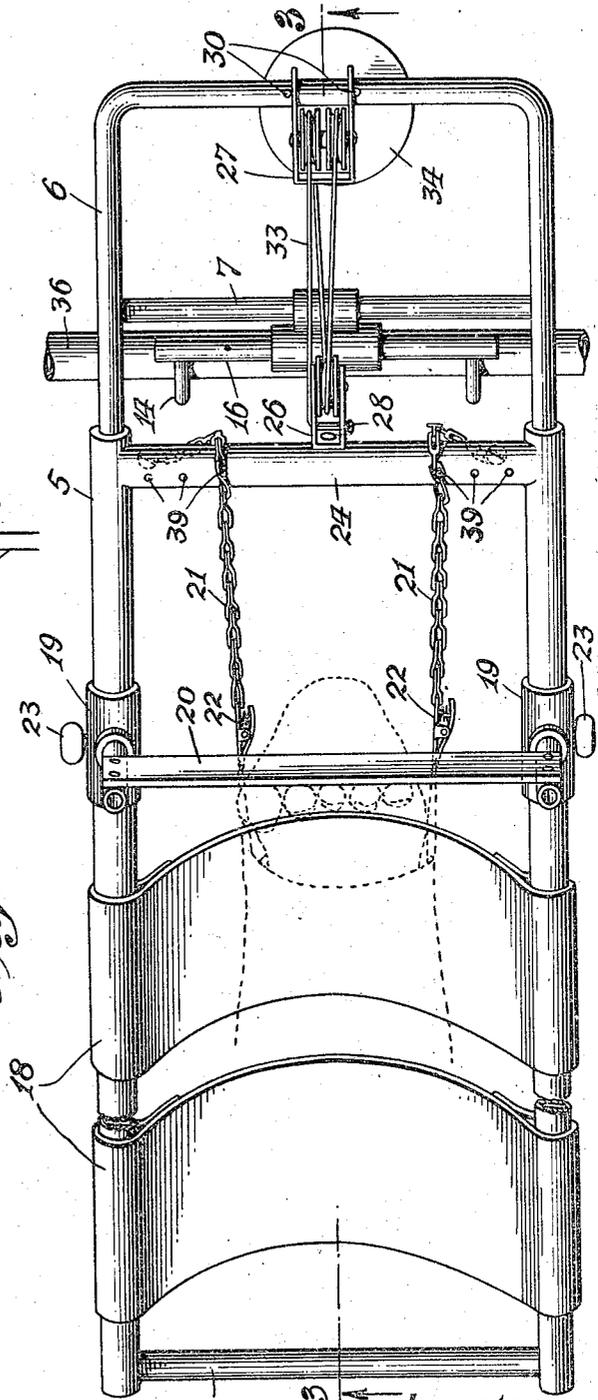
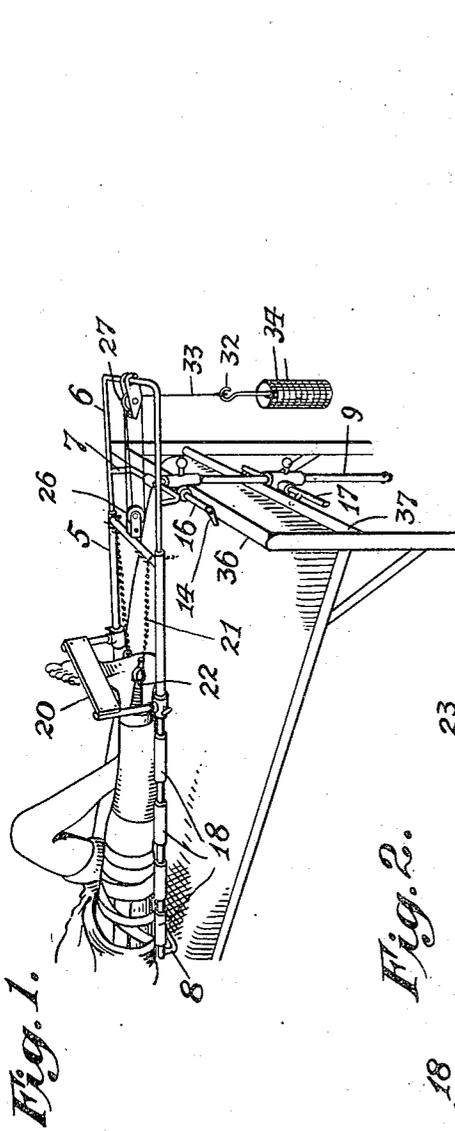


