

Oct. 7, 1941.

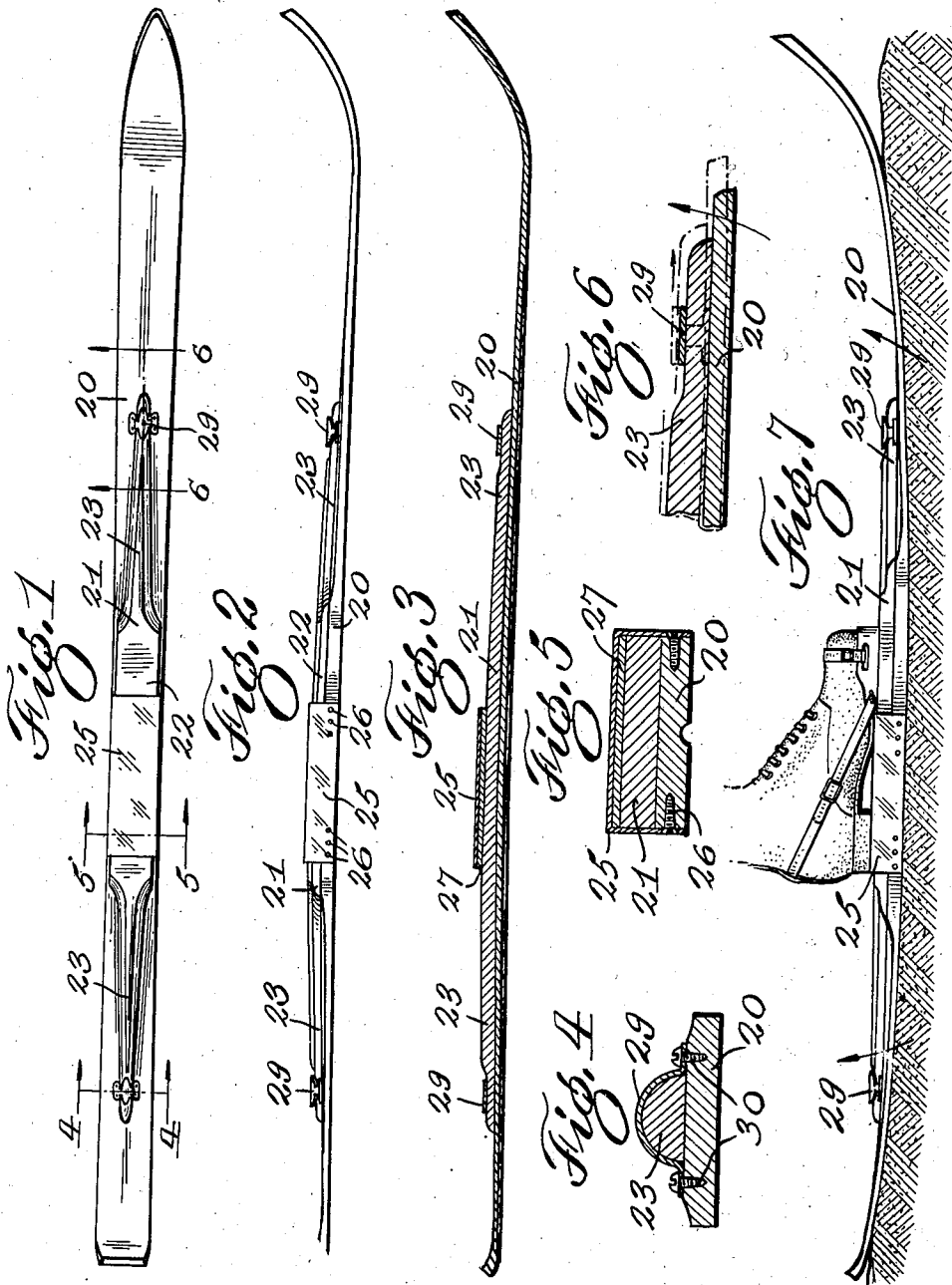
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2,258,046

