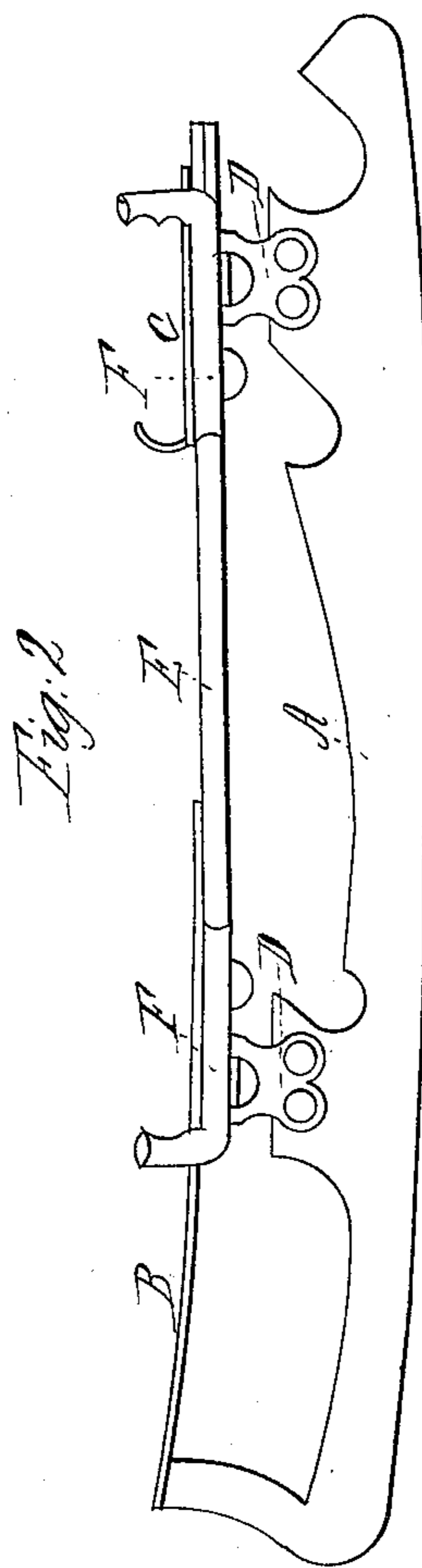
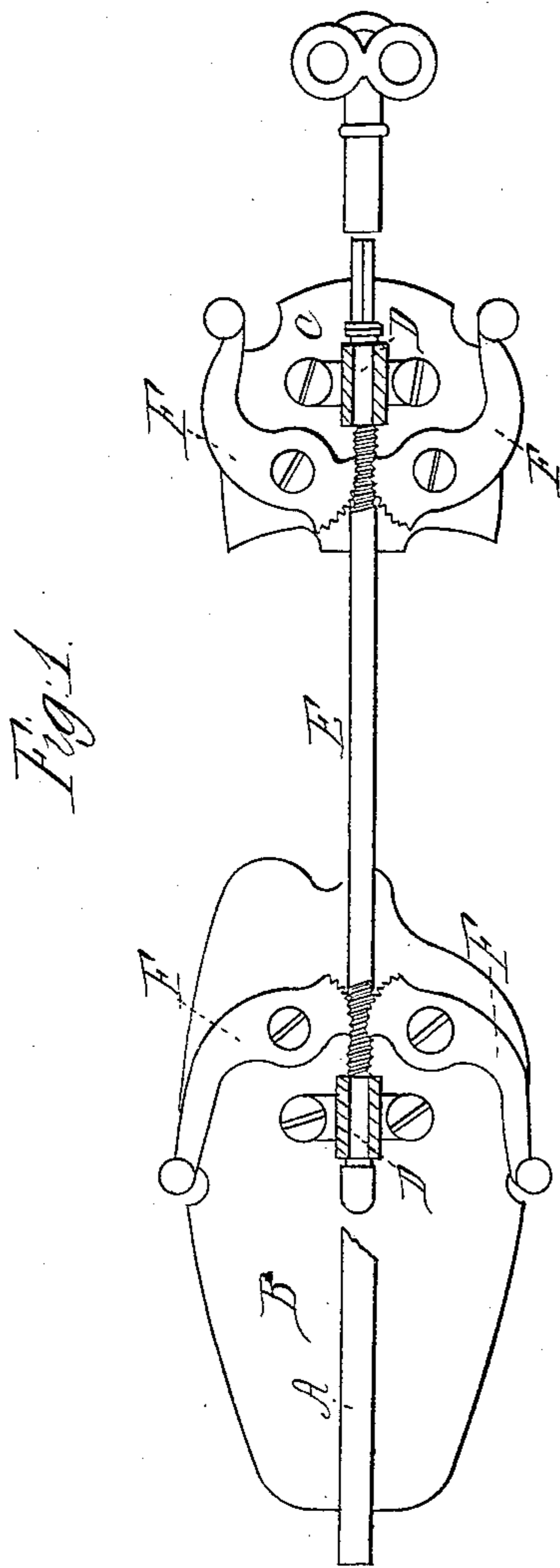


