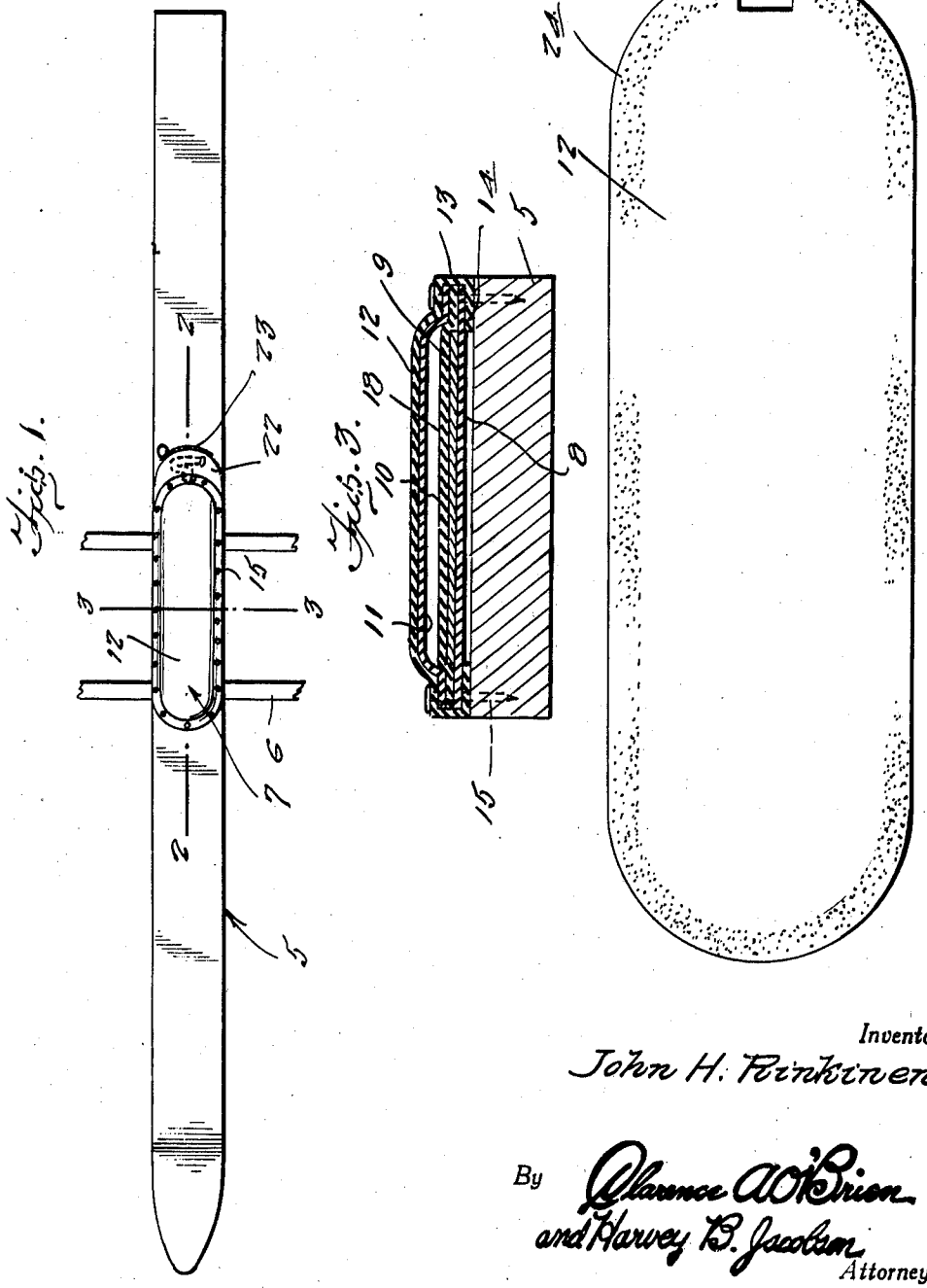
May 30, 1944. J. H. RINKINEN 2,350,130

FOOT PLATE FOR SKIS, SNOWSHOES, AND THE LIKE

Filed March 4, 1943 4 Sheets-Sheet 1



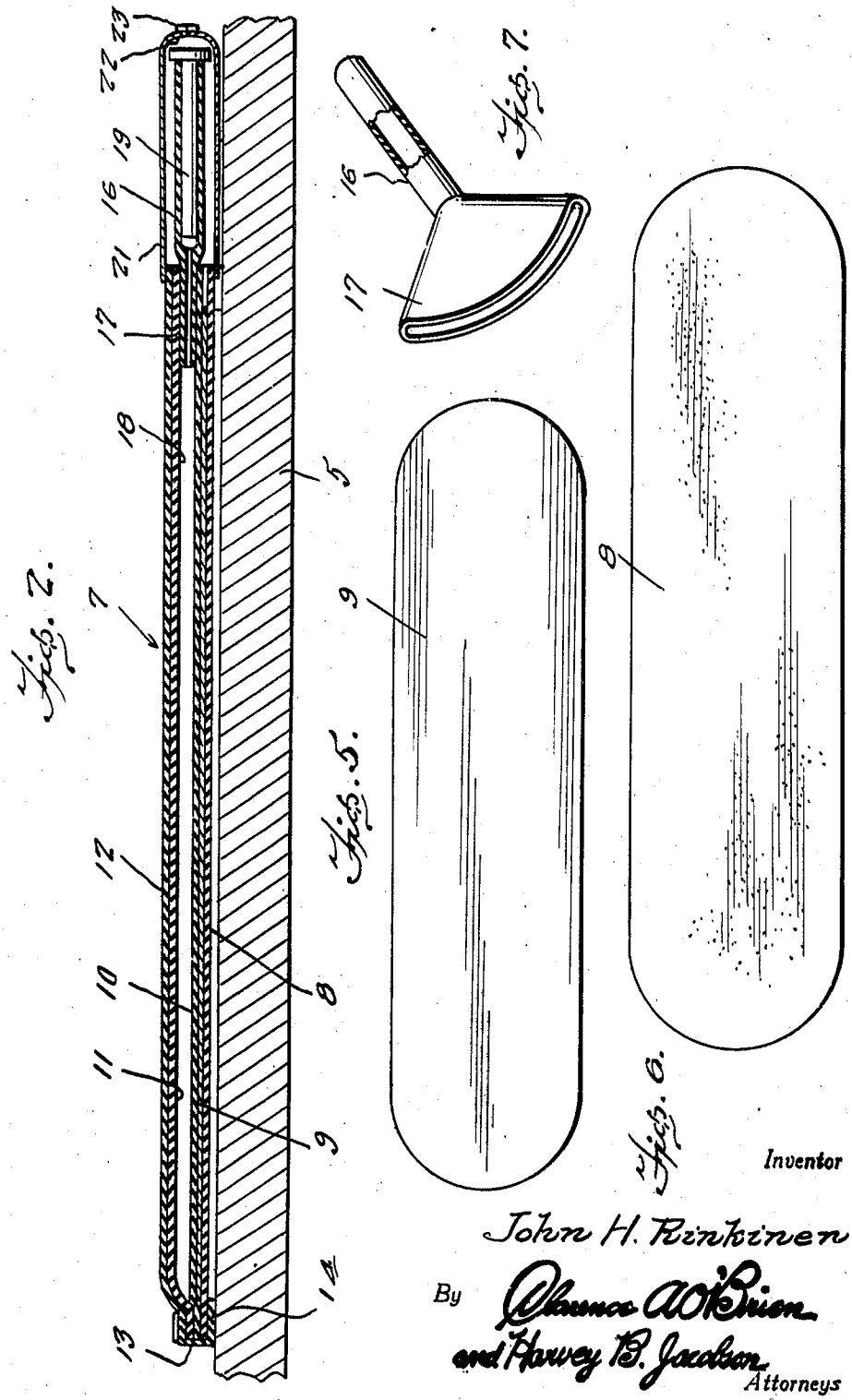
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FOOT PLATE FOR SKIS, SNOWSHOES, AND THE LIKE

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FOOT PLATE FOR SKIS, SNOWSHOES, AND THE LIKE

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Fig. 8.

