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WATER SKI HARNESS

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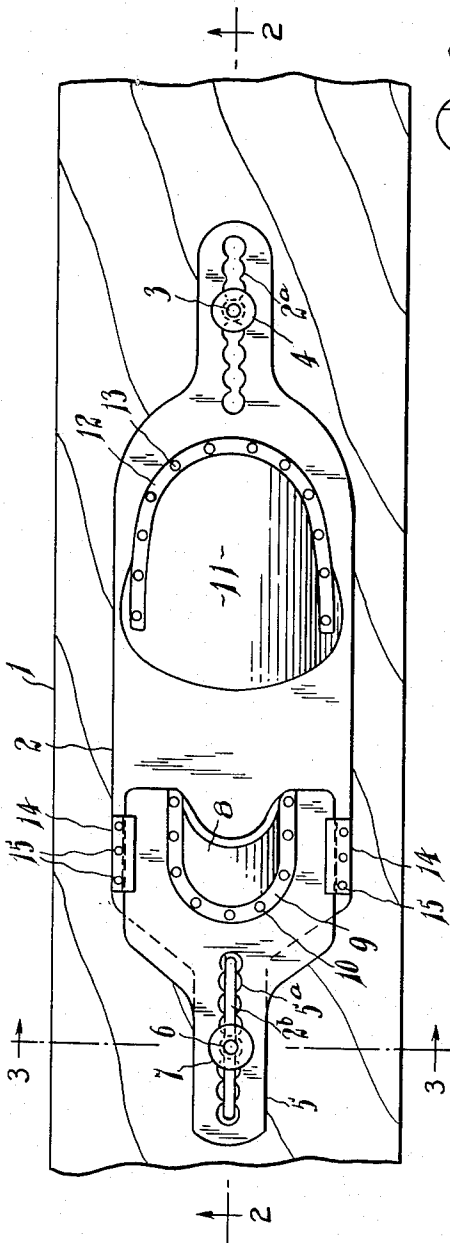


FIG. 1

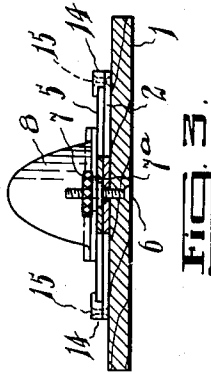


FIG. 3

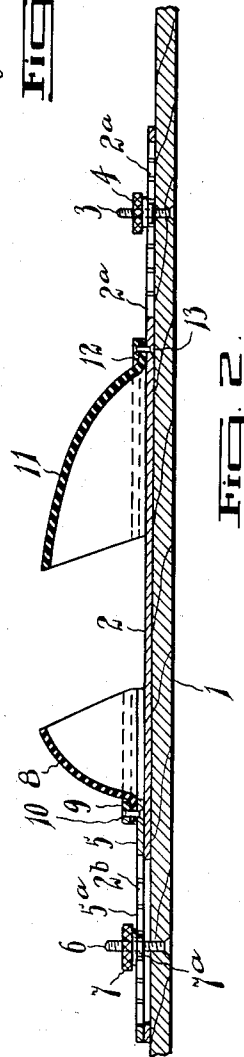


FIG. 2

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WATER SKI HARNESS

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8 Claims. (Cl. 9—21)

This invention relates to a ski harness, and more particularly to a harness for a water ski.

Ski harnesses of many types are known, and most of these have provisions for adjusting the harness to fit different sizes of foot for different wearers. However, old types of harness have been found unsatisfactory, particularly for water skiing, because they do not have provision for quickly adjusting the position of the whole harness relative to the ski in order to provide better balance for different wearers and water conditions.

It is therefore the object of this invention to provide a relatively simple and inexpensive ski harness which is readily adjustable longitudinally on the ski.

According to this invention the ski harness has a foot plate adapted to be mounted on the ski and longitudinally adjustable relative thereto. Guide means are secured to the ski to retain the foot plate in position and permit it to slide substantially on the longitudinal centre line. Means are provided for securing the plate in any one of a plurality of longitudinally adjusted positions relative to the ski. A fixed foot engaging member is secured to the foot plate and another foot engaging member cooperating with the first foot engaging member is mounted on the plate for sliding movement to and from the first foot engaging member. Means are secured to the ski or the plate for retaining the slidable foot engaging member on the plate and permitting it to slide substantially on the longitudinal centre line of the ski. Means is also provided for securing the second foot engaging member in any one of a plurality of longitudinally adjusted positions, which means may be the same as one of the means for securing the plate in position.

In drawings which illustrate one embodiment of this invention, and in which like reference numerals indicate corresponding parts in the several views:

Fig. 1 is a fragmentary plan view of a ski on which is mounted a water ski harness constructed in accordance with this invention;

Fig. 2 is a sectional view taken along line 2—2 in Fig. 1; and

Fig. 3 is a section on the line 3—3 in Fig. 1.

Mounted on the upper surface of a ski 1, of which the ends are broken away in the figures, is a main plate or foot plate 2 which is of less width than the ski and extends longitudinally on the ski. The foot plate has narrower end portions which extend centrally on the ski. In one of these narrower end portions, hereinafter called the front end, a plurality of holes are drilled in a longitudinal line, and these holes are slotted together to form a slot 2^a, of varying width. A bolt 3 projects through slot 2^a, the bolt having been screwed through the ski with its head flush with the underside of the ski to present a smooth running surface. Foot plate 2 can thus be shifted longitudinally relative to the ski, guided by bolt 3 in slot 2^a. To clamp plate 2 to the ski a knurled nut 4 having a depending boss 4^a is screwed down on bolt 3, boss 4^a fitting into one of the wider portions,

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or holes, in slot 2^a, to prevent the plate 2 from moving relative to the ski.

