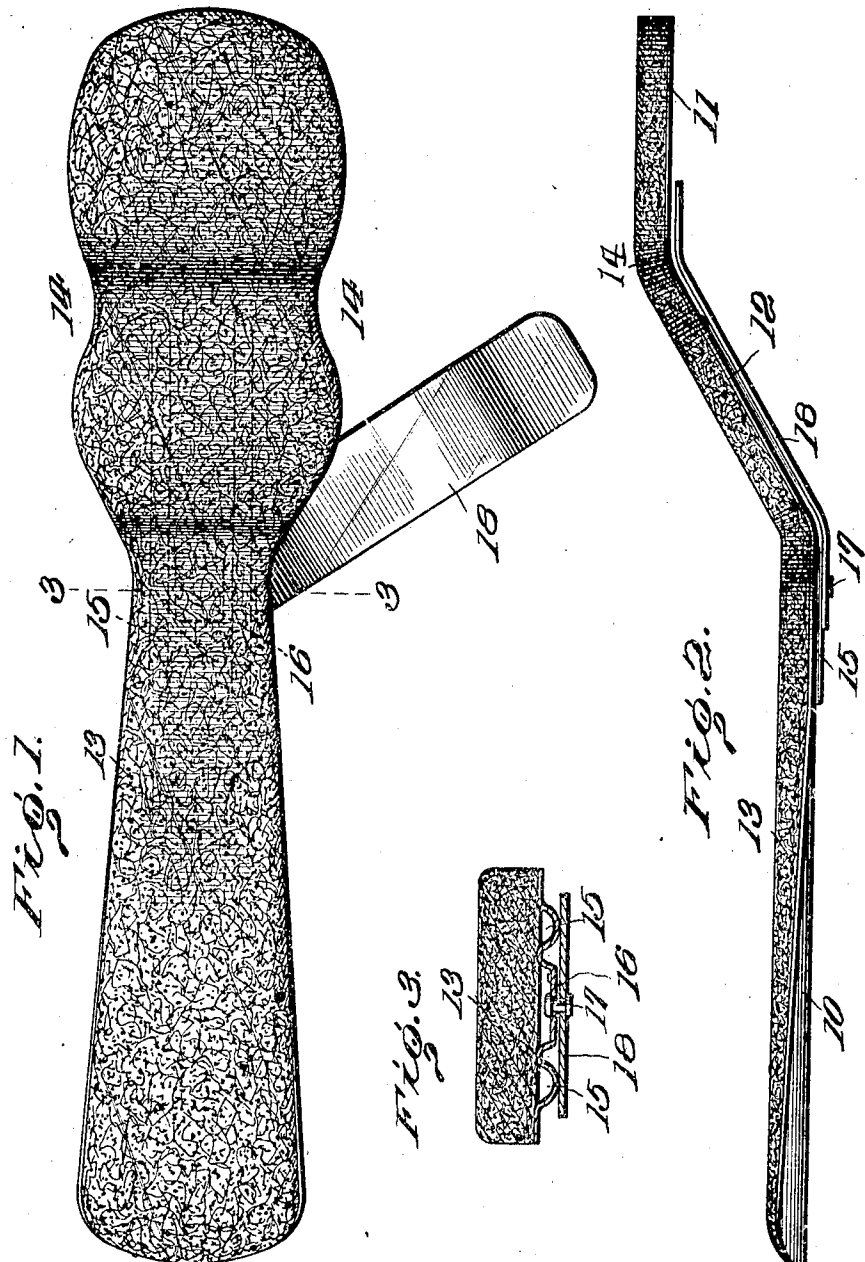


R. D. MADDOX,
SURGICAL SPLINT.
APPLICATION FILED OCT. 19, 1918.

1,298,529.

Patented Mar. 25, 1919.
2 SHEETS—SHEET 1.



Inventor
Robert Maddox

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Fig. 4.

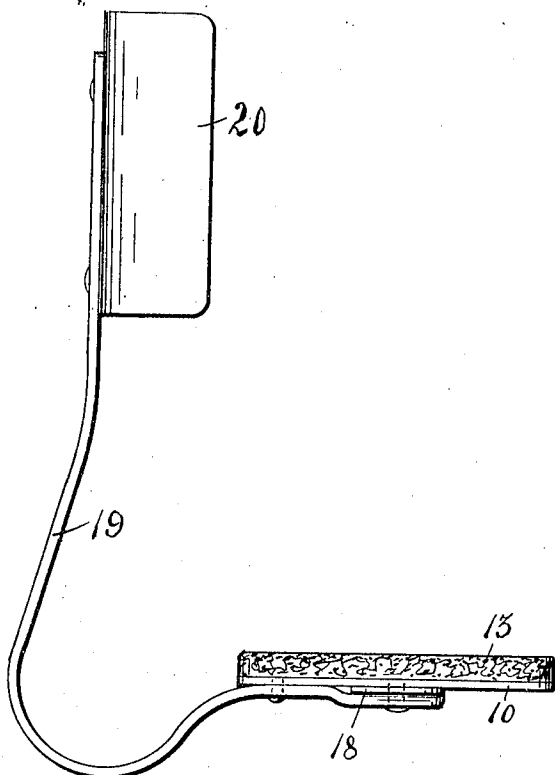


Fig. 5.

