

(No Model.)

L. HULL.

SKATE.

No. 336,919.

Patented Mar. 2, 1886.

Fig:1.

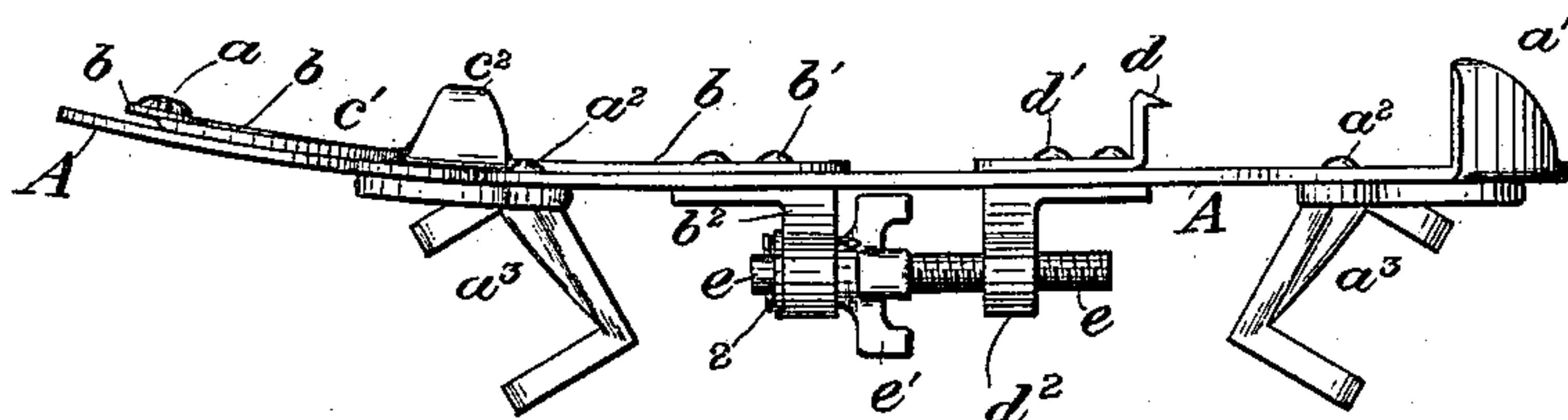
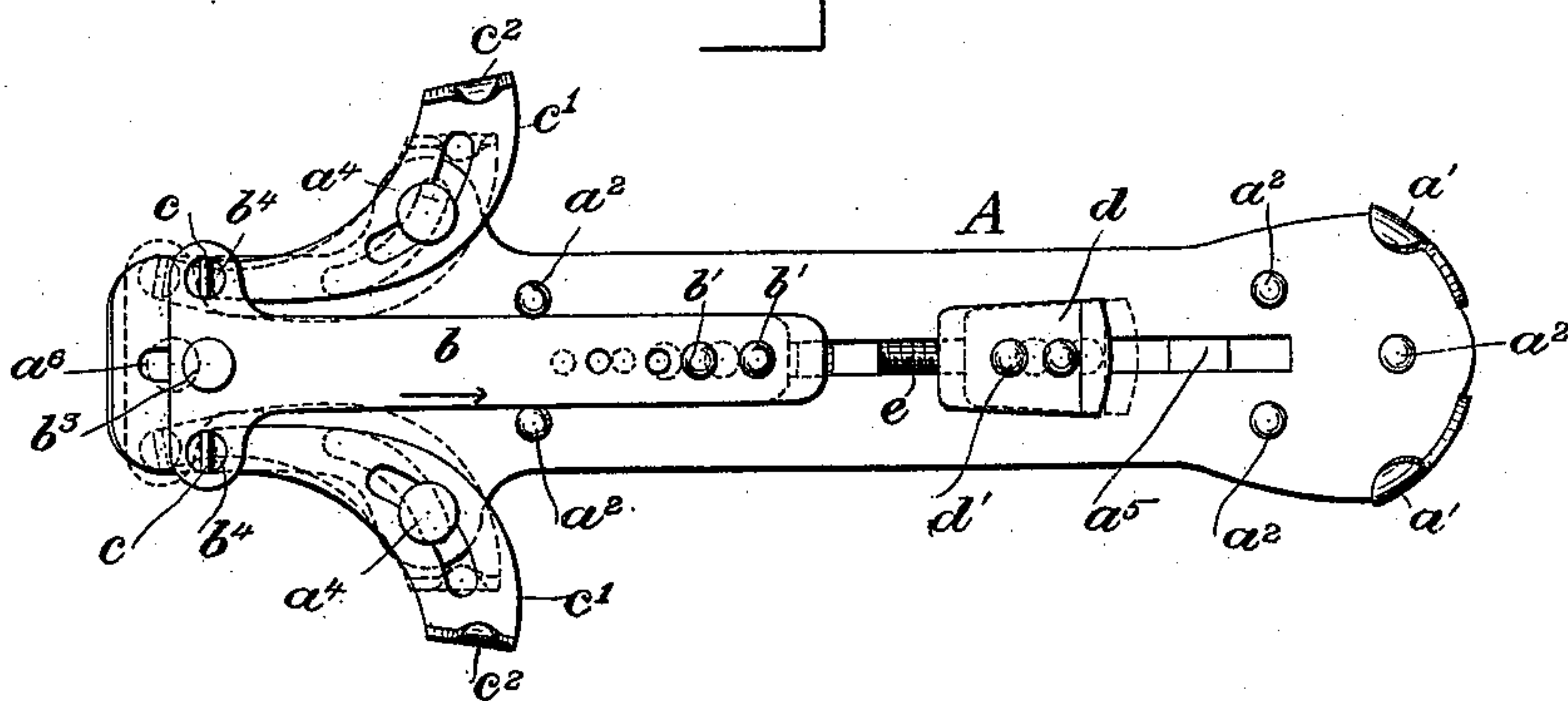


