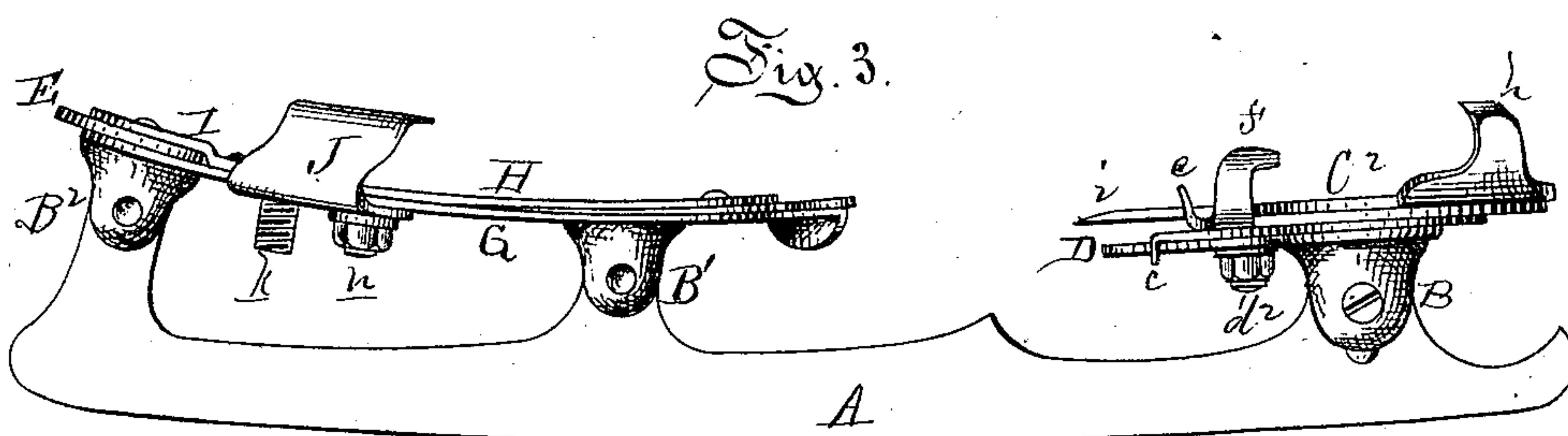
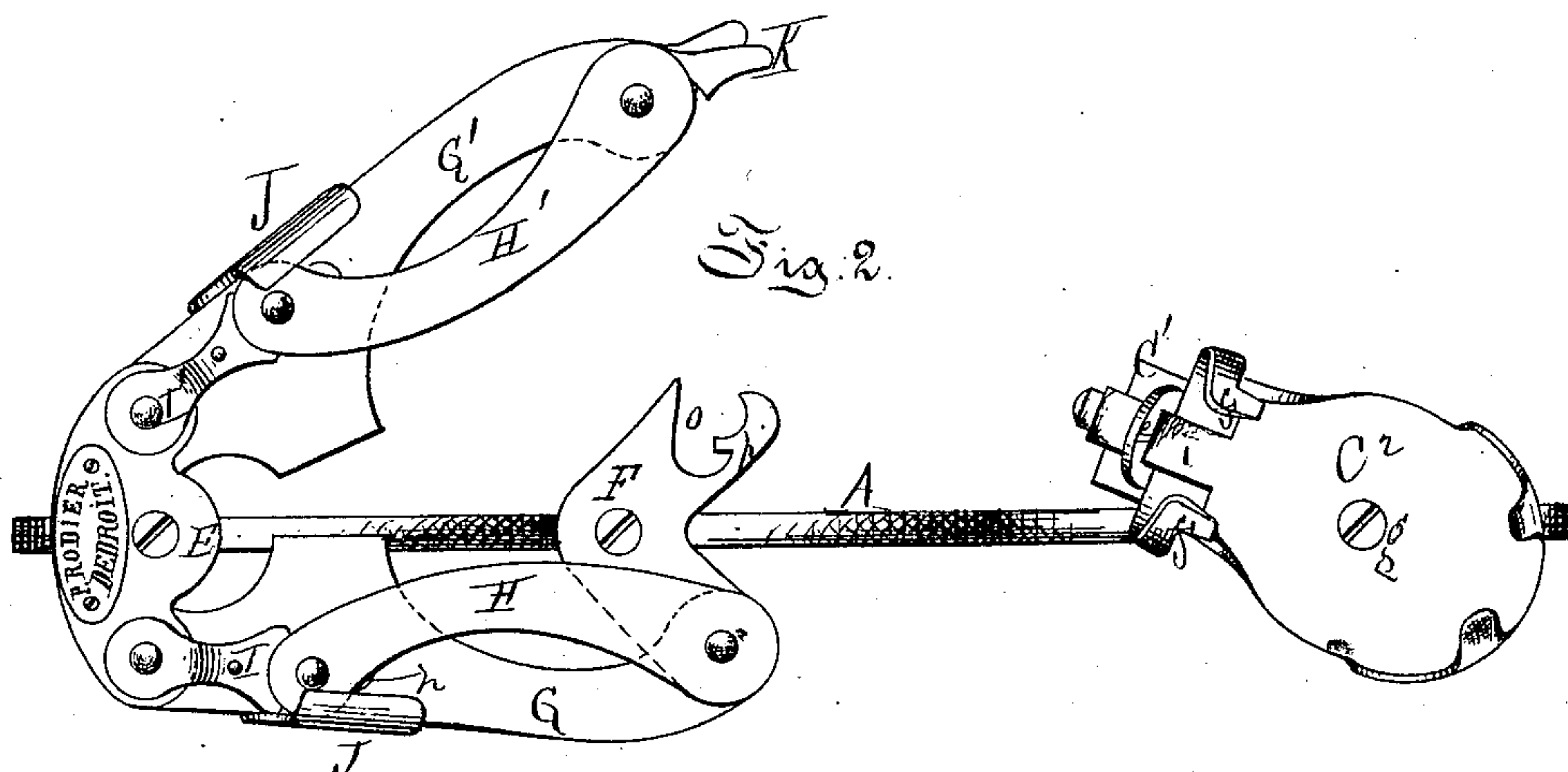
