

July 29, 1952

J. A. ERICKSON  
TRACTION SPLINT

2,604,889

Filed May 16, 1950

2 SHEETS—SHEET 1

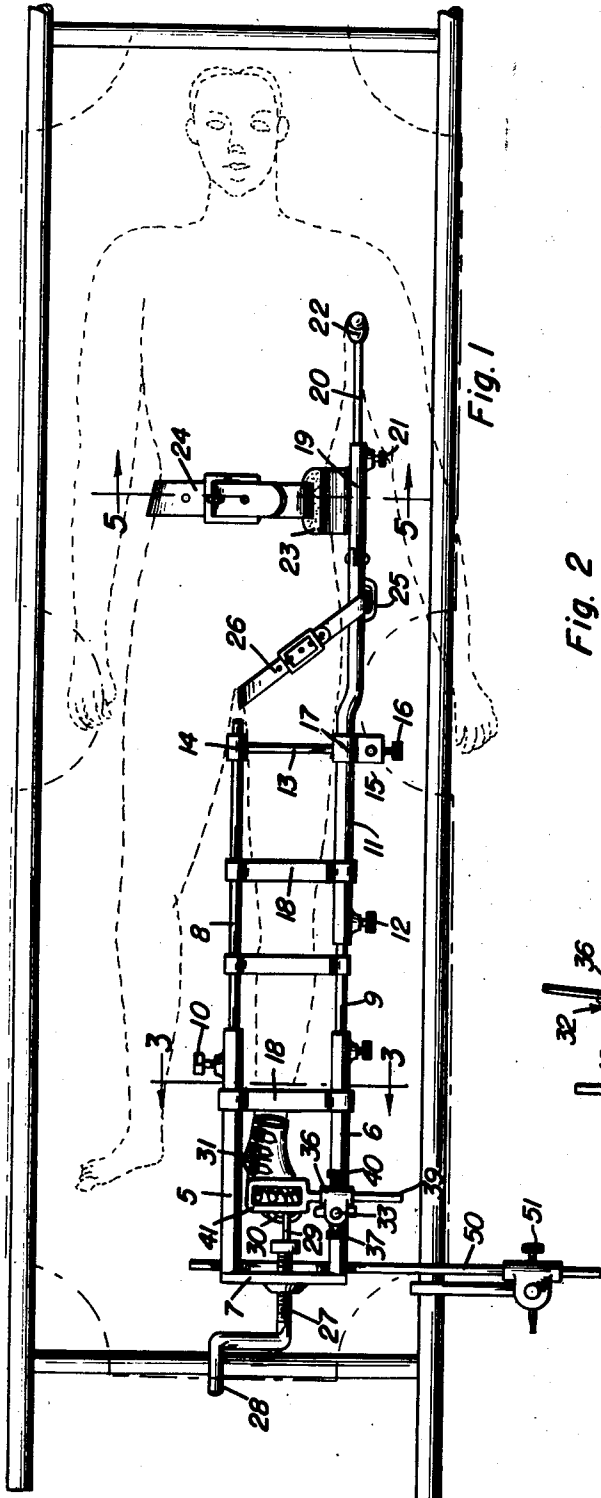
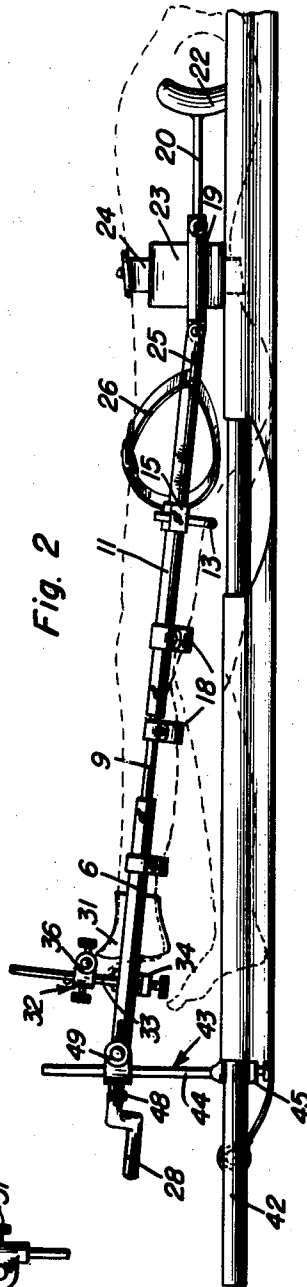


