

UNITED STATES PATENT OFFICE.

JOHN FORBES, OF HALIFAX, CANADA.

SKATE.

SPECIFICATION forming part of Letters Patent No. 582,909, dated May 18, 1897.

Application filed June 24, 1896. Serial No. 596,787. (No model.)

To all whom it may concern:

Be it known that I, JOHN FORBES, a subject of the Queen of Great Britain, and a resident of Halifax, in the Province of Nova Scotia, Canada, have invented certain new and useful Improvements in Skates; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a top plan view of skate embodying the invention, clamps being shown as open. Fig. 2 is a bottom plan view of same. Fig. 3 is a side elevation of same with clamps closed. Fig. 4 is a perspective view of heel-clamp. Figs. 5 and 6 are perspective views of the sliding and connecting bars.

This invention is designed to provide an ice-skate of improved character, and more particularly to improve the skate described and claimed in my Patent No. 522,321, granted July 3, 1894, to which reference may be had.

The invention has particular relation to the following parts—viz., the adjustable heel-clamp, the construction of the sole or foot plate, to the provision of means whereby the sole-clamp may be adjusted laterally with relation to the center line of the skate, and to minor features of the skate, all of which will presently appear; and it consists in the novel construction and combination of parts, all substantially as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates the skate-runner, and B the heel-plate, which is shown as having depending slotted lugs *a*, which embrace the upper edge portion of the runner, and also an intermediate screw-stud *b*, which fastens said plate to the runner, all substantially as in the said patent.

C designates the sliding bar, whose rear portion extends underneath the heel-plate through a slot *c* thereof, said bar being slotted at *b'* for the stud *b* and having at its rear end a tongue *c'*, which loosely engages a slot *c''* in the rear lug *a* of said heel-plate.

D designates the connecting-bar, which actuates the sole-clamps and whose rear end portion is lapped upon the slide-bar C. As thus far described, these two bars are the same as in said patent. In the present construction, however, said bars are formed with longitudinal registering slots, (indicated, respectively, by the numerals 1 and 2.) 3 designates the heel-clamp, having the lip or claw *3^a*, which engages the heel, and a flat base portion which seats upon the connecting-bar D, and has at its upper forward edge a downwardly-bent lug *3^b*, which engages the slot 2 of the said bar. Extending up through the slots 1 and 2 and engaging a tapped aperture of this base portion of the clamp is a binding set-screw 4, which holds the clamp and the two bars in the desired adjustment.

E E designate the two sole-clamps, which are preferably similar in form to those of the patent, and which are connected at their rear end portions to the respective arms of a transverse plate 6, to the central portion of which the connecting-bar D is connected. The forward end portion of the bar D is bent downwardly substantially at right angles, as indicated at 5, and is slotted to embrace the upper edge portion of the runner in a sliding manner.

6^a designates the transverse portion of the sole-plate. Formed in said plates are oblong slots 7, through which extend, respectively, the pins or rivets 8, which engage the curved slots *e* of the respective clamps E, the upper ends of said pins or rivets being secured in a transverse arm or plate 9, which thus connects the two clamps. In the forward edge of said arm or plate 9 are formed notches or teeth 10, which are engaged by the teeth of a spring 11, which is secured to the forwardly-extending portion 12 of the sole or foot plate. 13 is a button or projection which extends through the part 12 and by means of which the spring may be lifted to disengage it from the teeth 10. By means of this adjustment the clamps E E can be moved laterally with respect to the center line of the skate and of the shoe or boot in order to secure a more perfect adaptation of the clamps thereto.

The transverse portion 6^a of the sole-plate is supported by means of a U-shaped bracket or lug 13^a, whose bow portion is slotted at 14

to engage the skate-runner, to which it is secured by a pin 15. The arms of said bracket or lug are formed with tongues or tenons which extend up through the portions 6^a and 12 and are upset at their upper ends. The forward end of the part 12 is bent downwardly and engages the runner, as shown at 16. In the said patent the entire sole or foot plate was formed in one piece, which was bent downwardly at three different points to engage the runner. In the present construction it is, as has been described, made in the three separate parts 6^a, 12, and 11. The advantages gained by this change of construction are as follows: The single-piece construction is not only difficult to form up, but owing to its peculiar shape its formation results in a good deal of "scrap," which is a waste of material. In the present construction the three separate parts can be readily struck from sheet metal with very little waste. I also do away with one of the downwardly-bent supports by placing the U-shaped lug directly underneath the transverse portion 6^a.

F designates the clamping-lever, which is similar to that of the patent, being fulcrumed on the stub *b* with a cam-slot *b'*, which engages a pin or stud on the sliding plate C.

By the adjustment of the heel-clamp 3 and the two plates C and D relatively to each other the skate is adapted to shoes or boots of different shapes and sizes.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a skate, the combination with the heel-plate, having the screw-stud *b*, the slide-bar C, having a slot through which said stud ex-

tends, and a second slot forward of the heel-plate, the sole-clamps, the connecting-bar D having a slotted portion which overlaps the corresponding portion of the said slide-bar, the adjustable heel-clamps having a set-screw which engages said slotted portions, and a locking-lever pivoted to said stud and having an eccentric portion formed with a cam-slot which engages a stud or projection of said slide-bar, substantially as specified.

2. In a skate, the combination with the pivoted sole-clamps, having arcuate slots therein, and means for actuating the same, of the transverse portion 6^a, having the oblong slots 7, the transverse arm 9, the pins or rivets which extend through said arm and through the slots of the clamps and of the portion 6^a, said arm having a series of teeth in its forward edge, and a flat spring 11 having teeth adapted to engage those of the said arm, together with means for moving said spring vertically to retract its engagement, substantially as specified.

3. In a skate, the combination with the heel-plate, the sole and heel clamps, the slide-bar, the actuating-lever which engages said slide-bar, and the connecting-bar D, whose forward end portion is connected with the sole-clamps and is thence bent downwardly and slotted to loosely engage the runner, substantially as specified.

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

JOHN FORBES.

Witnesses:

E. P. FORBES,
CHAS. S. GARROWAY.