J. S. E. FREEL.

CUSHIONING DEVICE FOR TRUSS FRAMES AND THE LIKE.

APPLICATION FILED APR. 2, 1909.

943,244.

Patented Dec. 14, 1909.

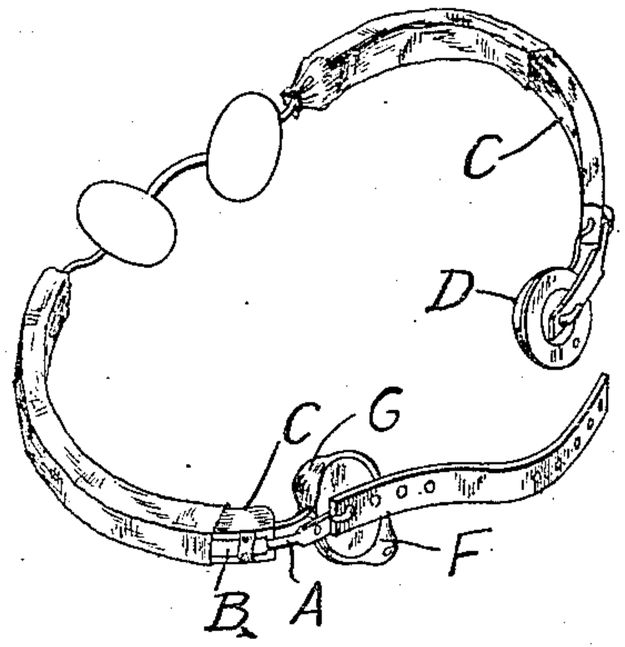


Fig. 1.

Fig. 2.