Fig. 1



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2 SHEETS—SHEET 2

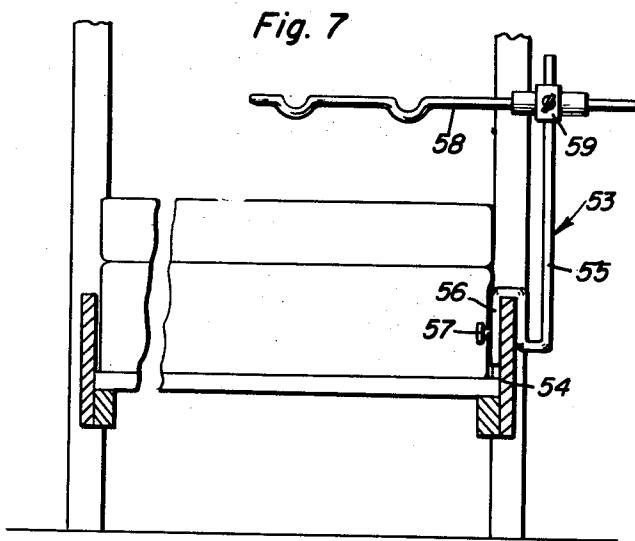


**Fig. 4**

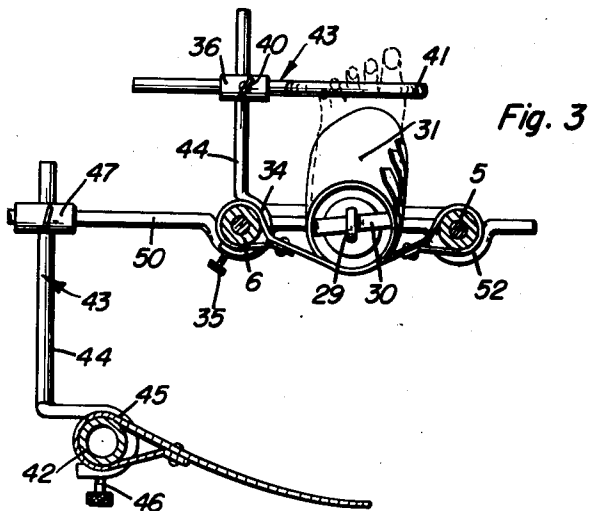


**Fig. 6**

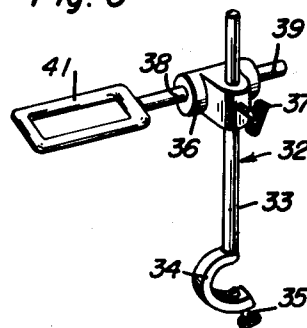
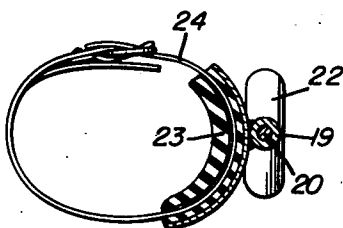


**Fig. 5**



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## UNITED STATES PATENT OFFICE

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## TRACTION SPLINT

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4 Claims. (Cl. 128—85)

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The present invention relates to new and useful improvements in traction splints and has particular reference to splints for fractured legs.

An important object of the invention is to provide means for bracing the splint under the armpit and strapping the splint to the waist of a person while traction is placed on the splint and to thus eliminate the discomfort and the danger caused by splints which are braced under the crotch.

Another object of the invention is to provide a novel means for supporting the splint and the leg held therein in a raised position while the patient is lying on a stretcher, cot or bed and which holds the leg immovable while the patient is being moved.

A further object of the invention is to provide a toe holder which is adjustable on the splint to hold the toes in a desired position while traction is being applied to a foot strap attached to the foot of the patient.

A still further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a top plan view;

Figure 2 is a side elevational view;

Figure 3 is a transverse sectional view taken on a line 3—3 of Figure 1;

Figure 4 is a side elevational view of the foot strap;

Figure 5 is a transverse sectional view taken on a line 5—5 of Figure 1;

Figure 6 is an enlarged perspective view of the toe holder; and

Figure 7 is a view in elevation of a modified support for the splint for clamping to the side of a bed.

Referring now to the drawings in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention the numerals 5 and 6 designate a pair of lower tubular side rails rigidly connected to each other at their lower ends by a cross bar 7. Rods 8 and 9 are slidable in the rails 5 and 6 and secured in longitudinally adjusted position by set screws 10.

An upper tubular rail 11 is telescoped over the

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upper end of rod 9 and secured in adjusted position thereon by a set screw 12 and the upper end of rod 8 is connected to the upper side rail 11 by means of a bowed cross bar 13 fixed at one end in a sleeve 14 slidable on rod 8 and having its other end secured in adjusted position in a bracket 15 by means of a set screw 16, the bracket 15 being formed on a collar 17 secured to the side rail 11. Leg supporting straps 18 also extend transversely between the side rails 5 and 6 as well as between the rods 8 and 9 and between rod 8 and upper side rail 11 and which, together with the bowed cross bar 13 support the leg of a person thereon.

The upper side rail 11 is provided at its upper end with a pivoted extension 19 also of tubular construction and in which a rod 20 is slidably received and secured in adjusted position therein by set screw 21. The upper end of rod 20 is provided with a crescent shaped pad 22 for engaging under the armpit of a person.