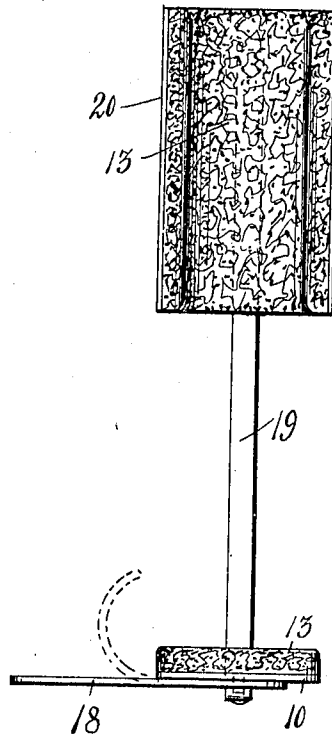
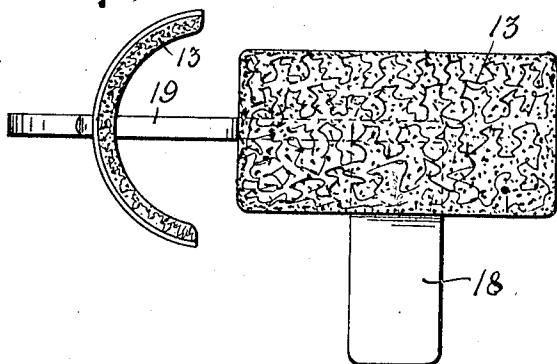


Fig. 6.



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UNITED STATES PATENT OFFICE.

ROBERT D. MADDOX, OF THE UNITED STATES ARMY.

SURGICAL SPLINT.

1,298,529.

Specification of Letters Patent.

Patented Mar. 25, 1919.

Application filed October 19, 1918. Serial No. 258,873.

(FILED UNDER THE ACT OF MARCH 3, 1883, 22 STAT. L., 625.)

To all whom it may concern:

Be it known that I, ROBERT D. MADDOX, major, Medical Dept., U. S. A., a citizen of the United States, stationed at Washington, D. C., have invented an Improvement in Surgical Splints, of which the following is a specification.

The invention described herein may be used by the Government, or any of its officers or employees in prosecution of work for the Government, or by any other person in the United States, without payment of any royalty thereon.

This invention relates to an improvement in surgeon's splints for sustaining a forearm and hand or a foot in position during treatment for fracture and other injuries to prevent displacement of the splint, while leaving the fingers or toes free to be separated for the application of separate bandages, or dressings.

Another object of this invention is to provide a device of this character in which provision is made for supporting the hand or foot independently of the fingers or toes, and readily applicable to either the right or left hand or foot without change of structure.

Another object of the invention is to provide a device of this character including a laterally swinging member and reinforcing or strengthening ribs, and means for frictionally retaining the swinging supporting member in position.

Another object of the invention is to provide a device of this character including a swinging bendable member adapted to be bent over the foot or hand to retain the same in position.

With these and other objects in view the invention consists of certain new and novel constructions and combination of parts as will hereinafter be more fully described and pointed out in the claims.

In the drawings illustrative of the preferred embodiment of the invention—

Figure 1 is a plan view of the improved device applied to a forearm and hand splint.

Fig. 2 is a side elevation of the same.

Fig. 3 is an enlarged transverse section on the line 3—3 of Fig. 1.

Fig. 4 is a view of the improved device applied to a foot splint.

Fig. 5 is a front elevation, and—

Fig. 6 is a plan view, of the improved device applied to a foot splint.

The improved splint is designed to hold an injured hand or foot from lateral displacement during treatment, and the holding attachment may be associated with any required form of hand or foot supporting body, but for the purpose of illustration is shown applied to a hand and forearm splint in Figs. 1, 2 and 3, and to a foot splint in Figs. 4, 5 and 6.

