

(No Model.)

G. C. BATEMAN.  
SKATE.

No. 440,529.

Patented Nov. 11, 1890.

Fig. 1.

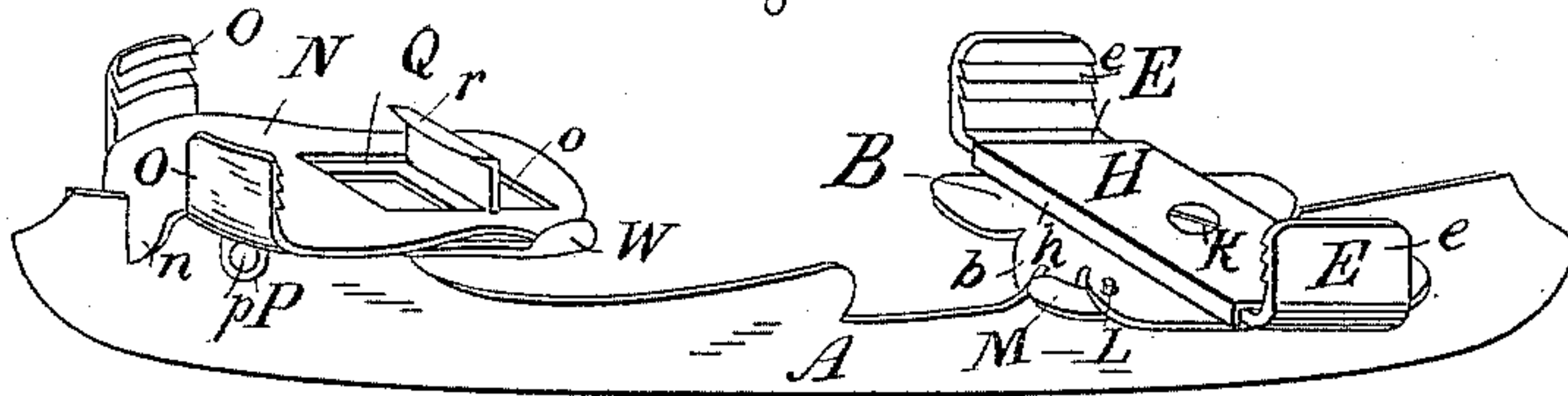


Fig. 2.

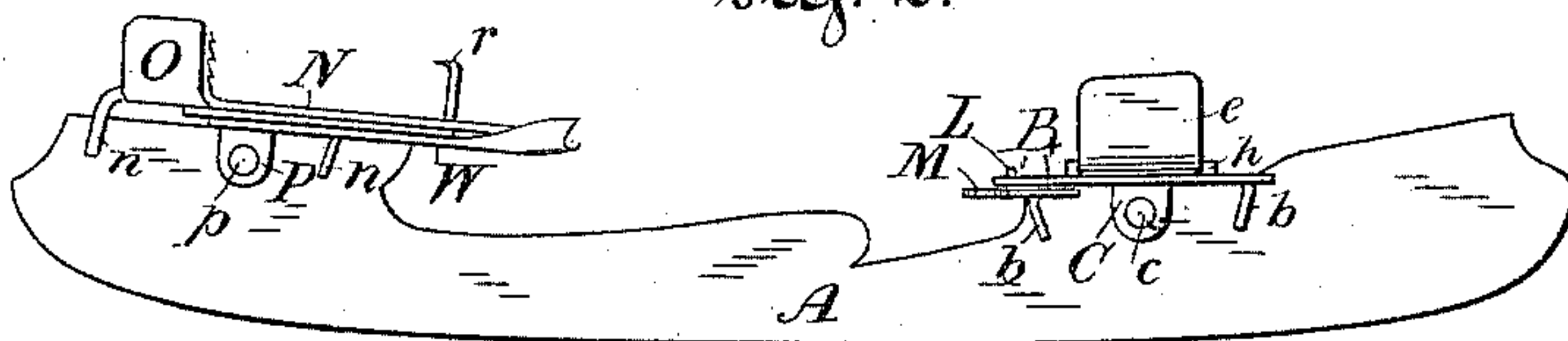


Fig. 3.

