Aug. 11, 1959 G. P. J. SALOMON 2,899,211

SAFETY THRUST BLOCK FOR SKIS

Filed May 7, 1956 4 Sheets-Sheet 1

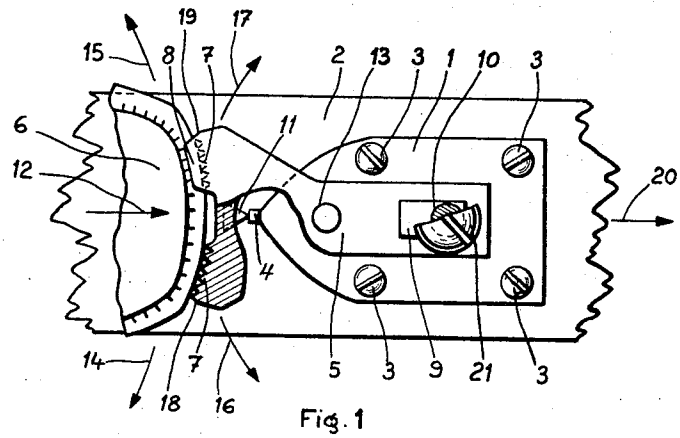

Fig. 1

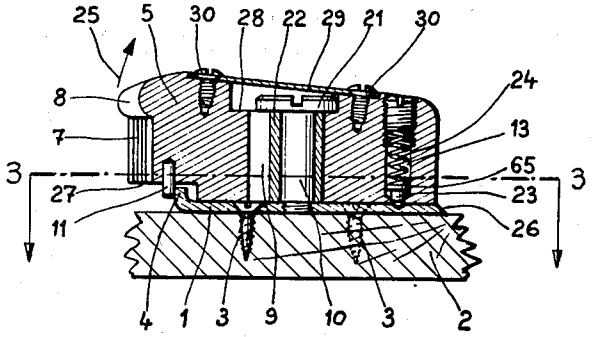

Fig. 2

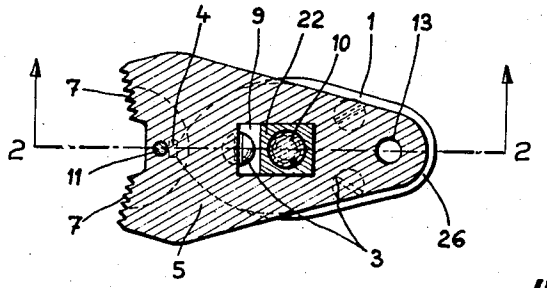

Fig. 3

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SAFETY THRUST BLOCK FOR SKIS

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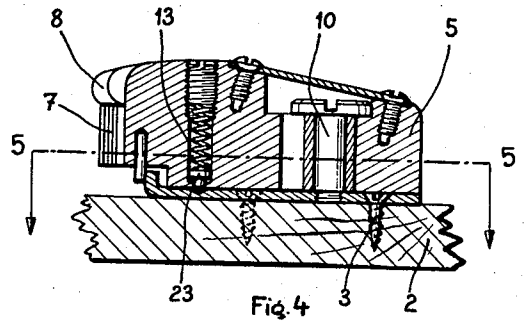

Fig. 4

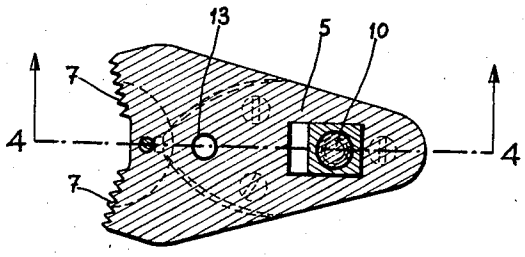

Fig. 5

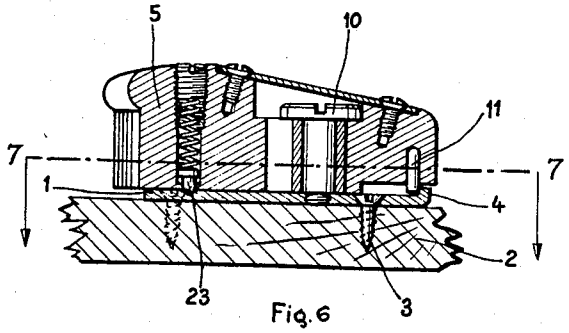

Fig. 6

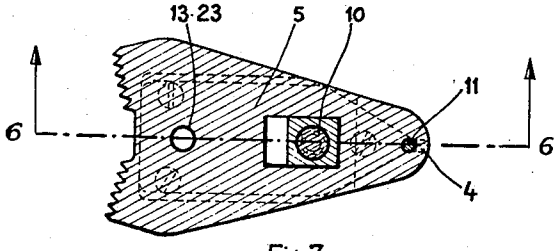

Fig. 7

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SAFETY THRUST BLOCK FOR SKIS

