

[54] REAR STOP FOR SKI BINDING

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[22] Filed: Jan. 27, 1970

[21] Appl. No.: 6,218

[30] Foreign Application Priority Data

Feb. 28, 1969 France.....6905513

[52] U.S. Cl.280/11.35

[51] Int. Cl.A63c 9/00

[58] Field of Search.....280/11.35 T

[56] References Cited

UNITED STATES PATENTS

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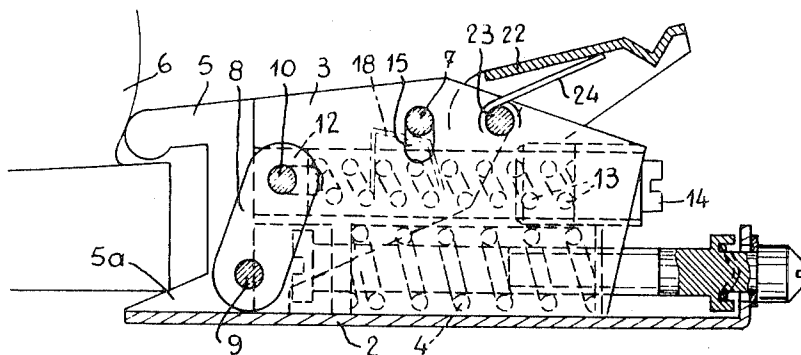
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Assistant Examiner—Robert R. Song
Attorney—Young & Thompson

[57] ABSTRACT

A rear stop for a ski binding comprising a stop body, a jaw, a link pivotally connected to the jaw, a pin hingedly interconnecting said body and said link, said pin passing through an elongated slot in the body, a spring urging the pin toward the front of the slot, a second pin carried by the jaw and passing through a slot in the body that has an upper end and a lower end, a retractable member holding the second pin in the upper end, and means to retract the retractable member thereby to open the rear stop.