Mounted rearwardly on foot plate 2 is a heel plate 5, having a narrow rearwardly extending portion of substantially the same width as the narrow rearward end portion of foot plate 2. The rearward end portion of each plate is provided with registering slots 5^a and 2^b respectively. A bolt 6 passes through the ski and through slot 2^b and slot 5^a, and a knurled nut 7 may be screwed down to clamp both the foot plate and the heel plate relative to the ski. The slot 5^a is provided with holes longitudinally thereof, and nut 7 is provided with a depending boss 7^a which fits into the holes to prevent the heel plate from moving relative to the foot plate and ski.

A portion of the front end of heel plate 5 is cut away to form a space which is wide enough to accommodate the heel of the wearer's foot. A heel piece 8, of rubber or the like, extends over this space and is clamped at its rearward and side edges to the heel plate by a U-shaped bar 9, the bar being suitably held by a plurality of bolts or rivets 10 passing through the foot plate, heel piece and bar. Near the front end of the foot plate 2 a toe piece 11 is similarly clamped at its front and side edges by a U-shaped bar 12 and bolts or rivets 13.

To provide a guide to permit the heel plate 5 to slide longitudinally with respect to the foot plate 2 when it is desired to adjust the harness, guide plates 14, 14 are secured by screws or rivets 15 to opposite sides of the foot plate 2. Longitudinal undercuts are provided in the inner sides of the plates to receive the sides of the heel plate 5.

It is thus seen that heel plate 5 is slidable longitudinally with respect to foot plate 2, being guided by guide plates 14, 14 but it can be firmly clamped to the foot plate by screwing down nut 7. Similarly, the whole harness can readily be shifted with respect to the ski by loosening nuts 4 and 7 and sliding the foot plate 2. The harness is therefore adjustable for size of foot as well as for balance of different wearers.

It is apparent that instead of having slots for longitudinal adjustment, the plates may be provided with a series of holes disposed in longitudinal lines.

It is thought that the construction and use of the invention will be apparent from the above description of the various parts and their purpose. It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred example of the same and that various changes in shape, size and arrangement of parts may be resorted to, without departing from the spirit of the invention or the scope of the subjoined claims.

What I claim as my invention is:

1. A ski having a foot plate having longitudinally extending forward and rearward apertures, means passing through the said forward aperture to secure the foot plate to the ski, a toe piece secured to the foot plate, a heel plate mounted rearwardly on the foot plate and having a longitudinal aperture therein, means passing through the said aperture in the heel plate and the said rearward aperture in the foot plate to secure the foot plate and heel plate to the ski, and a heel piece secured to the heel plate.

2. A harness as claimed in claim 1, in which at least one aperture consists of a slot of varying width.

3. A water ski having a foot plate having a plurality of holes near its forward and a slot near its rearward end, securing means adapted to selectively project through one of the forward holes for longitudinal adjustment of the foot plate on the ski, a flexible toe piece secured on the foot plate, a heel plate mounted rearwardly on the foot plate and having a plurality of holes extending

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through its rearward end and aligned with the slot in the rearward end of the foot plate, securing means adapted to project through the aligned holes and slot to secure the said plates rigidly with respect to the ski, and a flexible heel piece secured to the heel plate.

4. A harness for a water ski comprising a foot plate having a plurality of holes at one end and a slot at the other end, a pair of studs secured to the ski, one stud being adapted to selectively pass through one of the holes in the foot plate and one stud passing through the slot in the foot plate, a flexible toe piece secured forwardly on the foot plate, a heel plate mounted rearwardly on the foot plate and having at least one aperture through which one of the studs may be passed to secure the plates rigidly with respect to the ski and a flexible heel piece secured to the heel plate.

5. A ski as claimed in claim 1, in which guide means are mounted on the foot plate for sliding engagement with the heel plate.

6. A ski as claimed in claim 1 in which guide means are mounted on the foot plate for sliding engagement with the outer edges of the heel plate.

7. A harness for a ski comprising a foot plate adapted to be mounted on a ski, a fixed foot-engaging member secured to the foot plate, another foot engaging member adapted to co-operate with the first foot engaging member to retain the user's foot between them and longitudinally moveable relative to the foot plate, guide means for retaining the foot plate and the moveable foot engaging member substantially on the longitudinal centre line of the ski, and means for securing the foot plate in longitudinally adjusted position relative to the ski and the moveable foot engaging member in longitudinally adjusted

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relationship to the plate, said guide means and securing means including registering longitudinal apertures in the foot plate and in the moveable foot engaging member respectively, and means adapted to be secured to the ski to pass through the apertures to secure the foot engaging member and the foot plate to each other and the ski.

8. A harness for a ski comprising a foot plate adapted to be mounted on a ski, a fixed foot-engaging member secured to the foot plate, another foot engaging member adapted to co-operate with the first foot engaging member to retain the user's foot between them and longitudinally moveable relative to the foot plate, guide means for retaining the foot plate and the moveable foot engaging member substantially on the longitudinal centre line of the ski, and means for securing the foot plate in longitudinally adjusted position relative to the ski and the moveable foot engaging member in longitudinally adjusted relationship to the plate, said guide means and securing means including a longitudinal aperture in one end of the foot plate, means adapted to be secured to the ski and to pass through the aperture to secure the plate to the ski, registering longitudinal apertures at the other end of the foot plate and in the moveable foot engaging member respectively, and means adapted to be secured to the ski to pass through the apertures to secure the foot engaging member and the foot plate to each other and the ski.

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