(No Model.)

A. R. BASSETT.

TRUSS.

No. 320,453. Patented June 23, 1885.

Fig. 1.

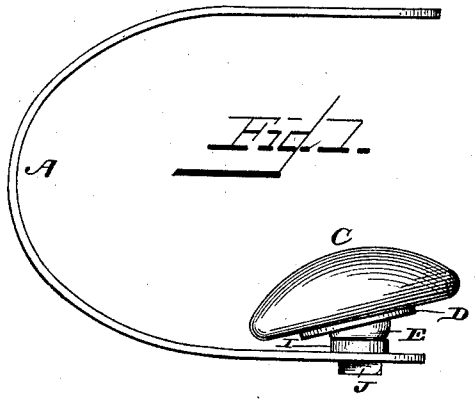


Fig. 2.

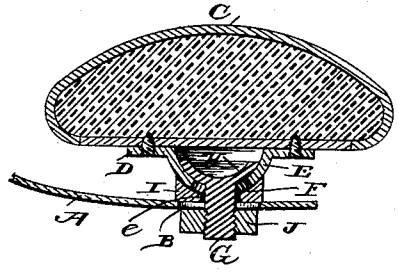


Fig. 4.

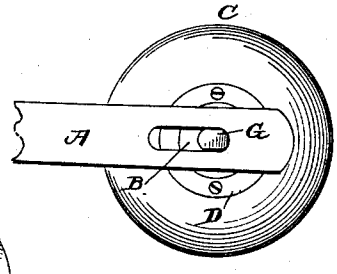
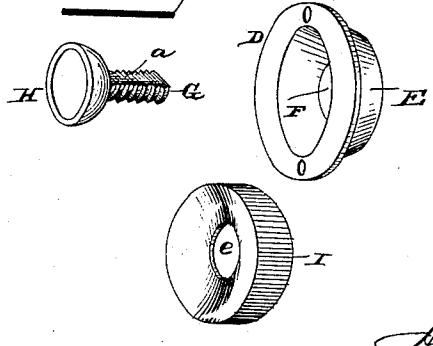


Fig. 3.



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UNITED STATES PATENT OFFICE.

ANDREW R. BASSETT, OF TAUNTON, MASSACHUSETTS.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 320,453, dated June 23, 1885.

Application filed March 25, 1885. (No model.)

To all whom it may concern:

Be it known that I, ANDREW R. BASSETT, a citizen of the United States, residing at Taunton, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Trusses, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to trusses; and the object of the invention is to provide a simple and inexpensive truss for the afflicted, which may be worn with less inconvenience and discomfort than formerly by giving numerous adjustments to the pad, any one of which may be made to suit the various stages of the disease and the circumstances of the patient.

With these ends in view the said invention consists in certain details of construction and combination of parts, as will be hereinafter set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of the spring or hoop of a truss, showing the pad thereon adjusted at an angle. Fig. 2 is a horizontal section of the same. Fig. 3 illustrates a detail view of the socket-plate, the hemispherical ball, with its bolt, and the friction cap-plate. Fig. 4 is a front elevation.

Like letters are used to indicate corresponding parts in the several figures.

Referring to the drawings, A designates the spring or hoop of a truss provided at its front end with an elongated slot, B. The truss-pad C, of any suitable construction, has attached to its outer face the socket-plate D, the socket E being hemispherical in form and projecting from the plate and having its outer face made convex. A circular hole or opening, F, is bored through the center of the socket E for the passage of the threaded bolt G, which carries at its inner end the hemispherical ball H that is received within the socket when the parts are in their proper positions. A cap-plate, I, provided with a central hole or perforation, *e*, fits around the bolt G, over the outer face of the socket E, one of the faces of the plate I being flat, while the other face is concaved or cut out to correspond with the convex surface of the socket. The threads of the bolt G are cut away at *a a* to allow the passage of the bolt through the perforations of the socket E and cap-plate I, and also through the elongated slot B of the spring A. A nut, J, is then screwed over the outer end of the bolt against the spring to force the cap-plate I in contact with the outer face of the socket E, and thus hold the pad from turning.

