Aug. 7, 1951 C. DELUCCHI 2,563,314

BUCKLE

Filed April 23, 1947

Fig. 1

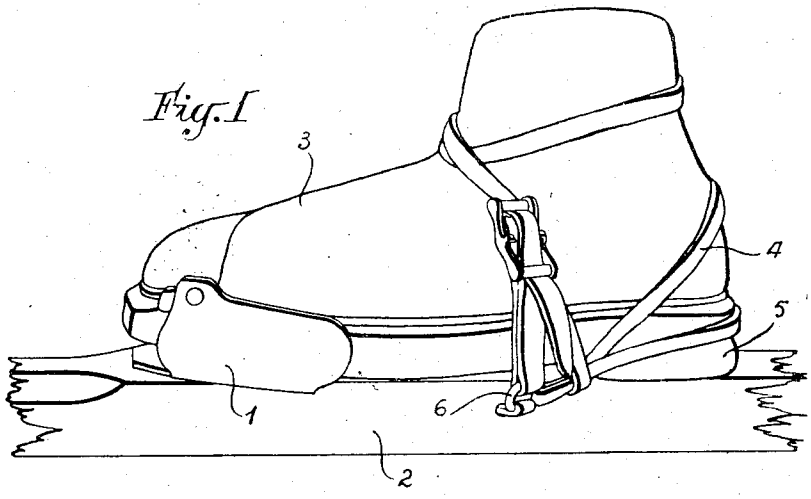


Fig. 2

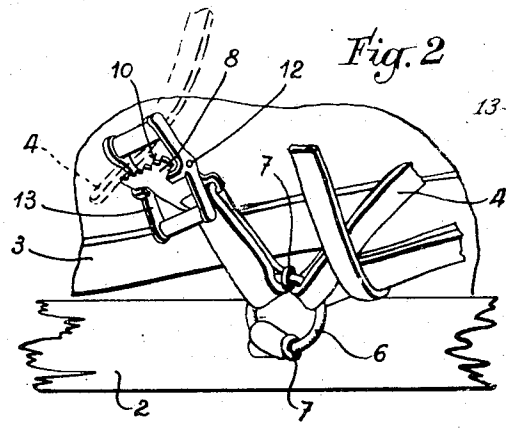


Fig. 4.

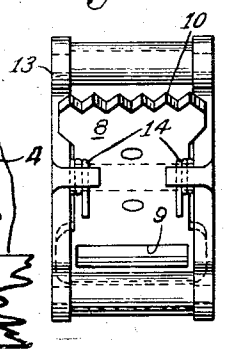
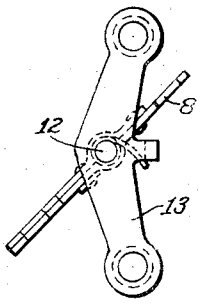


Fig. 5



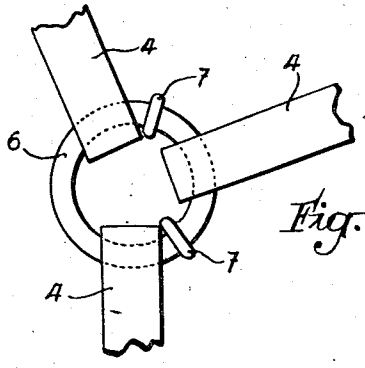


Fig. 3

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BUCKLE

Charles Delucchi, Lyon, France

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2 Claims. (Cl. 24—188)

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This invention refers to a strap device to attach the skis to the shoes of the skier.

In such a device the fore part of the shoe is engaged into a wedge-shaped stirrup wherein it may pivot about a horizontal axis, while the rear of the shoe is attached to the ski by means of a strap of great length which may be set at two positions according as the skier desires to take advantage of the pivotability of the shoe in the stirrup, or to have the shoe firmly pressed against the ski. The first position is adopted on ascending ground, the second one when sliding down.

One object of this invention is to enable the skier to modify rapidly the position of his straps without any noticeable loss of time.

Another object of this invention is to provide a strap device comprising a ring engaged by three portions of the strap and provided with projections adapted to form abutments preventing the three strap portions from interfering with each other.

A further object of this invention is to provide a strape gear comprising a buckle having a claw which is normally retained at the open position by a spring, whereby the end of the strap may be easily engaged through the buckle, while the claw is afterwards maintained at the closed position by the tension of the strap.

In the annexed drawings:

Fig. 1 is a general perspective view of a strap gear according to this invention.

