No. 741,083. PATENTED OCT. 13, 1903.

J. THOMSEN & A. PETERSON.

SKATE.

APPLICATION FILED APR. 3, 1902.

NO MODEL.

Fig. 1

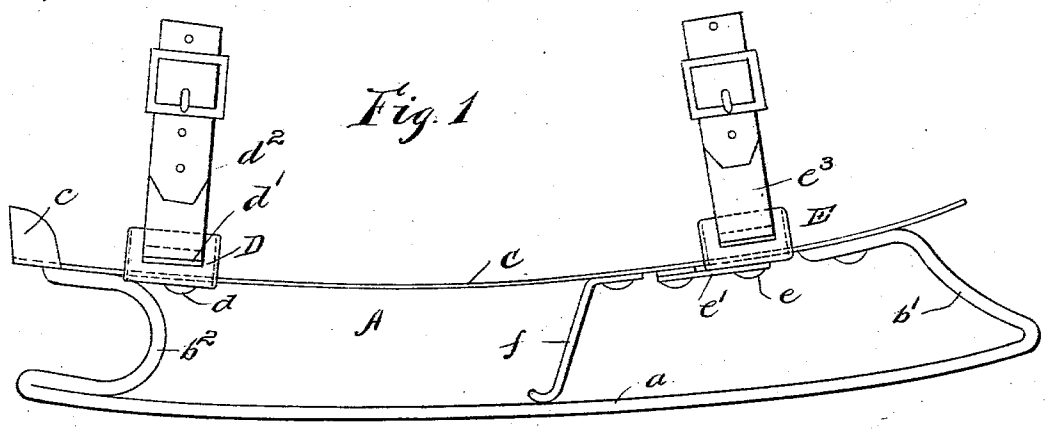


Fig. 2

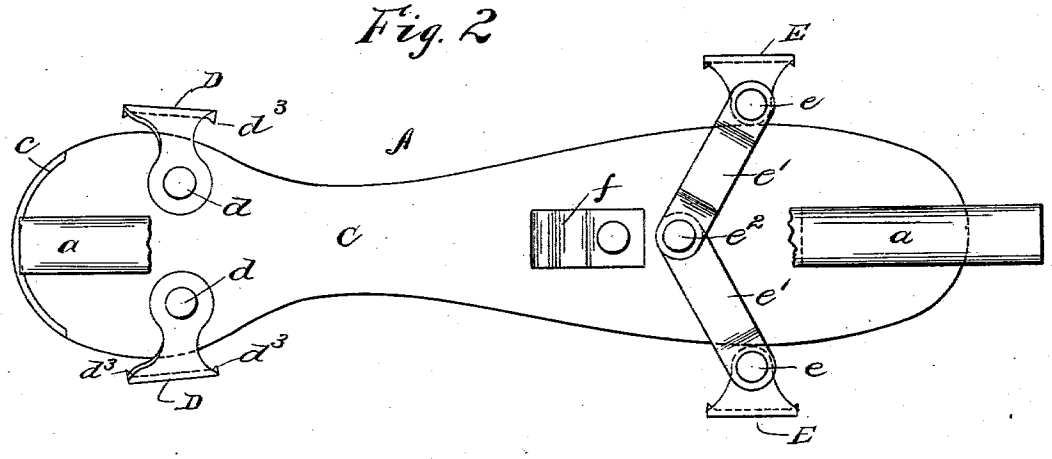
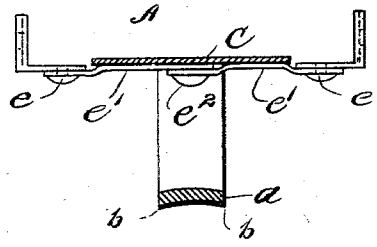


Fig. 3



Witnesses:

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Att'y.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 741,083. Patented October 13, 1903.

UNITED STATES PATENT OFFICE.

JOHANNES THOMSEN AND AUGUST PETERSON, OF CHICAGO, ILLINOIS.

SKATE.

SPECIFICATION forming part of Letters Patent No. 741,083, dated October 13, 1903.

Application filed April 3, 1902. Serial No. 101,285. (No model.)

To all whom it may concern:

Be it known that we, JOHANNES THOMSEN and AUGUST PETERSON, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Skates, of which the following is a specification.

This invention relates more particularly to improvements in skates adapted to be used on rough or soft ice and for persons who do not skate enough to become accustomed to the strain produced by the ordinary skates and also to improved means for securing the skate to the boot or shoe.