The operation of my invention will be readily understood from the foregoing description, taken in connection with the annexed drawings. In adjusting the parts to their proper positions the bolt G is passed through the hole or opening F of the socket E to cause its hemispherical ball H to be received within said socket, the latter being set out a sufficient distance from the pad so that the ball in its movements will not come in contact with said pad. The hole F in the socket should be considerably larger than the width of the bolt, so that the latter may have a universal movement through the hole in adjusting the pad. The cap-plate I is then slipped over the bolt to cause its concave face to fit over the convex surface of the socket, said cap-plate having its central perforation slightly larger in diameter than the bolt, so that while the plate may have a slight movement independent of the bolt, yet the movement of the latter in all cases effects a corresponding action to the said plate. The outer end of the bolt is then passed through the slot B of the spring A, with the cut-away edges *a* of the threads facing the side walls of the slot, the nut J screwing over the end of the bolt and binding against the spring. It will be observed that the hemispherical ball H is allowed to turn freely in the socket E to cause the bolt G to stand at any angle to the pad, said bolt carrying the cap-plate I with it, which plate rubs over the convex outer surface of the socket. When pressure is applied by the spring A through the nut J, the face of the hemispherical ball H is brought up firmly against the inner face of the socket, and the cap-plate I is forced down over the outer face of the same, and in this manner the adjustment will be secure in every respect, and there will be no danger of the pad shifting when once adjusted. By the peculiar ball-and-socket or universal joint, together with

the novel construction of the cap-plate, great nicety of adjustment can be effected with ease and facility by merely loosening the screw-bolt G through the nut J to allow the setting of the pad, and then tightening the nut at the proper time to secure the adjustment. Not only is the pad capable of being adjusted at any angle, but I also provide means for setting the same longitudinally or laterally to suit the requirements. This can be done at the same time by shifting the bolt G along the slot B to any point desired, then turning the pad to the requisite angle, and finally binding the parts in the adjusted position by turning the nut. It will be observed that the pad is allowed to turn independently of the bolt through the ball-and-socket connection, and also with the same when worked through the slot B of the spring.

Previous to my invention it has been proposed to employ a ball-and-socket joint for the purpose designed by the present invention, and I therefore do not wish to claim this construction, broadly. Heretofore, however, the socket has been embedded or formed in the pad, and a spherical ball employed to fit the socket, a screw being passed either through the ball or fitted in an opening thereof. This construction is not only impracticable by reason of difficulty arising from the manufacture thereof, but it is also unreliable, inasmuch as the screw will soon work loose or the ball will often bind in its socket, causing endless trouble and annoyance. These objections are overcome by forming the bolt integral with the hemispherical ball, providing a socket-plate with its socket projecting therefrom, and attaching a cap-plate between the spring and the socket to bind against the latter and hold the parts in their adjusted positions. Furthermore, I am not aware that a truss-pad has heretofore been constructed which will have an adjustable universal sliding joint combined together and under the control of a single nut, so that by the loosening and subsequent tightening of the latter the pad can be set on the spring at infinite different positions to suit the shape of the body, and at the same time to accommodate itself to the state of the disease. By my improvements the discomfort arising from the use of the truss will be less noticeable, so as to cause less pain to the patient, enabling the pad to be held to avoid possibility of its shifting while in use.

Having described my invention, I claim—

1. In a truss, the combination, with the pad having the socket-plate attached thereto, the socket of said plate projecting outward, of the bolt G, having the ball working in the socket, the cap-plate I, arranged on the bolt and concaved on its inner face to fit the convex outer surface of the socket, the spring A, and the nut J, binding against the spring to cause the latter to force the cap-plate into frictional contact with the socket, as set forth.

2. In a truss, the pad having the socket-plate, in combination with the bolt having the ball working in the socket, the spring A, slotted at one end, and the nut working over the threaded outer end of the bolt against the spring, said bolt being flattened on opposite sides to leave cut-away portions *a* through the threads, so that the bolt may be slid through the slot of spring A without being turned, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ANDREW R. BASSETT.

Witnesses:

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