

Aug. 16, 1949.

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BACK PAD FOR TRUSSES  
Filed May 29, 1947

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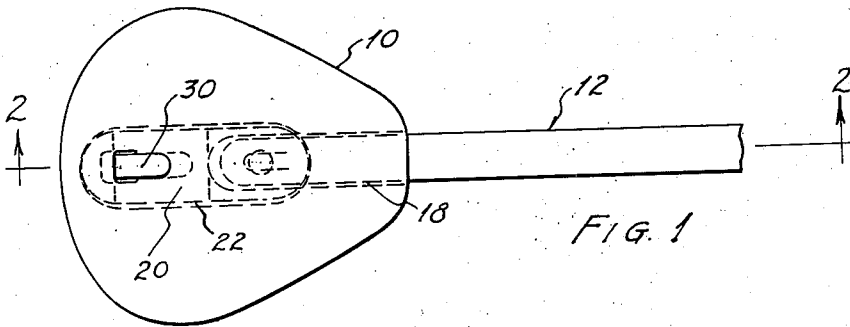


FIG. 1

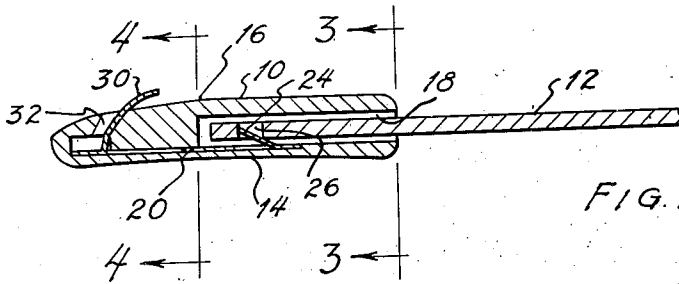


FIG. 2

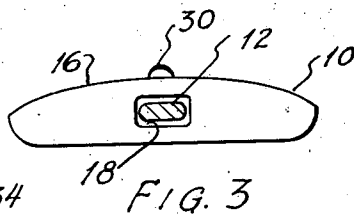


FIG. 3

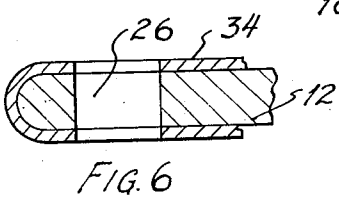


FIG. 4

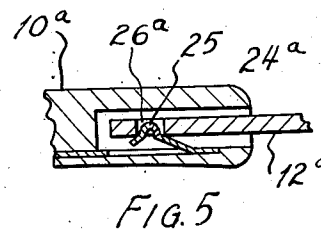


FIG. 5

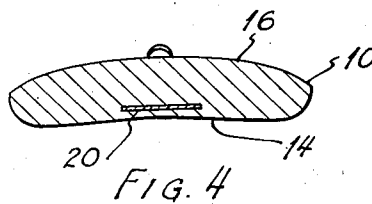


FIG. 6

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## UNITED STATES PATENT OFFICE

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## BACK PAD FOR TRUSSES

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Application May 29, 1947, Serial No. 751,253

10 Claims. (Cl. 128-95)

1

This invention relates to trusses, and, more particularly, is concerned with improved truss pads and spring frame combinations.

It is the general object of my invention to provide an improved, simplified, inexpensive, comfortable, and durable back pad and spring frame combination for a truss.

Another object of my invention is the provision of a back pad for use in a truss, the pad being adapted to snap onto the end of the spring frame.

Another object of my invention is to provide a spring frame and back pad combination in a truss wherein the pad is held on the end of the spring frame in a manner permitting limited pivotal movement so that the pad can adjust itself to the contours of the body of the wearer of the truss.

Another object of my invention is the provision of a back pad for a truss having a molded plastic body and a metal insert, the insert having a hook extending out of the upper surface of the body and to which a strap can be connected, and the insert also having a portion having a snap-on fit over the end of the spring frame of the truss.