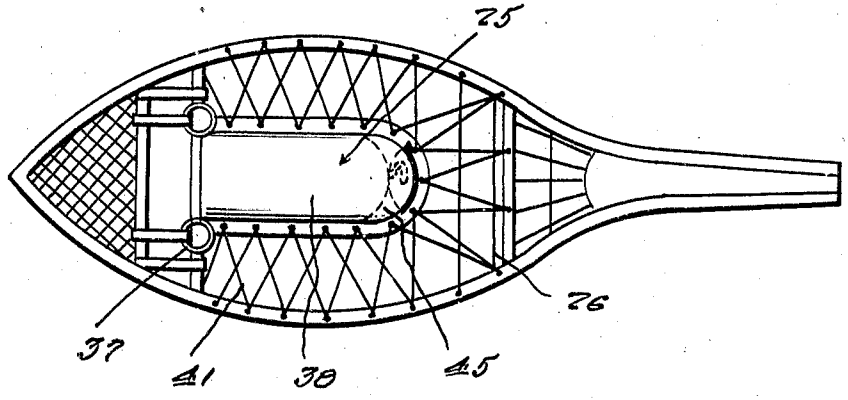
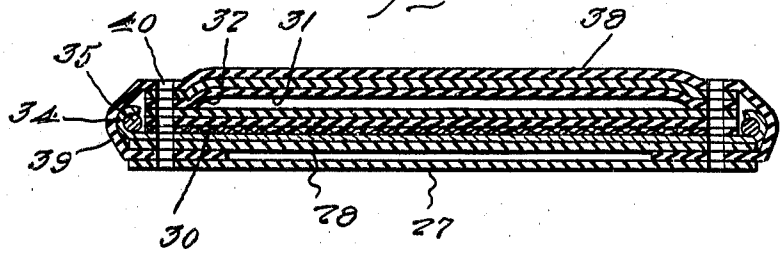


Fig. 9.



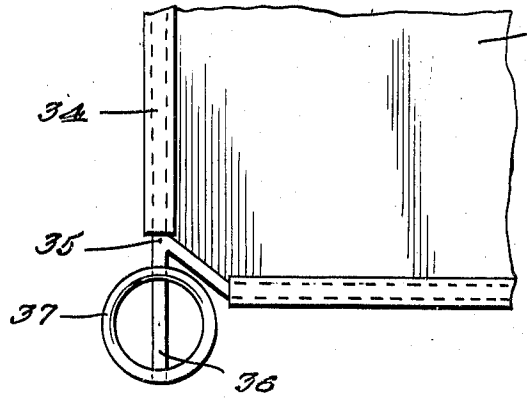


Fig. 12.

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FOOT PLATE FOR SKIS, SNOWSHOES, AND THE LIKE

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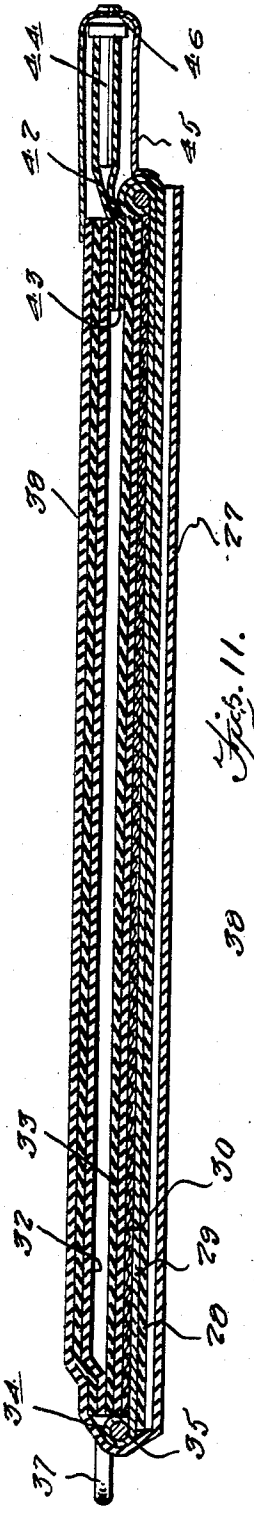


Fig. 10.

