

E. A. WATSON.
SURGICAL APPLIANCE.
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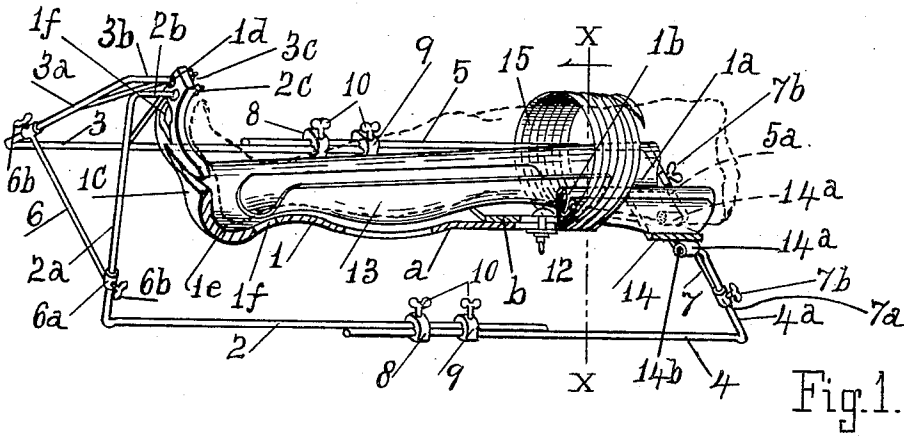


Fig. 1.

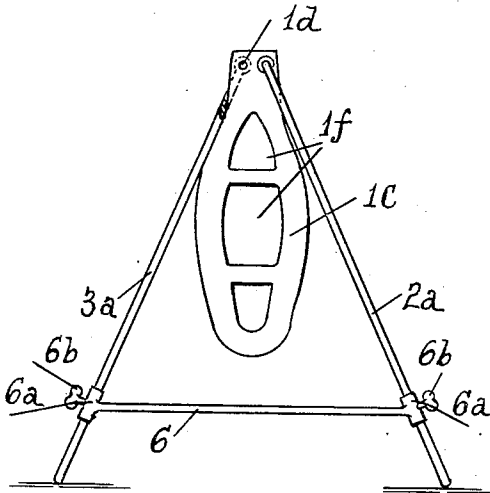


Fig. 2.

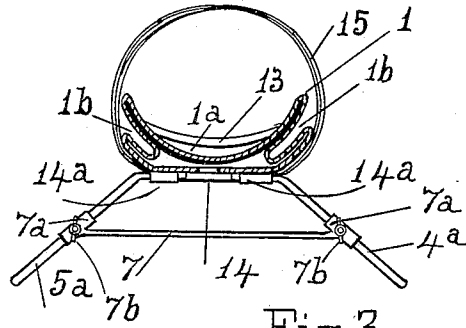


Fig. 3.

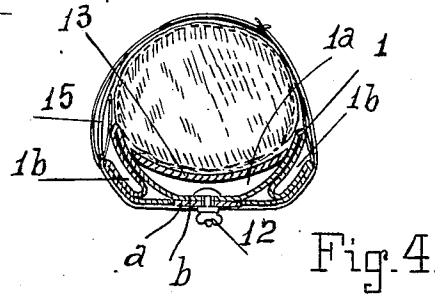


Fig. 4.

Witnesses.
Pearl Thain.
A. L. Courser

Inventor
EDWARD A. WATSON.
by Atty N. DuBois.

UNITED STATES PATENT OFFICE.

EDWARD A. WATSON, OF SPRINGFIELD, ILLINOIS.

SURGICAL APPLIANCE.

1,050,261.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD A. WATSON, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented a new and useful Surgical Appliance, of which the following is a specification.

This invention relates to means to facilitate the placing of a splint and bandages on and their removal from a limb which is being treated.

The purposes of the invention are: to provide a limb-support adjustable to fit limbs of different lengths and adapted to support the limb in a convenient position while applying or removing the bandages, and to provide an adjustable frame detachably connected with the limb-support so that the frame may be removed after the bandages have been applied or after they have been removed.

The invention is illustrated in the annexed drawing, is described in this specification, and is finally recited in the claims.

Figure 1 is a perspective view partially in section, of the complete appliance; Fig. 2 is an enlarged left-hand end elevation; Fig. 3 is an enlarged right-hand end elevation, partly in section; and Fig. 4 is an enlarged transverse section on the line X. X. of Fig. 1.

Similar reference characters designate like parts in the different views.

The limb-support 1 is preferably of sheet aluminum or other light sheet metal, in order that the structure may have the required strength and rigidity with the minimum weight.

The limb-support 1 has a concave upper surface 1^a substantially conforming to the contour of the limb. The metal of the limb-support is cut away in places to lighten the structure. The limb-support is preferably made in two sections, *a* and *b*, lapping each other so that the sections may be slid outwardly or inwardly to lengthen or shorten the limb-support. When the sections of the limb-support are in proper relation to each other they will be secured by the thumb screw 12. It is obvious that the limb-support may be made in one piece, and any one of a number of such one-piece limb-supports may be used indiscriminately in connection with the supporting frame, without departure from my invention.

The splint 13 is of usual construction and need not be described.

The metal of the limb-support is bent back on itself to form longitudinal channels 1^b (clearly shown in Fig. 3) extending the entire length of the limb-support. A plate 14 fastened on the underside of the limb-support has bosses 14^a provided with holes 14^b adapted to accommodate the upper ends of the rear legs of the frame. At the front end of the limb-support is an upwardly extending member 1^c having transverse holes 1^d adapted to accommodate the upper ends of the front legs of the frame.

