(No Model.)

S. WINSLOW.

SKATE.

No. 327,848. Patented Oct. 6, 1885.

Fig. 1.

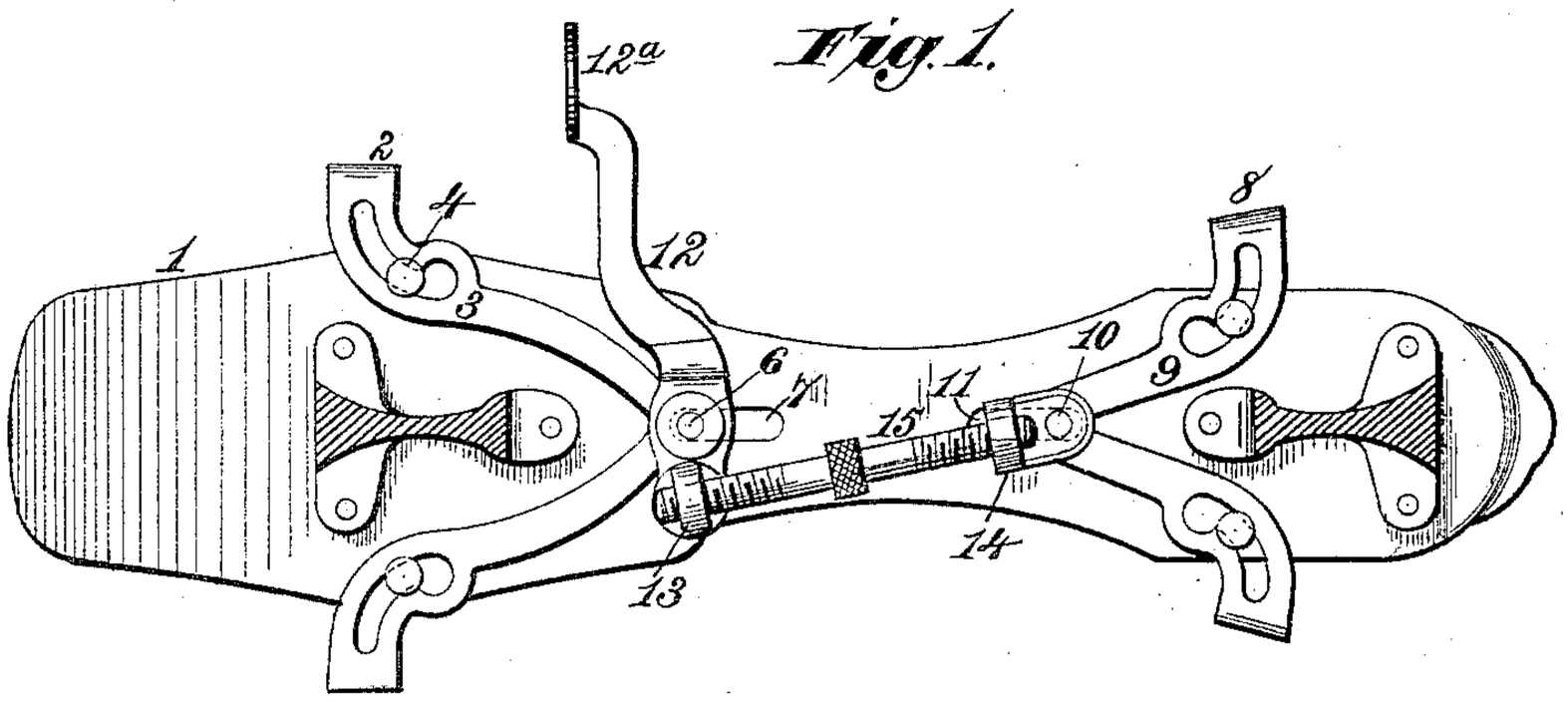


Fig. 2.