Fig:2.



Witnesses.

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UNITED STATES PATENT OFFICE.

LIVERUS HULL, OF BOSTON, MASSACHUSETTS.

SKATE.

SPECIFICATION forming part of Letters Patent No. 336,919, dated March 2, 1886.

Application filed April 18, 1885. Serial No. 162,660. (No model.)

To all whom it may concern:

Be it known that I, LIVERUS HULL, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Skates, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to improve the devices by which the clamps of the skate may be readily operated to effect the attachment of the skate to a boot or shoe.

My invention is an improvement on the class of skates known as "clamp-skates," and is shown as embodied in that form of clamp-skate described in my application Serial No. 136,325, filed June 30, 1884, to which reference may be had. In that application the slide-plate, bifurcated at its end and engaging slots of the sole-clamping arm, is moved by a lever. In this my present invention the sole-engaging clamps are pivoted directly upon a slide-plate, which is operated by a screw, the latter connecting the said slide-plate with a block or carriage holding the heel-breast-engaging dog, both the said slide-plate and clamp and the said block or carriage being longitudinally movable in slots in the top plate of the skate.

Figure 1 in side elevation represents the top plate of a roller-skate and the parts connected therewith sufficiently to illustrate my improvements; and Fig. 2 is a top view of Fig. 1.

The top plate, *a*, preferably of sheet-steel, has upturned lips *a'*, to engage the outer curved part of the heel, as usual. The brackets *a''* are secured to the under side of the top plate by the rivets *a'''*. The central part of the top plate is provided with a long slot, *a⁴*, and at each side of the plate is a headed screw or stud, *a⁴*. The slide-plate *b*, laid in the sole-plate *a*, is at its inner end attached by nuts *b'* to a block, *b²*, placed below the said sole-plate, and at its forward end a pin, *b³*, of the said slide enters the slot *a⁴*. The slide-plate *b* at its forward end has two holes, *b⁴*, to receive the projection *c* of the clamp-arms *c'*, having lugs or projections *c²*, to engage or lap over the edge of the sole of the boot or shoe, the said arms being each slotted, as shown, in the arc of a circle, and engaging the screws or studs *a⁴*, so that as the said slide-plate is moved longitudinally the said clamps will be

spread or contracted, as represented by the full and dotted lines. The heel-breast-engaging dog *d* is connected by rivets *d'* to a block, *d²*, placed in the slot *a⁴*. The block *d²* is provided with a screw-thread to receive the screw *e*, having fast on it the finger-nut *e'*, the unthreaded end of the said screw (see the left of Fig. 1) entering loosely the block *b²*, and being retained therein by the pin 2.

To apply the skate the screw *e* will be turned into the block *d²* for half or two-thirds its length, and the screw and both blocks *b²* will be moved bodily to the right, (viewing the drawings,) causing the slide-plate *b* to be moved in the direction of the arrow thereon, Fig. 2, which will cause the arms *c' c'* to be spread apart, as in full lines. The skate will then be applied to the bottom of the boot or shoe, and the screw will be turned in the direction to draw it out from the block *d²*, and as soon as the dog *d* meets the breast of the heel, and while the said dog rests against the breast of the heel the continued rotation of the screw *e* causes the slide-plate to be slid forward opposite the arrow, which results in drawing the slotted arms *c' c'* over the pins *a⁴*, thus closing the arms or clamps *c' c'* upon the sole of the boot or shoe, the sharpened end of the dog at such time entering the heel-breast, thus effectually and quickly securing the skate to the boot or shoe.

I claim—

1. The slotted plate *a*, its studs or screws *a⁴*, the slide plate, its block *b²*, and the slotted arms or clamps *c' c'*, and the dog and block *d²*, combined with the screw to connect the slide-plate and block, to operate substantially as described.

2. The slotted plate *a*, provided with the studs *a⁴*, and the block *b²*, the slide-plate and the arms *c' c'*, pivoted thereon and slotted, as described, to embrace the said studs, combined with the screw *e*, connected with the block *b²* and with the block *d²*, also held in place by the said plate *a*, to operate substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LIVERUS HULL.

Witnesses:

G. W. GREGORY,
B. J. NOYES.