Fig. 2 is a fragmentary perspective view showing position of the parts when the end of the strap is to be engaged into the automatic buckle.

Fig. 3 is an enlarged view of the ring and adjacent parts.

Fig. 4 is an enlarged plan view of the buckle, detached.

Fig. 5 is a side view thereof.

The device illustrated in Fig. 1 comprises a stirrup 1 fixed to a ski 2 and engaging the fore part of the shoe 3 of the skier. This stirrup comprises abutments preventing the sole of the shoe from becoming disengaged upwardly. The means for fixing the shoe to the ski comprises a strap 4 of relatively great length which may be disposed in a number of different ways according as it is desired either to only maintain the shoe engaged into stirrup 1 while permitting the heel to rise from the ski, or to retain the heel against the ski. Fig. 1 corresponds to this latter case as strap 4 is not only passed behind the heel 5 but also over the foot and around the skier's ankle.

Strap 4 is passed through a horizontal transverse passage bored through the ski, and it is provided with a ring 6 in the vicinity of one of its ends. Ring 6 is used to redirect the part of strap 4 coming from behind the heel, as clearly shown in Fig. 1. It follows that three portions of the strap are passed through ring 6, as illustrated in Fig. 3. And to prevent these three portions from becoming entangled, ring 6 is provided with two peripheral projections 7 disposed at about 120° from each other, said projections forming abutments to limit the angular zone of the ring adapted to receive the portion of the strap which is engaged through the ring when the strap is being disposed around the shoe.

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The end of strap 4 nearest to ring 6 carries a buckle adapted to receive the other end of the strap and to clamp the same. Fig. 2 shows the position of the buckle near ring 6. Figs. 4 and 5 illustrate the construction of this buckle. The latter comprises a plate 8 having at one end a slit 9 to receive the end of the strap to which the buckle is to be permanently fixed. The opposed end of plate 8 is provided with a serrated gripping edge 10. Plate 8 carries a transverse axle 12 substantially disposed midway of its ends. Axle 12 may be fixed to plate 8 in any appropriate manner; for instance plate 8 may be provided with a transverse depression of semi-circular cross section adapted to receive axle 12 and this depression is thereafter closed by a semi-circular cover fitting on axle 12 and riveted to plate 8.

A rectangular frame 13 is pivoted on axle 12, which is disposed transversely with respect to this frame. The respective dimensions of plate 8 and frame 13 are such that the latter abuts against the ends of the former, as it will be clearly understood from Fig. 5. Axle 12 carries two light springs 14 which tend to maintain frame 13 at an angle to plate 8 (Fig. 5).

In the free state the buckle is open, as shown in Fig. 2. Its angle of opening is limited by a pair of centrally located inwardly extending prongs carried by frame 13. It is therefore easy for the skier to engage the end of strap 4 through the buckle without having to first open the latter, as in required arrangements heretofore used. Fig. 2 shows in broken lines the end of the strap engaged through the buckle. The end of the strap is thereafter again passed through frame 13 and the tension of the strap closes the buckle against the action of springs 14.

It will be understood that the improved strap gear described is easy to operate even with benumbed fingers.

I claim:

1. A buckle for a strap gear for skis and the like, comprising a substantially rectangular frame; a plate pivoted in said frame about an axis transverse to said frame and to said plate, said plate being formed with a tail portion adapted to be fixed to one end of the strap gear and with a gripping edge adapted to cooperate with a transverse side of said frame to grip said strap gear; spring means tending to rotate said plate with respect to said frame to move apart said gripping edge from said transverse side; and abutments to limit rotation of said plate with respect to said frame under the action of said spring means to leave a sufficient space between said gripping edge and the side of said frame opposed to said first named transverse side for the free engagement of the end of said strap gear.

2. A buckle for a strap gear for skis and the like, comprising a substantially rectangular frame; a spindle fixed to said frame in transverse relation thereto and substantially in the central part thereof; a plate pivoted on said spindle, said plate being formed with a tail portion adapted to be fixed to one end of the strap gear and with a gripping edge adapted to cooperate with a transverse side of said frame to grip said strap gear; torsional spring means carried by said spindle and tending to rotate said plate with respect to said frame to move apart said gripping edge from said transverse side; and prongs carried by the longitudinal sides of said frame and bent at right angles towards each other to form abutments for said plate to limit rotation thereof with respect to said frame under the action of said torsional spring means to leave a sufficient space between said gripping edge and the side of said frame opposed to said first-named transverse side for the free engagement of the end of said strap gear.

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