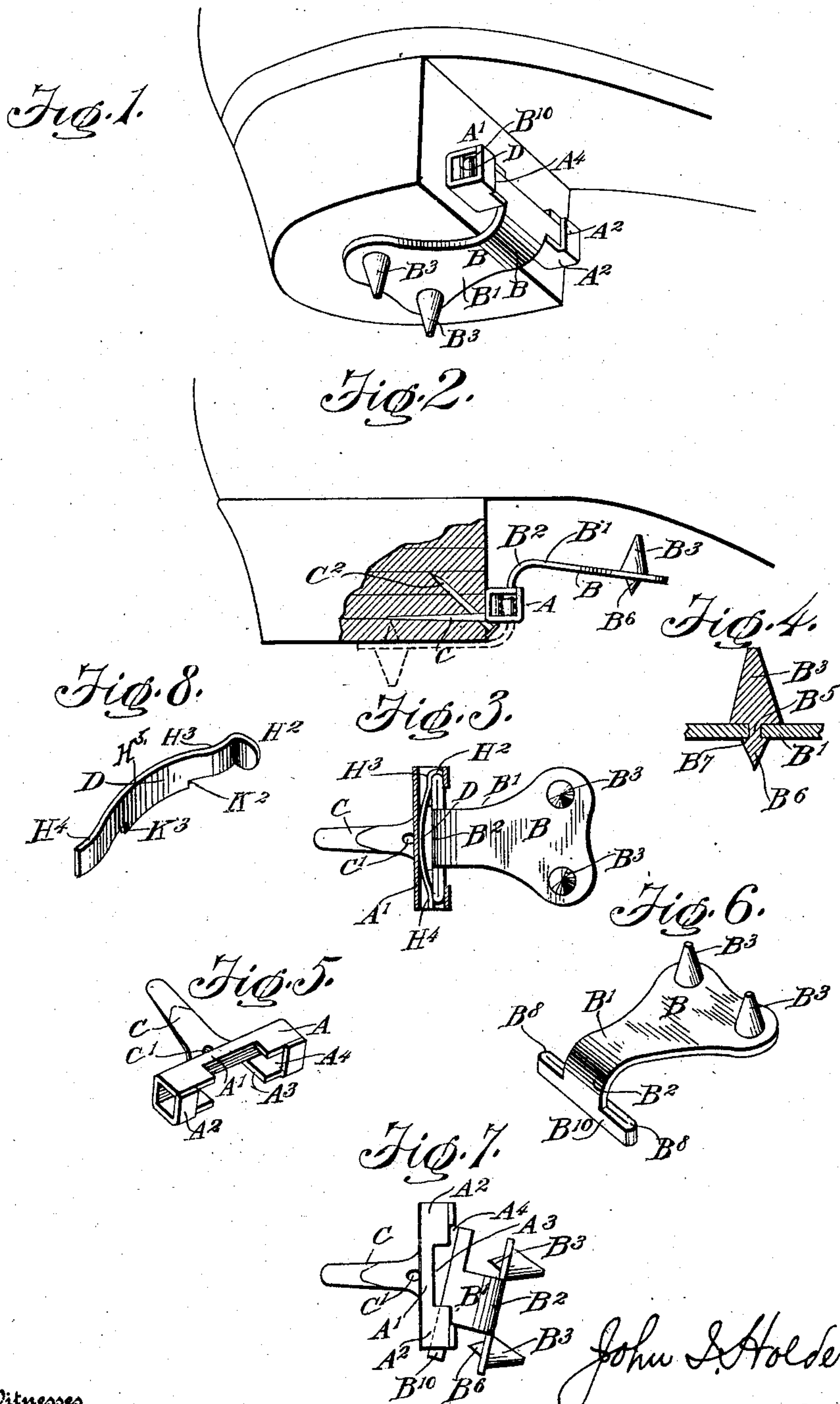


J. I. HOLDERBAUM.  
ICE CREEPER.  
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992,773.

Patented May 23, 1911.



Witnesses

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JOHN I. HOLDERBAUM, OF SOMERSET, PENNSYLVANIA.

ICE-CREEPER.

992,773.

Specification of Letters Patent.