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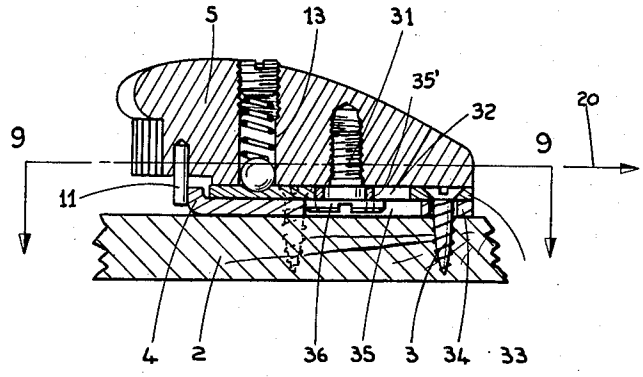

Fig. 8

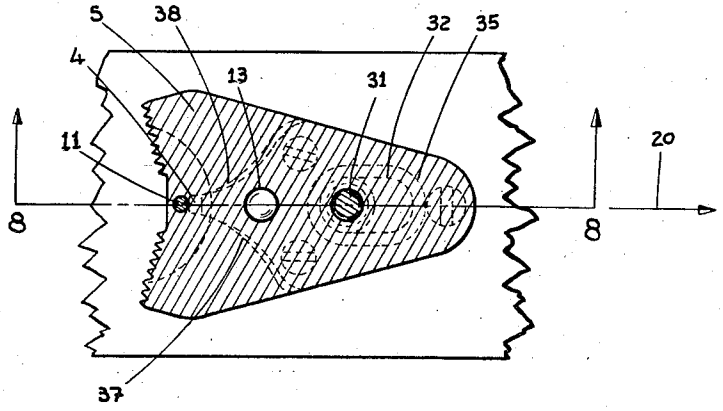

Fig. 9

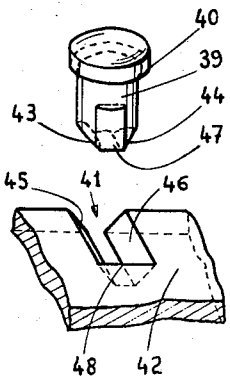

Fig. 11

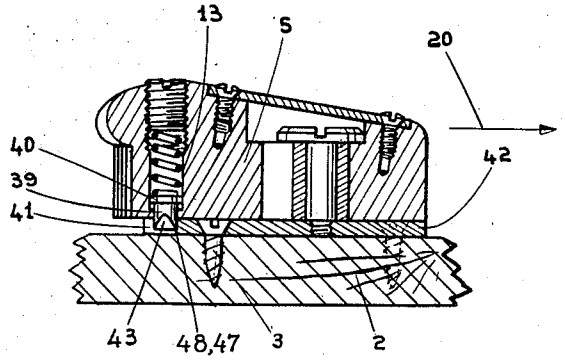

Fig. 10

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SAFETY THRUST BLOCK FOR SKIS

