

June 29, 1954

B. WITH
SKI BINDING

2,682,415

Filed May 13, 1949

2 Sheets-Sheet 1

Fig. 1.

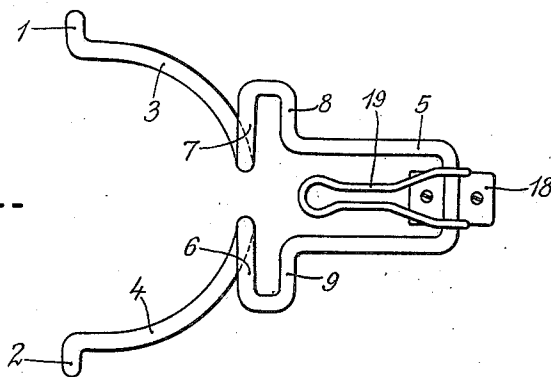


Fig. 2.

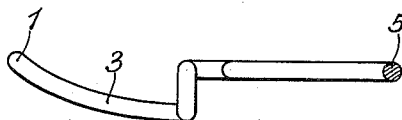


Fig. 3.

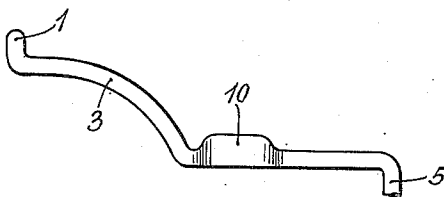
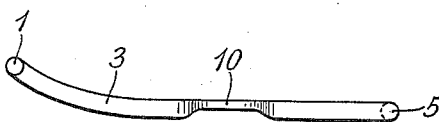


Fig. 4.



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Fig. 5.

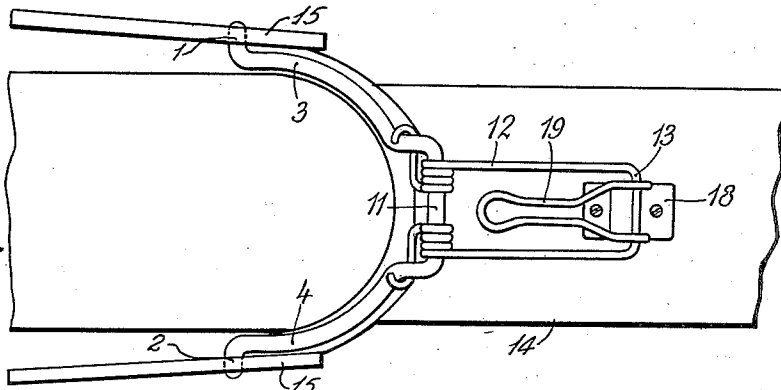


Fig. 6.

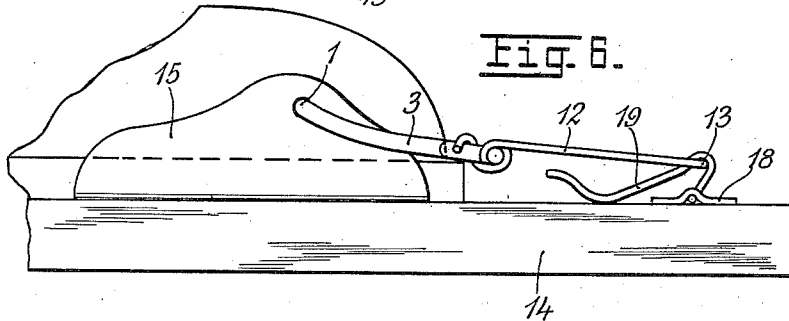


Fig. 7.

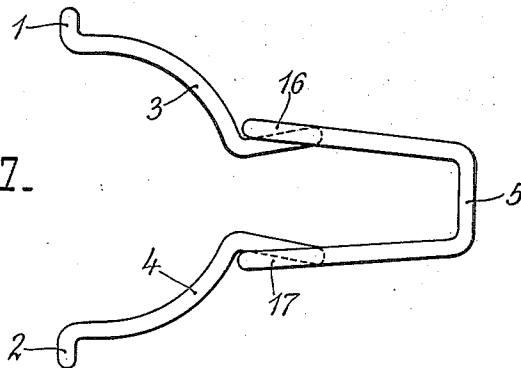
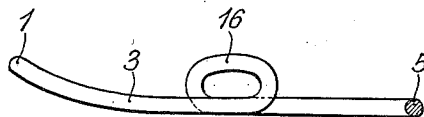


Fig. 8.



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UNITED STATES PATENT OFFICE

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SKI BINDING

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Claims priority, application Norway May 21, 1948

5 Claims. (Cl. 280—11.35)

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The present invention relates to certain improvements in ski bindings of the type where a pinch or pressure bail is pivotally attached to the toe irons of the binding and is provided with a portion adapted to be pressed against the top surface of the boot sole, in order to lock the same against the surface of the ski. Said part of the bail is preferably so shaped that it corresponds to the snout of a boot sole, and accordingly will be pressed against said sole substantially along the full extension thereof.

