June 13, 1950 A. A. VILLEMUR 2,511,087

SNOWSHOE BINDING

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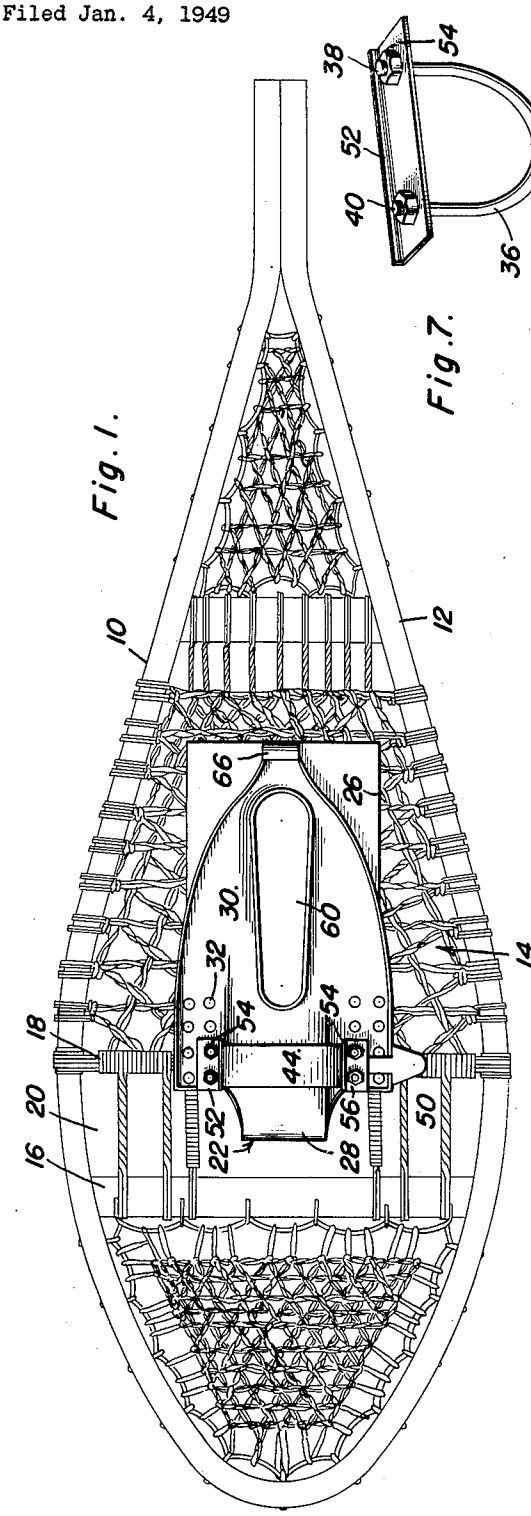


Fig. 1.

Fig. 7.

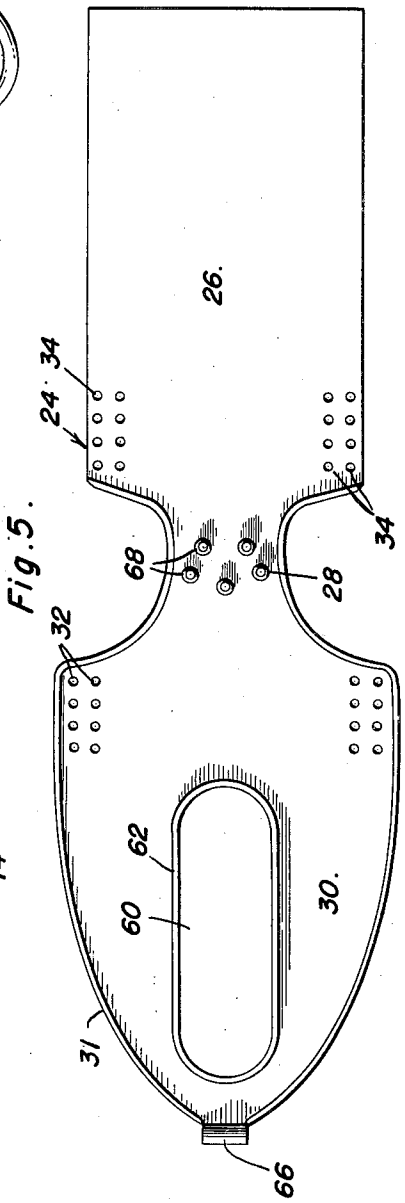


Fig. 5.