Filed May 7, 1956 4 Sheets-Sheet 4

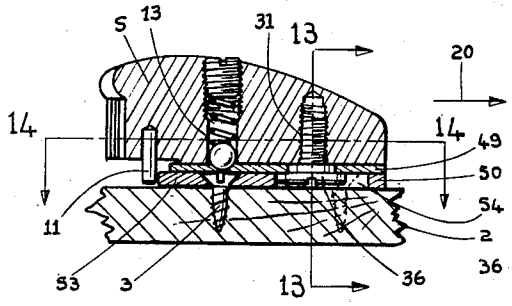

Fig. 12

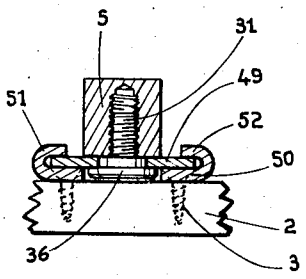

Fig. 13

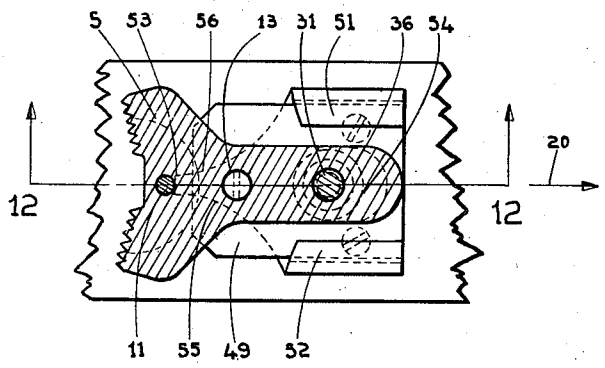

Fig. 14

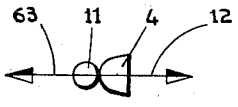

Fig. 19

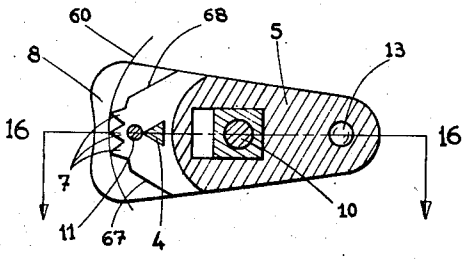

Fig. 15

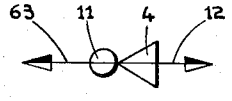

Fig. 17

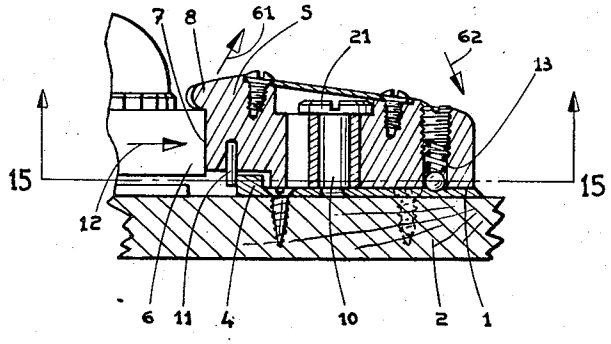

Fig. 16

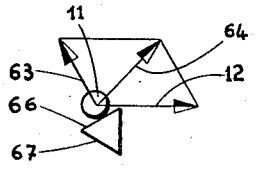

Fig. 18

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United States Patent Office 2,899,211 Patented Aug. 11, 1959

2,899,211

SAFETY THRUST BLOCK FOR SKIS

Georges Pierre Joseph Salomon, Annecy, France

Application May 7, 1956, Serial No. 583,014
Claims priority, application France May 7, 1955
12 Claims. (Cl. 280—11.35)

In certain known types of safety fixing devices for skis, the front part of the sole of the shoe comes into contact with a thrust-block against which it is held, for example, by means of an appropriate bracing cable. This thrust-block is intended, under certain conditions of use, to allow the disengagement of the boot from the fixing device of the ski, such as for example when a too violent force could cause sprains, fractures, etc.

Such blocks, which are theoretically satisfactory, tend to be unsatisfactory in practical use: on the one hand, it is usually necessary to provide the boot with an iron fitting of special profile to engage with the thrust-block, and this fitting may cause inconvenience when the boot is to be used for other purposes than skiing; and on the other hand, the disengagement of the block is usually obtained by rotation of said block around an axis when an immobilizing stop-pin or ball which is normally provided had been freed under the effect of a force which makes it necessary to liberate the boot. This disengagement does not occur immediately, but on the contrary with a delay which retards the fast and sure operation of the safety device. This last mentioned inconvenience is further aggravated when a concave shape of sufficient width to receive nearly all the front part of the sole is given to the thrust block (in this case there is usually no iron fitting). The distance between the extremities of the concave opening in the block not only prevents immediate disengagement of the boot the moment the block begins its rotation, but also makes it necessary for the said boot to move rearwardly which, when this is not possible, causes the safety device to jam, or, when it is possible, retards and seriously interferes with its operation.

The thrust block of the present invention has for its object to obtain, whilst retaining a remarkably low cost price resulting from great ease of manufacture and machining, a practically immediate disengagement of the block as soon as it has left its normal position of use on the fixing device under the effect of a particularly violent force, a position in which it is normally maintained by means of a trigger of known type, which may be adjustable by spring and ball (or other means).