The improved device comprises a base or body portion 10 of sheet metal cut and pressed into the required shape, and made of any suitable metal or metallic compound, and when applied to a forearm or hand support, the body portion is slightly curved transversely. When applied to a forearm and hand splint, the body 10 is extended into a hand supporting portion 11 and wrist supporting portion 12, the portion 12 extending obliquely to the longitudinal planes of the portions 10—11. When employed as a foot supporting splint, the surface of the body 10 will generally be continuous from end to end and from side to side, as shown in Figs. 4 and 5. A continuous pad of felt or like material 13 is disposed upon the body portions as shown. The hand supporting portion and wrist supporting portion are wider than the forearm supporting portion as shown in Fig. 1, and the body and the pad are reduced in width at the juncture of the portions 11—12 whereby recesses or depressions 14 are formed in the side edges of the device, to receive the binding straps.

When employed as a foot supporting splint, an arm or standard 19 will extend from the body 10 and be arranged to support a padded leg engaging member 20, the latter adapted to be secured to the leg of the patient by suitable straps, or like devices, not shown. It will be noted that the member 18 extends between the standard 19 and the body 10 and is thus frictionally held in adjusted position.

When employed as a hand supporting splint the body member 10 is provided with longitudinally directed reinforcing ribs 15, the latter extending for a portion of their length in the forearm supporting portion 10 and the remainder of their lengths in

the wrist supporting portion 12. By this means the obliquely directed portion of the body is strengthened and stiffened without adding to the weight, as the ribs are pressed from the sheet metal material of which the body is constructed. Pressed outwardly from the body between the ribs 15 is a bearing indicated at 16, the bearing being located preferably at the juncture of the obliquely directed portion 12 and the forearm supporting portion 10. The bearing 16 is preferably slightly less in height than the ribs 15 as illustrated in Fig. 3, and pivoted at 17 to the bearing is a thumb supporting member 18, the latter being of sufficient width to extend over the portion of the ribs adjacent to the bearing, and by reducing the height of the bearing the support 18 may be pressed by the action of the rivet against the ribs and thus prevent its working loose and at the same time causing the support 18 to grip the ribs with sufficient force to hold it in adjusted position. The member 18 is thus free to swing laterally to either side of the body of the device, one of its functions being to support the thumb. The member 18 is of bendable metal, so that after the hand or foot is in position upon the pad, the member 18 can be bent over into the position shown in dotted lines in Fig. 5, to form a stop to prevent lateral movement. The hand or foot is thus held in position and prevented from displacement. By arranging the member 18 to swing to either side of the body, it will be obvious that the device may be adapted to either the right or left hand, or the right or left foot and without structural change or the removal of any of the members.

If it is not desirable to support the thumb or foot, the member 18 may be left centrally of the body, or in parallel relation thereto as illustrated in Fig. 2.

When the device is applied holding straps or bandages, or both, not shown, will be passed around the hand portion and in the depressions 14, and thus effectively bind the device to the hand and arm and prevent slipping therefrom. The depressions 14 thus operate as a holding device to retain the straps or bandages and materially increases the efficiency and utility. Suitable straps, not shown will also be applied to hold the foot in position.

Having thus described the invention what is desired to secure by Letters Patent is:

1. A device of the class described comprising a body including continuous forearm wrist and hand supporting portions, and an auxiliary support of bendable material pivoted at one end to the body intermediate thereof and swinging by its free end beyond the sides of the body.

2. A device of the class described comprising a body including forearm and hand supporting portions directed in parallel relation and a wrist supporting portion connecting the forearm and hand supporting portions and obliquely to the plane thereof, and an auxiliary support of bendable material pivoted to the body at the juncture of the forearm and wrist supporting portions and swinging at its free end beyond the sides of the body.

3. A device of the class described comprising a body member including a forearm supporting portion, a hand supporting portion and an intervening obliquely directed wrist supporting portion reduced transversely to form depressions to receive holding straps, said wrist supporting portion and the contiguous arm and hand supporting portions having longitudinally directed stiffening ribs pressed therein, and a bendable thumb supporting member pivoted to the body and adapted to swing laterally thereon in engagement with the ribs.

4. A device of the class described comprising a body member formed of sheet metal and including forearm, hand and wrist supporting portions, said body member being formed with longitudinally directed strengthening ribs intermediate the ends and a bearing portion upset from the body member between the ribs, and a bendable member swinging upon said bearing and frictionally engaging the ribs.

5. A device of the class described comprising a supporting body, a rigid member of bendable material movable relative to said body and adapted to be bent relative to the same.

6. A device of the class described comprising a supporting body, and a rigid member of bendable material extendible laterally of the body.

7. A device of the class described comprising a supporting body, and a member of bendable material movable relative to the body and extensible laterally thereof.

ROBERT D. MADDOX.