

# United States Patent Office.

DUANE A. ROSS. OF NEWPORT, NEW YORK.

*Letters Patent No. 64,908, dated May 21, 1867.*

## IMPROVED SKATE FASTENING.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, DUANE A. ROSS, of Newport, in the county of Herkimer, and State of New York, have invented certain new and useful Improvements in a Device for Fastening Skates to the boot or shoe of the user; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a top plan of one of the skates with the top plate removed to show the interior mechanism.

Figure 2 represents a side elevation of the skate; and

Figure 3 represents a top plan of one of the skates with the top plate or cover in place.

Similar letters of reference where they occur in the separate figures denote like parts of the skate in all of the drawings.

I am aware that skates have been devised which are fastened to the foot of the user without straps. This of course I do not claim. My invention relates to an arrangement of thumb-screw at the end of the skate, with the heel and sole clamps, so that either or both sets of the clamps may be tightened up at pleasure.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

The skate-runner A, may be made or shaped in any of the usual well-known ways; and the frame B, upon which the foot of the user rests or is supported, is made of metal, and connected to the runner by standards C. For the purpose of lightness the frame and standards may be wrought or cast in open work. Underneath what may be termed the shank portion of the frame there is cast or formed a case or box, D, for enclosing, in connection with a cover or top plate, B', the screws or screw-rods *a b*, and their nuts and attachments respectively, for operating the clamps *c* at the ball or sole of the foot, and those, *d*, at the heel, as follows: Upon the end of the screw-rod *a* and at the heel of the skate, there is a thumb-nut, *e*, by which said rod may be turned. At the forward end of said rod there is a screw-thread cut, upon which a nut, *f*, is made to run, the screw-rod being prevented from moving lengthwise by suitable collars or other restraining devices. Connected to the nut *f* are the two curved pieces *g g*, which terminate in clamps *c* at each side of the skate where the ball or wide part of the foot rests and is supported upon the skate. By turning the thumb-nut *e*, the clamps may be tightly drawn up to or against the edge of the sole of the boot or shoe, or released therefrom at pleasure, the face of the clamps next to the sole being roughened to prevent them from slipping or yielding. The rod *a* passes through a hollow shaft, rod, or sleeve, *b*, upon which shaft a screw-thread is cut for running a nut, *h*, which works the two arcs or curved arms *i i* that terminate in clamps *d d*. On the end of the shaft, rod, or sleeve *b*, there is a thumb-nut, *k*, by which it may be turned, and when turned it draws the clamps *d d* tight up against the heel of the boot or shoe, and a reversed operation moves the clamps away from the heel to release the skate. The clamp *d'* that works against the shoulder of the heel of the boot or shoe next the shank may be stationary, as in fig. 2, or connected to the nut *h*, and movable with said nut, as in fig. 3. The object in encasing the screw-rods, nuts, and curved arms for operating the clamps is to prevent the snow, ice, or water from injuring them. The clamping-plates *n* may be pivoted to the arms *d* so as to accommodate themselves to the varied shape of boot or shoe heels.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the screw-rods *a b* with the sole and heel-clamps, and with the thumb-nuts *e k*, for the purpose of fastening or detaching the skate to or from the boot or shoe, substantially as described.

I also claim encasing the screw-rods, nuts, and curved arms, substantially as herein described, to prevent them from injury by snow, ice, water, or other causes, substantially as described.

I also claim hinging the clamp-plates *n* to the clamp-arms *d*, for the purpose of adapting the clamping surface to the varied shapes or tapers of the heels of boots or shoes, substantially as described.

DUANE A. ROSS.