According to the invention, the rapid retraction of the block will be obtained by the provision that its pivotal support is capable of sliding, either with respect to said block, or with respect to its support, this sliding motion enabling the immediate freeing of the boot. In the normal position of the block and under the effect of the pressure normally exerted by the boot on said block, a stop-pin in the latter bears against a corresponding stop-pin of the supporting plate fixed to the ski, preventing the thrust-block from sliding forwards in the slot provided for this purpose, this sliding motion however becoming possible again upon non-alignment of the stop-pins as soon as the block moves from its normal position, immediated disengagement thus being provided.

To avoid, on one hand, that the force required to initiate the disengagement of the boot should in a certain measure be proportional to the force applying the boot against the block, the adjustment of the positioning component remaining otherwise unchanged, and, on the other hand that the motion of rotation of small amplitude which precedes the forward movement of the block should cause the latter to bind against the sole of the boot, in the case of a particularly firm boot, according to the present invention several embodiments have been foreseen in which the pressure exerted by the boot against the block, producing a proportionate braking of the limited rotation of the latter, gives rise to a compensating resultant which helps the rotation of the block in such a way that the disengagement of said block is obtained for forces which are practically independent of that applying the boot against the block.

This result will be obtained, as in the preceding case, by making the stop-pin normally fixed to the body of the block take up its position against the stop-pin affixed to the supporting plate of said block. These stop-pins are made with a characteristic shape with the intention of giving rise to the compensating resultant of rotation mentioned above.

It has also been foreseen, still according to the invention, that the notches of the thrust-block destined to prevent any lateral slipping of the boot are placed along an arc of a circle substantially centered on the normal pivotal axis of the block, and would in addition and with advantage be provided with clearances towards the inside of the arc, in order to exclude all possibility of binding against the boot.

The following description and annexed drawings will permit better understanding of this invention, several non-limitative examples of various embodiments and variants being shown.

Fig. 1 is a very simplified view from above of the block device in which, with the help of the parts shown in broken lines, we can see the principal characteristics of the invention.

Fig. 2 is a view in elevation with a longitudinal cut along line 2—2 of Fig. 3 of a safety thrust-block in keeping with the invention.

Fig. 3 is a view from below of the thrust-block according to Fig. 2, cut along 3—3 of the latter figure, the part showing the supporting ski not being represented.

Fig. 4 is a view in elevation with a longitudinal cut along 4—4 of Fig. 5 of another embodiment of thrust-block according to the invention.

Fig. 5 is a view from above of the thrust-block according to Fig. 4, cut along 5—5 of this latter figure, the part showing the supporting ski not being represented.

Fig. 6 is a view in elevation with a longitudinal cut along 6—6 of Fig. 7 of another embodiment of thrust-block according to the invention.

Fig. 7 is a view from below of the thrust-block according to Fig. 6 cut along 7—7 of this latter figure, the part showing the supporting ski not being represented.

Fig. 8 is a view in elevation with a longitudinal cut along 8—8 of Fig. 9 of another embodiment of thrust-block according to the invention.

Fig. 9 is a view from below of the thrust-block according to Fig. 8 cut along 9—9 of this latter figure.

Fig. 10 is a view in elevation with a longitudinal cut identical to that of preceding Figs. 2, 4 and 6, of another embodiment of thrust-block.

Fig. 11 is a partial view in perspective of the immobilizing components of the block according to Fig. 10.

Fig. 12 is a view in elevation with a longitudinal cut along 12—12 of Fig. 14 of another embodiment of thrust-block according to the invention.

Fig. 13 shows a transverse section cut along 13—13 of Fig. 12 of the thrust-block embodiment represented in said Fig. 12.

Fig. 14 is a view from below of the thrust-block according to Fig. 12 cut along 14—14 of the latter figure.

Fig. 15 is a view from below in cross section along 15—15 of Fig. 16 of a thrust-block variant, the block only being shown.

Fig. 16 is a view in elevation of the said block, cut along 16—16 of Fig. 15, the boot and the supporting ski being partly represented.

Figs. 17 and 18 are schematic views from below showing the composition of the forces at the level of the stop-pins of a block and its support, identical to those according to Figs. 15 and 16.

Fig. 19 is a schematic view from below of a variant for the stop-pins of the block and its support, identical to those according to Figs. 15 and 16.