*R. Carmichael,*

*Skate,*

*No 68,558,*

*Patented Sept. 3, 1867.*



*Witnesses:*

*A. S. Yeatman*  
*A. H. Marr*

*Inventor:*

*Robert Carmichael*  
*per*  
*Alexander Mason*  
*Att'y*

# United States Patent Office.

ROBERT CARMICHAEL, OF NEWARK, ASSIGNOR TO FREDERICK STEVENS  
OF ESSEX COUNTY, NEW JERSEY

*Letters Patent No. 68,558, dated September 3, 1867.*

## IMPROVEMENT IN SKATES.

*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, ROBERT CARMICHAEL, of Newark, in the county of Essex, and in the State of New Jersey, have invented certain new and useful Improvements in Skates; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is an inverted view of my skate, part of the runner being broken away, so as to more perfectly represent the working of the clamps.

Figure 2 is a side elevation of the same.

The object of my invention is to provide a skate which shall be perfectly simple in its construction, and which can be easily and securely attached to the foot without the aid or assistance of straps, which always serve to produce a sensation of numbness and pain in the feet.

Letter A represents the runner, to which the foot-piece B and heel-plate C are attached by means of the supports D. Letter E represents a rod, which has its bearings upon the supports D, and which has a screw-thread cut upon its surface, near each of its ends. Pivoted to both the foot-piece B and heel-plate C, are the clamps F, by means of which the skate is attached to the foot. The short ends of each of these clamps is cut like a screw, so as to engage with the screw-threads upon the rod E, while the outer ends project to some distance above the foot and heel-plates, and have corrugations cut in their faces, so as to more effectually enable them to grasp the sole of the boot or shoe. The heel-plate is provided with a projecting edge, so as to prevent the foot from moving too far forward.

When it is desired to attach the skate to the foot, the rod E is turned by means of a common clock-key, until the clamps F have been moved far enough apart to allow the foot to be inserted between them. The rod is then turned in an opposite direction, when the clamps move towards each other far enough to securely grasp the sole of the boot or shoe.

There are many inconveniences connected with the skates that are attached to the foot by means of straps, such as the time that is required to buckle them on, the breaking of the straps, and the numb, dead sensation in the feet, after being strapped for some time, which all skaters have experienced who used the common skate. To obviate these inconveniences is the object of my invention, which leaves the foot perfectly free and untrammelled in every respect.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the clamps F F, as constructed with the screw-shaft E, as and for the purpose set forth. In testimony that I claim the foregoing I have hereunto set my hand and seal this 17th day of July, 1867.

ROBERT CARMICHAEL.

Witnesses:

A. A. YEATMAN,

A. N. MARR.