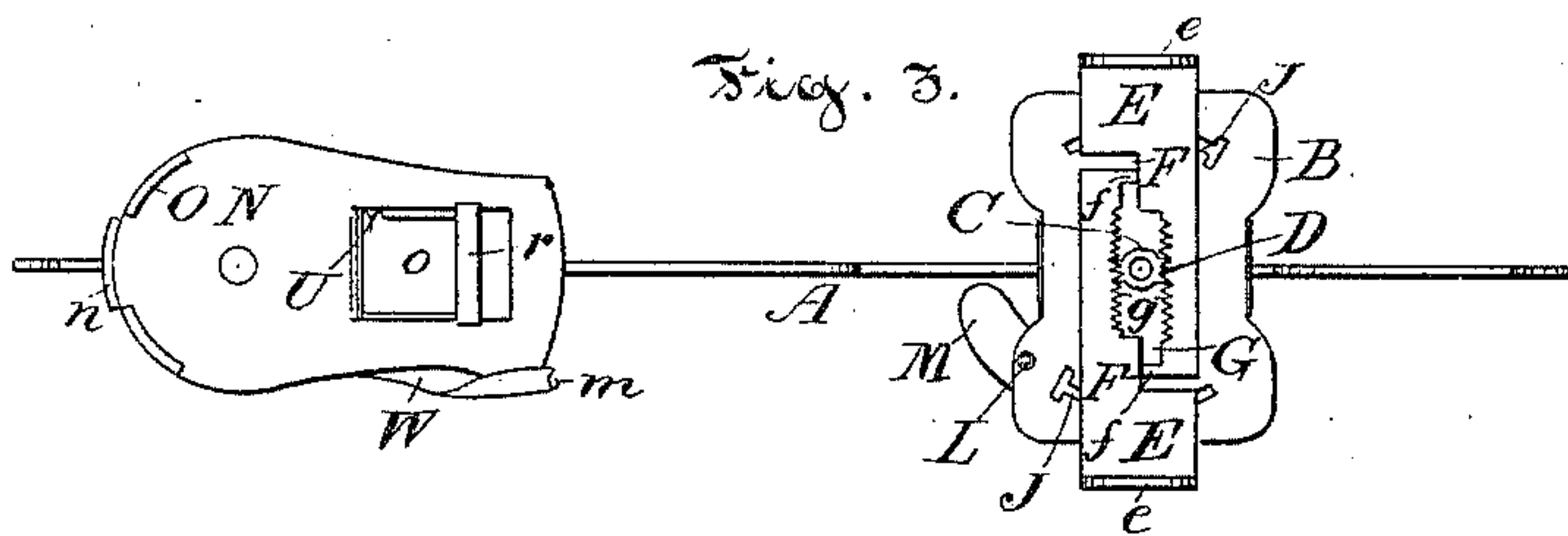


Fig. 4.

