

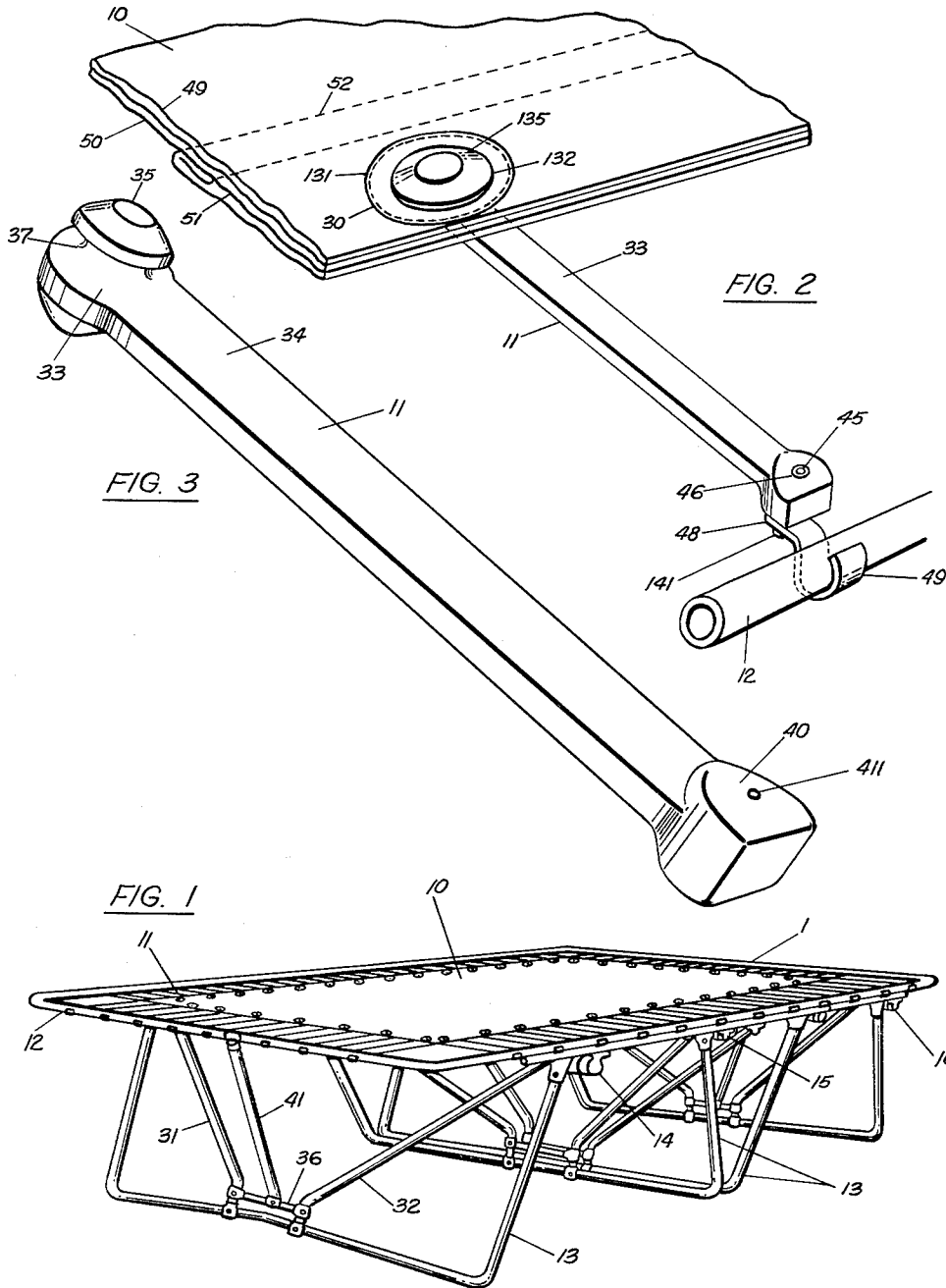
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STRAP FOR A TUMBLING DEVICE

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## STRAP FOR A TUMBLING DEVICE

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This invention relates to gymnastic equipment and, more particularly, to trampolines.

Trampolines in the past have usually been made with a flexible surface attached to a frame by means of resilient devices which were, in some cases, in the form of metal springs and, in other cases, in the form of elongated cords of resilient material. When metallic springs were used, there was a possibility that the person performing on the trampoline would be injured by contact of this body with the resilient member. In addition, metal springs have resilient characteristics which are not always desirable for use in a trampoline.

The present invention discloses a trampoline having improved resilient straps. The straps are so designed as to keep the main portions of the straps in a position remote from the performer and, therefore, avoid inadvertent contact with his body. The straps are so shaped that they give a maximum resiliency for the size thereof.

Other advantages of the invention are:

(1) The end of the elastic member, providing means for engaging a grommet or other opening, is an integral part of the elastic member.

(2) No metal fitting is required such as hooks, clamps, and similar metallic items otherwise used in previous devices.

(3) Positive protection against disengagement of the elastic member under normal use is provided as well as ease of application, using only household tools.

(4) Elimination of possible injury to the performer is provided by completely covering the metal grommet or other metal reinforcement which it is engaging.