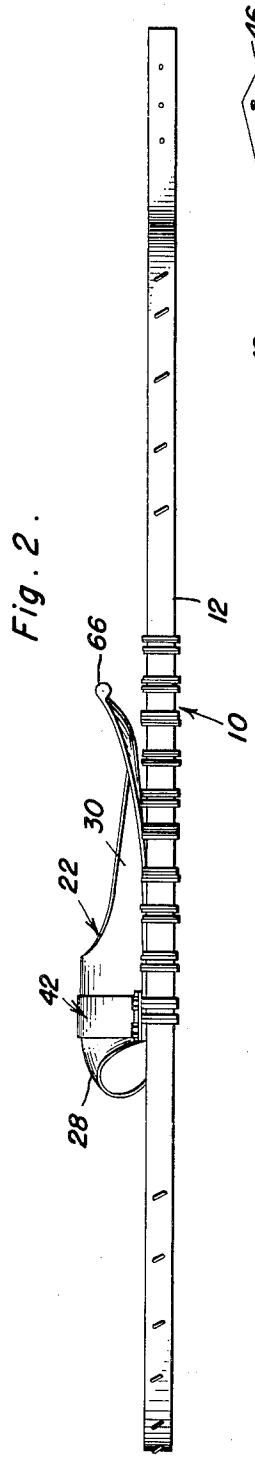
Albert A. Villemur
INVENTOR.

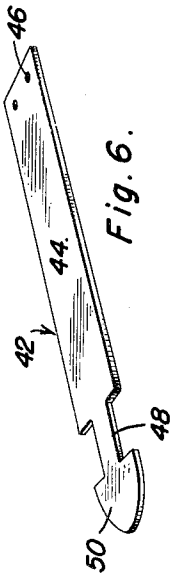
BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

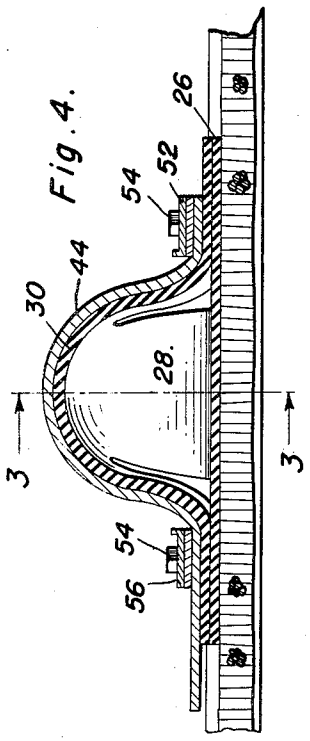
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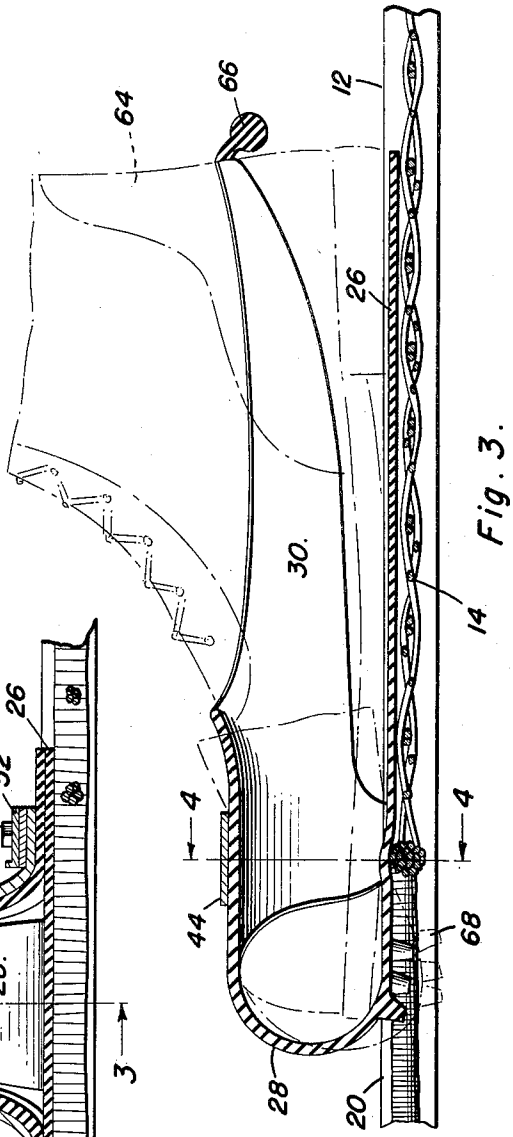
SNOWSHOE BINDING

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Albert A. Villemur
INVENTOR.