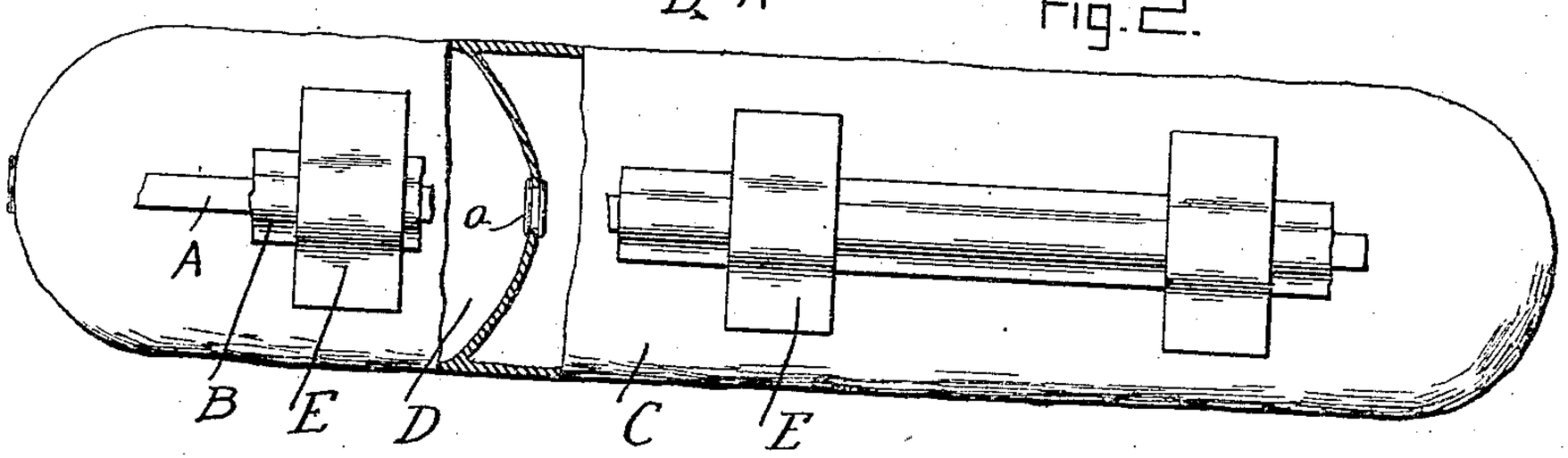
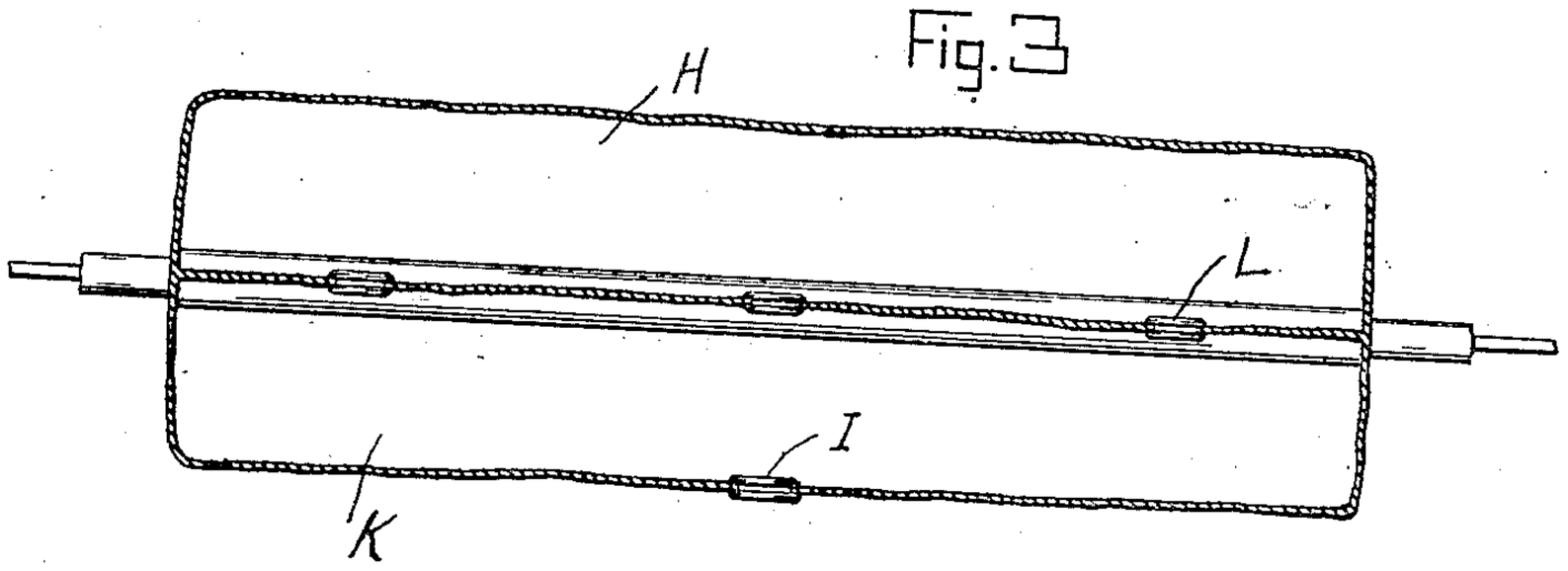


Fig. 3



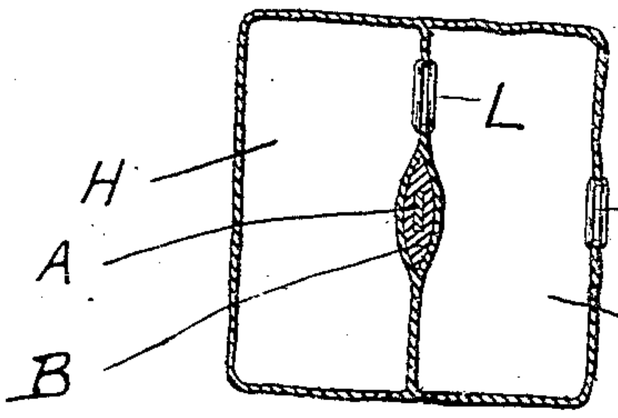


Fig. 4.

Witnesses

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CUSHIONING DEVICE FOR TRUSS-FRAMES AND THE LIKE.

943,244. Specification of Letters Patent. Patented Dec. 14, 1909.

Application filed April 2, 1909. Serial No. 487,403.

To all whom it may concern:

Be it known that I, JAMES S. E. FREEL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Cushioning Devices for Truss-Frames and the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in cushioning devices for truss-frames and the like, the device being applicable and intended for use in connection with any metallic frame adapted to engage or surround a portion of the human body, and is intended to protect the wearer against chafing or soreness, which is usually incident to the wearing of a frame of metal or other hard material.