SKI

Filed May 24, 1940

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

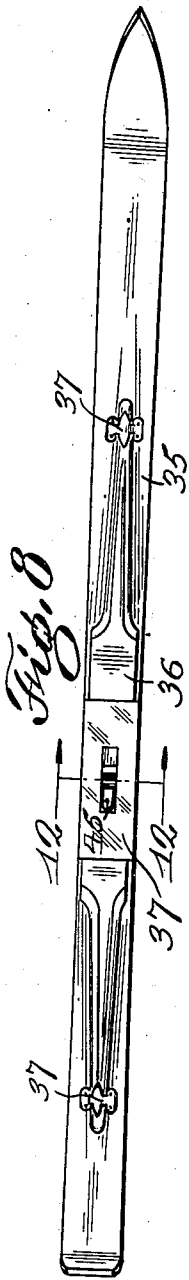


Fig. 8

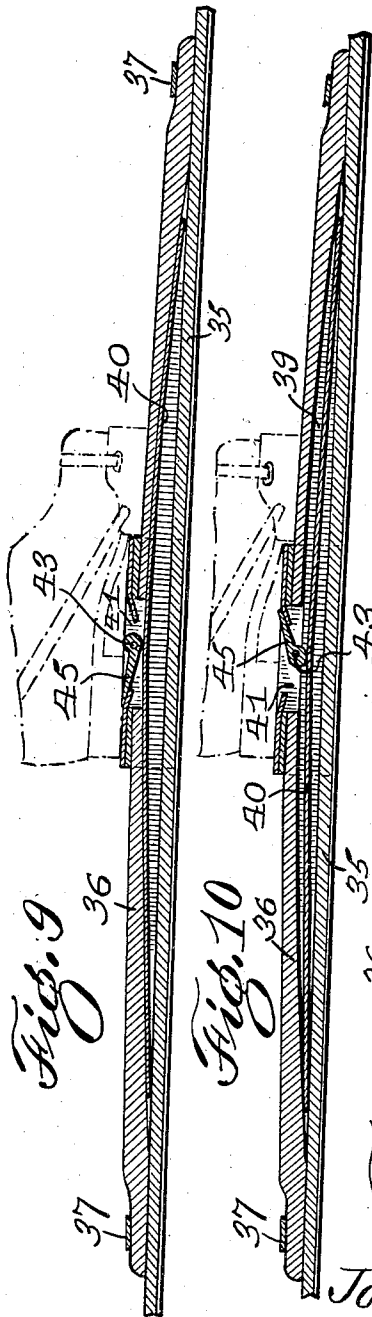


Fig. 9

Fig. 10

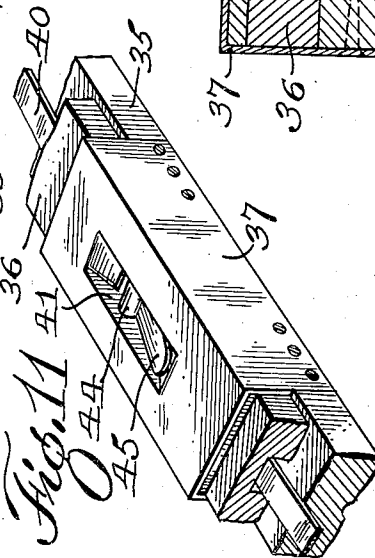


Fig. 11

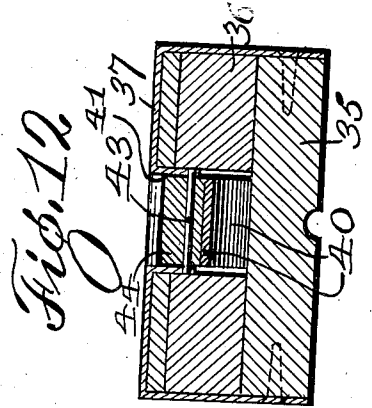


Fig. 12

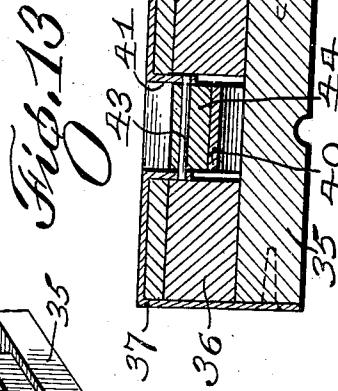


Fig. 13

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UNITED STATES PATENT OFFICE

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SKI

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3 Claims. (Cl. 280—11.13)

The present invention relates to improvements in skis.

An object of the invention is the provision of a ski of generally improved construction.

Another object of the invention is the provision of a ski having increased flexibility.

A further object of the invention is the provision of a ski of the aforesaid character which has great durability.

Other objects and advantages of the invention will become apparent as the description progresses.

In the accompanying drawings forming a part of this specification and in which like reference characters are employed to designate corresponding parts throughout the same:

Figure 1 is a top plan view of the preferred form of the invention,

Figure 2 is a side elevational view of the same,

Figure 3 is a longitudinal section through the same,

Figure 4 is an enlarged transverse section taken on the line 4—4 of Figure 1, and

Figure 5 is a similar view taken on the line 5—5 of Figure 1,

Figure 6 is an enlarged fragmentary longitudinal section taken on the line 6—6 of Figure 1,

Figure 7 is a side elevational view showing the device in flexed position,

Figure 8 is a top plan view of a modified form of the invention,

Figure 9 is a longitudinal section therethrough with the tension adjusting device in one position,

Figure 10 is a similar view with the adjusting device in another position,

Figure 11 is a fragmentary perspective view of the medial portion of the ski,

Figure 12 is an enlarged transverse section taken on the line 12—12 of Figure 8, and

Figure 13 is a similar view with the adjusting device in reverse arrangement.