Patented May 23, 1911.

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*To all whom it may concern:*

Be it known that I, JOHN I. HOLDERBAUM, a citizen of the United States, residing at Somerset, in the county of Somerset and State of Pennsylvania, have invented certain new and useful Improvements in Ice-Creepers, of which the following is a specification, reference being had to the accompanying drawings.

The present invention relates to improvements in ice creepers and more particularly the one set forth in Patent #866,467 granted to me September 17, 1907.

The object of the invention is to improve and simplify the construction and operation of ice creepers of the character mentioned and thereby render the same less expensive, stronger and more durable.

With the above and other objects in view, the invention consists in certain novel constructions and combinations of parts hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the invention applied to a heel with the swinging plate adjusted to position for use; Fig. 2 is a side view of the improvement applied to a heel with the swinging plate adjusted into the hollow of the shoe and out of position for use, a part of the heel being shown in section; Fig. 3 is a plan view, partly in section, of the device in the position shown in Fig. 2; Fig. 4 is a detail section showing the connection of one of the spurs with its carrying plate; Fig. 5 is a detail perspective view of the heel section, the spring being removed; Fig. 6 is a detail perspective view of the swinging section; Fig. 7 is a detail plan view of the device illustrating the manner of assembling the sections; and Fig. 8 is a perspective view of the spring shown in Fig. 3.

In carrying out my invention, I provide what for convenience of reference I term a heel section A and a swinging section B, the section A being secured in practice to the front side of the heel of a shoe, while the swinging section is pivoted at one end to the heel section so that it may be adjusted to either of the positions shown in Figs. 1 and 2, and spring devices being provided whereby to hold the swinging section in either of said positions.

As shown, the heel section is provided with a flat, longitudinally tapered bar C which is forced into a heel and either into

or between the layers thereof and will operate efficiently to hold the heel section in the desired position at the front face of the heel. This anchor bar C is provided with an opening C<sup>1</sup> for the reception of a nail or screw C<sup>2</sup>, the latter being preferably a headed nail which is driven diagonally through the bar and into the heel so as to effectively lock the bar in the heel, as clearly shown in Fig. 2 of the drawings. It will be noted that the opening or hole C<sup>1</sup> is close to the body of the heel section so that when such body is engaged with the front face of the heel just sufficient of said opening will be exposed to permit the nail C<sup>2</sup> to be driven into position. The heel section has a main portion or case A<sup>1</sup>, which is formed integral with the anchor bar C, and may be stamped up from a single blank of metal, as will be understood from Fig. 5, and has at its opposite ends the boxes or keepers A<sup>2</sup> in which the pivot portions of the swinging section are held when the parts are applied, as shown in Figs. 1 and 3. The space between the opposite boxes A<sup>2</sup> at the upper and lower sides of the heel section, is contracted relatively to the space between said boxes at the front side of the heel section, as best shown in Figs. 1 and 5. The contracted space at A<sup>3</sup> operating to receive portions of the swinging section when the latter is in either of its positions shown in Figs. 1 and 2, in order to prevent any lateral displacement of the swinging section when so adjusted, and the wide space at A<sup>4</sup> at the front side of the heel section, permitting the application and removal of the swinging section when the latter is adjusted to neutral position, as will be understood from Fig. 7 of the drawing.

A spring D is secured between its ends within the main portion of the heel section being secured in its proper place by shoulders K<sup>2</sup> and K<sup>3</sup> engaging between the contracted portion A<sup>3</sup> of the keeper and having its ends free and operating within the boxes A<sup>2</sup> and against the angular shaft B<sup>10</sup> of the swinging section in order to hold the same in both its adjustments, as will be understood from Figs. 1, 2 and 3 of the drawing. The spring D is formed of a single piece of metal, as shown in Fig. 8, and one end thereof is bent at right angles to form a lug or spur H<sup>2</sup>. Said spring is also provided with the curved portions H<sup>3</sup> and H<sup>4</sup> to engage with the flat faces of the shaft



B<sup>10</sup> so as to avoid the ends of the spring catching on any roughened surface there might be on said shaft B<sup>10</sup> and thereby interfering with the free and easy operation thereof. Said spring D is also bowed as shown at H<sup>5</sup>, Fig. 8, so as to contact with the rear wall of the heel member A<sup>1</sup> in order to hold the member B in both of its adjustments.