The foregoing objects of my invention, and other objects which will become apparent as the description proceeds, are achieved by the provision in a truss of a spring frame and back pad, the pad comprising a flat, tear-drop shaped body having a shallowly concave bottom surface, and a flatly rounded upper surface, the body having a hole at the tapering end of the body into which the end of the spring frame loosely extends, a metal insert molded into the body and having a spring finger extending with a sloppy fit into a hole in the end of the spring frame to retain the pad on the end of the spring frame but allowing limited tilting movement of the pad to adjust itself to the body of the wearer, and a hook integral with the insert and extending out of the upper surface of the body to which a flexible strap can be secured.

For a better understanding of my invention, reference should be had to the accompanying drawings, wherein:

Fig. 1 is a plan view of the improved pad and spring frame combination of the invention;

Fig. 2 is a longitudinal cross-sectional view taken substantially on line II—II of Fig. 1;

Fig. 3 is a transverse sectional view taken substantially on line III—III of Fig. 2;

Fig. 4 is a transverse sectional view taken substantially on line IV—IV of Fig. 2;

Fig. 5 is a fragmentary view similar to Fig. 2 illustrating a modification of the invention; and

Fig. 6 is an enlarged longitudinal sectional view

2

of the spring frame illustrating the plastic cover thereon.

Having reference to the drawing, the numeral 10 indicates generally a back pad and the numeral 12 indicates generally a spring frame of the type used in combination to form a truss for rupture and the like. The pad 10 is ordinarily of the type defined as a back pad to assist in supporting the back side and ends of the spring frame of the truss on the back of the body of the wearer.

The pad 10 preferably takes the form, as shown, of a flattened tear drop shape, the bottom surface of the pad, as at 14, being shallowly concave, and the upper surface of the pad, at 16, being flatly rounded. The body of the pad is usually made from molded hard rubber, or other suitable thermosetting plastic, and it will be understood that any one of a wide variety of suitable materials may be employed. The body can either be molded as a single integral piece, or two half portions may be separately molded and cemented together.

At one end of the body, preferably at the tapering end thereof, the body is formed with a hole or recess 18 which loosely receives the end of the spring frame 12, with sufficient clearance being provided between the hole 18 and the end of the spring frame so that the pad is free to tilt or rock.

Embedded, molded or positioned internally of the pad 10 is a metal insert 20. If the body of the pad 10 is made in two halves, each half will be provided with a suitable recess for receiving the insert, for example, the recess 22, and if the insert 20 is molded in a solid body, then suitable coring means are provided to provide the hole 18 and other clearance portions in the body.

The metal insert 20 is formed with a spring finger 24 which is adapted to extend or snap into a hole 26 formed in the end of the spring frame 12. In the embodiment of the invention illustrated in Fig. 2, the spring finger 24 is formed with a shape which allows the end of the spring frame 12 to be pushed into the opening 18 and over the depressed spring finger whereupon the spring finger snaps upwardly into the hole 26 to lock the pad on the end of the spring frame. The fit between the spring finger 24 and the hole 26 is such that the pad 10 can still tilt on the spring frame 12 to permit the pad to adjust itself to the body of the wearer. The fit might be said to be a sloppy fit. In the form of the invention shown in Fig. 2, the spring finger 24 locks the pad on the end of the spring frame, and

3

should it be desirable to remove the pad from the end of the spring frame, it is necessary to slide a thin tool, such as a finger nail file, under the spring finger 24 to block off the hole 26 after which the pad can be pulled off.

In Fig. 5, I have illustrated a modified form of the invention, wherein the spring finger 24<sup>a</sup> is provided with a rounded detent portion 25 which snaps into the hole 26<sup>a</sup> in the spring frame 12<sup>a</sup>, and by exerting a reasonable amount of force on the assembly the pad 10<sup>a</sup> can be stripped from the end of the spring frame. This arrangement still permits tilting of the pad relative to the spring frame to allow the pad to adjust itself to the body of the water.

The insert 20 is also formed with an integral hook portion 30 which extends out of an opening 32 in the body to the curved upper surface 16 of the body. A back strap can readily be secured over the hook 30.