G. W. HAWLEY,  
 EXTENSION SPLINT.  
 APPLICATION FILED JUNE 30, 1916.

Patented Oct. 9, 1917.  
 2 SHEETS—SHEET 1.

1,242,688.



Attest:  
*M. M. Jones*  
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George W. Hawley Inventor:  
 by *William R. Baird*  
 his Atty.

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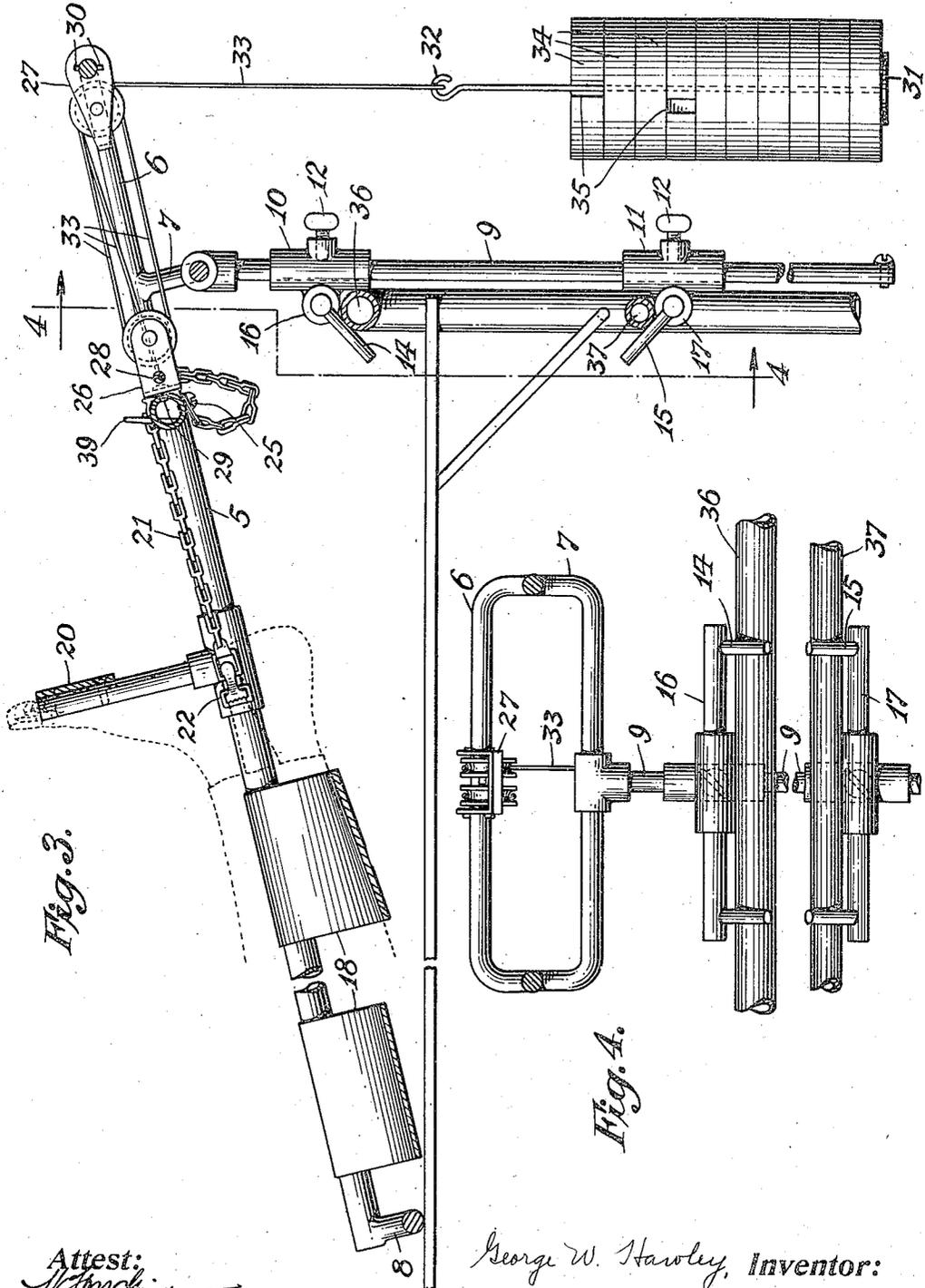