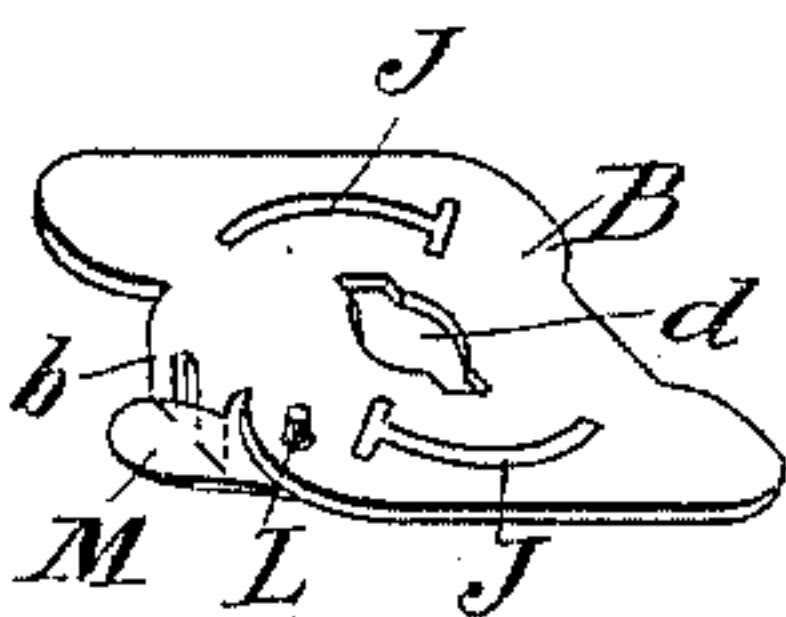


Fig. 5.

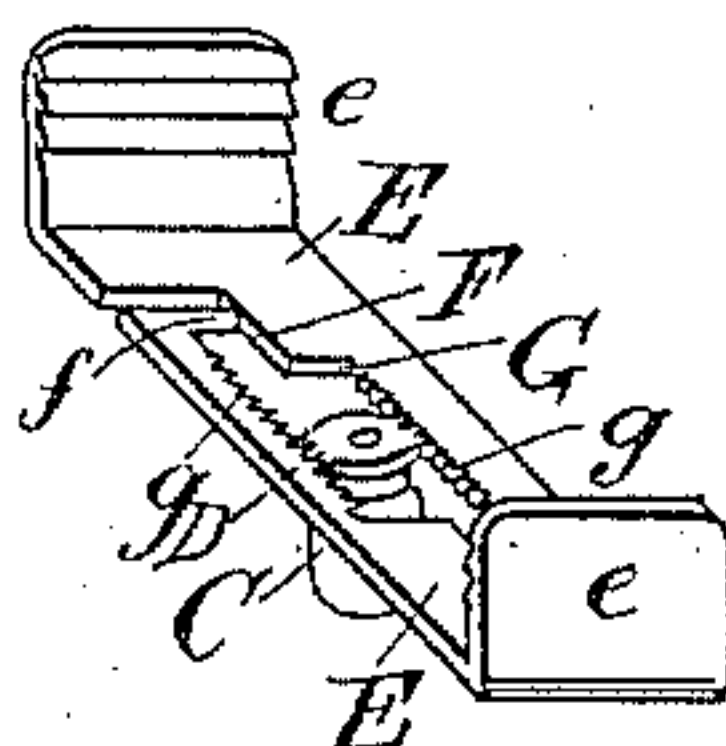


Fig. 6.

