J. KING.

SKATE.

APPLICATION FILED FEB. 10, 1917.

1,245,737. Patented Nov. 6, 1917.

Fig. 1.

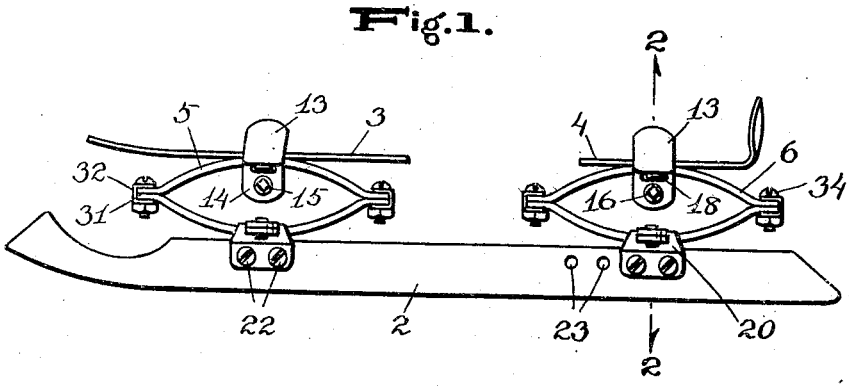
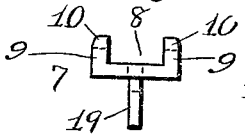


Fig. 2.

Fig. 3.



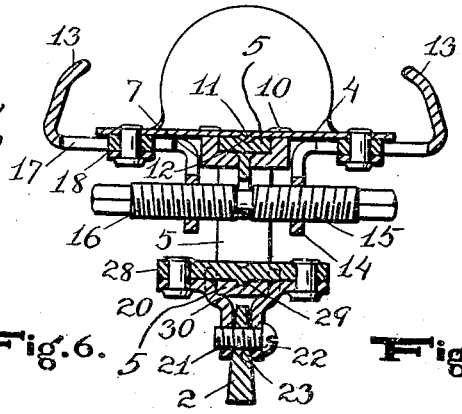
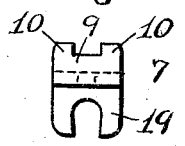


Fig. 4.



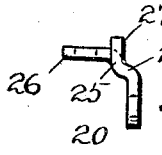


Fig. 6.

Fig. 7.

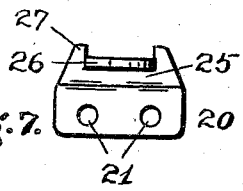
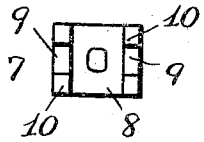


Fig. 5.



Witness

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By

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UNITED STATES PATENT OFFICE.

JOSEPH KING, OF TROY, NEW YORK.

SKATE.

1,245,737. Specification of Letters Patent. Patented Nov. 6, 1917.

Application filed February 10, 1917. Serial No. 147,823.

To all whom it may concern:

Be it known that I, JOSEPH KING, citizen of the United States, resident of Troy, in the county of Rensselaer and State of New York, have made a certain new and useful Invention in Skates; and I declare the following to be a full, clear, and exact description of the same, such as will enable others, skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a side view of the invention as applied.

Fig. 2 is a section on the line 2—2, Fig. 1.

Fig. 3 is a front view of one of the plate clamps.

Fig. 4 is a side view of the same.

Fig. 5 is a top plan view of the same.

Fig. 6 is a front view of a section of one of the runner clamps.

Fig. 7 is a side view of the same.

The invention has relation to skates, having for its object certain improvements upon the skate patented December 18, 1906, No. 838,623, with a view to increasing its strength and durability and lessening the cost of manufacture.

The invention consists in the novel construction and combination of parts as hereinafter set forth.

In the accompanying drawings illustrating the invention, the numeral 2 designates the runner or blade of an ice skate to which the invention is shown as applied, and 3 and 4 the toe and heel plates connected respectively to the runner through the medium of elliptical springs 5.