(5) An integral flanged member is incorporated into an elastic unit to provide a means of attachment to other objects.

It is, accordingly, an object of the invention to provide a trampoline which is simple in construction, economical to manufacture, and simple and efficient in operation.

Another object of the invention is to provide a trampoline having a tumbling surface attached to a frame by means of tensioning members which are made each of elastic material having an integral elastic headed member which engages an opening in the tumbling surface wherein no metal fitting is required for attaching the tensioning members to the tumbling surface.

Still another object of the invention is to provide an improved tensioning member made up of an elongated body of resilient material having a headed member integrally attached thereto, the headed member being attached to the tensioning member by means of a neck portion with an integral means on the other end of the tensioning member for attaching it to a frame.

A further object of this invention is to provide an improved tensioning member for a tumbling device.

With the above and other objects in view, the present invention consists of the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawing and more particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportions, and minor details of construction without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:

FIG. 1 is an isometric view of a tumbling device con-

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structed in accordance with a preferred embodiment of the invention;

FIG. 2 is an enlarged view of the improved tumbling surface with the tensioning member attached thereto; and

FIG. 3 is an enlarged view of the tensioning member which is an important part of the invention.

Referring now to the drawing, a tumbling device or trampoline 1 is shown having a tumbling surface or mat 10, preferably made of heavy canvas or the like, resiliently supported along its outer edges by a plurality of tensioning members 11. The members 11 are supported at their outer ends from a more or less rectangular frame 12 of tubular steel or the like having sides and ends defining an opening therebetween. The frame 12 could be of any other particular design suitable for supporting the tumbling surface 10 and is shown for purposes of illustration only. The frame 12 is shown with U-shaped legs 13 connected to the rectangular frame 12 at 14, 15 and 16. Lateral braces 31 and 32 and end braces 41 are connected to the U-shaped legs 13 by means of transverse members 36 attached to the lateral braces 31 and 32 at their opposite ends and having the other end braces 41 attached to the end of the rectangular frame 12 at an intermediate point.

The tumbling surface 10 may have a reinforcing strip 51 adjacent its peripheral edge; however, the tumbling surface 10 may comprise a single heavy thickness of fabric or it may be made of two thicknesses of canvas as shown at 49 and 50 having the lateral reinforcing strip 51 extending along the underside of each edge and stitched to the tumbling surface 10 as indicated at 52.

Grommets 30 are made of canvas pieces sewn to the upper surface of the tumbling surface 10 at 131. A head 135 of the tensioning members 11 overlies a part of an upper surface 132 of the grommets 30 and an upper surface 33 of the tensioning members 11. An elongated body 34 lies against the lower surface of the tumbling surface 10. Therefore, when the head 135 is projected through the grommets 30, a neck 37 will lie in the hole in the grommet 30 and the neck 37 itself will be of a diameter to completely fill the hole. The flanged edges of the head 135 will overlie the hole and the surface 33 will lie under and against the canvas, therefore holding the canvas firmly in shape.

The body 34 is preferably generally rectangular in cross section and has an enlarged boss 40 on the end opposite the head 135. The boss 40 is of considerably greater thickness than the body 34 and has a hole 411 therethrough. The hole 411 receives a bolt 45 which may have its head 46 covered with resilient material to prevent injury to a person tumbling on the tumbling surface 10. A lower end 141 of the bolt 45 extends through an eye 48 in a hook 49. The hook 49 is made of flat material and curves around the frame member 12. The hook 49 can also be covered with resilient material to prevent injury to the person tumbling on the tumbling surface 10. The head 135, neck 37, body 34, and boss 40, all being made of an integral piece of resilient rubber like material, will not injure the person tumbling on the surface 10 who may inadvertently strike the strap or any part thereof with his body.

The foregoing specification sets forth the invention in its preferred practical forms but the structure shown is capable of modification within a range of equivalents without departing from the invention which is to be understood is broadly novel as is commensurate with the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A tumbling device comprising a frame, a tumbling surface, tensioning members attaching said tumbling sur-

face to said frame, said frame comprising side members and end members defining an opening, each said tensioning member having one end thereof attached to said tumbling surface and the other end thereof attached to said frame, said one end of each said tensioning member having a head integrally attached thereto by means of a neck portion, spaced holes in said tumbling surface adjacent the periphery thereof, said neck portions each being disposed in one of said holes with said heads having an outwardly directed flange overlying the top side of said tumbling surface and the bodies of said tensioning members being disposed against the bottom side thereof below said tumbling surface, and means to attach the ends of said tensioning members opposite said heads to said frame, said heads, neck portions, and bodies of said tensioning members being made of resilient rubber like material.

2. The tumbling device recited in claim 1 wherein said means attaching said ends of said tensioning members to said frame comprises a boss on each said tensioning member having an opening therethrough and hook members made of flat material, each said hook member having one end disposed around said frame and the other end thereof attached to one said tensioning member by means of bolts each extending through one said boss and through one said hook member.

3. The tumbling device recited in claim 1 wherein said tensioning member body comprises a strap having one dimension of its cross sectional area substantially greater than the other.

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