In Fig. 1 a supporting plate 1 is fixed to ski 2 by means of screws 3 and includes a stop-pin 4 obtained for example by bending upwards the sheet-metal constituting plate 1. The body 5 of the block receives the end 6 of the boot with which it remains normally in engagement by means of notches 7 designed to avoid any lateral slipping, and lips 8 of the block are designed to prevent the boot from moving upwardly. The body 5 of the block is provided with a slot 9 through which extends a bossed pivot screw 10 which serves for assemblage of the block to the supporting plate 1. A stop-pin 11 fixed to the body 5 of the block rests normally against the corresponding stop-pin 4 of the supporting plate 1 under the action of the force 12 exerted by the toe 6 of the boot, this force resulting, for example, from the action of tension cables of known type which are not shown. The body 5 of the block is maintained in position of use by means, for example, of a ball trigger of known type, its position 13 only being shown on the drawing, a cavity being provided in the supporting plate 1 for the catch.

The stop-pin 4 projects above the upper face of the supporting plate 1, the length of stop-pin 11 of the body 5 of the block being such that it can in no case come into contact with said upper face of the supporting plate 1. The safety block will operate in the following manner: when the boot exerts a torsional stress in the direction of arrows 14 or 15 sufficient to disengage the trigger ball lodged at 13, body 5 of the block will rotate as shown by arrows 16 or 17, describing an extremely short arc around the pivot screw 10, an arc which is insufficient to cause binding of the edges 18 and 19 of body 5 of the block against the toe 6 of the boot, and following which stop-pin 11 will no longer engage stop-pin 4; the body 5 of the block will then be free to give way to the pressure exerted in the direction of arrow 12 by the boot, by sliding forward in the direction of arrow 20, around the bossed pivot screw 10 thanks to slot 9. This sliding motion, the extent of which is fixed by the dimensions of slot 9, will have the desired effect of disengaging the boot rapidly, whether the rotation of body 5 of the block around the pivot screw 10 continues or not. All risk of binding between the boot and the body of the block is eliminated by virtue of the rapid retraction of the latter, said retraction also being sufficient to cancel the pressure exerted along arrow 12 by the boot on the thrust-block body 5. The head 21 of the pivot screw 10 rests on body 5 of the block, holding the latter in such manner that it cannot slide or rotate, otherwise than substantially parallel to the upper face of supporting plate 1.

Figures 2 and 3 show a preferred embodiment of the invention, in which the supporting plate 1 fixed to the ski 2 by means of screws 3 comprises a stop-pin 4 identical to that of Fig. 1, and is provided, by means of a bossed pivot-screw 10, with a thrust-block body 5. This body comprises, as in Fig. 1, notches 7 and lips 8 designed to immobilize the toe of the boot, as well as a stop-pin 11 which works with the stop-pin 4 of the supporting plate 1. In this embodiment, the pivot-screw 10 is held in contact with the sides of slot 9 of body 5 through the intermediate shell 22 destined to reduce the friction between the sliding or rotating surfaces. The immobilizing and positioning ball trigger 23 in body 5 of the thrust-block is, in normal conditions of use, disposed in cavity 13, which is situated with respect to pivot-screw 10 on the side opposite to the zone of contact of thrust-block body 5 with the toe of the boot, in such manner that the pressure of the spring 24 of the ball-trigger 23 against the supporting plate 1 should tend to balance, with respect to said pivot-screw 10, the pressures which may be produced in the direction of arrow 25 by the edge of the sole of the boot against the lips 8 of the thrust-block body 5. Referring to Fig. 2, it will be noted in particular that the ball-trigger 23 is provided with a shoulder 65 which prevents it being ejected when the rotation of the thrust-block body 5 has disengaged said ball-trigger from its rest against the supporting plate 1. The bevelled edge 26 of the supporting plate 1 enables the ball-trigger 23 to move upwards into cavity 13 as the thrust-block body 5 is returned to its normal position of use, the operation of the whole being otherwise identical to that described for Fig. 1. It will also be noted that clearance 27 provided in the thrust-block body 5 permits the free passage of stop-pin 4 under said body 5; and also that the stop-pin 11, which can with advantage be a simple taper-pin driven into the thrust-block body 5, is of such length that its visible extremity will not enter into contact with the upper face of supporting plate 1 during operation. The head 21 of pivot-screw 10 permits sliding and rests against the bottom of groove 28 provided for this purpose in the thrust-block body 5, and opposes the wrenching forces applied to said body 5 by the spring 24 and the forces in the direction of arrow 25 from the toe of the boot. A plate 29 fixed to the thrust-block body 5 by means of the two screws 30 encloses the space housing the pivot-screw 10, formed by slots 9 and 28, and enables this space to be filled with grease which eases and maintains correct operation of the thrust-block.