The swinging section B has the bar B<sup>1</sup> projecting from the shaft B<sup>10</sup> and bent, as shown at B<sup>2</sup>, at an angle which is greater than a right angle so that the parts B<sup>1</sup>, B<sup>10</sup>, will be in planes at acute angles with respect to each other, and so that the section B<sup>2</sup> will curve around the front edge of the heel when adjusted, as shown in Fig. 1 and in dotted lines in Fig. 2, and contact with the bottom of the heel. By making the section B with the acute angle at B<sup>2</sup> it will be seen that the spur carrying outer portion or bar B<sup>1</sup> will contact the heel at all times when said section is in an operative position under the heel. The shaft B<sup>10</sup> is square in cross section so that its ends have four right angular edges and four flat faces for engagement by the spring D. In order to insure the flat faces and right angular edges on the ends of the shaft B<sup>10</sup>, the latter is preferably formed, as clearly shown in Fig. 6, by folding longitudinally upon itself, as indicated at B<sup>3</sup>, that portion of the metal which projects beyond the curved end of the bar B<sup>1</sup>. Said square ends of the shaft B<sup>10</sup> extend beyond the opposite side edges of the bar B<sup>1</sup> so that when the latter is in its neutral position it may be applied to or removed from the heel section in a manner indicated in Fig. 7, by slipping one end of the shaft into its box or keeper A<sup>2</sup> and then pressing the other end into alinement with its box or keeper, and then adjusting the spur bar to the central position shown in Fig. 3, when the curved portions H<sup>3</sup>, H<sup>4</sup> of the spring D will engage the shaft ends and hold the parts in such position. When the shaft is in position shown in Fig. 3 it also serves to retain the spring D in position in the heel section. When the bar B<sup>1</sup> is adjusted to the position shown in Fig. 1, or to the position shown in Fig. 2, it will by projecting within the narrow spaces A<sup>1</sup> between the boxes or keepers A<sup>2</sup> be held from lateral displacement, the narrow spaces forming seats to receive the bar B<sup>1</sup> in such position shown in Figs. 1 and 2.

The bar B<sup>1</sup> carries double ended spurs B<sup>3</sup> which are held in openings in the spur plate

B<sup>1</sup>, and by preference have their shanks B<sup>5</sup> projecting through said openings and extended to form the pointed projections B<sup>6</sup> slightly upset at B<sup>7</sup> in order to hold the spurs in place, and the said projections B<sup>6</sup> operating by engagement with the under surface of the heel to brace the swinging section when adjusted, as shown in Fig. 1, against any lateral displacement.

From the foregoing it will be seen that by making the attaching bar C flat and tapered and passing the nail C<sup>2</sup> diagonally through the bar and into the heel, the heel section will be effectively secured to the heel; that by making the spring D with the shoulders K<sup>2</sup> it will be removably retained in the body portion of the heel section, and that by making the square shaft B<sup>10</sup> by bending the extensions or tongues on the plate B longitudinally upon themselves, the ends of said shaft will have square edges and flat faces. The foregoing features of construction render the device less expensive to construct and assemble, easier to apply to the heel of a shoe, and to put together and take apart and also stronger and more durable.

Having thus described the invention what is claimed is:

An ice creeper comprising a heel section with an anchoring element and provided with a casing formed with a continuous straight wall and having spaced apart boxes on its front face, the space between said boxes being relatively wider at the front and contracted at the top and bottom thereof, a swinging spur section having a shaft with folded ends, said ends adapted to be journaled in said boxes, a longitudinally detachable bowed spring mounted within said casing with the convex portion of its bow contacting with the rear wall of the casing, said spring being also provided with cut-away portions to provide downwardly projecting shoulders which contact with the inner edges of the bottom walls of said boxes, one end of said spring having a curved spur thereon to inclose one end of the folded portions of the shaft, the other end of the spring being free and contacting with the other folded end of said shaft.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JOHN I. HOLDERBAUM.

Witnesses:

MAYME DARR,  
NELLE KIFER.