Fig. 6 illustrates in enlarged sectional form the spring frame 12 of the combination. Specifically, the frame 12 is usually covered with a plastic cover or coating 34 which improves the appearance and feel of the frame, all without interfering with or changing the operation of the frame and pad combination as heretofore described. The cover or coating 34 has not been illustrated in Figs. 1 to 5 of the drawings in order to avoid complicating and confusing these figures of the drawing, but as evident from Fig. 6, the cover is usually present.

From the foregoing it will be recognized that the various objects of my invention have been achieved by the provision of an inexpensive, durable, and comfortable truss frame and back pad combination. The pad and frame are assembled with a snap-on action even by a totally unskilled person in a matter of several seconds and without fumbling around with screws or other fastening means and without the stripping of threads, and dropping or loss of parts.

While in accord with the patent statutes, I have specifically illustrated and described one best known embodiment of my invention, it is to be particularly understood I am not to be limited thereto or thereby, but that the scope of my invention is defined in the appended claims.

I claim:

1. The combination in a truss of a spring frame and a back pad, the pad comprising a flattened tear-drop shaped body having a shallowly concave bottom surface and a flatly rounded upper surface, the body having a hole at the tapering end of the body into which the end of the spring frame loosely extends, a metal insert molded into the body and having a spring finger extending with a sloppy fit into a hole in the end of the spring frame to retain the pad on the end of the spring frame but allowing limited tilting movement of the pad to adjust itself to the body of the wearer, and a hook integral with the insert and extending out of the upper surface of the body to which a flexible strap can be secured.

2. The combination in a truss of a spring frame and a back pad, the pad comprising a substantially flat body, the body having a hole at an end of the body into which the end of the spring frame loosely extends, a metal insert positioned in the body and having a spring finger extending with a sloppy fit into a hole in the end of the spring frame to retain the pad on the end of the spring

4

frame but allowing limited tilting movement of the pad to adjust itself to the body of the wearer, and a hook integral with the insert and extending out of the upper surface of the body to which a flexible strap can be secured.

3. The combination in a truss of a spring frame and a back pad, the pad comprising a substantially flat body, the body having a hole at an end of the body into which the end of the spring frame loosely extends, and a metal insert positioned in the body and having a spring finger extending with a sloppy fit into a hole in the end of the spring frame to retain the pad on the end of the spring frame but allowing limited tilting movement of the pad to adjust itself to the body of the wearer.

4. The combination in a truss of a spring frame and a back pad, the pad comprising a substantially flat body, the body having a hole at an end of the body into which the end of the spring frame loosely extends, and a metal insert positioned in the body and having a spring finger snapping into a hole in the end of the spring frame to retain the pad on the end of the spring frame but allowing limited tilting movement of the pad to adjust itself to the body of the wearer.

5. The combination in a truss of a spring frame and a back pad, the pad comprising a substantially flat body, the body having a hole at an end of the body into which the end of the spring frame extends, and a metal insert positioned in the body and having a spring finger snapping into a hole in the end of the spring frame to retain the pad on the end of the spring frame.

6. In combination, a back pad for a truss, a spring frame, and a snap-on connection between the pad and frame, said connection providing a sloppy fit to allow tilting movement of the pad on the frame, said frame having a plastic cover thereover, a spring member being associated with the pad and frame to aid in forming the snap-on connection therebetween.

7. In combination, a back pad for a truss, a spring frame, and a snap-on connection between the pad and frame, said connection providing a sloppy fit to allow tilting movement of the pad on the frame, the connection being readily releasable by a release pressure applied thereto.

8. In combination, a back pad for a truss, a spring frame, and a snap-on connection including a resilient arm between the pad and frame.

9. A combination as in claim 7 wherein the connection is provided internally of the pad and includes a resilient member positioned therein.

10. A combination as in claim 8 wherein a seating aperture is provided for the resilient arm and the end of the arm abuts on a wall portion of the aperture to prevent disassembly of the pad and frame.

ADAM A. BORASKI.

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