It consists in the various novel features and combinations, which will be pointed out hereinafter and are shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a skate embodying this invention. Fig. 2 is a bottom plan view of the same with the runner partly broken away. Fig. 3 is a sectional view.

As designated in the drawings, A is a skate provided with a runner *a*. The runner represents an important feature in this invention. It is well known that the ordinary narrow and rigid skate-runner furnishes a very unstable support for the skater, making it very difficult and arduous, if not dangerous, for a person with weak ankles or limbs or to a person not in constant practice. The rigid and narrow blade also causes a continuous jarring and vibration in passing over rough ice and cuts through the ice if it is in any degree soft. Our improved runner does away with these difficulties and objections by being constructed out of a broad strip of spring-steel, which is preferably formed along the bottom in a concavo-convex cross-section, as shown in Fig. 3. By making it in this shape it adds to the resistance of the spring and forms sharp edges *b*, similar to the usual edges of a hollow-ground skate-runner. The runner is turned up at the front at *b'* and at its rear is bent over upon itself for a distance and then bent upwardly, as at b^2, then rearwardly to engage the sole-plate C, and is securely riveted thereto. The sole-plate is provided at the rear with a lip or stop *c* to engage the heel of the shoe. D D are heel-clamps, which are pivoted at *d d* to the bottom of the sole-plate C and are provided with slots *d' d'* for the straps d^2 d^2. Sharp vertical edges d^3 are provided to insure more secure engagement. The clamping device for the ball of the shoe comprises a pair of clamps E, similar to the heel-clamps, but pivoted at *e* to swinging arms *e'*, which are pivoted at e^2 to the center of the plate C. Straps e^3 are also provided for tightening and holding the clamps.

To fasten the skate to the shoe, the heel is first pressed back against the lip *c* and the clamps D swung around into engagement and the straps d^2 buckled. The front part of the skate is then adjusted to its position in the center of the sole and the arms *e'*, with the clamps E, swung around until the clamps bear evenly against the sole. Then the straps e^3 are buckled, and skate is securely held.

It will be noted that the arrangement of the forward clamps allows them to be properly adjusted to any shaped sole, and the clamps will always aline themselves with the edge thereof. By means of this improved clamp the vexatious tearing and splitting of the shoe-sole incident to the use of the ordinary clamp is done away with and the skate can be properly alined as well as securely held.

In using this improved skate it will be found that the broad flexible runner will conform itself to uneven surfaces and avoid the jarring ordinarily caused thereby. For larger sizes an additional supporting-spring *f* may be attached to the sole-plate and bear against the runner.

What we claim, and desire to secure by Letters Patent, is—

1. A device of the type set forth, consisting of a sole-plate, a runner formed of an integral piece of material having its front end bent rearwardly and then in substantial alinement with the sole-plate but beneath the plane of the latter and riveted to said sole-plate, the rear end of the runner being bent over to engage upon itself, then upwardly and riveted to the sole-plate, and a supporting-spring riveted to the sole-plate intermediate the ends of the latter and inclining downwardly and having its end curled upwardly and freely bearing against the runner, substantially as described.

2. A device of the type set forth, comprising a sole-plate, and a runner secured thereto, with a pair of arms pivoted to a common point

on the under side of the sole-plate, and clamps pivoted to the ends of said arms, with straps carried by the clamps, and heel-clamps pivoted one to each side of the runner, and carrying straps, substantially as described.

3. A device of the type set forth, comprising a sole-plate, and a runner secured thereto, with a pair of arms pivoted at their rear ends to a common point central the width of the sole-plate, a clamp pivoted to the free end of each of the arms, consisting of a vertical member having its sides turned inwardly and sharpened and having a slot therein to receive the fastening means, with clamping members pivoted to the heel portion of the plate and carrying fastening means.

4. In a skate the combination with a foot-piece of a runner comprising a sheet-metal strip that is concavo-convex in cross-section, being thereby stiffened against transverse bending and yielding connections between the runner and foot-piece.

5. In a skate the combination with a foot-piece of a runner comprising a sheet-metal strip that is bowed upwardly at its end portions and secured to the foot-piece, the runner portion between the bows being concavo-convex in cross-section, thereby stiffening said runner portion, and said concavo-convexity terminating short of the bows, whereby said bows constitute spring connections between the runner and foot-piece.

6. In a skate-runner composed of a flat sheet-metal strip, the under face of which is concave throughout its length, and the upper face being convex throughout its length, said runner therefore being concavo-convex in cross-section, thereby stiffening the runner and forming cutting edges along the opposite side edges of the same.

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