4 Claims, 5 Drawing Figures



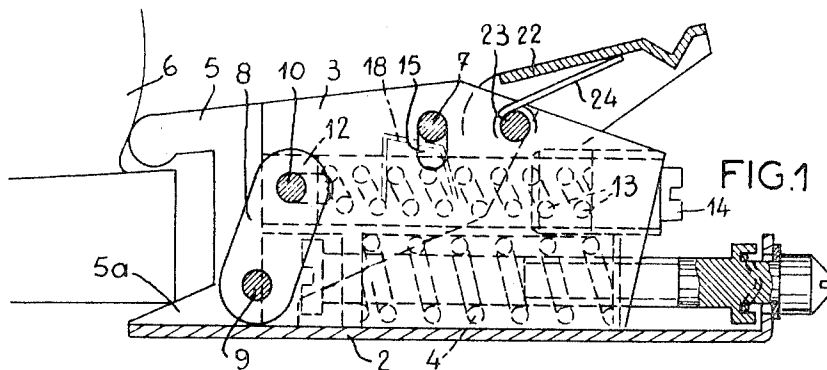


FIG. 1

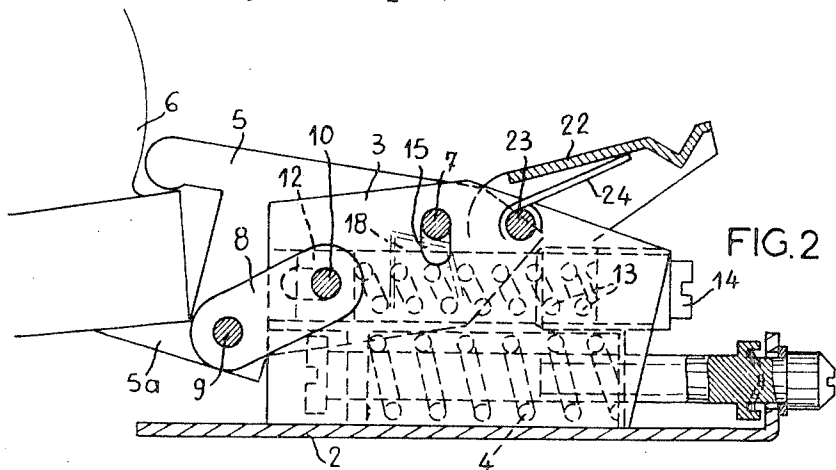


FIG. 2

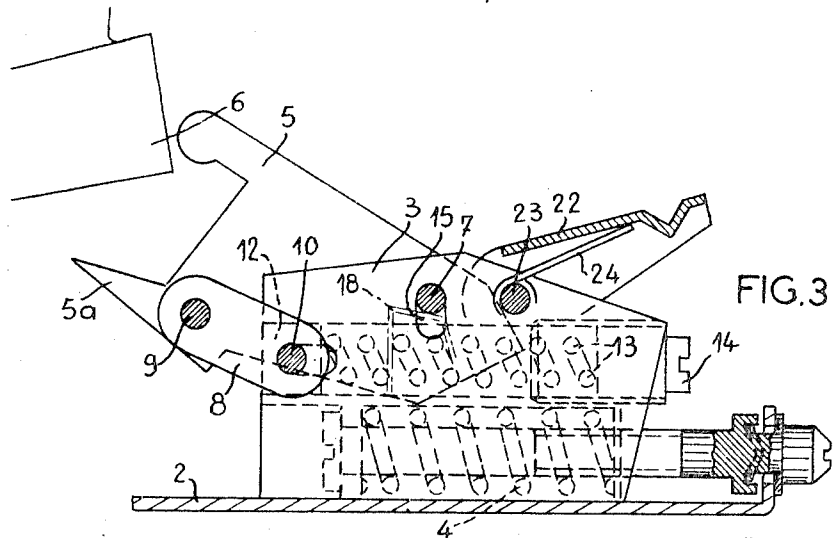


FIG. 3

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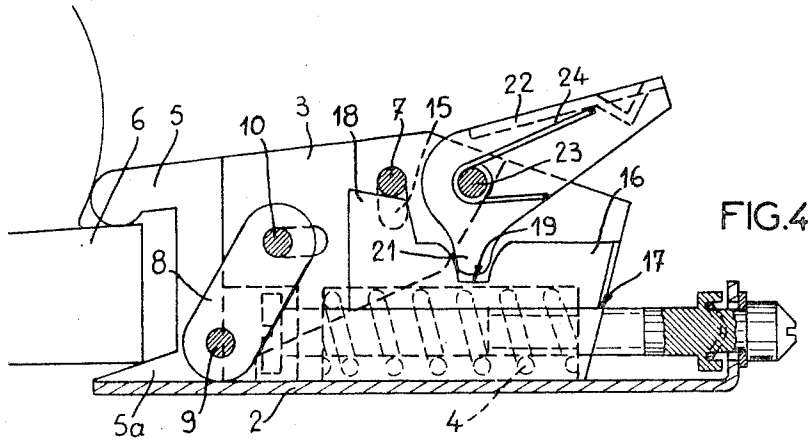


