

(No Model.)

W. S. HALE.
SKATE.

No. 583,684.

Patented June 1, 1897.

Fig. 1.

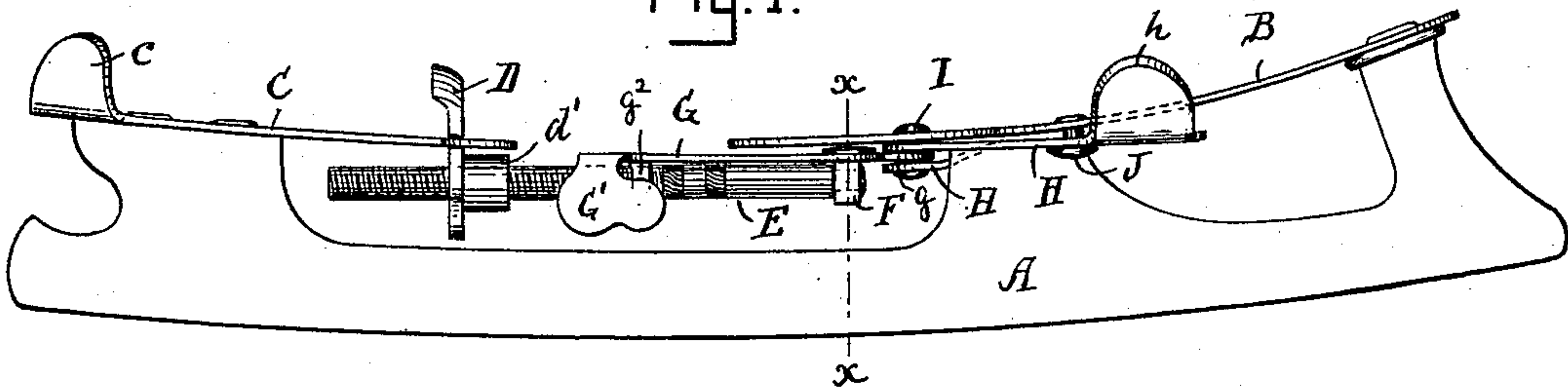


Fig. 2.

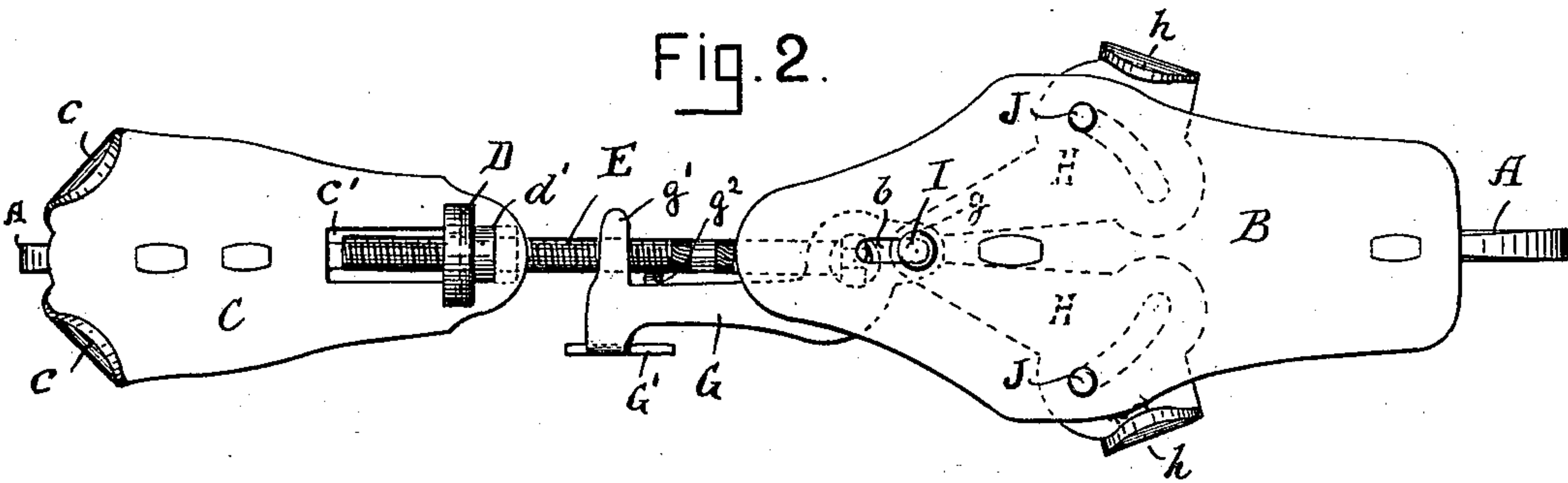


Fig. 3.

