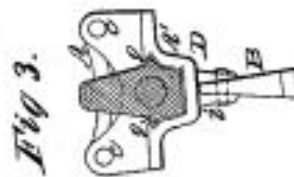
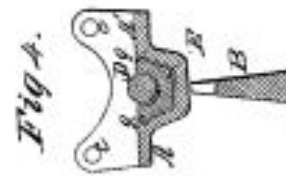
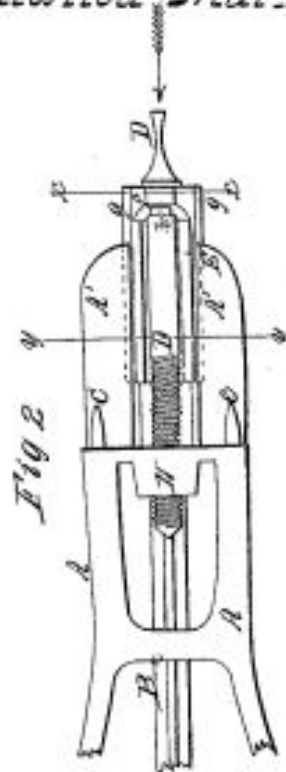
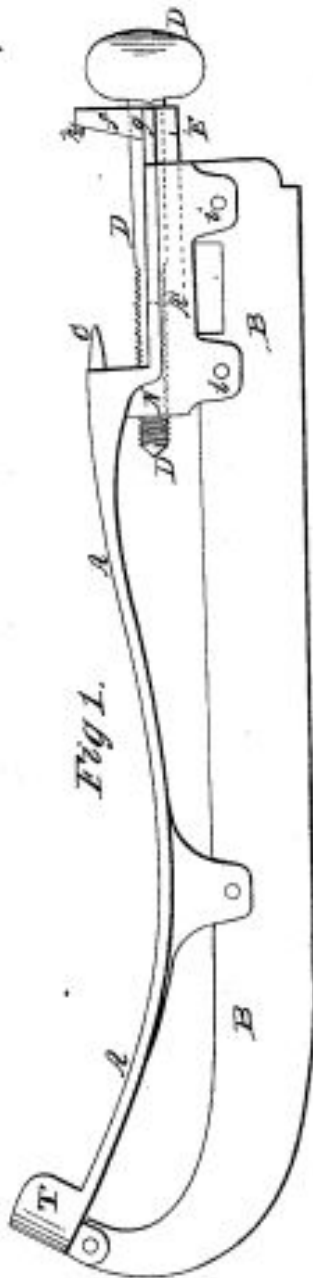


W. Hawkins,
Skate,

No. 47,018.

Patented Mar. 28, 1865.



Witnesses.

Andrew DeLacy,
Charles Spurr

Inventor.
William Hawkins
By his Attorney,
J. N. McIntire

UNITED STATES PATENT OFFICE.

WILLIAM HAWKINS, OF BIRMINGHAM, CONNECTICUT.

IMPROVED SKATE.

Specification forming part of Letters Patent No. 47,018, dated March 28, 1865.

To all whom it may concern:

Be it known that I, WILLIAM HAWKINS, of Birmingham, of New Haven county, in the State of Connecticut, have invented certain new and useful Improvements in Skates; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this application.

My invention relates to that class of skates in which the stock is secured to the boot of the skate by means of a toe-piece, or lip, which projects or laps slightly over the toe of the boot, and a screw-clamping device which takes hold of the heel of the boot, such as patented April 12, 1859, to D. H. Shirley, of Boston, Massachusetts, and subsequently improved by him. In this kind of skate (patented as aforesaid) the heel of the boot of the skater is gripped and held fast between points which project longitudinally backward from the skate stock (and pierce or enter the inner or plane vertical face of the boot-heel) and the vertical leg or portion of an angular slide which moves longitudinally in the rear portion of the skate, and which is moved by a thumb-screw, as fully set forth in the patents granted to Shirley, April 12, 1862, and June 25, 1861. I have learned by practice and experience in the manufacture of this kind of skates that a serious objection arises in the use of them, consequent to the liability of the screw-rod to become strained out of shape and to frequently break. This objectionable defect, but for the existence of which this kind of skate would be the most desirable, arises from the tendency of the back end of the heel-slide or clamping-bar (through which the screw-rod passes) to lift when the heel of the boot is clamped tightly, whereby the back end of the screw-rod is strained upward and deranged or broken. Another slight objection or deficiency in this kind of skate is the absence of a prick point or points to insure the hold of the slide upon the back of the boot-heel. To supply this want is a simple matter; but I have found by experience that to comply with this demand for the prick point or points in the heel-slide to insure its grip upon the heel of the boot renders the skate more liable to the more serious objection before mentioned—viz., the tendency of the clamping-slide to strain and break the