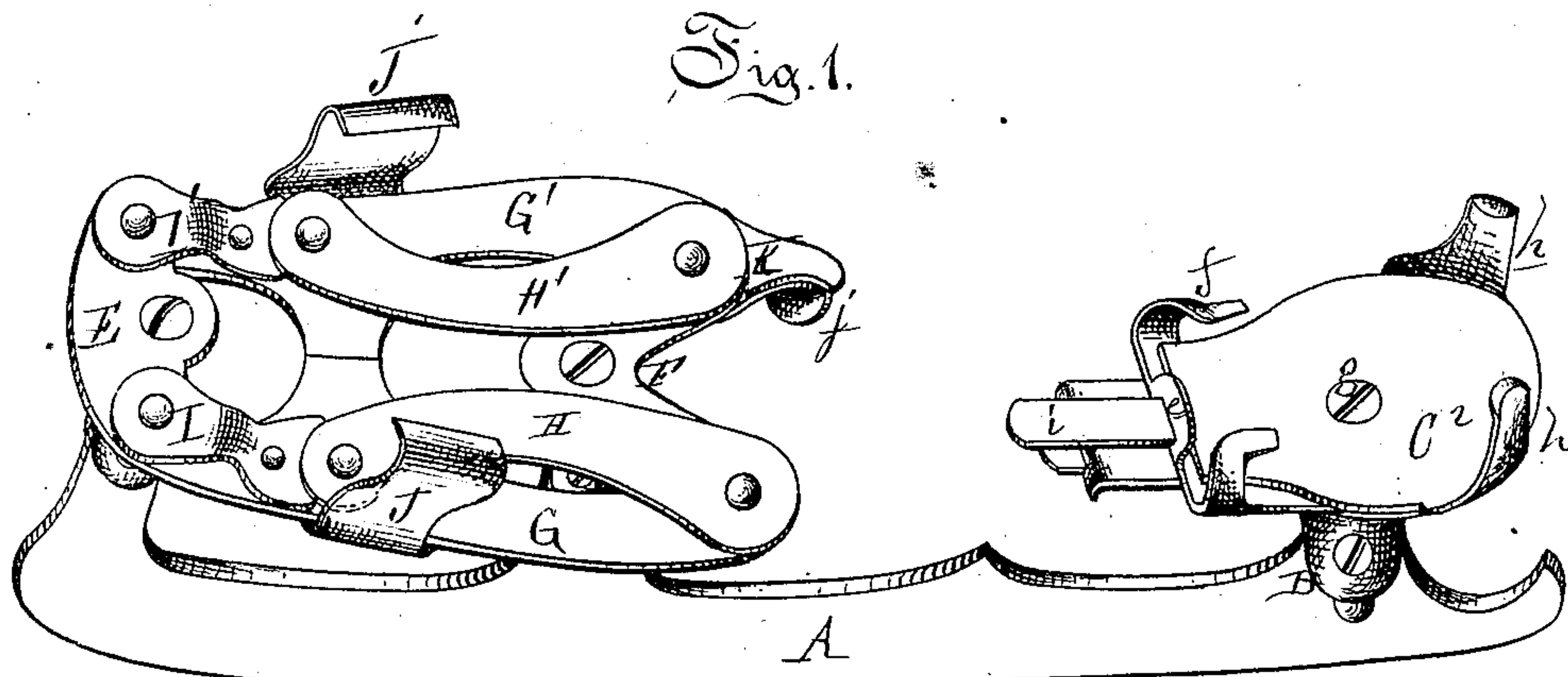


