

(No Model.)

C. HIRSCHMANN.
SKATE.

No. 475,241.

Patented May 17, 1892.

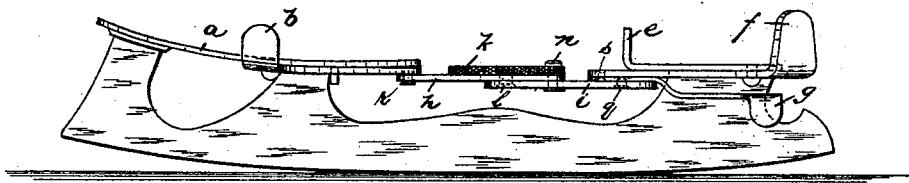


Fig. 1.

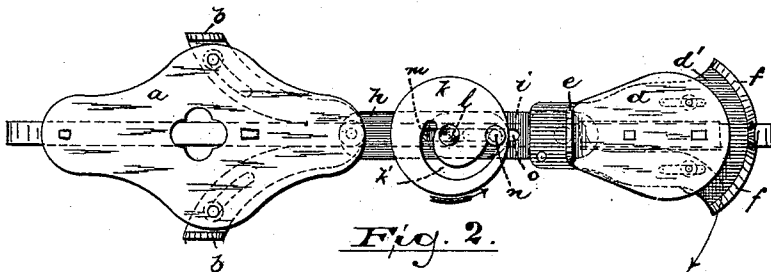


Fig. 2.

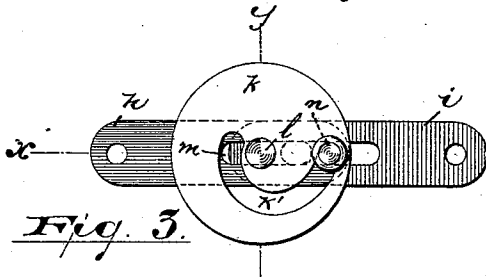


Fig. 3.

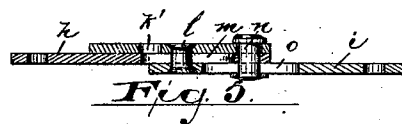


Fig. 4.

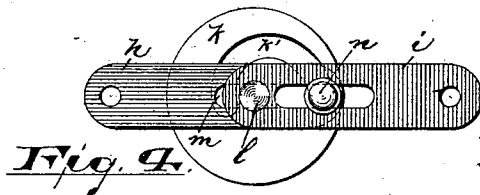


Fig. 5.



Fig. 6.

Witnesses

Inventor

Oscar A. Michel.

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UNITED STATES PATENT OFFICE.

CHRISTOPH HIRSCHMANN, OF NEWARK, NEW JERSEY, ASSIGNOR TO HENRY FOERSTER, OF SAME PLACE.

SKATE.

SPECIFICATION forming part of Letters Patent No. 475,241, dated May 17, 1892.

Application filed December 21, 1891. Serial No. 415,698. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPH HIRSCHMANN, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Skates; and I do hereby 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 of reference marked thereon, which form a part of this specification.

The object of this invention is to facilitate the operation of adjusting a skate for the foot, to reduce the cost of construction, and to secure other advantages hereinafter referred to.

The invention consists in certain novel features of construction herein shown and described, and finally pointed out in the claims.

Referring to the accompanying drawings, in which similar letters of reference indicate corresponding parts in each of the figures where they occur, Figure 1 represents in side elevation a skate embodying my improvement. Fig. 2 represents a top plan view of the same. Fig. 3 is a similar view, enlarged, of the central portion of the skate, which illustrates more clearly my improvement; and Fig. 4 is an inverted plan of the same. Fig. 5 is a section taken through line *x* of Fig. 3, and Fig. 6 is a section taken through line *y* of the same figure.

The heel and toe portions and the runner or iron of the skate are of the ordinary or usual construction and arrangement, and will not be otherwise described or referred to herein than is deemed necessary or desirable to make my improvement clearly understood.

In said drawings, *a* indicates the toe-plate; *b*, the toe-clamps; *d*, the fixed heel-plate; *d'*, the movable heel-plate; *e* and *f*, the heel-clamps, and *g* the tightening-lever. As already intimated, these parts are all old.

h and *i* indicate two slotted plates or bars, one of which is pivotally connected at one end with the tightening-lever *g* by the pivot *q*, and the other with the toe-clamps *b* by the pivot *r*, their opposite extremities overlapping and sliding upon one another, as will be shown farther on, the end of lever *g* being

pivotally secured to the heel-clamp by means of the pivot *s*.

k indicates a slotted cam-plate of circular or polygonal form (in the present case it is circular) having a milled edge, which is pivotally connected with the plate *i*, the pivot *l* passing through and working in the slot *m* of the plate *h* as the said cam-plate is rotated.

n indicates a pin or rivet carried by the plate *h* and passing through and working in the slot *k'* of the cam-plate and through the slot *o* in the plate *i* as the cam-plate is rotated, the effect of which is, when turned in one direction, to force the toe and heel clamps toward one another, thereby tightening their grip upon the boot or shoe or to loosen said grip when turned in the opposite direction, as will be understood upon reference to the drawings.

When it is desired to place the skate upon the foot, the free end of lever *g* is thrown around to one side in the direction of the arrow in Fig. 2. This will cause the toe and heel clamps to be forced apart, owing to the fact that the pivotal points between the lever *g* and the heel-clamp is forward of the pivoted point *q*, and the movement of the lever carries the pivotal point *g* at the end of the plate *i* around and forward of the pivotal point *s*. The width of the toe-clamps *b* is then adjusted to the width of the foot by turning the cam-plate *k* in the proper direction. The skate is then applied to the foot and the lever *g* is thrown back under the heel-plate, which draws the toe and heel clamps so tightly against the boot or shoe that the skate cannot be removed, except by throwing the lever out laterally, as before described.

By means of this improvement the operation of adjusting a skate to the foot is accomplished much easier and the device is less expensive than those heretofore employed, as well as more sightly in appearance.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a skate, the combination, with the foot or toe clamps and the movable heel-clamps, of the plates *h* and *i*, the inner ends of which overlap and are movable upon each other, a cam-plate pivotally secured to one of the

plates and engaging with and adapted to move the other plate longitudinally on the first-mentioned plate, and means for moving said plates relatively to one of the clamps of the skate, substantially as described.

2. In a skate, the combination, with the toe and heel clamps movably secured to the body of the skate, of a lever *g*, pivotally secured to one of the clamps, two plates *h* and *i*, secured, respectively, to the remaining clamp and to the lever, the adjacent ends of said plates being slotted and overlapping each

other, a cam-plate *k*, pivotally secured to one of the plates and provided with a spiral slot, and a pin *n*, secured to the other plate and passing through the slot of the cam-plate, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of December, 1891.

CHRISTOPH HIRSCHMANN.

Witnesses:

OLIVER DRAKE,
HENRY FOERSTER.