

C. G. C. SIMPSON.
SKATES.

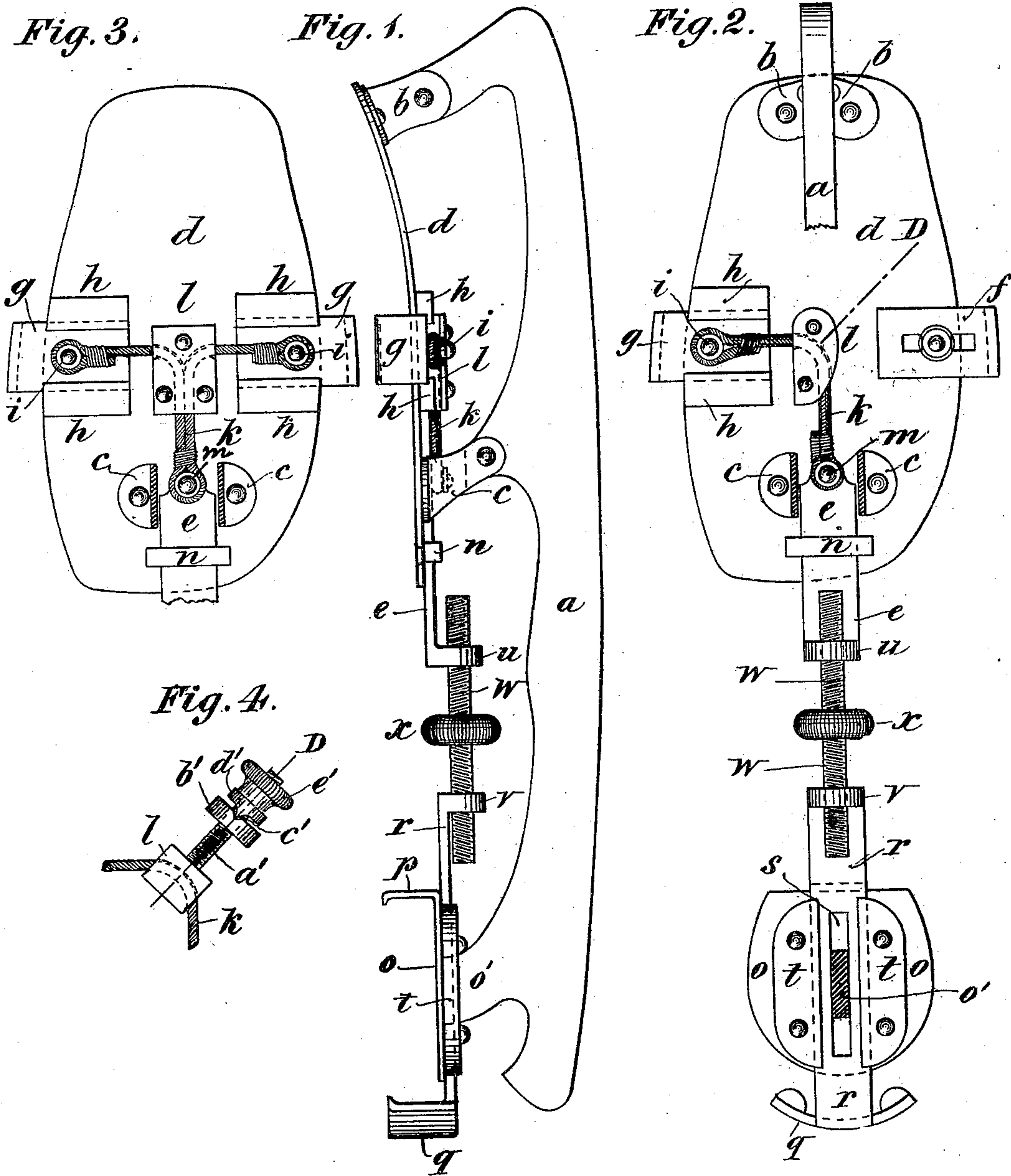
No. 179,465.

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Fig. 3.

Fig. 1.

Fig. 2.



Witnesses.
M. A. Nelson
& L. Stilwell.

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UNITED STATES PATENT OFFICE.

CHARLES G. C. SIMPSON, OF MONTREAL, CANADA, ASSIGNOR TO CHARLES BREWSTER, OF SAME PLACE.

IMPROVEMENT IN SKATES.

Specification forming part of Letters Patent No. 179,465, dated July 4, 1876; application filed May 12, 1876.