P. RODIER.
Skates.

No. 164,039.

Patented June 1, 1875.



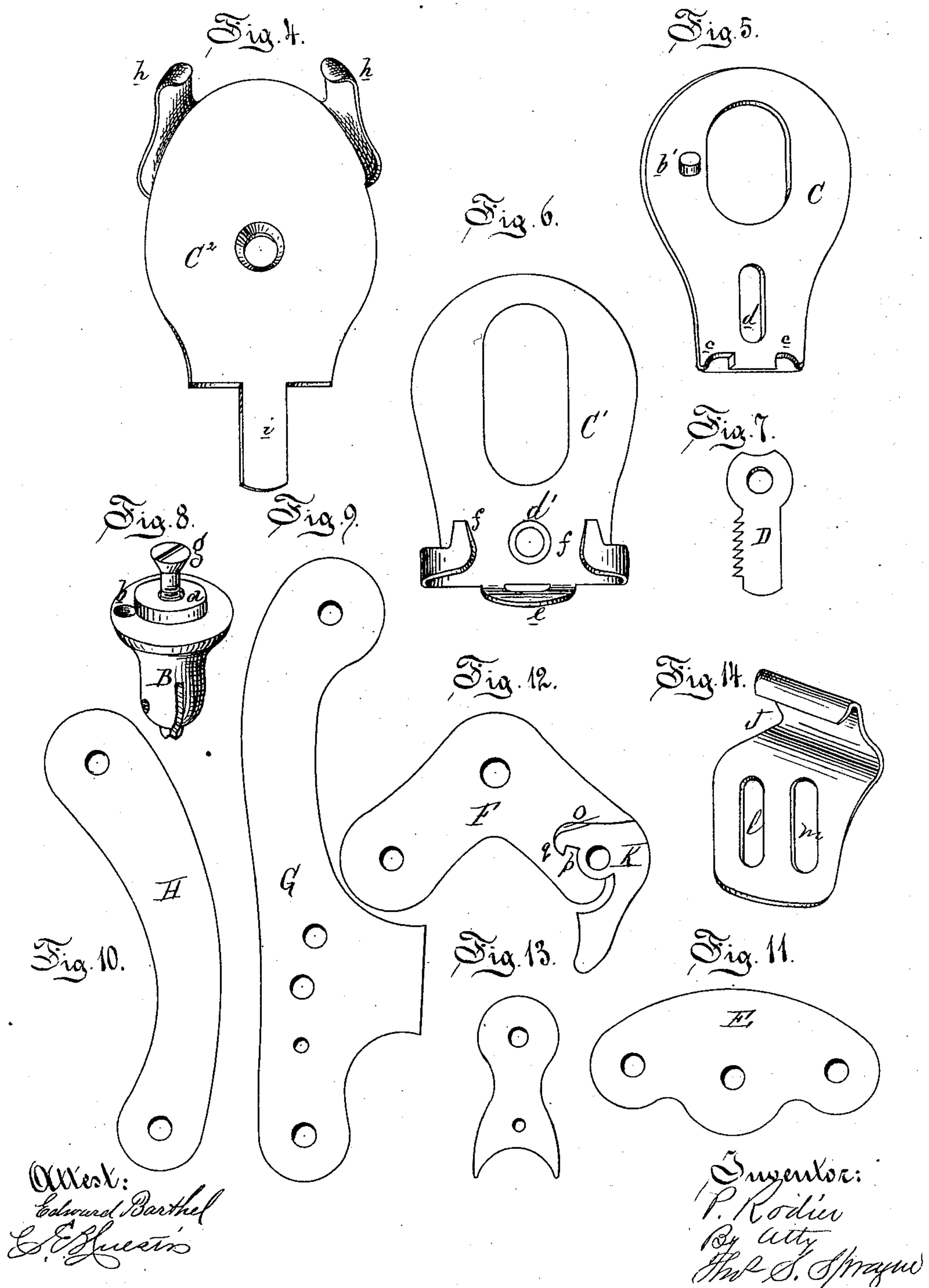
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UNITED STATES PATENT OFFICE.

