

April 23, 1940.

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SAFETY DEVICE FOR THE FIXATION OF SKI

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2 Sheets-Sheet 1

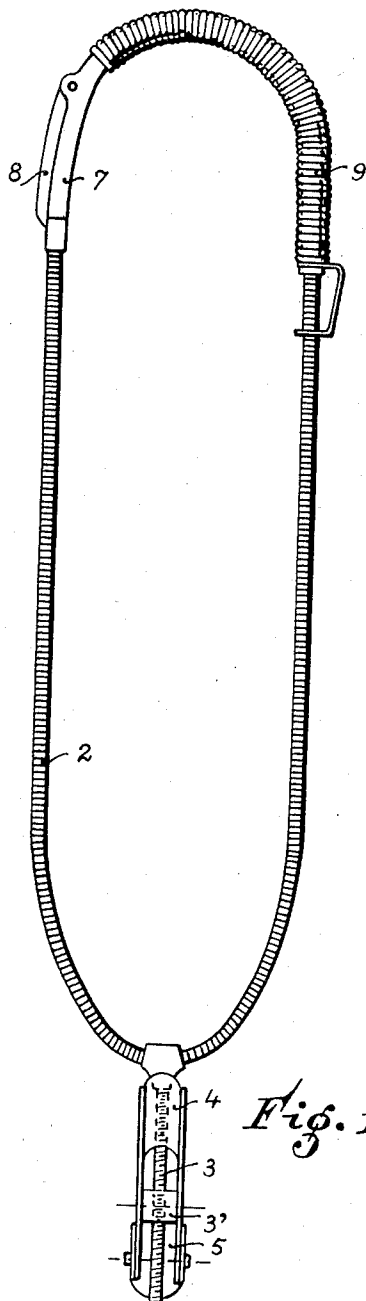


Fig. 1

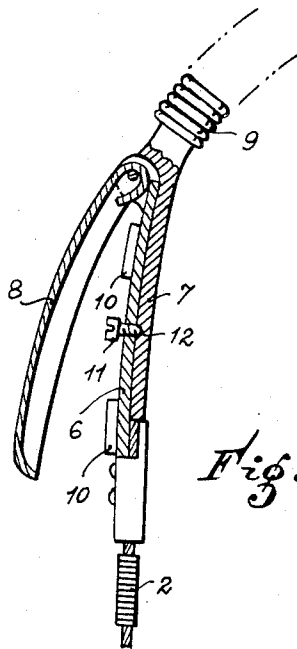


Fig. 2

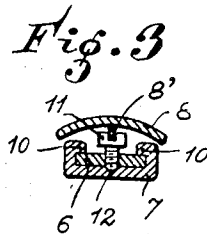


Fig. 3

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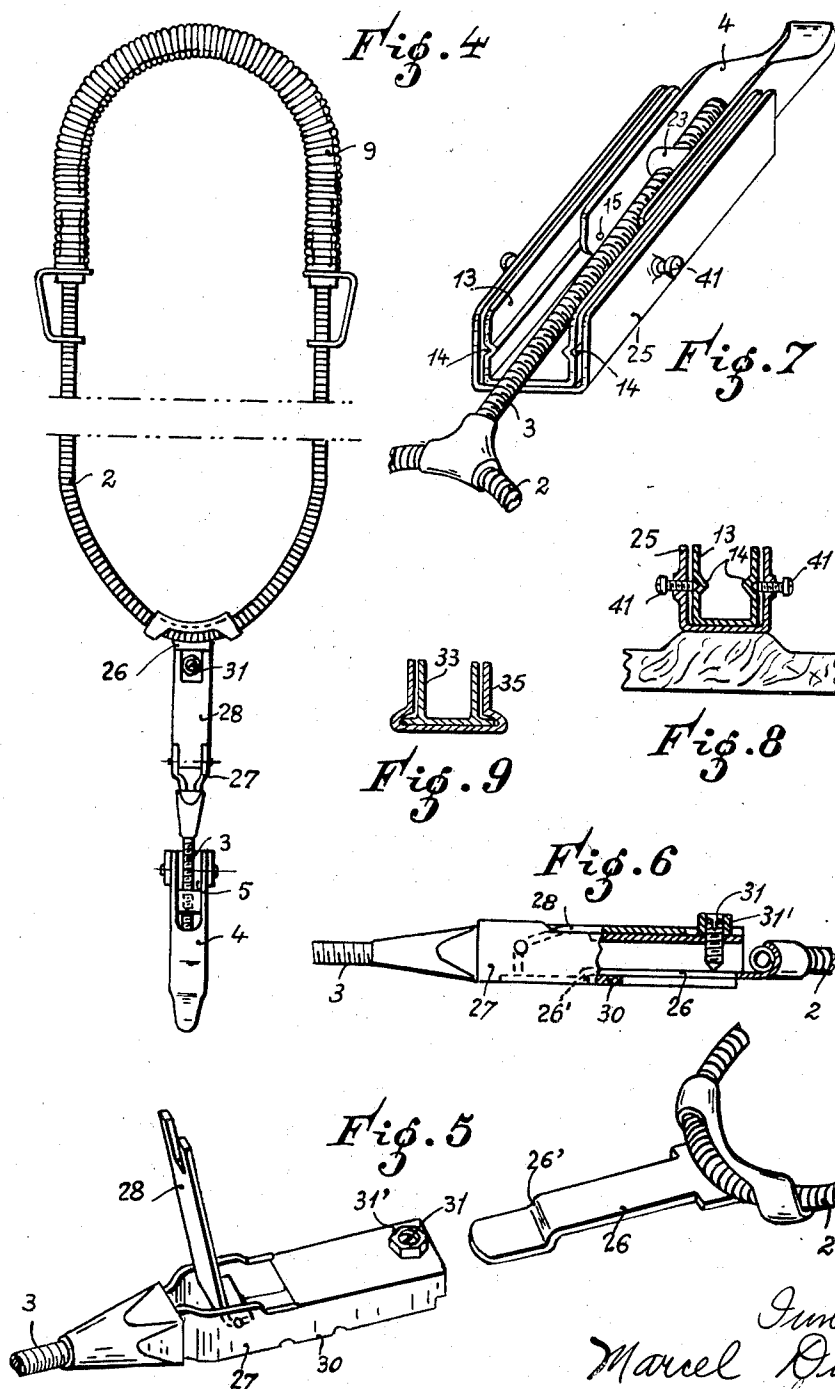
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SAFETY DEVICE FOR THE FIXATION OF SKI

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2 Sheets-Sheet 2



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SAFETY DEVICE FOR THE FIXATION OF
SKI

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Application September 7, 1938, Serial No. 228,844
In France September 10, 1937

4 Claims. (Cl. 280—11.35)

The present invention has for its object a safety device for the fixation of ski, permitting of their separation from the feet of the skier as soon as a violent effort is exerted, for example in case of a downfall, and so on.

The particularities of this device will become evident in the course of the following description and with reference to the accompanying drawings showing:

In Figure 1 an attachment system making use of a flexible member, improved according to the invention;

In Figure 2 a longitudinal section of the safety device applied to the lever shutting the flexible member;

In Figure 3 the safety device in transverse section; Figure 4 is a view similar to Fig. 1 showing a slight modification;

In Figure 5 the pieces constituting the device, in perspective views, as they present themselves previous to assembling;

In Figure 6, the device in longitudinal section, after assembling;

In Figure 7 another embodiment of this device;

In Figure 8, the embodiment of Fig. 7 in transverse section, and