To all whom it may concern:

Be it known that I, CHARLES GRAHAM CHAPPELL SIMPSON, of the city and district of Montreal, Province of Quebec, Canada, have invented certain new and useful Improvements in Skates; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention has reference to improvements in the mechanism for attaching skates to the boot or shoe of the skater.

In the drawings hereunto annexed, similar letters of reference indicate like parts.

Figure 1 is a side elevation of my invention. Fig. 2 is an inverted plan view. Fig. 3 is a modification of Figs. 1 and 2. Fig. 4 is a detail of a modification of my invention.

a is the runner, to which is attached, by brackets *b* and *c*, the sole-plate *d*. The ends of the brackets *c*, attached to the sole-plate, are spread sufficiently far apart to admit the passage of the bar *e* between them; and, if desired, they may be situated to form lateral guides to the bar. *f* is a slotted sole-clamp, attached to the plate *d* by a bolt and nut, in the ordinary way, the slot allowing of a certain amount of adjustment. The other sole-clamp, *g*, is held in guides *h*, attached to the sole-plate. This clamp is provided with a pin, *i*, projecting downward for the attachment of a piece of small wire cable or chain, *k*, which passes through a friction-block, *l*, and has its other end attached to the pin *m* on the bar *e*. *n* is a staple, in which the bar *e* slides, guiding and holding it up close under the sole-plate *d*. *o* is the heel-plate, attached, as shown, on the rear of the runner, by having the end of the riser *o'* riveted within a suitable opening made in the heel-plate. This heel-plate is provided with a turned-up tongue in front, forming a stationary inner heel-clasp, *p*, for the front of the heel to rest against. *q* is the outer or rear heel-clasp. This is made in one with a bar, *r*, which bar is provided with a slot, *s*, allowing it sufficient range for sliding upon the riser *o'*, adjacent to the heel-plate, the bar being put in place before the riser is riveted in the plate *o*. *t* are guides attached to the heel-plate *o*, and

further guiding the bar *r*, and holding it close up under the heel-plate.

The bars *e* and *r* are provided with eyes *u* and *v*, which are tapped with screw-threads to receive the screwed ends of the spindle *w*, which is operated by any suitable thumb-and-finger device *x*.

The ends of the spindle *w* are provided, the one end with a right-hand and the other with a left-hand thread, so that by rotating it in one direction the bars *e* and *r* are drawn together, thereby closing the clasp *g* on the sole and the clasp *q* upon the heel.

By turning the spindle the reverse way the bars *e* and *r* are forced apart, releasing the clasps from the boot or shoe.

The clasp *f* is, in the first place, set to suit the boot, and to bring the runner *a* to the desired position under the sole. Thus the skater is enabled to have the runner either under the center of the foot or a little to one side, if desired.

In the modification shown in Fig. 3 the friction-block *l* has a double form, and the clasps are both constructed, arranged, and operated similar to the clasp *g*, the cable *k* also having the double form, being attached to both, so clearly shown in the drawings that it requires no further explanation.

In Fig. 2 the friction-block *l* may, if desired, be made movable, and used to tighten, or assist in tightening and loosening, the clasps. In this case it will be arranged as shown in Fig. 4. The center line *D* in that figure corresponds with the center line *D* in Fig. 2. The block *l* in this case is not secured on the plate, but is made in one, with a screwed spindle, *a'*, passing through an eye, *b'*, attached on the plate *d*. This eye is provided with a notch to receive the balance-center *c'* of the washer *d'*. *e* is a nut to be operated by the thumb and finger, so that by screwing up the nut *e'*, to cause the block *l* to approach the eye *b'*, the clasps *g* and *q* will be drawn in, and by a reverse rotation of the nut they will be loosened.

By making the opening in the eye *b'* somewhat larger than the screw *a'* the balance-center *c'* enables the block *l* to swing a suffi-

cient amount to accommodate various positions of the parts.

In applying this skate to the foot the clasp *p* is placed firmly against the front of the heel of the boot; the spindle *w* is then rotated to cause the clasps to come to a bearing.

What I claim is as follows:

1. The combination of clasp *g*, cable *k*, and friction-block *l*, substantially as and for the purposes set forth.

2. The combination of the clamp *g*, cable *k*, friction-block *l*, bars *e* and *r*, and screw-spindle *w*, substantially as and for the purposes set forth.

Montreal, 17th day of April, A. D. 1876.

CHARLES G. C. SIMPSON.

Witnesses:

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