The embodiment variant represented in Figs. 4 and 5 differs from that of Figs. 2 and 3 only by the position of ball-trigger 23 situated in its housing 13 in the thrust-block body 5, between the pivot-screw 10 on the one hand, and the notches 7 and lips 8 destined to receive the toe of the boot on the other hand, said lips 8 being divided into two parts in identical manner to those represented in Fig. 1 and Fig. 2.

Figures 6 and 7 represent a variant which differs from that described in Figs. 2 and 3 only by the inversion, with respect to pivot-screw 10, of the respective positions of ball-trigger 23 and the stop-pins 11 of thrust-block body 5, and 4 of supporting plate 1, these stop-pins being situated at the extremity of the thrust-block opposite to that destined to receive the toe of the boot.

The operation of these last two variants (Figs. 4, 5, 6 and 7) does not differ from that described for variants of Figs. 1, 2 and 3.

In Figs. 8 and 9, in order to reduce as far as possible the size of the thrust-block body 5, the bossed pivot-screw 31, whose function is identical to that of pivot-screw 10 of the preceding figures, is fixed to the thrust-block body 5. The slide slot 32 corresponding to slots 9 of the preceding figures is provided in an intermediate plate 33 which is fixed by means of the ski fixing screw 3 to a supporting plate 34, corresponding to the plate 1 described in the preceding figures, and provided in addition with a recess 35 for holding and housing the head 36 of screw 31. Preferably, a sleeve 35′ is provided coaxial with the pivot-screw 31 and engaging with the inner surface thereof the boss of screw 31 and with the outer surface thereof the slot 32 so as to reduce friction during movement of the thrust-block body 5. A stop-pin 11 in the thrust-block body 5 will cooperate, as previously, with the stop-pin 4 carried by plate 34, but because of its length it will not be able, during the displacement of the thrust-block body 5 in direction of arrow 20 forwardly on the ski, to pass over the supporting plate 34,

the recessed edges 37 and 38 of the said plate however enabling the rapid retraction of the thrust-block body 5 during operation. Thrust-block body 5 is provided, as previously, with a ball-trigger in housing 13, positioning the said thrust-block body, the ball-trigger locking in a corresponding recess in the intermediate plate 33 fixed to the supporting plate 34. The operation of this embodiment will be identical to that of the above-described embodiments, with the exception that the thrust-block body 5 will not be able to return, during operation and after disengagement of the stop-pins 4 and 11, to the position in which its longitudinal axis is parallel to that which said axis occupied before disengagement, because of the respective characteristics of stop-pin 11 and plate 34. It is evident that it is possible, as in the case of the preceding embodiments, to adopt various relative positions for the stop-pins, the ball-trigger, etc., with respect to the pivot screw of the thrust-block body.

Figures 10 and 11 illustrate the replacement, according to a particularity of the invention, in a thrust-block otherwise identical to that described in the preceding Figs. 2 and 3, of the stop-pin system 4 and 11 by a trigger 39 with a shoulder 40, particularly illustrated in Fig. 11, which provides, in addition to its known positioning effect, the restraining action which devolved precedingly to the said stop-pins. This trigger is fitted in housing 13 of the thrust-block body 5 and engages in a slot (or other recess) 41 in the supporting plate 42, attached to the ski 2 by the screws 3, said trigger being prevented from rotating in its housing 13 by appropriate means (key-pin, etc.) not illustrated. The bevels 43 and 44 of the trigger will catch, in the normal position of use of the thrust-block body 5, against the corresponding bevels 45 and 46 of the supporting plate 42, thus furnishing the known positioning effect; the flat 47 on the trigger will rest, whilst said trigger is engaged in slot 41 of the supporting plate 42, against the end 48 of said slot, said end being perpendicular to the faces of supporting plate 42. It will thus be seen that the retraction, in the direction of the arrow 20, of the thrust-block body 5, will only be possible after disengagement of the trigger, this effect being substantially identical to that obtained previously with the stop-pins 4 and 11 (Figs. 1, 2), all other operating characteristics remaining unchanged.