One of the objects of my invention is to provide a device of the character mentioned, which can readily be applied to the frame of a truss or other similar appliance, and protects the user efficiently and completely while in position.

An additional object of the invention is to afford such a device, that the degree of cushioning can be changed at will, to afford a more or less resilient body-contacting surface, as may be desired.

Still another purpose of my improvement is to provide a device in which the adjustment referred to can be obtained, while the same is in use and positioned on the body.

Briefly, the invention comprises a pneumatic pad or bag, and means for attaching the same upon the metallic frame, so that the frame is positioned centrally and longitudinally of the outer surface of the bag, which in turn lies against the body, acting as a protective cushion. Various means may be employed for inflating the bag, to increase the amount of air contained within, and so harden the cushion.

With these several objects and advantages in view, my invention includes the novel combination and arrangement of parts hereinafter described in detail, and particularly pointed out in the appended claims.

In the accompanying drawing, forming a part of this specification and intended to be read in conjunction therewith, and in which I have disclosed merely one form of construction as illustrative of various other structures equally advantageous, but differing slightly as to details, Figure I is a perspective view of a truss-frame, showing my invention applied thereto, Fig. II is a view in side elevation of the device, Fig. III is a longitudinal sectional view of a modified form of my invention, and Fig. IV is a transverse section of the same.

Referring more particularly to the drawing, A designates the side-bar of the truss-frame, which is incased in a suitable rubber tube or sheath B. The tube B is supported on an inflatable air-cushion here shown in the form of a pad or bag C, constructed preferably of rubber. At one end of the air-cushion C is a supplemental chamber D which is connected to the cushion C by means of a valve *a* opening inward, but closing against pressure outward. The chamber D acts as a bulb, and when compressed, forces air into the cushion C, which expands and is held against contraction by the valve *a*. Instead of employing a supplemental chamber as herein shown and described, I may employ a bulb independent from the cushion C, and connected thereto by means of a suitable air-tube. Thus, when the cushioning-device is in operative position on the frame, it may be pumped up at any time, by simply striking the supplemental chamber or bulb D several blows, which will keep the air-cushion C tight for considerable time, the amount of leakage being comparatively slight.

Secured to the cushion C are loops E, which surround the tube B and serve to hold the frame in the center of the cushion, and permit it to rest easily and comfortably upon the body.

In Figs. III and IV, I have disclosed a modified form of construction, in which the pneumatic cushion surrounds the frame and inclosing tube, the frame being arranged centrally of the cushion. H and K designate the two chambers of the cushion, on either side of the frame A with its inclosing tube B, said chambers being separated by a partition provided with the valves L. I is the air-intake valve for chamber K. The operation is substantially the same as for the form heretofore described.

It will be understood that various changes and modifications may be adopted in con-

nection with the construction hereinbefore set forth, without departing in any way from the spirit and scope of my invention, and I do not wish to limit myself to any single structure, but desire to include any form of device coming within the terms of the claims included herein.

In order to protect the rubber cushion from direct contact with the body, I employ a casing of mercerized silk or other suitable envelop, which is arranged to surround the cushion, it being suitably shirred at the ends.

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

1. In a truss, the combination with a supporting body-frame, of a pneumatic cushion adapted to receive the body-frame, said cushion being positioned between the body and the body-frame, and serving to hold the frame out of contact with the body.

2. The combination with a body-frame, of a surrounding tube, a pneumatic-cushion, and means for supporting said tube upon the cushion.

3. The combination with a body-frame, of a tube inclosing the same, a pneumatic-cushion, and loops carried by said cushion for retaining the aforementioned tube.

4. The combination with a body-frame, of a pneumatic-cushion, and loops carried thereby for retaining said frame upon the cushion.

5. In a truss, the combination with a metallic bar, of a pneumatic cushion for supporting the same upon the body.

6. The combination with a truss-frame, of a cushion-chamber, means for supporting said frame on the cushion-chamber, a supplemental chamber, and communicating valves between the chambers.

7. The combination with a truss-frame, of a cushion-chamber, means for supporting said frame on the cushion-chamber, and an inflating bulb connected to the cushion-chamber.

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

JAMES S. E. FREEL.

Witnesses:
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