BY Thomas A. O'Brien and Harvey B. Jacobson
Attorneys

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2,511,087

SNOWSHOE BINDING

Albert A. Villemur, Escanaba, Mich.

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7 Claims. (Cl. 36—4.5)

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This invention relates to new and useful improvements in snow shoes and more particularly in the binding or harnesses therefor whereby the foot of the wearer is securely and flexibly attached to the snow shoe.

A primary object of this invention is to provide a foot harness or binding for a snow shoe that is convenient and easy for the wearer to employ in attaching his foot securely to the snow shoe and which in operation will prevent the snow from caking and adhering to the harness or the portion of the snow shoe adjacent to the harness.

Another important object of this invention is to provide a detachable harness or binding for a snow shoe that will function in attachment to the snow shoe not only to securely and naturally support the foot of a wearer but which will prevent backward slipping or movement of the wearer, when the snow shoes are used for walking up a slope or hill of hard crusty snow.

Another important object of this invention is to provide a harness for a snow shoe and to attach the harness to the snow shoe in a manner so that the fore part or toe portion of the wearer's foot is loosely connected with the snow shoe and is free to move through the tread portion of the snow shoe, the under side of the toe portion being provided with cleats, the same being adapted to penetrate into and grip on the hard surface of an incline.

And yet a further important object of this invention is to provide improved means for firmly and securely attaching a wearer's foot to a snow shoe, without interfering with the normal movement of the foot in walking and to obviate lateral or rearward displacement of the foot, during the lifting movement, when the snow shoe is raised from the ground.

These and ancillary objects and meritorious features of structure and arrangement of parts are attained by this invention, a preferred embodiment of which is set forth in the following description and illustrated in the accompanying drawings, wherein:

Figure 1 is a top plan view of this invention, showing the same in attachment with a conventional snow shoe;

Figure 2 is a side elevational view of Figure 1;

Figure 3 is an enlarged vertical sectional view taken on a longitudinal plane of line 3—3 of Figure 4;

Figure 4 is a transverse sectional view taken substantially on line 4—4 of Figure 3;

Figure 5 is a bottom plan view of this invention per se;

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Figure 6 is a view in perspective of the attaching stop, and;

Figure 7 is a view in perspective of the means provided for attaching the attaching stop (Figure 6) to the snow shoe for securing the harness thereon.

Referring now more particularly to the drawings, a conventional snow shoe 10 is shown in Figure 1 and comprises a wooden frame 12 of a conventional shape and size, having an interwoven or interlaced body portion or tread portion, formed of thongs in a conventional manner. At the forward end of the shoe there is a conventional cross bar 16, commonly referred to as a toe bar, from which is rearwardly spaced and transversely disposed in the frame a toe cord 18, the two transverse members defining a toe space 20, adapted to accommodate the toe or fore part of a wearer's foot.

This invention, generally designated by the character reference 22 is adapted for attachment to the toe cord 18 in a manner and for a purpose to be described. The harness or binding, 22, constituting this invention, consists of an elongated piece 24 of flexible pliable material, such as plastic or rubber, which consists of a bottom or heel support section 26, a reduced toe portion 28 and an upper support section 30. The toe support portion 28 and the upper support section 30 are provided with a beaded outer edge 31 to add to the durability and wearability of the same.

In attaching the flexible strip 24 to the snow shoe, the same is medially bent, at the longitudinal center point of the toe portion, so that the upper portion 30 is superimposed on the heel support section 26. The respective sections, 26 and 30, are provided with a series of spaced openings or apertures 32 and 34, the apertures being disposed on opposite sides of the forward end of the section 26 and opposite sides of the rearward end of the section 30, so that the same are registerable when the sections are superimposed. The registered or aligned openings 32 and 34 are then placed on top of the toe cord 18, as seen in Figure 1.