PETER RODIER, OF DETROIT, MICHIGAN.

IMPROVEMENT IN SKATES.

Specification forming part of Letters Patent No. 164,039, dated June 1, 1875; application filed April 17, 1875.

To all whom it may concern:

Be it known that I, PETER RODIER, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Skates, of which the following is a specification:

The first part of my invention relates to the devices at the heel of my skate for automatically fastening or clamping the skate to the boot-heel by simply swinging the skate into position under the foot, the said attachments being also adjustable to boot-heels of varying sizes.

The second part of my invention relates to the peculiar devices employed for securing the toe-part of the skate to the sole of the skater's boot, as more fully hereinafter set forth.

Figure 1, Sheet 1, is a perspective view of my improved skate. Fig. 2 is a plan of the same, showing the positions of the parts preparatory to putting on the skate. Fig. 3 is a side elevation. Fig. 4, Sheet 2, is a front perspective view of the heel-plate proper. Fig. 5 is a bottom perspective view of the lowermost heel-plate. Fig. 6 is a top perspective view of the intermediate heel-plate. Fig. 7 is a plan of the ratchet lock-plate. Fig. 8 is a perspective view of the heel-pedestal. Fig. 9 is a plan of one side plate, which sustains a curved foot-plate, Fig. 10, on which the ball of the foot rests. Fig. 11 is a plan of the toe-girt. Fig. 12 is a plan of the rear girt and of the side plate-lock. Fig. 13 is a plan of toe-stay. Fig. 14 is a perspective view of a sole-clip.

In the drawings, A represents the runner of my skate. B is the heel-pedestal. B¹ is the middle pedestal, and B² the toe-pedestal, all of which are riveted to the runner, as shown. The top of the heel-pedestal has a raised central shoulder, *a*, at one side of which a hole, *b*, is tapped in the top of the outer part of said pedestal, which receives a stud, *b'*, on the under side of the lower heel-plate C, which has a longitudinal slot, up through which the raised shoulder *a* projects. The stud *b'* serves as a fulcrum, on which said plate may oscillate. The front end of said plate C has a slot cut in it, the slotted end being then turned downward to make two flanges, *c c*, Fig. 5. There is also a slot, *d*, cut in it longitudinally.

C¹ is an intermediate heel-plate placed on top of the lower one, C. There is a large slot in it to slip over the shoulder *a* of the pedestal. Near the front end there is a bolt-hole, *d*¹, countersunk to receive a screw-bolt, *d*², Fig. 3, which passes through the slot *d* in the plate C, with a nut on the lower end to clamp the plates together, which can be adjusted by sliding them one upon the other. The plates are more securely fastened after adjustment by a lock-plate, D, Fig. 7, slipped on the bolt above the nut, having a ratchet cut on one edge, which is swung laterally to engage with one of the flanges *c*, the latter being beveled on the inner end for that purpose. At the front end of the plate C¹ a clip, *e*, is turned up, with a horizontal slot punched through it, and at each front corner there is a spur, *f*, curved upward, inward, and backward, to engage with the front of the boot-heel. C² is the upper or heel plate proper pivoted, by a screw, *g*, to the heel-pedestal. At the quarters spurs *h h* are turned upward and inward to engage with the quarters of a boot-heel when forced into the same. At the front end there is a tongue, *i*, which passes through the slotted clip *e* of the plate C¹, so that, if the plate C² be swung to one side, the others will necessarily be turned by it; but, at the same time, the eccentric fulcrum of the lower plate will cause it, and the intermediate one attached to it, to slide or elongate, separating the spurs *f h*, or moving them apart.