In Figure 9, still another embodiment in transverse section.

According to one, the first, embodiment of the subject matter of the invention, merely cited in the way of example, the safety device is placed on the shutting system 7 of the flexible member 2 (Figure 1) so as to permit of putting the flexible member around the shoe. The flexible member is fixed to the ski 1, by means of a screw 3 screwing into a nut 3' journaled between the arms of a tightening clasp 4 pivoting in a stirrup 5 secured to the ski 1. This tension system permits of a more accurate micrometric adjustment than can be obtained by the hitherto usual slopes (or racks).

The safety device comprises a blade 6 or a lamel (Figure 2), fixed to one of the extremities of the flexible member 2 and engaging a piece 7 of U-like section, forming a guide (see also Figure 3).

The extremity of the lamel 6 is pinched by a lever 8 pivoted to the piece 7 secured to the heel or rear portion 9 at the other extremity of the flexible member 2.

The lamel 6 is maintained on the piece 7, besides by the lever 8, only by the flanges 10 permitting of a certain elasticity of the lamel in its central part. At this place is provided a screw

11, with a lock-nut, traversing the lamel (Figures 2 and 3) and engaging a recess 12 provided in the piece 7.

It is obvious that the force pinching the lamel 6 by the lever 8, and the pressure of the screw 11 to the piece 7 permit, owing to their combined action, a fixation of the blade 6 to the piece 7, which will be the more powerful the more the screw is screwed into this blade.

Nevertheless this manner of fixation permits the separation of the lamel from the piece 7 if the traction effort surpasses the effort of fixation, the buckle or the bent rear portion of the flexible member getting thereby loose or opened and liberating in this way the foot of the skier.