Figures 12, 13 and 14 illustrate an embodiment of thrust-block which differs from that described in Figs. 8 and 9 above by the rotatable fitting on the thrust-block body 5, by means of the pivot-screw 31, of an intermediate plate 49 provided with the positioning recess of the trigger, this intermediate plate 49 being held slidably on the supporting plate 50, fixed to the ski 2 by screws 3, by means of the lips 51 and 52 provided for example by folding over said plate 50. The stop-pin 11 of the thrust-block body 5 will rest against extremity 53 of plate 50, which takes the place of stop-pin 4 of plate 34 in Fig. 8. The sliding motion will take place between the intermediate plate 49 and the supporting plate 50 which retains it, a slot 54 being provided in said supporting plate to receive the head 36 of screw 31 and thus limit the said sliding motion. The rotation will take place, as indicated above, between the thrust-block body 5 and the intermediate plate 49, around the pivot-screw 31, the plate 49 being provided in addition with openings which are not shown but which give access to screws 3 fixing the supporting plate 50 to the ski 2, in order to permit assemblage. It is thus seen that the operation of the thrust-block is identical to that described above, in particular for the variant according to Figs. 8 and 9, the stop-pin 11 entering, during retraction of the thrust-block body 5 in direction of arrow 20 towards the front of the ski, into either of the cutouts 55 and 56 in the supporting plate 50, similar to cutouts 37 and 38 in the supporting plate 34 of Fig. 9.

In Figures 15 and 16, the thrust-block (otherwise substantially identical to that described in Figs. 2 and 3), is provided with notches 7 on its body 5, with the intension of preventing lateral movement of the boot, the extremity 6 of which engages under the lips 8 with said notches. These notches 7, say three for example, are disposed along the arc of a circle 60 which has substantially for its center the axis of pivot-screw 10, in the position of use of the thrust-block. The lip 8 is shaped so that during operation of the thrust-block, it will at no moment come into contact with the upper part of the boot, and the substance of the thrust-block body is limited towards the extremity 6 of the boot, with the exception of the lip 8, by clearances 67 and 68 recessed behind the arc of circle 60 positioning notches 7, on either side of the latter, in such manner that during rotation, as limited as it may be, of the thrust-block, no binding of the thrust-block body 5 against the sole of the boot may take place.

When the end 6 of the shoe exerts pressure along arrow 12 against the thrust-block body 5 (Fig. 16), this pressure produces a force 61 which tends to lift the front of the thrust-block body from the supporting plate 1, thus increasing the pressure of said body against the head 21 of the pivot-screw 10, and, following arrow 62, against the supporting plate 1.

It is evident that the greater the force 12, the greater will be the resulting friction under the head 21 of the pivot-screw 10 and against the supporting plate 1 which will oppose the eventual retraction-rotation motion of the thrust-block body 5 with respect to the pivot-screw 10, the adjustment of the known positioning component (situated in 13) having however not changed.

In order to compensate for the resistance furnished by this friction, the stop-pins 11 of the thrust-block body 5 and 4 of the supporting plate 1, have the shape more particularly apparent in Figs. 15, 17 and 18, as well as in Fig. 19.

In Fig. 17, the stop-pin 11 of the thrust-block body 5 is of cylindrical shape and rests on an edge of stop-pin 4, of prismatic shape, integral with the supporting plate 1; both stop-pins being identical to those illustrated in Fig. 15. With the thrust-block in its normal position of use, the force 12 acting on pin 11 is compensated for by the reaction 63 of pin 4, and the system is balanced. As soon as the thrust-block is urged to rotate (Fig. 18), pin 11 engages with one of the faces (66) of the prism formed by pin 4, the composition of forces 12 and 63 giving rise to a resultant 64 which aids the rotation of the said thrust-block with increasing force as component 12 increases.

By suitable choice of the angle of the sliding faces 66 and 67 of the prismatic pin 4 it is possible to obtain a resultant 64 which is proportional to the values of force 12 and which compensates for the braking and friction due to the action of this force.

Still according to the invention, one may replace the prismatic shape of one of the two stop-pins under consideration by a shape appropriate to the desired increase of the resulting force (such as 64, Fig. 18), such as for example a semi-cylindrical shape, Fig. 19, for stop-pin 4 integral with the thrust-block support, and opposing the cylindrical stop-pin 11 of the thrust-block body, the system being represented in balanced state between the applied force 12 and the reaction 63, as in Fig. 17.

It is of course evident that one would remain within the invention if the shape of the pins were reversed, i.e. in giving the prismatic, semi-cylindrical, etc. shape to pin 11 in the body of the thrust-block, the stop-pin 4 integral with the supporting plate then having a cylindrical shape, or any appropriate shape enabling the compensating effect hereabove described to be obtained.

The operation of the safety thrust-block according to Figs. 15, 16, 17, 18 and 19 is identical to that of the embodiments previously described, but in addition enables independent adjustment of the disengagement of the thrust-block with respect to the pressure exerted by the boot, as well as increased speed of disengagement. It

goes without saying that the particularities of the embodiments of Figs. 15–19 may be combined with those resulting from the embodiments previously described.