For ski bindings of this type is commonly used a locking device that is secured to the ski and which is adapted to lock the bail when depressed, in order to maintain the desired pressure of the bail against the sole. Such locking means should, however, be adjustable, so that the bail may be swung more or less downwards, according to the prevailing conditions.

For that reason it has been customary to use a hook-shaped member that is pivotally attached to the ski and which is provided with a series of indentions adapted for attachment of the bail in a desired position, as the conditions may demand.

Such an upwardly extending member is not desirable on a ski, and it is also obviously not desirable that the bail shall extend upwardly.

The primary object of the invention is to obviate, in a ski binding of the type referred to, any vertically adjustable organ for securing of the front end of the bail.

Another object of the invention is to provide an arrangement whereby the front end of the bail may be pressed down to the surface of the ski and secured there at a fixed point, independent of the thickness of the sole of the boot that may happen to be inserted into the binding.

The annexed drawings illustrate by way of example some embodiments of the invention.

Figure 1 is a top view of a bail according to the invention, and

Figure 2 is a side view of one arm thereof.

Figure 3 is a partial top view of another embodiment and

Figure 4 is a side view thereof.

Figure 5 is a top view of a third embodiment showing the device applied to the front end and tip of the sole of a shoe and a ski and Figure 6 is a side view thereof.

Figure 7 shows still another embodiment in top view, and Figure 8 is a side view thereof.

In Figures 1 and 2 the parts 1 and 2 of the bail are those parts that are pivotally journaled in the lugs of the toe iron (not shown.) The arms

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3 and 4 are curved toward each other and are adapted to be pressed against the top side of the boot sole so as to substantially encompass the tip thereof and the foremost end 5 is adapted to be locked to the ski when the boot is to be retained thereagainst. Between arms 3, 4 and the front part 5 the bail is, according to the idea of the invention, so formed that it will be subjected to torsional stress when the binding is tightened. To this effect the bail is, at 6 and 7 bent outwards and then, at 8 and 9, bent inwards. The length of the pressure bail thus may, therefore, be materially shortened, since the resiliency of the bail is substantially increased by said construction thereof.

The embodiment illustrated in Figures 3 and 4 is between the arms 3 and the front part 5 provided with a flattened portion 10 that brings increased resiliency of the bail.

In Figures 5 and 6 is shown an embodiment where the arms 3 and 4 directly interconnected by an intermediate member 11, and said arms 3, 4 and member 11 are combined with a spring arrangement 12, the foremost end 13 of which is adapted to be pressed towards the ski 14 and to be attached thereto in the same manner as the foremost end 5 of the previous embodiments. On Figure 6 numeral 15 designates one lug of a ski bindings toe iron.

In the embodiment illustrated on Figures 7 and 8 is, between the arms 3, 4 and the foremost bail end 5, provided helically wound parts 16 and 17, the windings of which are vertically disposed, whereby the resiliency of the foremost end of the bail is materially increased.

The above described embodiments of the invention distinctly show that the problem may be solved in different manners, and of course is such embodiment chosen that will be most suitable in view of local questions and of the materials available.

An essential point of the invention resides therein that for attachment of the bail to the ski it is not necessary to use a conventional hook member having a series of slots and a fixed attachment point on the ski. As shown on Figures 1, 5 and 6 this problem may be solved by fixing to the ski a member 18 in which is supported a self-locking lever 19, which lever also acts as a tightener depressing part 5 of the bail towards the ski.

I claim:

1. A ski binding comprising toe irons having substantially vertical side portions, a resilient clamping bail pivoted to said vertical portions,

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the inner part of said bail being curved and adapted to rest against the top of the sole of the shoe and substantially encompassing the tip of the sole to effectively bind the same and another part extending in front of the toe iron and being adapted to press the first mentioned curved part against the said sole by a swinging movement in direction towards the face of the ski, locking means on the face of the ski, adapted to lock the free end of the said bail to the face of the ski in a fixed predetermined non-adjustable position, the said bail being provided with a section of high flexibility between the point of contact with the sole of the shoe and the point of engagement between the front end of the bail and the locking member on the face of the ski.

2. A ski binding as claimed in claim 1, in which the bail, in front of its point of support against the boot sole, is helically wound in vertical plane relatively to the ski.

3. A ski binding as claimed in claim 1, where the material of the bail is flattened in front of its point of support against the boot sole.

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4. A ski binding as claimed in claim 1, in which the bail has lateral extensions providing torsional resilience when tightening the binding.

5. A ski binding as claimed in claim 1 in which spring means are associated with the bail in front of its point of support against the boot sole.

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