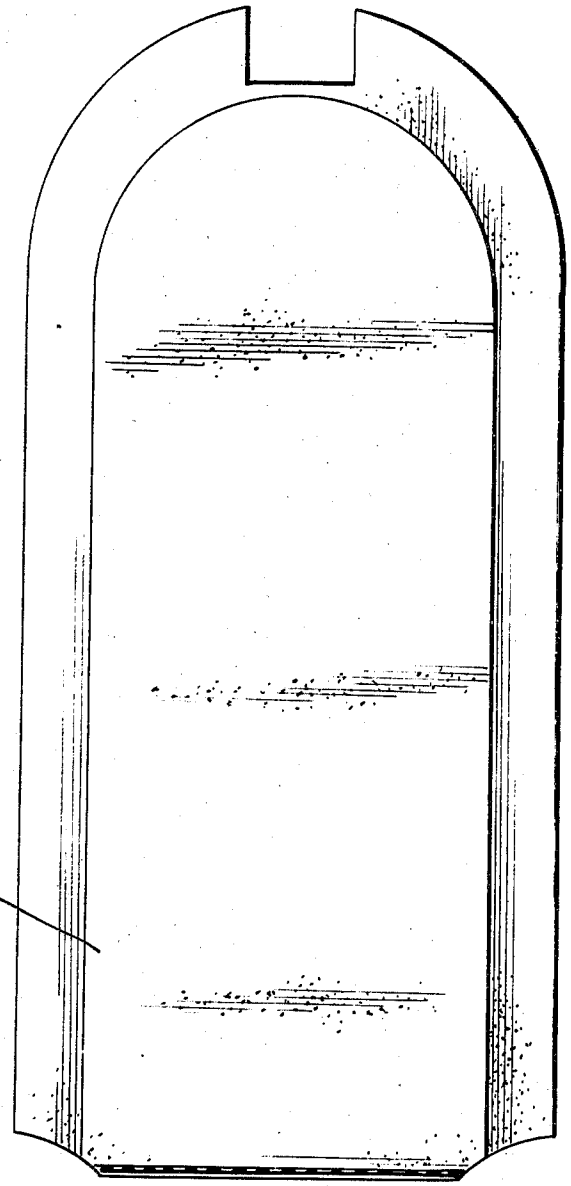


Fig. 11.

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UNITED STATES PATENT OFFICE

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FOOTPLATE FOR SKIS, SNOWSHOES, AND THE LIKE

John H. Rinkinen, Atlantic Mine, Mich.

Application March 4, 1943, Serial No. 477,987

5 Claims. (Cl. 280—11.13)

The present invention relates to new and useful improvements in skis and snowshoes, and has for its primary object to provide a plate for the foot of a person constructed of a series of laminations including a rigid metal plate, on top of which is positioned a plurality of rubber plates, the latter being formed into an inflatable bag having an air valve attached thereto, the inflatable rubber member embodying cushioning means for the foot and also serving to prevent the formation of ice or snow on the upper surface of the plate.

A further object is to provide a foot plate of this character of simple and practical construction, which is efficient and reliable in performance, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which—

Figure 1 is a top plan view of a ski showing the plate secured thereto,

Figure 2 is a fragmentary longitudinal sectional view taken substantially on a line 2—2 of Figure 1,

Figure 3 is a transverse sectional view taken on a line 3—3 of Figure 1,

Figure 4 is a plan view of the top cover for the foot plate,

Figure 5 is a similar view of the metal reinforcing plate,

Figure 6 is a similar view of the bottom rubber plate,

Figure 7 is a perspective view of the rubber valve tubing and connection means with the inflatable bag formed in the plate,

Figure 8 is a top plan view of a snowshoe showing the plate in position thereon,

Figure 9 is a transverse sectional view of the plate shown in Figure 8,

Figure 10 is a longitudinal sectional view therethrough,

Figure 11 is a top plan view of the top cover for the assembled plate, and

Figure 12 is a fragmentary plan view of the reinforcing metal plate.

Referring now to the drawings in detail and with particular reference to Figures 1 to 7 inclusive, the numeral 5 designates a ski of conventional construction having the straps 6 secured thereto and projecting from opposite sides to secure the foot of a person on the ski. The foot plate is designated generally at 7 and is constructed of an elongated bottom rubber plate 8 of sheet material upon which is superposed a rigid metallic plate 9 of relatively thin sheet metal and of an area slightly less than the area of the plate 8.

Positioned upon the metal plate 9 is a pair of sheet rubber plates 10 and 11, respectively, coextensive in area with the bottom rubber plate 8. A rubber cover 12 is positioned on top of the rubber plates 10 and 11, said cover plate being of increased area so that its side edges cover the side edges of the plates 8, 10 and 11, as shown at 13, and also adapted to have its edge portions extended inwardly and under the bottom plate 9, as shown at 14.

The marginal edges of the plate are secured to the ski 5 by means of nails or the like 15 which penetrate the cover plate 12, the rubber plates 10 and 11 and the bottom rubber plate 8, as well as the inturned edge portions, as more clearly shown in Figure 3 of the drawings.