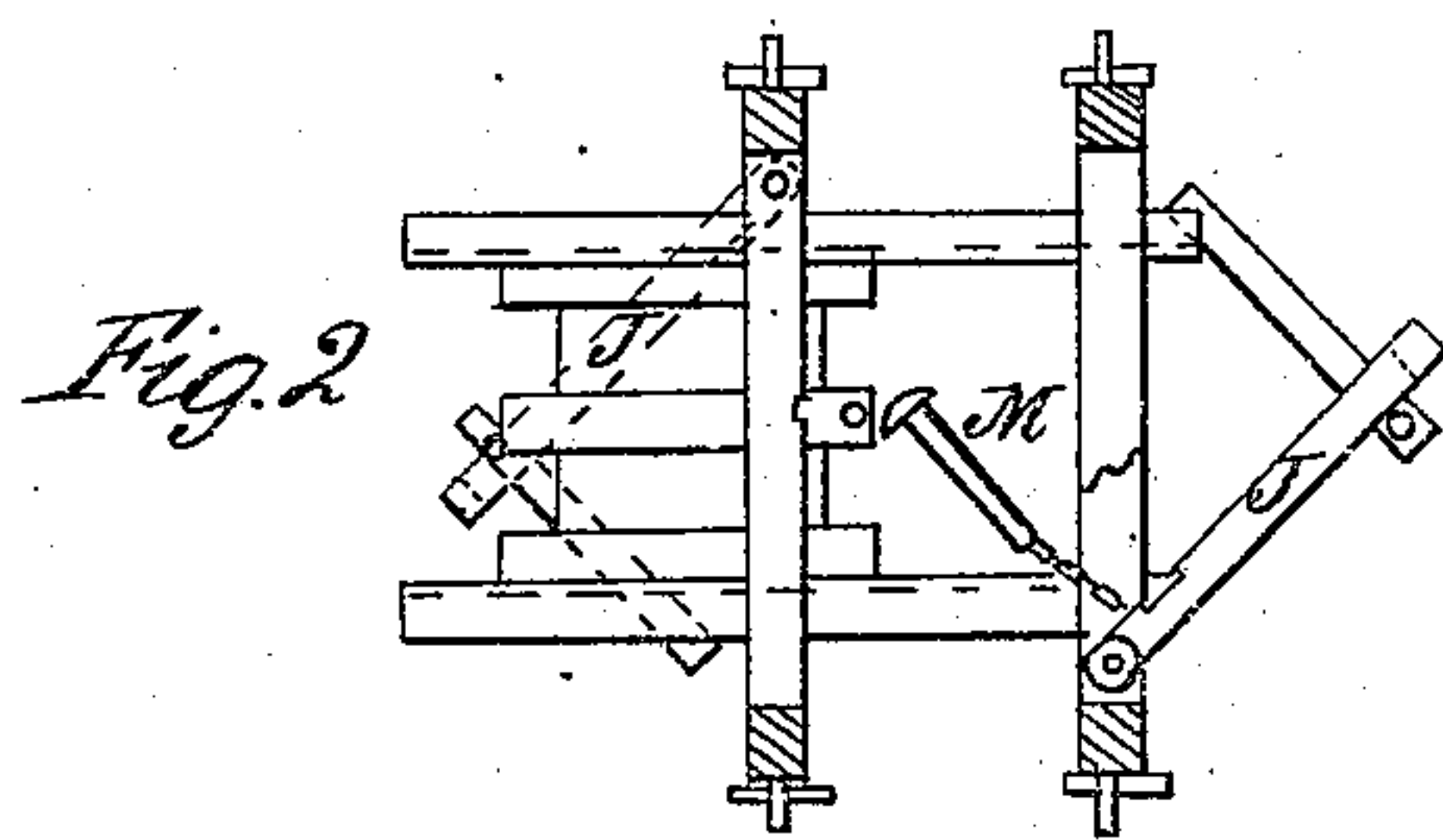
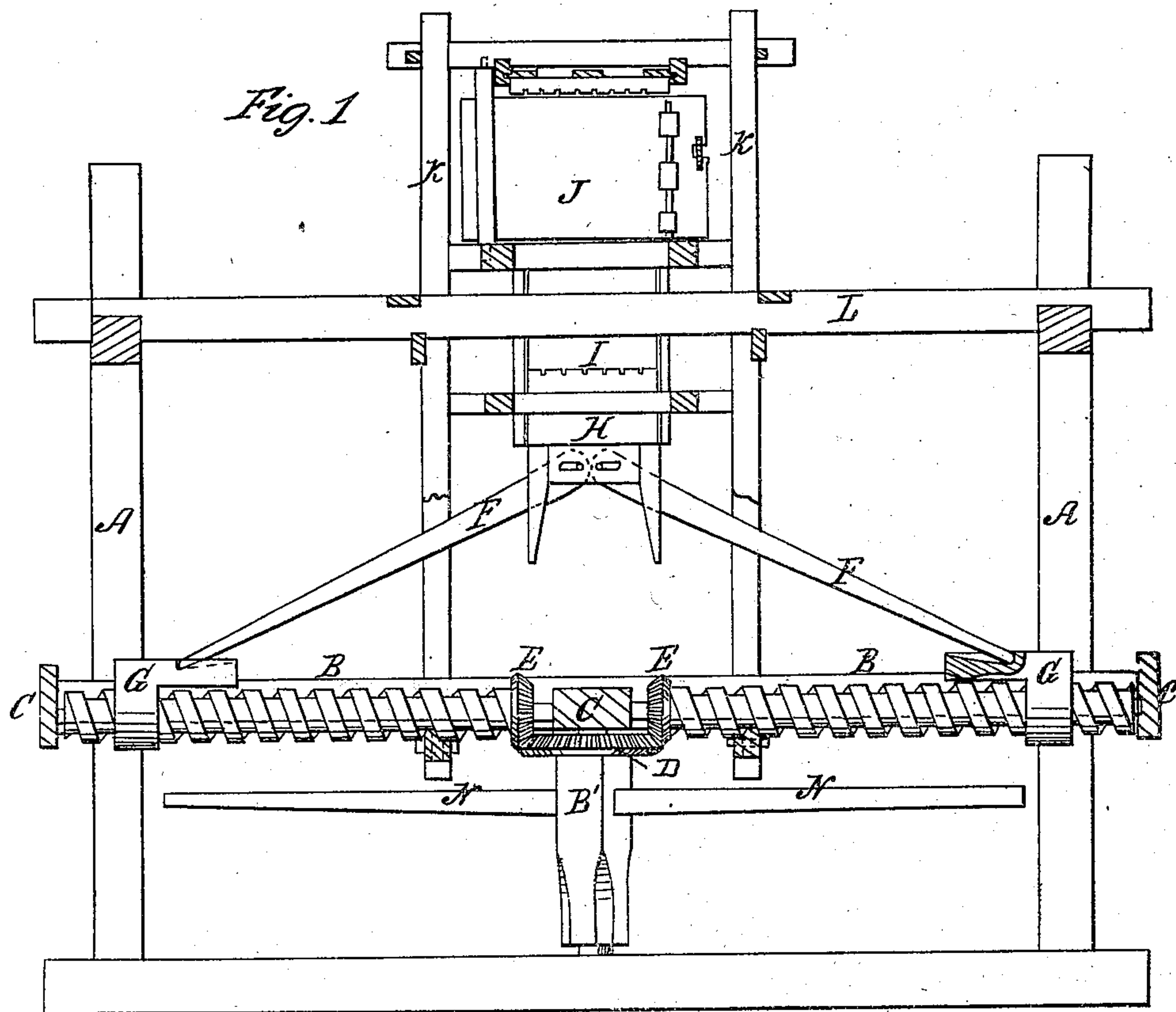
Witnesses:

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COTTON OR HAY PRESS.

No. 64,909.

Patented May 21, 1867.



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