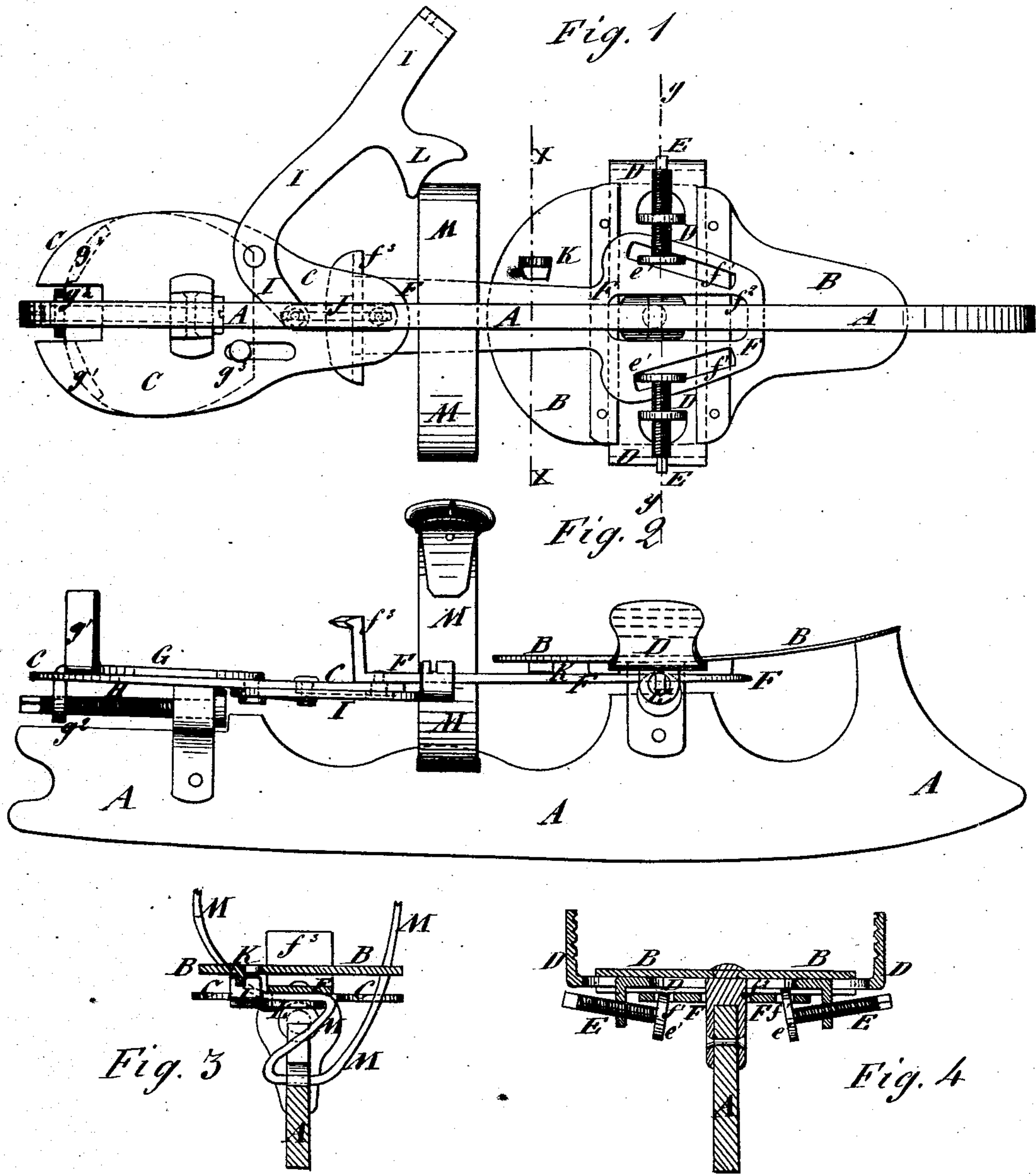


R. H. EARLE.

Skates.

No. 160,087.

Patented Feb. 23, 1875



WITNESSES:

C. Novus
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INVENTOR:

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UNITED STATES PATENT OFFICE.

REGINALD H. EARLE, OF ST. JOHN, NEWFOUNDLAND.

IMPROVEMENT IN SKATES.

Specification forming part of Letters Patent No. **160,087**, dated February 23, 1875; application filed December 28, 1874.