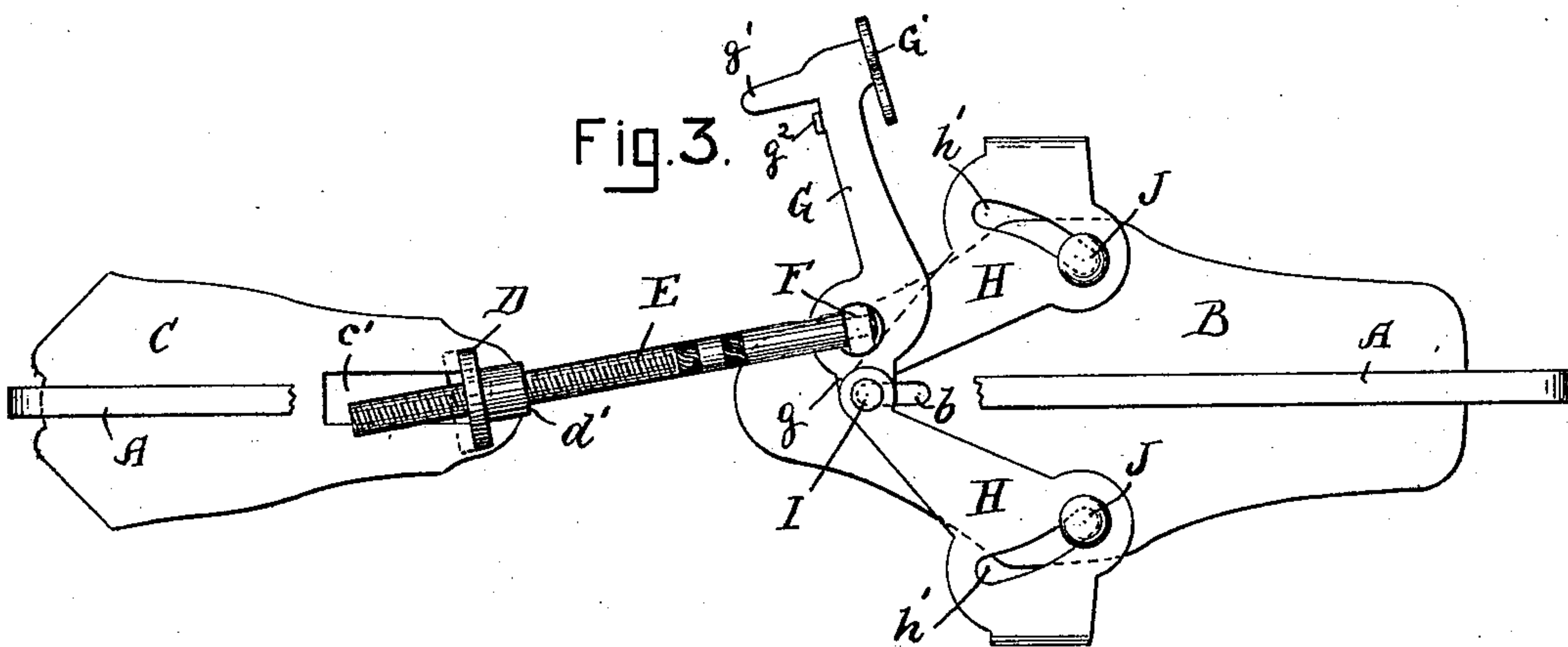


Fig. 4.