A web 8' can be provided in the lever 8, for engaging the slit of the screw 11 so as to prevent its rotary displacement.

Such a safety device comprising a guide is applicable, instead to the system shutting the flexible member, to any other suitable spot, for example to any other point of the flexible member and especially to the point of its fixation to the ski.

In this case, the elastic lamel 26 (Figures 4 and 5) is fixed to the flexible member 2 in its central buckle, and enters the piece 27 integral with the screw 3 of the stretcher of the flexible.

The lamel 26 is provided with an offset portion 26' (Figure 6) cooperating with a bridge 30 provided below the piece 27. The bent lever 28 and the screw 31 permit of applying the offset portion more or less strongly against the bridge, the elasticity of the lamel nevertheless permitting of its escapement in case of an abnormal effort.

A lock-nut 31' permits of blocking the screw 31 in its position corresponding to the best convenient pressure upon the lamel 26.

The safety device can also be applied directly to the socket 25 for the fixation of the flexible to the ski.

In this case the socket 25 (Figures 7 and 8) is constituted by a U-like, sufficiently long piece wherein slides another equally U-like piece 13.

The wings of this second piece 13 are provided with grooves 14 extending over a certain length of the wings and destined for engagement of the extremities of screws 41 traversing the wings of the socket 25.

The pivoting tensioning lever 4 supporting the nut 23 of the screw 3 accroaching the flexible 2, is articulated at 15 to the wings of the piece 13.

Here too it is obvious that for a determined effort adjustable by means of the screws 41, the

piece 13 separates itself from the socket 25 pushing against its wings so as to liberate the flexible 2 and to permit of its separation from the ski.

It goes without saying that the pieces 25 and 13 could receive any other appropriate section, for example the one shown at 35 and 33 in Figure 9.

Obviously the above described embodiments of the safety device are in no way limiting the possibilities of execution, since manifold modifications both with regard to the general arrangement and to details are possible within the scope of the present invention.

What I claim, is:

15 1. In a system for fixation of the foot to a ski, comprising a metallic flexible member forming a loop for partially surrounding the heel of the shoe, and means fixed to the ski to permit of pulling up and tensioning this flexible member, a safety device placed on the flexible member 20 for releasing the foot of the skier in case of an effort surpassing a certain limit, the said device comprising a sliding member constituted by an elastic lamel, and a retaining member constituted by a guide, and furthermore a cranked 25 lever articulated to said guide-member, the said lamel sliding in the said guide-member and being pinched by the cranked portion of said lever in closed position of the latter, the limit of resistance of sliding of the lamel in the guide being 30 adjusted by a screw traversing the lamel and engaging a recess provided in the guide.

2. In a system for fixation of the foot to a ski, comprising a metallic flexible member forming a loop for partially surrounding the heel of the shoe, and means fixed to the ski for permitting 35 pulling up and tensioning said flexible member, a safety device placed on the flexible member for releasing the foot of the skier in case of an effort surpassing a certain limit, said device comprising a sliding member constituted by an elastic lamel, and a retaining member constituted 40 by a guide, and, furthermore a cranked lever articulated to the member forming guide, a cranked portion on said lamel to slightly accroach a bridge-like part provided in said guide member, said lamel sliding in this guide member, the bent portion of said lever maintaining said cranked 5 portion of the lamel over the bridge of the guide after closing said lever, the limit of resistance of sliding of the lamel in the guide member being adjusted by a screw fixed in the guide member and exerting a pressure upon the lamel. 10

3. In a system for fixation of the foot to a ski, comprising a metallic flexible member forming a loop for partially surrounding the heel of the shoe, and means for fixing and tensioning the flexible member, said means being fixed to the 15 ski, a safety device placed on the flexible member for releasing the foot of the skier in case of an effort surpassing a certain limit, the said device comprising a member tightly sliding in a retaining member, the limit of resistance of 20 sliding of the first member in the second member being adjusted by a screw, the said device being arranged on the flexible member itself in such manner that the sliding member is fixed to one of the extremities of the flexible member 25 and the retaining member to the other extremity and that the flexible member opens itself for liberating the foot when the two members are separated from each other.

4. In a system for fixation of the foot to the ski, comprising a metallic flexible member forming a loop for partially surrounding the heel of the shoe and means fixed to the ski for permitting pulling up and tensioning said flexible member, a safety device placed on the flexible member for releasing the foot of the skier in case of 35 an effort surpassing a certain limit, the said device comprising a member tightly sliding in a retaining member, the limit of resistance of sliding of the first member in the second member being adjusted by a screw, a lock nut preventing 40 all undue displacement of this screw.

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