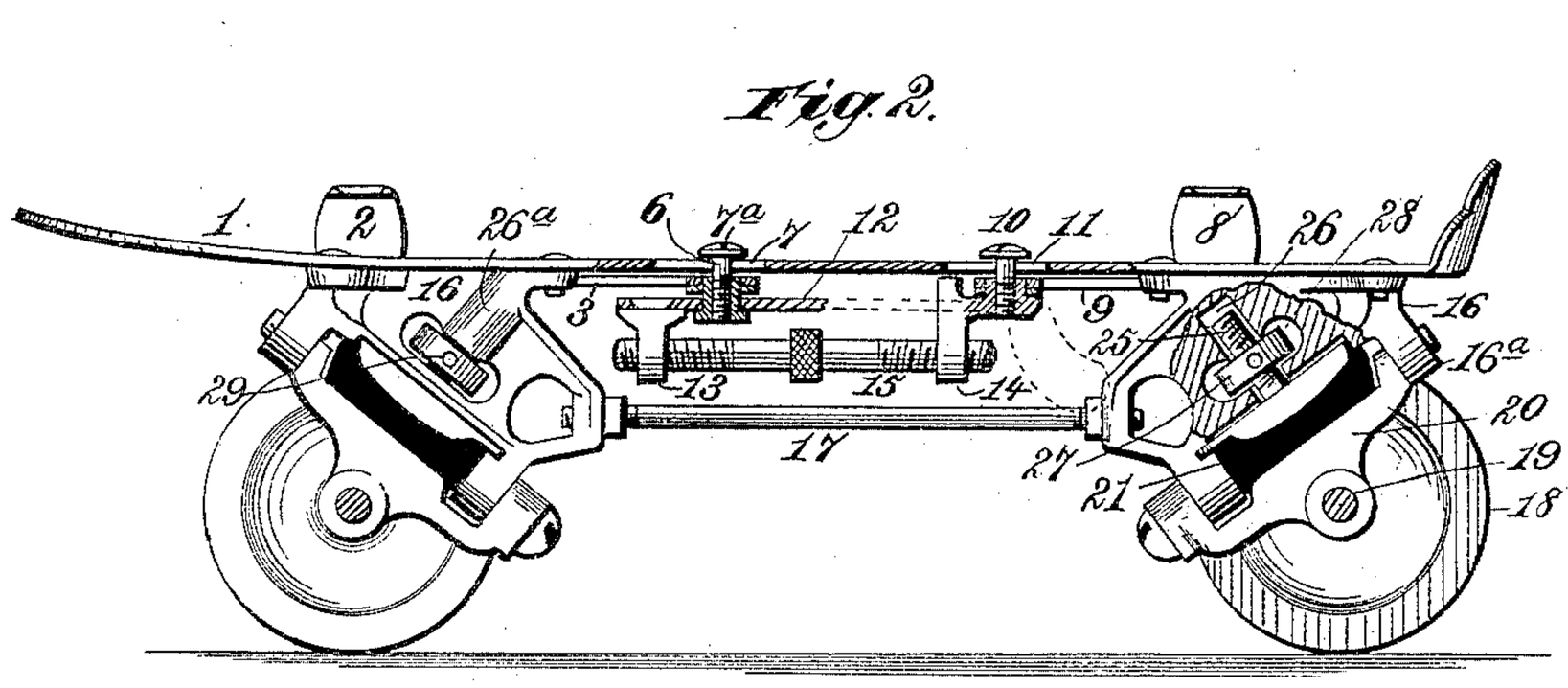
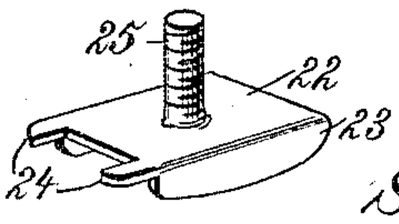


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

SAMUEL WINSLOW, OF WORCESTER, MASSACHUSETTS.

SKATE.

SPECIFICATION forming part of Letters Patent No. 327,848, dated October 6, 1885.

Application filed June 6, 1885. Serial No. 167,879. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL WINSLOW, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented new and useful Improvements in Skates, of which the following is a specification.

The present invention relates to roller-skates, and has for its object to provide simple and effective means for securing the heel and toe to the foot of the wearer, the invention is applicable also to a runner-skate.

It is the special purpose of this improvement to so construct the clamping devices and combine them with the skate in such a manner that the clamps at both heel and toe shall have movement in substantially a right line transverse to the longitudinal line of the foot-plate, and that the outward and inward movements of the clamps shall be equal upon the opposite sides of said foot-plate.

With these purposes in view my invention consists in the several novel features of construction and combinations of parts hereinafter fully set forth, and specifically pointed out in the claims, the same constituting an improvement upon the invention shown in an application for Letters Patent filed by me upon the 24th day of January, 1885, Serial No. 153,894.

Referring to the drawings forming part of this application, Figure 1 is a bottom plan view of a skate, the brackets and rolls being removed to show the clamping devices. Fig. 2 is a central vertical section of the foot-plate and its clamping devices, the rolls and brackets being shown in elevation.

In the said drawings the reference-numeral 1 designates the foot-plate of a skate, whether the same be a roller or a runner skate, having any suitable form of brackets or bearings for the rolls or runner. Upon this foot-plate are arranged clamping-jaws 2, projecting laterally from each side of the forward end of said plate, and carried or supported by arms 3, from which the clamping-jaws rise to a suitable height above the plate. These arms 3 are curved toward the rear, and are slotted to receive a headed supporting-pin, 4, which passes through such slot into the foot-plate, the arms being thereby held closely against the under surface of the plate and having free movement thereon. The curved arms 3 are prolonged beyond the slotted portions, and are gently curved inward until their extremities meet at a point not far from the center of the foot-plate, where they are united by a pivot-bolt, 6, which passes up through a slot, 7, in the central line of said plate, the pivot-bolt having a broad head, 7^a, which rests upon the foot-plate upon each side of the slot.

At the heel of the skate are arranged clamps 8, having a substantially similar construction, the clamp-carrying arms 9 being carried forward and united at their ends by a pivot, 10, which moves in a slot, 11, formed centrally a little in front of the heel portion of the plate.