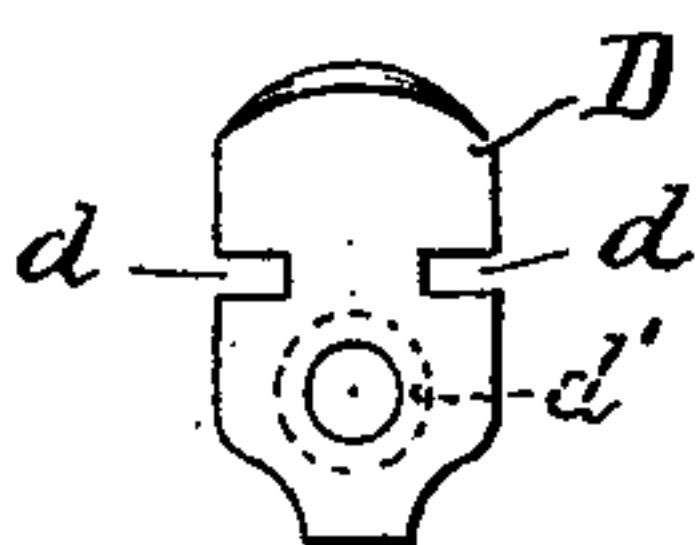
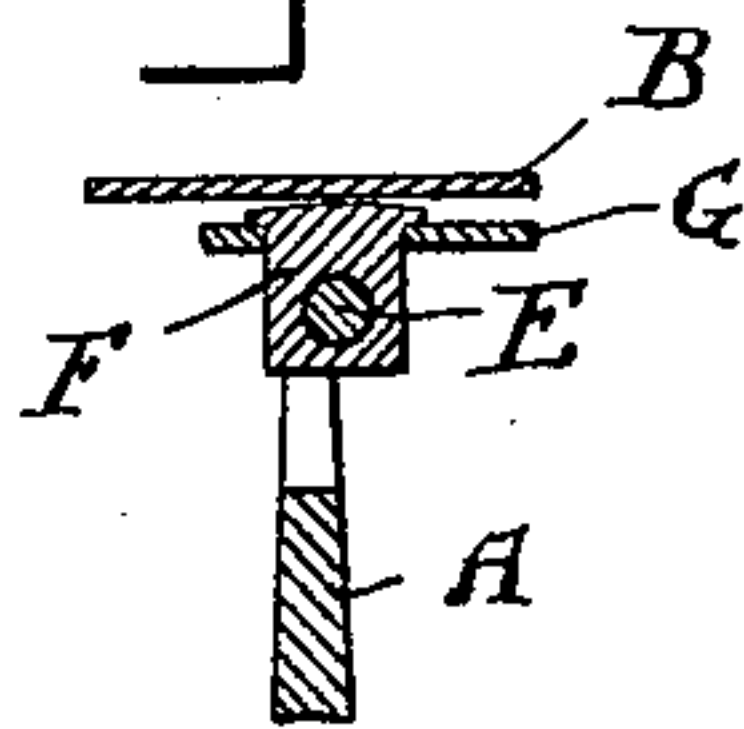


Fig. 5.



Witnesses.
Wm. G. Kinn
Edward C. Brown

Inventor.
William S. Hale
by Edwin Planta
attorney.

UNITED STATES PATENT OFFICE.

WILLIAM S. HALE, OF KEENE, NEW HAMPSHIRE, ASSIGNOR TO THE UNION
HARDWARE COMPANY, OF TORRINGTON, CONNECTICUT.

SKATE.

SPECIFICATION forming part of Letters Patent No. 583,684, dated June 1, 1897.

Application filed August 27, 1896. Serial No. 604,089. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. HALE, a citizen of the United States, and a resident of Keene, in the county of Cheshire and State
5 of New Hampshire, have invented certain new and useful Improvements in Skates, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to improvements in
10 skates that are secured to the boot or shoe by clamps; and the invention consists in certain details of construction, as hereinafter described, and pointed out in the claims.

Referring to the accompanying drawings,
15 Figure 1 represents a side elevation of a skate embodying my invention. Fig. 2 is a plan or top view of same. Fig. 3 is a view looking from the under side with the clamps and actuating-lever in the open position. Fig. 4 is
20 a view of the front heel-clamp, and Fig. 5 is a vertical section taken on line *xx* of Fig. 1.