At the rear end of the assembled plate is a rubber inflating tube 16 having a flat flared end 17 adapted for insertion between the plates 10 and 11 and cemented, vulcanized or otherwise fixedly secured therein. Accordingly, air may be supplied to the chamber 18 formed between the plates 10 and 11 by means of a suitable hand pump or the like, for the purpose of inflating the bag formed by the plates 10 and 11. A removable plug 19 is inserted in the tube 16 in order to prevent escape of the air therefrom.

The rear edge portion of the cover plate 12 is formed with a notch 20 to accommodate the tube 16 when said edge portion is folded under.

The air tube 16 is enclosed within a canvas or cloth bag 21 having its edge portion secured to the cover plate 12 as well as to the bottom plate 8, the bag 21 being provided with an opening 22 adapted to be closed by a zipper fastener 23.

The inturned edge portion 14 of the cover 12 may be provided with an adhesive coating 24 to secure the same to the upper surface of the ski 5.

In the form of the invention illustrated in Figures 8 to 12 inclusive the foot plate 25 is shown attached in position on a snowshoe 26 and in this form of the invention the foot plate comprises a bottom rubber plate 28 upon which the metallic plate 29 is positioned, the plate 29 having positioned thereon a cloth or canvas plate 30 upon the latter of which is positioned the

inflatable envelope **31** formed of double upper and lower layers of sheet rubber **32** and **33**.

Extending around the marginal edges of the metal plate **29** is an upwardly rolled edge **34** forming a channel within which is seated a wire member **35**. The wire **35** has extensions **36** projecting laterally from each front corner of the plate and to which is secured a strap attaching ring **37**.

The cover plate of rubber is shown at **38** and is of sufficient length to be doubled upon itself to provide a bottom **27** which is positioned under the bottom plate **28**, as shown in Figure 10. The side edges **39** cover the side edges of the remaining plates, except the bottommost plate **27** and the side edge portions of the cover plate are inserted inwardly between the bottom plates **27** and **28**, as shown more clearly in Figure 9 of the drawings. The side edges **39** of the cover plate also cover the rolled edge **34** of the metal plate.

The edge portions of the assembled plates are provided with aligned openings **40** through which the woven strands **41** of the snowshoe are inserted for attaching the plate to the snowshoe **26** and for securing the sections of the foot plate in assembled relation.

Secured to the envelope **31** is the inflating tube **42** which also includes the flattened flared portion **43** and is provided with the plug **44**. The inflating tube is also enclosed within the cloth casing **45** also having the zipper opening **46** in its edge portion.

From the foregoing it will be apparent that the foot of the person is secured in position on top of the plate and due to the constantly yielding action of the plate ice and snow is prevented from forming thereon and which ordinarily causes considerable annoyance and inconvenience to the wearer of the skis or snowshoes. Also the inflatable bag or envelope provides a cushion base for the foot plate to add to the comfort of the wearer.

It is believed the details of construction, operation and advantages of the device will be readily understood from the foregoing without further detailed explanation.

Having thus described the invention, what I claim is:

1. A foot plate of the class described comprising a plurality of sheets of rubber, a rigid sheet of material beneath said rubber sheets, attaching means at the edge portions of said sheets to secure the same in superposed relation and an inflatable tube interposed between said sheets of rubber.

2. A foot plate of the class described comprising a rigid plate, a pair of rubber plates mounted in superposed relation on said rigid plate, a flexible cover plate having its edge portion enclosing the edges of said first named plate, the said edge portion extending under said plate, attaching means at the edges of said plate to secure the same to a supporting structure and an inflatable tube attached between said rubber plates.

3. A foot plate of the class described comprising a rigid plate, a pair of rubber plates mounted in superposed relation on said rigid plate, a flexible cover plate having its edge portion enclosing the edges of said first named plate, the said edge portion extending under said plate, attaching means at the edges of said plate to secure the same to a supporting structure and an inflatable tube attached between said rubber plates, and a flexible casing for said inflatable tube secured to said cover plate.

4. A foot plate of the class described comprising a metallic plate, a plurality of rubber plates mounted in superposed relation on said metallic plate, a flexible cover plate having edge portions extending over the edges of said first named plate and under the metallic plate, said plate having aligned openings adjacent the edges thereof, flexible attaching members inserted through said openings for attaching the assembled plates to a supporting structure, and an inflatable tube between a pair of superposed rubber plates to form an air chamber.

5. In a snowshoe having a rigid frame, a mesh structure within the frame and an inflatable foot plate having openings at its edge portion for receiving the strands of said mesh structure for attaching the foot plate thereto.

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