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C. A. PROCTOR

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TOE PIECE FOR SKIS

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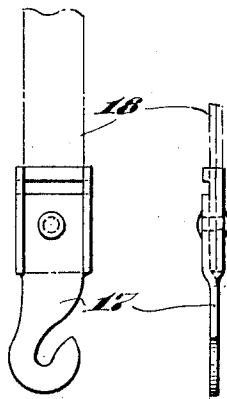
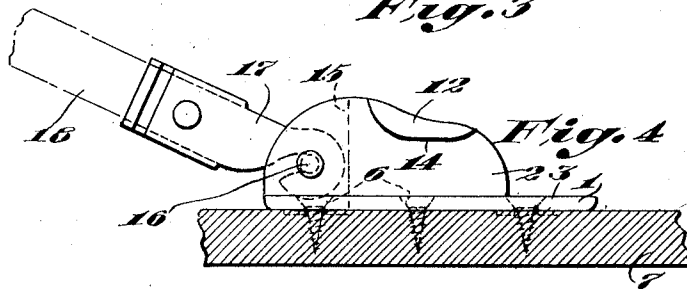
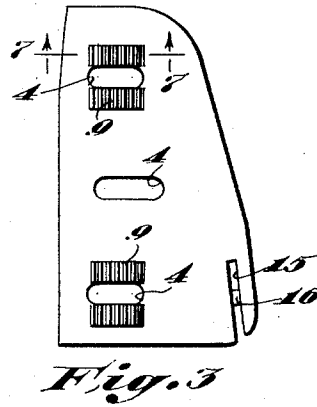
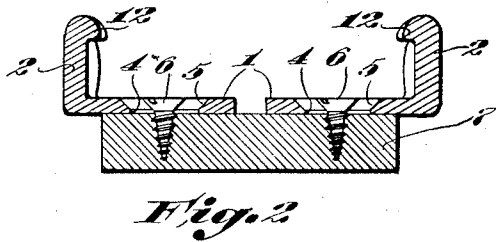
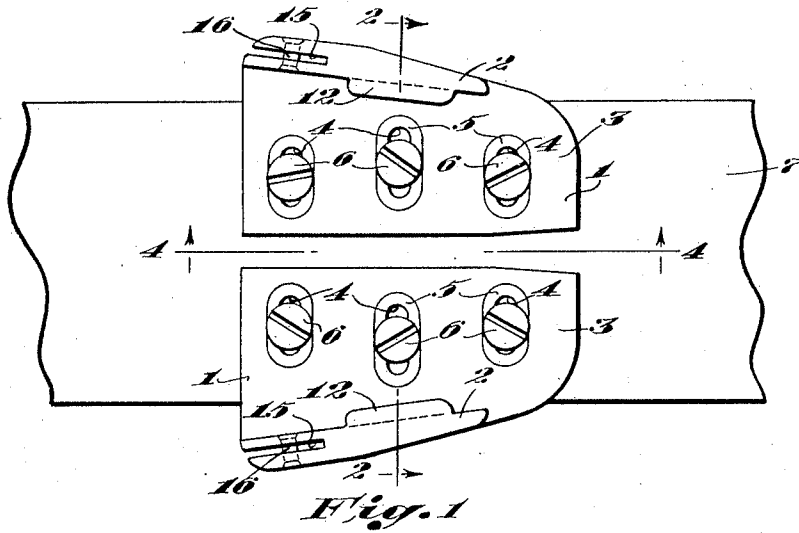


Fig. 5 Fig. 6

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TOE-PIECE FOR SKIS

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This invention relates to improved toe pieces designed to cooperate with suitable heel straps to secure skis to the shoes of a user.

5 The improved toe pieces are provided with secure and dependable means to hold them to the ski and are especially designed to avoid catching upon each other or adjoining objects, thus eliminating danger of falls and
10 injury. Furthermore, this type of ski binding is arranged to be simple and sturdy in construction, light in weight, and adjustable to fit shoes of various sizes or widths, while some freedom of movement of the shoe in relation to the ski is permitted and the wedging of material between the toe of the user and the top of the ski is avoided.

The above and further objects and advantageous features of the invention will be apparent to those skilled in the art upon a reading of the subjoined description and claims in conjunction with the accompanying drawings, in which:

25 Fig. 1 is a top plan view of the improved toe piece as applied to a ski;

Fig. 2 is a section on line 2—2 of Fig. 1;

Fig. 3 is a bottom view of one of the toe pieces;

Fig. 4 is an inside elevation of the same;

30 Figs. 5 and 6 are side and end elevations of the preferred strap fastening construction used with toe pieces of this character and;

Fig. 7 is a section on line 7—7 of Fig. 3.