Fig. 3.

Fig. 4.

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# UNITED STATES PATENT OFFICE.

GEORGE W. HAWLEY, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO KNY-SCHEERER CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## EXTENSION-SPLINT.

1,242,688.

Specification of Letters Patent.

Patented Oct. 9, 1917.

Application filed June 30, 1916. Serial No. 106,876.

*To all whom it may concern:*

Be it known that I, GEORGE W. HAWLEY, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Extension-Splints, of which the following is a specification.

My invention relates to splints, and its novelty consists in the construction and arrangement of the parts as will be more fully pointed out hereinafter.

In handling fractures, one problem is that the fractured member be so immobilized that the necessary movement of the other parts of the patient's body or of the bed shall not affect the fractured member. This object is accomplished by the device herein described and claimed by securely immobilizing the fractured member and holding it at all times clear of the bed.

Another problem solved for the first time by my device is the quick and rigid securing of the splint to any and every metal bed. My device also is very compact when closed and sufficiently light to make it practical for carrying.

In the drawings, Figure 1 is a miniature perspective of the splint in use; Fig. 2 is a top plan view of the splint showing a foot and leg in dotted outline in use on a bed; Fig. 3 is a vertical section of Fig. 2 along the line 3—3; Fig. 4 is a vertical section along the line 4—4 of Fig. 4.

In the drawings 5 is a tubular movable frame in which is telescoped an extension frame 6 which has a downturned integral member 7 and the movable frame 5 has a downturned integral rest 8. On the downturned member 7 is loosely mounted a rod 9 which carries adjustable sleeve members 10 and 11, each of which has a set screw 12. The sleeve members 10 and 11 are made integral with cross bars 16 and 17 respectively, and they in turn each have two clamping pins 14 and 15 made integral therewith. The movable frame 5 is fitted with flexible cross suspension straps 18 which are secured to each side of said frame. A foot support 20 is slidably mounted on the movable frame 5 by sleeves 19 which can be rigidly secured to said frame in the position desired, by set screws 23. The movable frame 5 has a cross bar 24 to which is secured chains 21 by means of screws 25, and

to the opposite ends of the chains 25 are permanently secured clips 22. Pins 39 are rigidly mounted in the cross bar 24 adapted to be used as hooks for the chains 21. A single pulley block 26 is riveted to the cross bar 24 by a rivet 29, and a double pulley block 27 is loosely mounted on the extension frame 6 and held against lateral movement by pins 30 which pierce the extension frame 6. A weight holder 31 is secured to a cord 33 by means of a hook 32 and the cord 33 is secured at its other end to a pin 28 in the block 26 running over one of the pulleys in the block 27, thence over the pulley in the block 26 and back under the second pulley in the block 27. The weight holder 31 is adapted to hold weights 34 which are slotted for that purpose at 35.