Means is provided for detachably and adjustably securing the sections on the toe cord, with the toe section 28 extending beyond the toe cord and in vertical alignment with the toe opening 20. In this respect, a pair of U-bolts or gripes 36 are adapted to engage the underside of the toe cord 18 and the unattached exteriorly threaded ends 38 and 40 are inserted through a pair of the aligned openings 32 and 34 on both sides of the sections. A flexible securing or attaching strap,

42, is provided and comprises an elongated substantially rectangular body section 44 having a pair of transverse openings 46 at one end, with a reduced extension 48 extending outwardly at the apertured end and terminating in an enlarged arcuate end 50. The strap 42 is secured, at one end, through the medium of the openings 46, which are inserted on the unattached ends of one of the U-bolts. An attaching plate 52 is then then super-imposed on the apertured end of the strap and received on the ends of the U-bolt, with nuts 54 threaded on the threaded end of the U-bolt to securely attach one side of the sections 26 and 30 together and the end of the supporting strap 44.

The supporting strap 44 is transversely superimposed on the upper section 30, as seen in Figure 1, and the opposite end is secured between the unattached ends of a U-bolt and held thereon by an attaching plate 56, the same being secured in a manner similar to the plate 52 by the nuts 54.

The upper supporting section 30 is provided with a substantially elliptical opening 60, having a reinforcing means at 62. The opening 60 is provided to accommodate the shoe 64 of a wearer, shown in dotted lines in Figure 3, with the toe portion or forward part of the shoe received in the extended toe portion 28. To aid a wearer in conveniently and easily inserting a shoe in the opening 60, a finger grip extension 66 is provided at the end of the section 30, as seen in Figures 3 and 5.

To render the harness more convenient for use, when the snow shoe is being employed on an incline having a hard upper crust, there is provided a series of cleats 68, disposed in a prearranged pattern on the lower surface of the toe portion 28. The cleats, such as hard rubber tips or cork tips can be forced, by the weight of the wearer's foot, through the toe opening 20 into ground engagement and penetration.

Thus, it can be seen that there is provided a sturdy and dependable harness or binding for a snow shoe, that will render more convenient the attachment of the snow shoe to the wearer's feet and will add to the utility of the snow shoe and render the same more efficient in utilization.

Of course, since many other embodiments of this invention will occur to those skilled in the art, it is to be understood that minor changes in the details of construction and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

Having described the invention, what is claimed as new is:

1. A snow shoe harness comprising a sole section adapted to seat on a snow shoe, a centrally apertured upper section superimposed on and overlying said sole section, means for securing said sections together defining a toe portion, and gripping means carried by the undersurface of the toe portion.

2. A snow shoe harness comprising a sole section adapted to seat on the snow shoe, a top section overlying said sole section and having a centrally disposed foot receiving aperture, means for securing said sections together defining a toe portion, gripping cleats disposed in the under surface of the toe portion.

3. A snow shoe harness for a snow shoe having a transversely disposed flexible toe member and a forwardly spaced transversely disposed toe bar, comprising an elongated strip of flexible material, including a bottom section superimposed on the snow shoe adjacent the toe string, a centrally apertured upper section extending upwardly and rearwardly from said bottom section, and means for securing the sections together on the toe member defining a toe section extending beyond the toe member.

4. A snow shoe harness comprising an elongated strip of flexible material having a bottom section at one end adapted to seat on a snow shoe adjacent a toe cord thereon, an upper section at the other end bent rearwardly and overlying said sole section, a toe section defined by the juncture of the bottom section and upper section, said toe section extending beyond the toe string and having gripping means disposed on its underside, and means for securing said strip on the snow shoe.

5. In combination with a snow shoe having a frame, an interwoven tread portion and a pair of transversely disposed longitudinally spaced toe members, a harness structure comprising an elongated strip of flexible material, said flexible strip including a bottom section superimposed on the tread portion adjacent one of the toe members, an upper section bent upwardly and rearwardly from the bottom section and defining a toe section freely extending between the to members, and means for commonly securing the bottom and upper sections to one of the toe members.

6. The combination of claim 5, wherein said last means includes a pair of U-shaped securing members received about the toe member, a flexible strap adjustably anchored to the securing members and transversely overlying the upper section, said upper and bottom sections being apertured for commonly receiving the securing members and locking means received on said securing members.

7. The combination of claim 5, wherein said toe section is provided with a plurality of cleats on its under-surface.

ALBERT A. VILLEMUR.

No references cited.