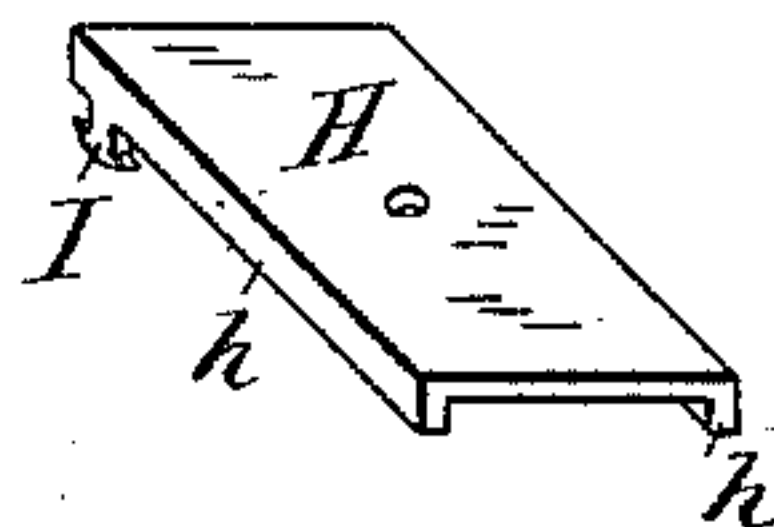
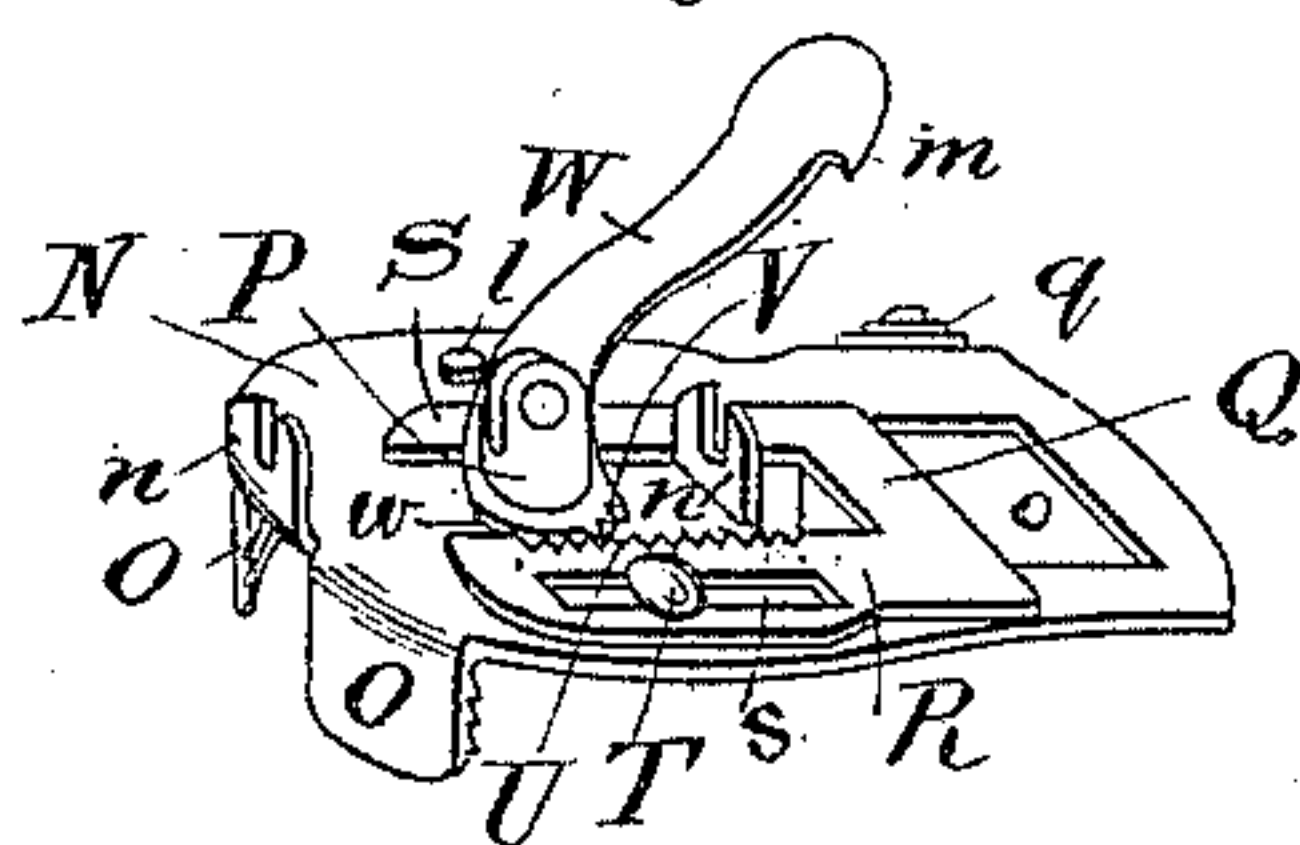


Fig. 7.



