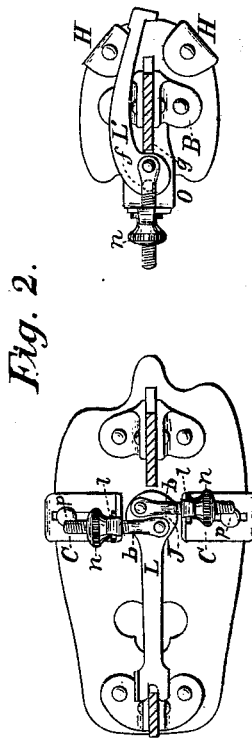
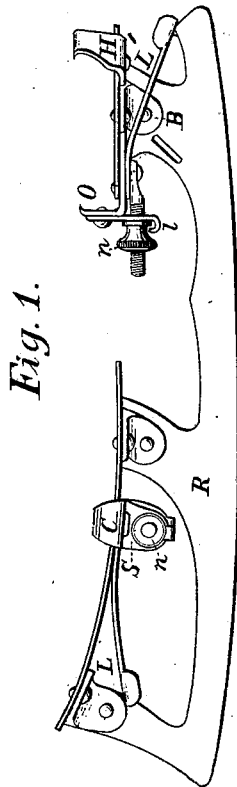
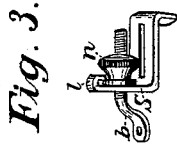
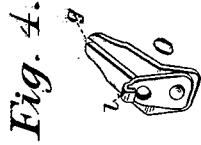


L. COOK.
Skate.

No. 206,165.

Patented July 23, 1878.



Witnesses;
Edwin E. Moore.
Albert A. Parker.

Inventor;
Leroy Cook.

UNITED STATES PATENT OFFICE.

LEROY COOK, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN SKATES.

Specification forming part of Letters Patent No. **206,165**, dated July 23, 1878; application filed February 11, 1878.

To all whom it may concern:

Be it known that I, LEROY COOK, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Skates; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 the letters of reference marked thereon, which form a part of this specification.

My invention consists of a skate provided with adjustable sole and heel clamps, the sole-clamps being operated by a lever separate and independent of the heel-clamp, and the heel-clamp also operated by another similar lever, so that either sole or heel clamp can be adjusted or operated separately, as hereinafter more particularly described.

In the drawing, Figure 1 is a side elevation. Fig. 2 is a plan view. Fig. 3 shows the construction of the sole-clamp. Fig. 4 shows the construction of the heel-clamps.

C represents the sole-clamps, which slide backward and forward on the foot-plate at right angles with the runner of the skate, being confined in place by the pins *p p*, as shown in the figure. The rear end of the clamp C terminates in a standard, S, at right angles with the foot-plate. To this standard is attached the bar or connecting-rod *b*, which connects the clamp with the spring-lever L. On the outer end of the bar *b* is a thumb-nut, *n*, provided with a flange or shoulder, which plays against the standard S. The top of this standard is provided with a flange or lip, *l*, which projects over the flange of the thumb-nut, thus connecting the nut with the clamp C, so that the clamp can be readily and easily moved backward and forward by turning the nut with the fingers.

By this arrangement the clamps can be readily adjusted to feet of different sizes. The foot can also be placed more on one side of the foot-plate than the other, if desired, by moving both sole-clamps in the same direction.

The connecting-rods *b* are attached to the lever L by pins or bolts on opposite sides of

the fulcrum of the lever L, forming a toggle-joint, by which the clamps C are forced backward or forward by moving the lever. The spring-lever L, when in position, is confined to the runner by a notch in the end, or by any other convenient method.

The heel-clamp O is made to move backward or forward by an arrangement substantially the same as that used for the sole-clamps. The clamp O is provided with an open slot or sliding groove, *g*, by which the clamp is made to slide on the fulcrum-pin *f* of the lever L, and also on the runner of the skate R.

The clamp is also narrowed at the end, to allow the same to pass under, as well as to form a bearing against the bracket B, thus keeping the clamp O firmly in its proper place.

The heel-clamps H H, on the rear of the heel-plate, are constructed of metal, of convenient size and shape, and fastened to the heel-plate, as hereinafter described.

The clamp is bent at or near the middle portion, so as to form a base and standard, which are at right angles with each other. The base of the clamp is provided with a rivet-hole, by means of which the clamp is riveted firmly to and parallel with the heel-plate. The upper portion of the standard is bent inwardly toward the heel-plate, so as to form the ordinary spur for holding the heel of the boot.

By the independent action of both sole and heel clamps either can be adjusted, in case it should become loose while skating, without disturbing the other, which is not the case where a single lever is employed to operate both sole and heel clamps.

All danger of warping the runner is also obviated by the independent action of the sole and heel clamps.

I claim as my invention—

1. The adjustable thumb-nut *n* and the flange or lip *l*, constructed and combined so as to move the clamp backward or forward, as described, for the purposes set forth.

2. The combination of the sole-clamp C, standard S, flange or lip *l*, the adjustable thumb-nut *n*, connecting rod or bar *b*, toggle-joint J, and the spring-lever L, when constructed as described, to operate the clamps C with

one movement of the lever L, substantially as and for the purpose set forth.

3. The combination of the clamp O, provided with the slot or sliding groove *g*, with the pin *f*, the runner R, and bracket B, when constructed and arranged to operate substantially as described, and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

LEROY COOK.

Witnesses:

EDWIN E. MOORE,
ALBERT A. BARKER.