It is equally evident that the various possible embodiments of the safety thrust-block according to the invention are not limited to those described above, that in particular one may place one or several height adjusting plates between the supporting plate (**1**, **34**, **42**, or **50**) and the ski **2**, these plates being fixed to said ski **2** by means of screws **3** which traverse them, in such manner that (see above figures) the lips **8** of the thrust-block body **5** engage exactly above the sole of the boot.

It is also evident that the various components of the safety thrust-block for skis may be made of any matter or combination of materials, be subject to any treatments, thermal, mechanical, chemical, etc. which may be judged preferable, be of all shapes, of all colours obtained by any process whatsoever, and comprise any particularities not described in the text and/or the accompanying drawings, without for all this leaving the field of the invention.

What I claim is:

1. In a safety ski binding for skis, in combination, support means; a thrust block carried by said support means in front of a ski boot and having a front end and a rear end, the latter being located rearwardly from said front end in direction of the ski and in front of said ski boot; boot engaging means provided at the rear end of said thrust block extending in normal position of said block substantially transversal to the axis of the ski and adapted to engage only the front end of the boot arranged rearwardly of said thrust block; means for mounting said thrust block on said support means for turnable movement in opposite directions from said normal position thereof and for slidable movement from a rearmost position forwardly; means for blocking said forward slidable movement of said thrust block from said rearmost position thereof when said thrust block is in normal position and for permitting said thrust block to slide forward when it is turned from said normal position; and yieldable locking means tending to prevent turning of said thrust block in said rearmost normal position thereof.

2. A safety ski binding as defined in claim 1 in which said means for mounting said thrust block on said support means include a slot formed in said thrust block and a pivot pin extending through said slot and fastened with a lower end thereof to said support means.

3. A safety ski binding as defined in claim 2 and including a sleeve coaxial with said pivot pin and engaging with the inner surface thereof said pin and with the outer surface thereof said slot so as to reduce friction during movement of said thrust block.

4. A safety ski binding as defined in claim 1 in which said support means include an intermediate plate sandwiched between the ski and said thrust block and in which said means for mounting said thrust block on said support means include a slot formed in said intermediate plate and a pivot pin extending through said slot and fastened to said thrust block.

5. A safety ski binding as defined in claim 4 and including a sleeve coaxial with said pivot pin and engaging with the inner surface thereof said pin and with the outer surface thereof said slot so as to reduce friction during movement of said thrust block.

6. A safety ski binding as defined in claim 1 in which said means for blocking forward sliding of said thrust block from said rearmost position thereof include a first stop pin fixedly mounted on said support means and a second stop pin fixedly mounted on said thrust block, said stop pins in normal position of said thrust block engaging each other and the axes of said stop pins being substantially normal to a top surface of the ski and intersecting in normal position of said thrust block the ski axis.

7. A safety ski binding as defined in claim 6 in which said stop pins are located between said boot engaging means and said means for mounting said thrust block on said support means.

8. A safety ski binding as defined in claim 6 in which said means for mounting said thrust block on said support is located between said boot engaging means and said stop pins.

9. A safety ski binding as defined in claim 1 in which said yieldable locking means are located in the region of the front end of said thrust block and in which the means for mounting said thrust block on said support means are located between said yieldable locking means and said boot engaging means.

10. A safety ski binding as defined in claim 1 in which said thrust block is formed with a bore therethrough substantially normal to a top face of the ski and said support means is formed with a slot extending transversely to said bore and in which said means for blocking forward sliding of said thrust block and said yieldable locking means are constituted by a spring pressed member located in said bore and engaging in normal position of said thrust block with a lower end thereof said slot.

11. A safety ski binding as defined in claim 1 in which said boot engaging means has a face extending transversely to the axis of the ski and substantially normal to a top face thereof, said face being provided with a plurality of ridges extending rearwardly therefrom substantially normal to the top face of the ski and arranged only in the region of opposite lateral ends of said face and an elongated projection extending rearwardly along the top edge of said face beyond the crowns of said ridges.

12. A safety ski binding as defined in claim 1 in which said boot engaging means has a face extending transversely to the axis of the ski and substantially normal to a top face thereof, said face being provided with a plurality of ridges extending rearwardly therefrom substantially normal to the top face of the ski and the crowns of said ridges being located along an arc of a circle having its center substantially in the center of rotation of the thrust block when the latter is in its normal position.

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