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# UNITED STATES PATENT OFFICE.

GEORGE CHARLES BATEMAN, OF HALIFAX, CANADA, ASSIGNOR OF ONE-HALF TO CHARLES WILLIAM MCKEE, OF SAME PLACE.

## SKATE.

SPECIFICATION forming part of Letters Patent No. 440,529, dated November 11, 1890.

Application filed May 19, 1890. Serial No. 352,276. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE CHARLES BATEMAN, machinist, a citizen of Canada, residing at Halifax, in the county of Halifax and Province of Nova Scotia, have invented certain new and useful Improvements in Skates; and I do hereby declare that the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof, in which—

Figure 1 is a perspective view of my improved skate. Fig. 2 is an elevation of the same. Fig. 3 is a top view of the same. Figs. 4, 5, and 6 are details of the device for securing the skate at the toe. Fig. 7 is a view of the fastening device for the heel, as seen from the under side.

The object of my invention is to provide a skate that can be easily and quickly adjusted to any ordinary boot, the toe and heel fastenings of which act independently of each other, and other improvements, which will be fully set forth hereinafter.

A is the blade of the skate, to the front end of which is secured the top plate B, by means of two forks *b b*, formed integrally with the toe-plate, preferably stamped out of sheet metal and bent downward astride the blade A and a standard C, the lower part of which is forked and secured to the blade by a screw *c*. On the upper part of this standard and on opposite sides thereof are projecting teeth D. These teeth project over the toe-plate and hold it firmly on the blade, a circular slot *d* being formed in the toe-plate, having a recess on either side through which the teeth D pass when the skate is being put together.

E E are the toe-clamps, the upright portions *e* of which are serrated in the usual manner to obtain a grip on the sole of the boot. The horizontal portions are cut away at F, and a recess G cut out of this reduced portion, as shown in Fig. 5. The inner edges of these recesses are provided with teeth *g*. The projections *f* left on the ends of the plates serve as a guide in the recessed portion F of the opposite clamp, and also as stops to prevent the clamps being withdrawn. These clamps are covered by a cover-plate H, the edges *h* of which are turned down and cover the sides

of the clamps, forming a slide for the clamps. Pins or buttons I project downward from the diagonally-opposite corners of this cover-plate, adapted to pass through and slide in the slots J in the toe-plate B. These slots J are arcs of a circle of which the screw K is the center. Cross-slots are provided through which the buttons I pass when the skate is being put together. The screw K passes through the cover-plate H and into the standard C, acting as a pivot for the plate H. A stop L passes up through a hole in the toe-plate B, and is attached to a spring thumb-plate M, secured to the under side of the toe-plate.

It will readily be seen, Fig. 5, that when the spring-stop is depressed the blade A may be turned to one side, so that the teeth of the standard are disengaged from the teeth of the two toe-clamps, which may then be adjusted to any width required. When the required width has been attained, the blade may be then turned back until the cover-plate passes the spring-stop, in which position the teeth of the standard engage the teeth of the clamps. The spring-stop then prevents the blade being turned too far and the teeth disengaged when securing the skate to the boot, but permits a limited contraction of the clamps. It will thus be seen that the blade of the skate is used as a lever, by which the toe-clamps are secured to the boot.

The heel-plate N has two forks *n* bent down astride the blade and two serrated plates O bent upward to secure the back of the heel of the boot. A slot *o* is formed in the front portion of the heel-plate N. A forked standard P is secured to the blade A by a screw *p* and riveted or screwed to the plate N. Under this plate is a sliding plate Q of the heel-clamp, the forward end of which is turned up and passes through the slot *o*, and is furnished with a knife-edge *r*, turned rearwardly to engage the heel of the boot. This clamp-plate is provided with two arms R and S, passing one on each side of the standard P. The arm R is provided with a slot *s*, adapted to slide on a button T, which holds it in place. The inner edge of this arm is provided with teeth U, adapted to engage teeth V on a lever W,