The improved toe pieces, exemplified by
35 the accompanying drawings, each comprises a bottom or bed plate 1, and a side plate 2 projecting upwardly substantially at right angles to the plane of the bottom plate. Preferably these plates are formed integrally out
40 of light material, in the recommended embodiment of the invention, being die cast of aluminum alloy. The bottom plate 1 has its outer side, which joins the side plate 2, tapering somewhat in order to conform to the
45 shape of the front portion of a shoe, and it

preferably projects forwardly of the side plate, as designated by numeral 3.

Formed in the member 1 are a plurality of transverse slots 4 preferably arranged with beveled or countersunk surfaces 5 to engage
50 the heads of fastening screws 6 which are embedded within the material of the ski 7. The bottom face of plate 1 adjoining certain of the slots is provided with corrugations 9, Figs. 3 and 7, which are designed to bite the wood
55 of ski 7, and thus to prevent accidental loosening of the toe piece. The surface of plate 1 adjoining the intermediate opening may be left free of these corrugations, if desired. Ordinarily screws 6 adjoining the front and
60 rear openings 4 will afford ample security in holding the toe pieces to the ski and the screw at the intermediate opening may be used as an additional precaution.

The comparatively long bed plate, which
65 results from the provision of extensions 3, permits ample spacing of the substantially aligned front and rear screws 6, whereby danger of splitting the ski is lessened and whereby more effective securing means is af-
70 forded.

The plate 2 preferably is provided with an integral lug 12 having a curved, cam-like lower surface 14 designed to engage the sole
75 of the shoe. The curvature of this surface permits some freedom in relative movement in a vertical plane between the shoe and the ski at the same time permitting any lateral movement of the boot relative to the ski as well as avoiding injury of the shoe sole. The
80 front of plate 1 preferably is curved to avoid sharp projections which might engage foreign objects and tend to trip the user of the ski, while the upstanding plate 2 is carefully stream-lined or provided with a curvature
85 about its edge and its junction with the bottom plate which prevents catching upon foreign objects or upon the adjoining toe piece carried by the other ski.

The fastening means for the heel strap 90

preferably is received in the plate 2 in such a manner that it is guarded against accidental unfastening or catching upon an adjoining fastening or other object. For this purpose, the rear portion of plate 2 is provided with a slot 15 substantially paralleling the plane of the side plate. A transverse rivet 16 bridges the slot and has its ends flush with the surface of the plate. A flat hook of sheet metal designated by numeral 17 and carried by a heel strap 18 (Figs. 5 and 6) is designed to be received within the slot 15 and to engage pin 16 thus being protected from accidental disengagement or catching upon adjoining objects.

It is thus evident that I have provided means for binding skis to the shoes of a user which are carefully stream-lined in order to avoid catching upon foreign objects or upon each other, and which are designed to protect the heel strap fastenings against accidental entangling or disengagement. The bed plates of these toe pieces are provided with projections to avoid the wedging of snow or foreign objects between the shoe sole and the upper surface of the ski and to provide room for more sturdy and dependable means for fastening to the ski. Furthermore, toe pieces of this character are designed to allow some freedom of movement in a vertical plane between the shoe and the ski and to permit adjustment in width to suit various sizes of shoes, while providing fastening means which are secure and are adapted to withstand a long period of usage. Thus, toe pieces are provided which are light, durable, and dependable and which enable high speed or stunt skiing to be attempted with greater safety and less danger of tripping than has heretofore been possible.

I claim:

1. A toe piece for skis and the like, comprising a bed plate and an integral side plate, a slot within the side plate disposed in a plane generally parallel to the plane of that plate, and a pin in said slot to engage a hook upon the end of a heel strap, whereby the hook is guarded against catching upon foreign objects.

2. A toe piece of aluminum alloy for skis or the like, comprising a bed plate and a side plate, said bed plate having a plurality of transverse slots and extending forwardly of the side plate, and corrugations upon the bottom face of the bed plate adjoining the slots to bite the ski wood.

3. A toe piece of aluminum alloy for skis or the like, comprising a bed plate and a side plate, said bed plate having a plurality of transverse slots and extending forwardly of the side plate, the side plate having its edges merging into its outer face and having a slot with a pin extending between opposite sides of the slot to engage a hook upon the end of a heel strap.

4. A toe piece for skis and the like comprising a bottom plate and a side plate, a slot within the side plate disposed in a plane generally parallel the plane of the plate and a pin in said slot to engage a hook upon the end of a heel strap, the side plate being stream-lined to avoid catching on adjoining objects.

Signed by me at Hanover, New Hampshire, this 19th day of July, 1927.

CHAS. A. PROCTOR.