FIG. 4

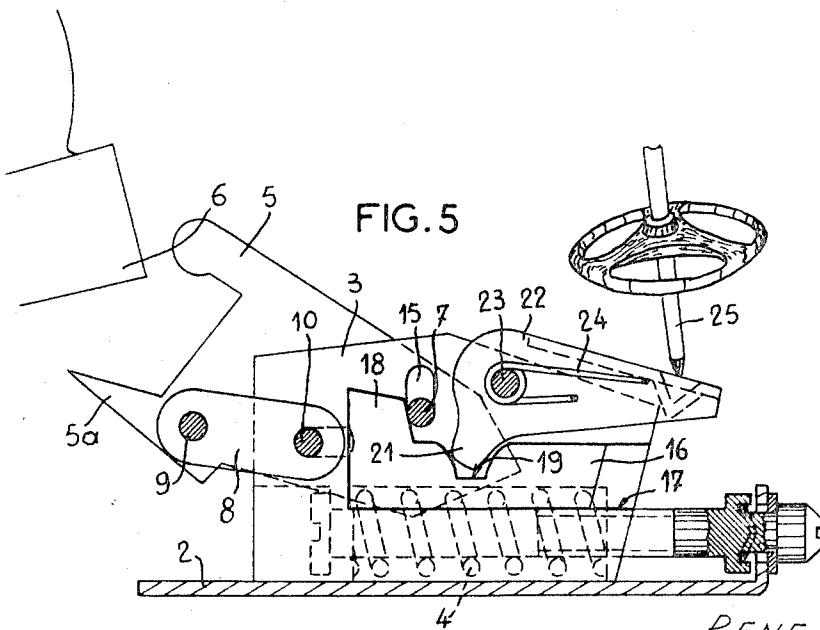


FIG. 5

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REAR STOP FOR SKI BINDING

The present invention relates to rear stops for ski bindings.

In my U.S. Pat. No. 3,408,087 I describe a rear stop for ski binding, mentioned hereinafter as the kind referred to, wherein the jaw accommodating a shoe heel is provided with two pins enabling the said jaw to be hinged to the stop body and to a link respectively, said link being in turn hinged on the stop body by means of a pin which is out of line with respect to the two pins on the jaw and passes through an elongated hole in said stop body, said letter pin being urged by a spring, so that the lower limit of the force required for opening the stop is defined by the disalignment angle of the three above-mentioned pins.

In the embodiment described in my above-mentioned Patent, the force of the spring enabling the stop to be released automatically is adjustable and constant, and one of the two pins acting indirectly as bearings for said spring passes through a curvilinear slot provided in the stop body, said pin remaining bearing on the bottom of said slot when the stop is in its normal position of use, while means are provided for enabling said pin to move within said slot when the user wants to open the stop, that is, when said user wants to take off his skis. As a matter of fact, said means enable said pin and the pin hinging the link on the stop body to move within their respective slots, whereby said link assumes a position such that the three pins normally out of line are first brought into line, and then reach opposite disaligned positions wherein the stop is brought to its opening position, that is, the position enabling the user to take off his ski.

The object of the present invention is to provide a rear stop for ski binding of the kind referred to, the construction of which is simplified.

In a rear stop according to the invention, the link connecting the jaw with the stop body is hinged to said body by means of a pin passing through an elongated slot and held at the front end of the latter by a spring the force of which is adjustable, while the pin hinging directly the jaw on the stop body passes through an elongated slot at the upper part of which it is held by a retractable member intended for opening the stop positively when operated by the user.

An embodiment of a rear stop for ski binding according to the invention will now be described by way of nonlimiting example, with reference to the appended diagrammatic drawing, in which:

FIGS. 1, 2 and 3 are diagrammatic views showing the automatic release device of the stop of the invention in its closed position, that is, in use, then at the time it is being released, and in its opened or released position, respectively;

FIGS. 4 and 5 are side elevational views showing the positive release device for the stop of the invention, in its closed position, that is, when the stop is in use, and just after the opening of the latter, respectively.

In the Figures, 2 indicates the base plate on which the stop body 3 is mounted for sliding lengthwise by means of slides (not shown), while 4 indicates a spring which urges the stop forward, while allowing a resilient rearward movement of the latter when the user puts on his ski, as described previously in my above-mentioned patent.

Five indicates the jaw intended for accommodating the rear portion of the heel 6 of a shoe. Said jaw is pivoted on the stop body 3 by a pin 7, on the one hand, and hinged to a link 8 by a pin 9, on the other hand. Said link 8 is pivoted on the stop body 3 by a pin 10. Said pin 10 is actually constituted by two coaxial lugs integral with a central member 12, against the rear face of which a helical spring 13 bears, while the rear end of said spring bears against a screw 14 adapted to be screwed in a tapped housing in the stop body 3.