through which the standard P passes and acts as a fulcrum thereto. The teeth V extend over only a portion of the end of the lever W. The other portion *w* is left without teeth, so that when the lever is turned back the teeth of the sliding plate and of the lever are disengaged, and the rack-plate or heel-cutter may be adjusted to any desired size. A stop *l* may be attached to the heel-plate, over which the lever may be sprung when the lever is turned back; but in putting on the skate this stop prevents the teeth being disengaged. The lever W is bent over at the outer extremity, forming a hook or catch *m*, adapted to engage teeth *q*, formed on the edge of the heel-plate. This holds the lever firmly when the skate is on the boot.

In this skate it will be seen that an ordinary-sized toe or heel plate can be attached to a long or short blade, whereas in the skates now in use, as the "Acme," only the same-sized plate can be used with the same-sized blade.

I claim as my invention—

1. The combination of the runner-blade, the extensible clamp sustained thereby, provided with racks and movable bodily on a central vertical axis, and the central operating-pinion provided with the opposite delay-surfaces.

2. The combination of the runner-blade, the toe-plate rigidly secured thereto, the extensible clamp overlying said plate, movable thereon around a vertical axis and provided with racks, and the central operating-pinion provided with opposite delay-surfaces.

3. The combination of the runner-blade, the rigid plate provided with curved slots, and recesses communicating with the slots, the extensible clamp movable on a central vertical axis, the inclosing-case provided with the headed pins to enter the recesses and move in the slots, and suitable mechanism for operating the clamp.

4. The combination of the runner-blade, the extensible clamp sustained thereby and movable on a vertical axis, a locking device to prevent the clamp from moving on its axis, and suitable means for operating the clamp.

5. In a skate, the combination of the runner-blade, the heel-plate fixed thereto and provided with the vertical flange, the movable flanged plate Q, provided with the rack, and the lever provided with the toothed segment

to engage the rack, whereby the said lever may be moved to disengage the segment from the rack and admit of the adjustment of the movable plate to heels of different sizes.

6. In a skate, the combination of the runner-blade, the fixed slotted heel-plate provided with the vertical flanges, the sliding toothed plate Q, provided with the vertical flange *r*, extending through the slot in the heel-plate, and the lever provided with the toothed segment to engage the rack.

7. A skate consisting of a blade to which is rigidly attached a toe-plate by means of downturned forks and a standard, a standard having teeth round its upper face projecting over said toe-plate, said teeth being only on its opposite sides, toe-clamps the plates of which have toothed racks on their inner edges adapted to be engaged by the teeth of said standard, a cover-plate covering racks in the said clamps and having buttons sliding in slots in said toe-plate, said cover pivoted to the said standard, a spring-stop to limit the movement of said cover-plate and clamps, a heel-plate having forks and a standard to secure it to the blade, stationary clamps, a sliding clamp or heel-cutter having a toothed rack, a lever pivoted to said standard, having projecting teeth engaging the toothed rack, a stop to limit the movement of said lever, and a hook and teeth to hold the lever in position, substantially as shown and described.

8. In a skate, the combination, with the blade or lever A, toe-plate B, the standard C, having teeth D on the front and rear sides of the upper surface, of the toe-clamps E E, having toothed racks *g*, the cover-plate H, stop L, and spring thumb-plate M, substantially as shown and described.

9. In a skate, the combination of the blade A, heel-plate N, stationary clamps O, forks *n*, slot *o*, standard P, sliding plate Q, cutting-edge *r*, arms R and S, slot *s*, button T, toothed rack U, lever W, having teeth V, segment *w*, catch *m*, teeth *q*, and stop *l*, substantially as shown and described.

Signed at Halifax this 21st day of April, 1890.

GEORGE CHARLES BATEMAN.

In presence of—

HENRY TRENDMAN,

THOMAS W. BATEMAN.