At the juncture of the member 1^c with the body of the limb-support is a concavity 1^e accommodating the heel of the limb to which the splint is applied so that the heel will not bear on the limb-support. This feature is of great value for the reason that when the limb is long in restraint the pressure on the heel, if the heel were in contact with the limb-support, would be very painful. By providing the limb-support with a concavity as described pressure on the heel is avoided.

The supporting frame consists of four rods, 2, 3, 4, and 5 preferably of aluminum wire of sufficient rigidity, and bent and connected together as described. The rod 2 has a horizontal base member and an upwardly inclined leg 2^a provided with a horizontal braced member 2^b fitting in one of the holes 1^d and secured by a nut 2^c. The rod 3 has an upwardly inclined leg 3^a provided with a member 3^b fitting in one of the holes 1^d and secured by a nut 3^c. The rod 6 has at its ends collars 6^a fitting around the legs 2^a and 3^a. Set screws 6^b secure the collars on the legs so that the brace prevents spreading of the legs. The rod 4 has an upwardly inclined leg 4^a having its upper end bent to fit the holes 14^b in one of the bosses 14^a. The rod 5 has an upwardly inclined leg 5^a having its upper end bent to fit in the holes 14^b of the other boss 14^a. A brace rod 7 has at its ends collars 7^a fitting around the legs 4^a and 5^a. Set screws 7^b secure the collars 7^a on the legs so that the brace 7 will keep the legs from spreading. Blocks 8 and 9 are secured on the rods 2 and 3 and have transverse holes in which the rods 4 and 5 slide. Set screws 10 on the blocks 8 secure the rods 2 and 4, and 3 and 5 in the different positions in which they may be placed.

I do not restrict my claims to braces 6 and 7 of the precise construction described, since braces of any other suitable construction may be used without departure from my invention. Neither do I restrict my claims to a supporting frame of the precise construction herein set forth, since it is obvious that other longitudinally adjustable supporting frames may be used without departure from my invention.

To adjust the appliance to fit a relatively long limb-support the set screws 10 and 12 will be loosened and the sections of the limb-support and the rods of the supporting frame will be slid outwardly to the desired extent and the set screws will then be tightened to hold them in place. To shorten the appliance this procedure will be reversed.

The supporting frame supports the limb-support in such position that the bandages may be easily wound around the limb or unwound therefrom.

In order to apply the bandages to the limb the splint will be placed on the limb and the limb and the splint will be placed on the concave upper surface of the limb-support. The bandages 15 will then be wrapped around the limb and around the limb-support. When the bandages are in place and secured the thumb screw 10 will be loosened, the nuts 2^c and 3^c will be removed from the members 2^b and 3^b respectively and the members 2^b, 3^b, 4^a, and 4^b will then be withdrawn from the holes in the limb-support and the supporting frame removed.

When it is desired to remove the bandages the supporting frame will again be connected with the limb-support as described and a saw or other suitable instrument will be caused to traverse the channels 1^b and cut the bandages so that they may be easily removed.

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

1. In a limb-support, the combination of a main structure having a concave upper surface shaped to accommodate a splint supporting the ankle of the limb being treated, an upwardly extending foot member integral with the main structure and adjacent to the foot of the limb being treated, and a concavity at the juncture of the upwardly extending member with the main structure, and a splint having one end adjacent to said concavity and adapted to support the limb in such position that the heel will be above the upper surface of the concavity and separated therefrom by a space.

2. A limb-support consisting of a single sheet of metal having its longitudinally cen-

tral part shaped to form a concave upper surface and having its lateral parts bent back on themselves to form external longitudinal channels and to form bottom members under the concave central part of the limb-support.

3. A limb-support consisting of a single sheet of metal having its longitudinally central part shaped to form a longitudinal concave upper surface and having one terminal part shaped to form a foot member, also having its lateral parts bent back on themselves to form external longitudinal channels and to form bottom members under the central concave part of the limb-support.

4. A limb-support comprising a first section consisting of a single sheet of metal having its longitudinally central part shaped to form a concave upper surface and having its lateral parts bent back on themselves to form external longitudinal channels and to form bottom members under the concave central part of said first section; a second section consisting of a single sheet of metal having its longitudinally central part shaped to form a concave upper surface and having one terminal part shaped to form a foot member, also having its lateral parts bent back on themselves to form external longitudinal channels and to form bottom members under the central concave part of said second section.

5. In an appliance of the class described, the combination of a limb-support consisting of a single sheet of metal having its longitudinally central part shaped to form a concave upper surface, and having its lateral parts bent back on themselves to form external longitudinal channels and to form bottom members under the concave central part of the limb-support, and connecting means rigidly connecting the bottom members of the limb-support.

6. In an appliance of the class described, the combination of a limb-support consisting of a single sheet of metal having its longitudinally central part shaped to form a concave upper surface, and having its lateral parts bent back on themselves to form external longitudinal channels and to form bottom members under the concave central part of the limb-support; connecting means rigidly connecting the bottom members of the limb-support and having holes to accommodate legs for supporting the limb-support; and legs fitting in the holes in said connecting means.

EDWARD A. WATSON.

Witnesses:

ROY G. TROXELL,
PEARL THAIN.