A curved sponge rubber or other resilient pad 23 is suitably secured to pivoted extension 19 of upper side rail 11 and through which a strap 24 extends for placing about the waist of a person.

The upper portion of side rail 11 is also formed with a strap loop 25 in which a leg strap 26 is held for attaching side rail 11 to the thigh or upper portion of the leg resting on the splint.

A traction screw 27 is threaded in lower cross bar 7 with a crank handle 28 at the lower end of the screw and a hook 29 swivelly attached to the upper end of the screw for engaging a strap 30 extending transversely under a foot strap 31.

The splint is used by attaching foot strap 31 to the foot of a person and placing the leg on the cross straps 18 and bowed cross member 13 and with the side rail 5 and rod 8 at the inside of the leg and with side rail 6, rod 9 and side rail 11 at the outside of the leg, as shown in Figure 1 of the drawings.

The armpit pad 22 is adjusted under the armpit of the person and rods 8, 9 and 20 adjusted longitudinally of the splint in accordance with the requirement and waist strap 24 and leg strap 26 secured tightly to the body and leg of the person.

Hook 29 of traction screw 27 is engaged in strap 30 of the foot strap 31 and traction applied to the leg.

A toe holder designated generally at 32 is provided for holding the toes of the foot in a desired position, the toe holder comprising a post 33 having a C-clamp 34 at its lower end with a clamping screw 35 for clamping to the side rail 6.

A bracket 36 is secured in vertically adjusted

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position on post 33 by a set screw 37 and bracket 36 is formed with a horizontal bore 38 in which a horizontal bar 39 is slidably adjustable and secured in adjusted position by a set screw 40. The inner end of rod 39 is formed with a toe engaging loop 41 in which the toes of the person are placed.

The entire splint, from the pivoted extension 19 down may be secured in vertically adjusted position on the side rail of a stretcher or cot 42 by means of a support designated generally at 43 and comprising a post 44 also having a C-clamp at its lower end with clamping screw 46 for clamping to the side rail 42 and a bracket 47 is secured in vertically adjusted position on post 44 by a set screw 48. Bracket 47 is formed with the horizontal bore 49 in which a horizontal rod 50 is secured in slidably adjusted position by a set screw 51. The arm or rod 50 extends under the side rails 5 and 6 and is formed with downwardly curved saddles 52 in which the side rails rest.

A support designated generally at 53 is also constructed for supporting the splint in a vertically adjusted position on side rail 54 of a bed, the support 53 also comprising a post 55 having an inverted U-shaped clamp 56 at its lower end secured to the bed rail by a set screw 57. The horizontal arm 58 of the support is adjustable on post 55 by a bracket 59 similar to the bracket for support 43.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A traction splint comprising a pair of extensible spaced apart parallel side rails adapted for placing at the opposite sides of a leg of a person, an arm pit brace at the upper end of the outer most side rail, a body attaching strap attached to the outer most side rail for embracing the body of a person at the waist, a traction screw at the lower end of the splint, a foot strap attached to the traction screw and adapted for attaching to the foot of a person, and a toe holder mounted on one of the side rails and adjustable along the same relative to said foot strap and including means for confining the toes of a person.

2. A traction splint comprising a pair of extensible spaced apart parallel side rails adapted for placing at the opposite sides of a leg of a

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person, an arm pit brace at the upper end of the outer most side rail, a body attaching strap attached to the outer most side rail for embracing the body of a person at the waist, a traction screw at the lower end of the splint, a foot strap attached to the traction screw and adapted for attaching to the foot of a person, and a toe holder including a post, clamping means securing the post to one of the side rails at a right angle thereto and adjustable along said rail and around the same to correspondingly adjust said post, a horizontal arm supported by the post and extending crosswise of said strap, and a toe supporting loop on the arm.

3. A traction splint including a pair of spaced apart parallel side rails adapted to be positioned at the inner and outer sides of a leg of a person, a tubular rail at one end of the splint telescopically adjustable over one side rail and including a pivoted extension thereon, a body strap on said pivoted extension adapted to be attached around the body, traction means at the other end of said splint adapted to be attached to the foot of the leg, flexible leg supporting straps cross connecting said side rails, a rigid bowed leg supporting member cross connecting the tubular rail to the other side rail and slidable on said other side rail for adjustment with said tubular rail, a toe holder on one side rail for the toes of the foot, and a vertically adjustable support for said other end of the splint.

4. A traction splint including a pair of spaced apart parallel side rails adapted to be positioned at the inner and outer sides of a leg of a person, a tubular rail at one end of the splint telescopically adjustable over one side rail and including a pivoted extension thereon, a body strap on said pivoted extension adapted to be attached around the body, traction means at the other end of said splint adapted to be attached to the foot of the leg, flexible leg supporting straps cross connecting said side rails, a rigid bowed leg supporting member cross connecting the tubular rail to the other side rail and slidable on said other side rail for adjustment with said tubular rail.

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