To all whom it may concern:

Be it known that I, REGINALD H. EARLE, of St. John, in the Province of Newfoundland, have invented a new and useful Improvement in Skates, of which the following is a specification:

Figure 1 is a bottom view of one of my improved skates. Fig. 2 is a side view of the same. Fig. 3 is a detail cross-section of the same, taken through the line *x x*, Fig. 1. Fig. 4 is a detail cross-section of the same, taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to simplify the construction of the skate for which Letters Patent No. 155,015 were granted to me September 15, 1874, make it more convenient in use, and enable it to be applied to any kind of a boot or shoe.

The invention consists in the combination of the screws and their disks with the sliding arms, the slotted sliding plate, and the foot-plate; in the rearwardly-projecting edge or teeth formed upon the rear end of the sliding plate, in combination with the sliding heel-plate and the stationary heel-plate; and in the combination of the arm with the long arm of the lever that operates the clamps, and with the instep-strap, as hereinafter fully described.

A represents the blade or runner of the skate, to the upper edge of the forward part of which is secured a plate, B, upon which the forward part of the skater's foot rests. To the upper edge of the rear part of the blade A is attached a plate, C, to support the heel of the skater's foot. Upon the under side of the foot-plate B is formed a transverse dovetailed or T groove to receive the sliding arms D, the outer ends of which are bent upward, and are corrugated, to clasp the edges of the boot-sole. Through screw-holes in lugs formed upon or attached to the lower side of the outer part of the sliding arms D are passed the screws E, the outer ends of which are squared off to receive a key for turning them. To the inner ends of the screws E are attached small disks *e'*, which enter inclined slots *f*¹ formed in the forward part of the plate F.

By this construction, by turning the screws E the arms D may be moved out and in, to

adjust them to the width of the boot-sole to which the skate is to be attached. By moving the plate F forward, to bring the disk *e'* into the rear part of the slots *f*¹, the arms D will be moved outward to release the boot-sole; and by moving the plate F to the rearward, to bring the disks *e'* into the forward parts of the slots *f*¹, the arms D will be moved inward, to clasp the edges of the boot-sole and secure the skate to it.

The middle forward part of the plate F has a longitudinal slot, *f*², formed in it to receive the stud by which the plate B is secured to the blade A. The rear part of the plate F is made narrow, and extends back so as to overlap the forward part of the heel-plate C. The rear end *f*³ of the plate F is bent upward at right angles, and has a rearwardly-projecting edge or teeth formed upon it, to take hold of the front side of the boot-heel. Upon the heel-plate C is placed a plate, G, upon the rear edge of which are formed upwardly-projecting lugs *g*¹, the inner sides of which are corrugated, and against which the rear side of the boot-heel rests. Through a screw-hole in a lug, *g*², formed upon or attached to the rear part of the lower side of the plate G, passes the screw H, the rear end of which is squared off to receive a key for turning it. The forward end of the screw H is swiveled to the stud by which the heel-plate C is connected with the blade A, so that by turning the said screw H the plate G may be slid forward and back upon the plate C, to adjust it to the size of the heel of the boot to which the skate is to be applied. The plate G is kept in place, as it is slid back and forward, by the lug *g*² and one or more rivets, *g*³, which pass through slots in heel-plate C, as shown in Fig. 1. I is a bent lever, which is pivoted at its bend or angle to the heel-plate C, and the end of the short arm of which is pivoted to the rear end of a short connecting-bar, J. The forward end of the connecting-bar J is pivoted to the rear part of the sliding plate F, the pivoting-rivet passing through a slot in the forward part of the heel-plate C, to cause the plate F to move in a straight line.

By this construction, by moving the long arm of the lever I outward the sliding plate F is moved forward, which releases the skate

from the boot; and by moving the long arm of the said lever I inward the sliding plate F is moved to the rearward, clamping the skate to the boot.

The free end of the long arm of the lever I, when moved inward, catches upon a catch, K, attached to the foot-plate B. To the inner edge of the forward part of the long arm of the lever I is attached, or upon it is formed, an arm, L, the forward end of which is slightly concaved, so as, when the lever I is moved inward, to press against and tighten the strap M, which passes through a hole in the middle part of the blade A and over the instep of the foot.

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

1. The combination of the screws E and disks *e'* with the sliding arms D, the slotted sliding plate F, and the foot-plate B, substantially as herein shown and described.

2. The rearwardly-projecting edge or teeth *f*³ formed upon the rear end of the sliding plate F, in combination with the sliding heel-plate G and the stationary heel-plate C, substantially as herein shown and described.

3. The combination of the arm L with the lever I, that operates the clamps, and with the instep-strap M, substantially as herein shown and described.

REGINALD HEBER EARLE.

Witnesses:

I. W. MELVIN,
P. F. CARBERY.