Referring to Figures 1 to 7 inclusive, wherein is shown a preferred embodiment of the invention, 20 designates the body member of a ski, in the form of an elongated relatively narrow strip or runner curved upwardly at the toe and heel portion in the customary manner. This runner is transversely elongated in cross section and may be formed of hickory or other suitable material as is conventional in skis, but differs from ski runners heretofore known in that the runner, particularly the part between the toe and heel portion, is quite thin in comparison with con-

ventional skis and consequently my runner has greater longitudinal flexibility.

Mounted longitudinally on the top face of the runner body 20 is a reinforcing member 21 in the form of an elongated bar shorter than the runner, formed of flexible resilient material, such as wood, having a rectangular-shaped medial portion 22 and substantially long end portions 23 formed with a diminishing taper from the medial portion 22 to the extremity.

The rectangular part 22 of the reinforcing member is firmly held in face to face relation with the intermediate portion of the runner by means of an attaching member 25 in the form of a channel-shaped clamping piece fitted over the complementary runner and re-inforcing members with the web extending across the top face of the part 22 and the lower margins of the side flanges rigidly secured to the runner by screws 26 or the like. Between the top web portion of the channel 25 and the top of the reinforcing bar 21 is preferably mounted a lining strip 27.

The ends of the tapered projections 23 of the bar 21 are slidably fastened to the body or runner of the ski by means of arched clips 29 which extend over the end portions of these extensions and are fastened to the runner by screws 30. As shown to advantage at Figures 2 and 3 the end portions of the bar which extend under the clips are slightly cut down to limit the longitudinal sliding movement of the reinforcing member.

During use, the ski thus constructed will be characterized by exceptional flexibility due to the comparatively thin formation of the runner body and the slidable mounting of the reinforcing member. As shown at Figure 7 the ski will readily conform to varying curvatures or depressions of the skiing surface so as to provide more effective contact and control. Due to the provision and particular mounting of the reinforcing bar a high degree of strength, durability and resiliency of the ski structure is afforded so that the assembly will yieldingly maintain its approximately straight normal formation.

A modified form of the device, shown at Figures 8 to 13 inclusive, provides a ski embodying a body runner 35, which may be relatively thin and flexible, having mounted longitudinally thereon an elongated member 36 forming a top section similar in appearance to the member 21. The tapered end portions of this top section are slidably connected with the body by clips 37, while the medial portion is fastened to the runner by

a channel-shaped holding member 38. In the underside of the section 36 is formed a longitudinally extending arched indentation or concave groove 39 which, in assembly, forms a chamber for the reception of an elongated relatively narrow strip 40 which may be formed of spring metal bent longitudinally to assume an upwardly bowed position in the chamber.

In a slot 41 provided in the central portion of the top section 36 and in the top web of the holding member 38 is secured a transversely extending spindle 43 having journaled thereon, in eccentric position, a cylindrical cam 44 formed with an actuating lever 45. This cam is mounted in cooperative relation with the medial portion of the leaf-spring 40 in order that proper movement or adjustment of the cam will result in depressing or releasing the spring for varying the arrangement thereof and the flexibility of the ski.

Thus, when the lever 45 of the cam is disposed in a rearwardly directed position, as shown at Figure 9, it disengages the spring 40 so as to allow contraction thereof and affording the maximum flexibility of the skiing structure. By swinging the cam lever to its operative extreme position, as shown at Figure 10, the cam is adjusted to engage and depress the intermediate portion of the spring strip 40 to longitudinally extend the same and force the ends against the connected portions of the ski runner and top section, so as to strip the intermediate part of the ski and materially reduce the flexibility thereof. This enables the user to conveniently adjust the regulating cam to vary the flexibility of the ski, in accordance with the particular conditions under which the ski is to be employed.

As will be readily apparent from the drawings the bottom marginal portions of the clamping channels, that is of the side flanges thereof, shown

flush with the side edges of the runner body at Figure 11, also serve as reinforcing edging corresponding to the artificial edges quite frequently attached to skis.

It is to be understood that the forms of my invention herein shown and described are to be taken as preferred examples of the same and that various changes as to the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. In a ski, a flexible and resilient body runner, a reinforcing section mounted on the said runner and having slidable connection therewith, a leaf-spring mounted between the top section and the runner, and cam mechanism operable to adjust the leaf-spring for selectively varying the flexibility of the ski.

2. In a ski having a flexible body runner, a reinforcing section slidably mounted on the runner, said section having a hollowed out portion underneath, spring means disposed in said portion between runner and reinforcing section, boot-receiving means on the section, a cam mechanism on said section for adjusting the spring means to vary the runner flexibility, and cam-movement limiting means on said boot-receiving means.

3. A ski comprising a flexible runner blade, an arched reinforcing section mounted on the runner, spring means disposed between section and runner, an elevated portion disposed in the middle of the reinforcing section, a channeled clamping plate secured to the runner for holding the section and elevated portion in place, cam means secured to the plate for adjusting the spring means tension, and stops on said plate for limiting movements of the cam means.

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