The extension splint can be attached to any metal bed resting the integral rest member 8 on the bed after it has been made up, and securing the cross bar 16 by means of the set screw 12 so that as the clamping pins 14 fit snugly over the top rail 36 of the foot of the bed, the desired pitch is obtained for the splint. The cross bar 17 is then adjusted by means of the set screw 12 so that the clamping pins 15 fit snugly under the lower rail 37 of the foot of the bed and it is secured rigidly in that position so that the extension frame 6 is thereby held in a fixed rigid position to the foot of the bed. Then the leg of the patient, for example, is laid on the suspension straps 18 and the foot support 20 is adjusted in a fixed position by means of the set screws 23 against the ball of the foot so that it is under pressure and so held in an upright position. The leg is thus held clear of the bed and bed clothes.

To hold the foot rigidly against the foot support 20 in an upright position the clips 22 are fastened to the bandage 38 on each side of the leg and the chains 21 are each slipped over one of the pins 39 so as to keep them as taut as possible.

The desired traction is then obtained by placing the weights 34 on the weightholder 31 which multiplies the pull on the movable frame 5 to which the leg is rigidly secured in accordance with well known laws of physics through the cord 33 which runs over one pulley in the double pulley block 27, thence over the pulley in the single pulley block 26, thence under the second pulley in the block 27, and thence to the

block 26 where it is fastened to the pin 28. It will be understood that the patient is secured against traction by means of bandages fastened to the traction post of the regular hospital bed, or in any other suitable manner.

Changes may be made in the construction, arrangement and disposition of the several parts of the invention without in any way departing from the field and scope of the same, and it is meant to include all such in this application wherein only a preferred form has been disclosed.

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

1. An extension splint consisting of an extension frame adapted to be rigidly secured to the bed on which a patient lies, a longitudinally movable frame attached to said extension frame, a downwardly turned end rest on the free end of the movable frame, a foot support adjustably mounted on the movable frame, means for securing the foot of a patient in an upright rigid position against said foot support, in combination with an adjustable weight traction suspended from the extension frame by a cord running back on itself twice over pulleys on the extension frame, thence secured to the movable frame so as to cause traction thereto.

2. An extension splint adapted to be readily secured to any metal bed provided with means for securing the limb to be treated in a fixed rigid position to a movable frame, in combination with means for exerting the desired traction on the movable frame, consisting of a weight support to which the desired weight may be added secured by a cord to an extension frame which is rigidly mounted to the foot of a bed, the said cord multiplying the traction according to a fixed law of physics through pulleys on the extension frame and thence secured to the movable frame.

3. An extension splint comprising an extension frame, a movable frame carried by the extension frame, and gravity operable means carried by said frame for moving the movable frame toward the extension frame.

4. An extension splint comprising relatively movable members and cooperating gravity operable means carried by said members for moving one of said members toward the other member.

5. An extension splint comprising a movable frame, a foot support, adjustable on said frame, an extension frame for supporting the movable frame, and gravity operable tensioning means carried by said frames for moving the movable frame toward the extension frame.

6. An extension splint comprising an extension frame, a movable frame adjustably carried by the extension frame, gravity operable means secured to said frames for moving said movable frame toward the extension frame and means secured to said extension frame for raising or lowering the extension frame.

7. An extension splint comprising an extension frame, a movable frame carried by the extension frame, means secured to said frames for moving the movable frame, a down-turned member on the extension frame, a rod loosely secured to the down-turned member, and cross bars secured to a bed and carried by said rod for adjustably supporting the extension frame.

8. An extension splint comprising an extension frame, a movable frame carried by the extension frame, a foot support carried by the movable frame, gravity operable tensioning means secured to said frames for moving the movable frame toward the extension frame, and means secured to the movable frame for securing the foot of a patient to the foot support.

9. An extension splint comprising an extension frame, a movable frame carried by the extension frame, means secured to said frames for moving the movable frame on the extension frame, a downturned member on the extension frame and means secured to the downturned member for adjustably supporting the extension frame on a bed.

10. An extension splint comprising an extension frame, a movable frame carried by the extension frame, means secured to said frames for moving the movable frame, a downturned member on the extension frame, a rod loosely secured to the downturned member and means secured to a bed carried by said rod for adjustably supporting the extension frame.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. HAWLEY.

Witnesses:

WALTER MARTINI,  
A. F. BRAND.