The upper leaf or branch 6 of each elliptical spring is connected to the respective plate 3 or 4, by means of a clamp 7 having a longitudinal passage 8 through which said leaf or branch extends, and lateral flanges 9 at the sides of said passage, said flanges provided with upwardly extending lugs 10 engaging perforations of the plate 3 or 4 and upset or headed at their upper ends to make the connection secure. The toe and heel plates are each provided with a projection 11, usually stamped or struck downwardly therefrom and engaging a similarly formed seat 12 in the upper branch of the spring, to limit longitudinal movement of the plate with relation to the spring. Shoe clamps 13, one at each side of each plate, are provided respectively with downturned inner ends 14, said ends having threaded perforations 15, engaged by the oppositely threaded portions of the adjusting screw 16, said clamps having slots 17 engaged by headed studs 18 of each said plate. The clamps 7 are each provided with a downwardly extending central slotted portion 19 engaging an annular central recess of the respective adjusting screw. These clamps are usually made each in two parts, the part 19 having a head engaging and riveted in an opening of the body of the clamp. Movement of the upper branch or section of the elliptical spring transversely is prevented by engagement thereof with the lateral flanges of the respective clamp 7.

The lower branch or section of each elliptical spring is seated in a runner clamp 20 made up of two opposite similar sections or cheek pieces abutting against the runner at opposite sides thereof and having registering perforations 21 transverse bolts 22, engaging said perforations and similarly situated perforations 23 of the blade or runner. The runner clamp sections are each provided with a laterally and outwardly extending upper horizontal portion 24, and with a vertical portion 25 above the horizontal flange, the vertical flange having vertical end lugs, and an outwardly extending horizontal lug 26 between the end lugs numbered 27. A top plate 28 extends transversely across the lower branch of each spring, said plate resting upon the horizontal lugs 26 and located between the end lugs 27. Each top plate is provided with a central projection 29, usually struck downwardly therefrom and engaging a similar seat 30 in the lower branch of the spring, whereby said lower branch is fixed against longitudinal movement with relation to the runner, transverse movement of said branch being prevented by engagement thereof with the vertical flanges 25.

The upper and lower branches of the elliptical springs are provided with overlying perforated horizontal ends 31, engaged by U-form clips or washers 32 and vertical screws or bolts 34 engaging perforations of said clips and those of said ends. The abutting horizontal ends of the spring branches serve to steady or stiffen the springs in use and at the same time lessen the cost of manufacture. Each runner

clamp is connected to the runner by two bolts engaging perforations of the runner or blade as stated, and one of these clamps usually the rear clamp is longitudinally adjustable to fit shoes of varying sizes by removing the transverse connecting bolts and engaging the same with others of a longitudinal series of perforations of the runner.

The skate is designed to be stronger and better braced than that of the patent referred to and the parts are mostly capable of being stamped from sheet metal.

I claim:

1. In a skate, toe and heel plates provided with central perforations, downwardly projecting studs, a central clamp for each plate having a depending slotted portion, an upper longitudinal passage and flanges bounding the passage at the sides, said flanges provided with headed lugs engaging the perforations of the plate, said plate bounding said passage at the top, elliptical springs having upper branches each engaging the passage of said clamp, shoe clamps having horizontal slotted portions engaging said studs and vertical portions provided with threaded perforations, and a transverse adjusting screw oppositely threaded and engaging said threaded perforations, said screw having an annular central recess engaging the slot of said depending portion.

2. In a skate, toe and heel plates provided with central perforations, downwardly projecting studs, a central clamp for each plate having a depending slotted portion, an upper longitudinal passage and flanges bounding the passage at the sides, said flanges provided with headed lugs engaging the perforations of the plate, said plate bounding the passage at the top, elliptical springs having upper branches each engaging the passage of said clamp, shoe clamps having horizontal slotted portions engaging said studs and vertical portions provided with threaded perforations, a transverse adjusting screw oppositely threaded and engaging said threaded perforations, said screw having a central annular recess engaging the slot of said depending portion, a runner having a horizontal series of perforations, runner clamps composed of two opposite perforated sections, horizontal bolts engaging the perforations of the runner and of said sections, said sections having each an upper horizontal portion and a vertical portion having end lugs and a central horizontal lug, the lower branch of each elliptical spring resting upon the horizontal portions of said sections, a top plate overlying said lower branch and said central horizontal lugs, and vertical bolts connecting said top plate to said horizontal lugs.

3. In a skate, a runner having a horizontal series of perforations, runner clamps composed of two opposite perforated sections, horizontal bolts engaging the perforations of the runner and of said sections, said sections having each an upper horizontal portion and a vertical portion having end lugs and a central horizontal lug, elliptical springs the lower branches of each of which rest upon the horizontal portions of said sections, a top plate overlying each of said lower branches and said central horizontal lugs, and vertical bolts connecting said top plate to said horizontal lugs.

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

JOSEPH KING.

Witnesses:

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ANNA D. GUERTIN.