A represents the runner, B the sole-plate, and C the heel-plate, which is formed with two upturned portions *cc*, forming clamps to hold
25 the rear of the heel. The front portion of the heel-plate *c* is formed with a slot *c'*, in which the front heel-clamp D is free to slide. This clamp is of the form shown in Fig. 4 and has a recess *d* on each side, into which the
30 heel-plate is fitted, and the lower end of said clamp is formed with a boss *d'*, that is screw-threaded to receive the screw-threaded end of the regulating-bar E, the forward end of which is journaled and free to rotate in a stud
35 F, that is fulcrumed to the actuating-lever G below the sole-plate. The front end *g* of the lever G extends a short distance beyond the stud F, and to its extreme end the toe-clamp plates H H are connected by a pivot I, that
40 also passes up through a slot *b*, formed in the rear end of the sole-plate B.

The toe-clamps and plates H are each made out of a single piece of metal and of the form shown, (see Fig. 3,) the inner ends of which
45 are fulcrumed to the actuating-lever G, as described, one above and one below same, as shown, and their outer ends are turned up to form the toe-clamps *h*. Each of these plates is formed with a curved slot *h'* and is held up
50 to the under side of the sole-plate by a rivet J.

The actuating-lever G is at its outer end

bent down, as at G', to form a thumb-piece for operating said lever, and it is also formed with a straight projecting piece *g'*, that passes
over the top of the regulating-bar E and
55 serves to hold the lever in place when the skate is clamped onto the boot or shoe. It is also formed with a small projecting piece *g*² on its inner side, which is bent down, as shown, and forms a stop that comes into contact
60 with the regulating-bar E to prevent the lever being pushed too far in.

In applying the skate to a boot or shoe the actuating-lever G is opened out, as shown in
Fig. 3. All the operating parts are then
65 loose. The heel of the boot is then placed on the heel-plate C. The actuating-lever is then drawn inward, it turning on the fulcrum I, and causes the heel-clamp D to come into contact with the inner portion of the heel
70 that forms a resistance. Then as said lever is pressed in it turns upon the fulcrum F. Thus the fulcrum F is forced forward and with it the toe-clamp plates H, said fulcrum traveling in the slot *b* of the sole-plate B, and
75 at the same time the outer ends of said plates H are forced inward by means of the slots *h'* and rivets I, so that the toe-clamps *h* will firmly clasp the sole of the boot.

The skate can be readily adjusted to fit the
80 boot, according to the size of heel and width of sole, by means of the adjusting-rod E, which is milled, as shown, so as to be easily turned by the thumb and finger.

As shown in the drawings, all of the oper-
85 ating and moving parts of the clamping mechanism, with the exception of the small upper end of the pivot-stud I and the clamps D and *h h*, are located below the plane of the sole and heel plates. Therefore there is no objec-
90 tionable friction between moving parts and the sole or heel of the user's shoe, no matter what the size or shape of the latter may be. This freedom of movement of the parts, coupled with the fact that as the heel-clamp D
95 is forced rearward the sole-clamps *h h* move forward while approaching each other, the pressure of the clamps thus opposing each other, results in the advantage that the skate can be quickly and easily applied with little
100 effort and removed without binding or hanging on the shoe. The above-mentioned for-

ward movement of the clamps h h when approaching each other is due to the fact that the slots h' are curved outward and rearward.

I claim—

- 5 1. In a skate two toe-clamp plates having curved slots extending outward and rearward and arranged under the sole-plate, rivets secured to the sole-plates and passing through said slots to support the toe-clamp plates, the
10 rear end of said plates being fulcrumed upon a pivot that passes through a longitudinal slot in the rear of the sole-plate, an actuating-lever also fulcrumed to said pivot in combination with a movable heel-clamp having a
15 boss below the heel-plate and a regulating-rod between said heel-clamp and the actuating-lever the said lever and rod being below the plane of the sole and heel plates substantially as set forth.
- 20 2. In a skate the combination of the following elements: a runner, a sole-plate having

a longitudinal slot at its rear end, a pivot passing through said slot, two toe-clamp plates and an actuating-lever fulcrumed on said pivot, said toe-clamp plates having curved slots extending outward and rearward rivets secured to the sole-plate and passing down through said curved slots, a stud mounted in the actuating-lever, a screw-threaded rod journaled in said stud, a heel-plate having a longitudinal slot and a heel-clamp working in said slot and having a screw-threaded boss through which the end of the regulating-rod passes substantially as set forth. 25 30

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 16th day of June, A. D. 1896.

WILLIAM S. HALE.

Witnesses:

WM. P. CHEEVER RICE,
JOHN T. ABBOTT.