The pin 10 pivoting the link 8 on the stop body 3 passes through a horizontal elongated slot provided in said stop body 3 and, under the pressure of the spring 13, bears resiliently on the front end of said slot, as shown in FIG. 1. In such a position, the three pins 9, 10, and 7 are disaligned, and the jaw 5 is in its lowermost position, which corresponds to the closed

position of the stop. In this position, the shoe of the user is firmly held against the front stop and the rear stop of the binding, and is thus made integral with the ski. When the tractive effort exerted upward by the jaw 5 of the rear stop by the user's shoe exceeds a predetermined maximum value, said jaw 5 tends to rise, the link 8 tending to push back its pin 10 within its slot while compressing the spring 13. The stop is thus able to reach the unbalanced position shown in FIG. 2, in which position the pins 9, 10 and 7 are in line. The jaw 5 is, of course, unable to remain in said unbalanced position and passes beyond it to reach the opposite balanced position shown in FIG. 3, that is, its open position, at which the shoe is entirely disengaged from the rear stop of the ski binding.

When the user wants to put his ski on again, it is only necessary for him to press on the lower wing 5a of the jaw by means of the lower surface of his shoe's heel. The stop comes back thus to its closed position as shown in FIG. 1, according to a course opposite to that described hereinabove.

Means are provided, of course, for enabling the user to take off his ski at will. To this end, the pin 7 hinging the jaw 5 to the stop body 3 does not pass through a round hole but through a substantially vertical elongated slot 15 provided in the stop body 3, and a member is provided for holding normally said pin 7 at the upper portion of said slot 15.

Said member consists of a small plate 16 slidingly mounted in a slide 17 provided on the side of the stop body 3. Said small plate 16 has an upper wing 18 on which the pin 7 rests, so that it is the said wing 18 which holds the pin 7 at the upper portion of the elongated slot 15. The small plate 16 is provided, besides, with a notch 19 in its central portion, which notch houses the nose 21 of a small lever 22 hinged at 23 to the stop body 3. A spring 24 holds said lever 22 in its uppermost position, in which the small plate 16 is shifted rearward to a maximum by the nose 21 of the lever 22.

When the user wants to take off his ski, it is only necessary for him to exert a pressure on the lever 22, either by hand or by means of the tip of one of his ski sticks 25, as shown in FIG.

5. As a matter of fact, this pressure causes the lever 22 to move angularly about its pivot pin 23, which results in the nose 21 of said lever 22 causing the small plate 16 to move forward. Due to this forward translation, the wing 18 on the small plate 16 does not hold the pin 7 any longer, and the latter drops into the lower end of the elongated slot 15, while the three pins 9, 10 and 7 fall automatically in line, which enables the jaw 5 to be brought to its open position as shown in FIG. 5.

As soon as the user stops depressing the lever 22, the latter comes back, of course, to its uppermost position as shown in FIG. 4, while bringing back the small plate 16 rearward and, consequently, the pin 7 upward. But the jaw 5 remains in its open position, so that, in order to put the ski on again, it is only necessary for the user to exert a pressure on the lower wing 5a of the jaw 5 with his shoe's heel, exactly as he would do following an automatic opening of the shoe.

According to the provisions of the Patent Statutes, I have explained the principle of my invention and have described what I now consider to represent its best embodiment. However, I desire to have it understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

What is claimed is:

1. A rear stop for a ski binding, comprising a stop body, a jaw, a link pivotally connected to the jaw, a pin transversely extending hingedly interconnecting said body and said link, said pin passing through an elongated slot in said body, a spring urging said pin toward the front of said slot, a second transversely extending pin carried by said jaw and passing through a second slot in said body that has an upper end and a lower end, a retractable member holding said second pin in said upper end, and means to retract said retractable member thereby to open the rear stop.

2. A rear stop as claimed in claim 1, and means to adjust the force of said spring.

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3. A rear stop as claimed in claim 2, said means to adjust the force of said spring comprising a screw screw-threadedly received in said stop body and bearing against said spring.

4. A rear stop as claimed in claim 1, said retractable member comprising a plate sliding on the side of said body and

having a notch therein, said means to retract said retractable member comprising a spring-loaded lever pivotally mounted on said body and having a nose selectively engageable in said notch.

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