screw. To overcome these objections is the object of my invention, which consists in so constructing and arranging together the sliding heel-clamp and the skate-stock that the slide shall be held down in its bearings by the stock of the skate instead of being retained in its proper horizontal position by the screw-rod, as heretofore, whereby the screw-rod is relieved of all lateral strain; and I am enabled to supply the necessary device for insuring the grip of the sliding upon the rear part of the boot-heel without any liability of derangement or breakage of the parts of the skate.

To enable those skilled in the art to make and use my invention, I will proceed to describe the construction and operation of my improved skate, referring by letters to the accompanying drawings, in which—

Figure 1 is a side elevation of one of my improved skates. Fig. 2 is a partial top view of the same. Fig. 3 is a vertical section at the line *x x*, Fig. 2; and Fig. 4 is a cross-section at the line *y y* of Fig. 2.

In the several views the same part is designated by the same letter of reference.

A is the metallic stock of the skate, which is secured by rivets *i i*, &c., to the runner B in the usual manner. C C are the points which pierce the inner face of the boot-heel, and T is the toe-piece, all of which parts are constructed and combined (with the exception of a slight change in the form of the stock at the heel end) in the same manner as heretofore manufactured by me under Shirley's patents. E is the sliding heel-clamp, and D the thumb-screw by which it is moved, said screw-rod D being formed and arranged to work in a nut cut in the stock at N, as heretofore. Instead of forming the rear portion, A, of the stock with a longitudinal depression or cavity tapering from its bottom to the top (in cross-section) and making the slide to correspond with such shaped depression, I make the depression or cavity in A' with a longitudinal, *v*, groove on either side near the top surface of stock A', and the slide E with a correspondingly-shaped rib or way on each side, as clearly seen at *g g*. By thus forming the slide E and the cavity or seat, (in the stock A') in which it fits and works longitudinally, the said slide E, it will be seen, is securely held in its proper plane or relative position with the stock A' independently of the screw-rod

D, which simply works through the hole formed for its accommodation in said slide E, and performs only the function of a set-screw to set up or move forward the slide E.

I have thought of so constructing the stock A' with a bar projecting over the top of the screw-rod D as to effect the bracing or holding down of the said rod at a point as far from the nut N as the play of the slide would admit of; but I believe the so forming the slide and stock as to dovetail or interlock, as already explained, so that the slide will be retained vertically or held down independently of the screw-rod, is the most desirable plan. *h* is a prick-point on the inner face of the vertical leg or portion of clamp E, to insure the hold or grip of said clamp upon the boot-heel.

The operation of the skate in its application to and use on the boot of the skater is the same as that heretofore manufactured by me under the Shirley patents, except the avoidance of the great objections heretofore existent and effectually overcome by my improvement.

It will be understood that very many modifications of my invention may be conceived and adopted without departing from its spirit.

The slide and stock may be varied in form, or separate devices may be employed in com-

bination therewith to effect the interlocking of the slide and stock, so as to avoid the objections which existed previous to my improvement and to accomplish all the advantages gained by my invention; but it will be obvious that all such colorable changes will involve the gist of my invention, which rests in the idea of locking the slide vertically in its proper relative position with stock, in which it is seated, while it is left free to move longitudinally, and thus relieve the screw of (lateral) vertical strain and avoid any tendency to derangement or destruction of the screw or nut or slide.

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

So constructing a skate that the sliding heel-clamp shall be held or retained vertically within the seat or bearing formed for it in the stock independently of the set-screw, as and for the purposes substantially set forth.

In testimony whereof I have hereunto set my hand and seal.

WILLIAM HAWKINS. [L. S.]

In presence of—
CHARLES F. COLT,
FITCH SMITH.