If, now, the boot-heel be introduced between them, resting upon the lower plate, and the skate be swung under the foot, the plates C C¹ will be forced back, and sink the spurs *f* into the heel, thereby firmly securing the skate thereto.

By reason of the adjustability of the lower plates C C¹ upon one another, the heel-spurs may be adjusted to heels of various sizes.

E is a segment-shaped toe-plate secured to the toe-pedestal. F is a Λ -shaped foot-plate secured to the middle pedestal. G is a curved side plate, whose ends are secured to the under sides of the outer ends of the plates E F. G' is a plate of like shape, whose front end is pivoted under the end of the toe-plate. At its rear end there is turned down a lip, *j*, for a finger-piece. H is a segment-shaped foot-sup-

porting plate, whose front end is laid on the fore part of the side plate G, up through which is tapped a screw, *k*, Fig. 3. A shoulder is turned at the top of this screw, which reduced end is passed through a hole punched in the front end of said plate H, and then riveted over, so that by turning the screw the front end of said plate H may be raised or lowered. The rear end of said plate H rests upon the plate F, and a rivet, passing through both of them, and through the rear end of the side plate, secures all three together. I is a stay laid upon the toe-plate and fore part of the side plate, to stiffen the joint thereof, being firmly riveted in place. J is a clamp, adjustably secured to the under side of the side plate, and is so shaped as to come up over the edge of the sole and welt of a boot. Its top flange is of such height as to overlap the thickest sole. Where the boot has a thinner sole the foot-supporting plate may be raised up, as above described, so that the flange of the clamp will just come up over the edge of the sole. The clamp J has a lateral slot, *l*, for the screw *k* to pass through, and another one, *m*, for a clamp-bolt, *n*, which secures it to the bottom of the side plate, and by means of which the clamp may be adjusted to any width or shape of sole.

The side plate G', being pivoted at the front end to the toe-plate, may be, with its foot-support H', stay I', and clamp J', swung outwardly to enable the skate to be adjusted to the foot, after which the said plate G' is swung back to bring its clamp J' against and over the edge of the sole, when the said plate may be locked to the foot-plate in the following manner: In the outer edge of the foot-plate a curved notch, *o*, is cut out, with a projection, *p*, in the rear

part. An L-shaped latch, K, is pivoted between the plates G' H', on their rivet, its inner end projecting into the notch *o*, where it has a hook, *q*, which can be hooked onto or behind the projection *p*, thus locking the skate to the boot.

All the plates, clips, and clamps can be punched out of sheet-steel, thereby making the skate a cheap one to manufacture.

What I claim as my invention is—

1. The combination of the plates C C' C², the two latter provided with the spurs *f h*, with the heel-pedestal of a skate, substantially as and for the purpose set forth.

2. The ratchet lock-plate D and bolt *d*², in combination with the plates C C', as and for the purpose set forth.

3. The toe-plate E, foot-plate F, side plates G G', plates H H', adjustable clamps J J', and a locking device, in combination with the pedestals B¹ B² of a skate, substantially as and for the purpose set forth.

4. The hook-latch K, pivoted between the plates G' H', in combination with the notch *o* and projection *p* of the foot-plate F, substantially as described.

5. A skate having a stationary side plate provided with an adjustable sole-clamp, a swinging side plate provided with a similar clamp, which latter plate is pivoted to the stationary plate, or to an intermediate girt-plate, and a locking device, the several parts combined and operating substantially as described.

PETER RODIER.

Witnesses:

H. F. EBERTS,
C. E. HUESTIS.