Upon the end of the pivot-bolt 6 is mounted a clamping-lever, 12, having a grasp, 12^a, by which it is moved. This lever is prolonged beyond its pivotal point, and upon the prolongation is pivotally mounted a boss, 13, a similar boss, 14, being pivotally mounted upon the pivot-bolt 10, which unites the ends of the arms 9. In each of these bosses is cut a female thread, which receives one end of a connecting-bar, 15, having a male thread upon each end cut with a reverse twist.

The end of the lever which carries the boss 13 is curved slightly in such a manner that when the lever is turned inward to lie wholly under the foot-plate the axial line of the connecting-bar 15 will form an exceedingly small angle with the central longitudinal line of the foot-plate, the forward end of said bar being thereby carried a little beyond the central line of strain. By this means the clamps will not be released in use, as the outward thrust will tend to draw the lever 12 inward more closely.

The brackets or hangers 16, which may be of any suitable construction, are united by a longitudinal rod or brace, 17, which is at its ends screwed into a projecting angle of the bracket. Between this rod and the foot-plate the clamping devices are arranged, and the rod not only serves to stiffen the foot-plate, but affords a degree of protection to the clamping devices whereby accidental release of the clamp-lever is avoided. This might otherwise easily happen when the skates are used upon the street, or anywhere outside of a rink.

By connecting the ends of each pair of

clamping-arms by means of a pivot-bolt which moves in a central longitudinal slot in the foot-plate I not only secure a movement of the clamping-jaws in a line substantially at right angles to the central line of the foot-plate, but I also cause each clamp to move equally—that is, the jaw upon one side of the plate will move over the same space as the jaw upon the opposite side—and the foot of the wearer will therefore be accurately centered upon the skate.

The rolls 18 are mounted on an axle, 19, carried by a hanger, 20, which is swiveled in eyes 16ª in the bracket 16. Between the hanger and said bracket is interposed a rubber cushion, 21, and resting upon the upper surface thereof is a tension-plate, 22, having flanges 23, which overlap the sides of the rubber, and provided also with fingers 24 upon one end, which lie upon each side of the eye 16ª upon the bracket, serving as guides for the plate, and preventing any lateral displacement of the cushion. Rising from about the central portion of said plate is a threaded stud, 25, which lies in a recess, 26, in the bracket, said recess being formed in a boss, 26ª. Upon the stud 25 is turned a nut, 27, lying in an opening, 28, cut through the bracket just beneath the lower end of the boss 26ª. By turning this nut the tension-plate may be driven down against the cushion to increase its tension, or may be raised to diminish it. The nut 27 is provided at suitable intervals with peripheral openings 29, in which a short bar or key may be inserted for the purpose of turning the nut to give adjustment to the tension-plate.

I do not, broadly, claim a rotating screw engaging a screw-socket in the bracket of a roller-skate for adjusting the tension of a rubber cushion, as such has heretofore been accomplished.

What I claim is—

1. In a roller or other skate, the combination, with two pairs of laterally-movable clamping-jaws, one pair at the heel and the other near the toe, of clamp-arms curved inward beneath the foot-plate and prolonged toward the shank portion, the extremities of each pair of arms being connected by a pivot-bolt which moves in a central longitudinal slot in the foot-plate, a clamping-lever pivotally mounted upon one of said pivot-bolts and carrying upon its end a boss, a similar boss upon the other pivot-bolt, and a threaded adjusting-bar connecting the two, substantially as described.

2. In a roller or other skate, the combination, with two pairs of clamping-arms having their prolonged and united ends connected by a reversely-threaded bar, of pivot-bolts uniting the extremities of said arms and moving in central longitudinal slots in the foot-plate, substantially as described.

3. In a roller or other skate, the combination, with clamping-jaws carried by arms which are curved inward and toward the shank portion of the skate, of pivot-bolts which unite the prolonged ends of said arms, central longitudinal slots in the foot-plate in which said bolts move, a clamp-lever pivotally mounted on one of said bolts and a boss upon the other, and a reversely-threaded bar connecting said boss with a similar boss upon the end of the lever, substantially as described.

4. In a roller or other skate, the combination, with a foot-plate having clamping-jaws carried by arms lying beneath the plate and actuated by a lever mounted upon the bolt connecting said arms, of a rod or brace uniting the brackets or hangers, the clamping devices being arranged between the said rod and the foot-plate, substantially as described.

5. The combination, with the foot-plate of a roller-skate and the hanger carrying the axle of the rollers, of the bracket attached to the foot-plate and constructed with the smooth-surface recess 26 and transverse smooth-surfaced opening 28, the cushion 21, the tension-plate 22, having the rigidly-attached non-rotating screw-stud 25, rising and falling without turning in the said recess, and the screw-nut 27, arranged in the transverse opening and rotating on the screw-stud, said nut held against upward and downward movements by the upper and lower walls of the transverse opening, substantially as described.

6. The combination, with the foot-plate of a roller-skate and the hanger carrying the axle of the rollers, of the bracket 16, constructed with the interior boss, 26ª, the smooth-surfaced recess 26, and the smooth-surfaced transverse opening 28, formed below said boss, the cushion 21, the tension-plate 22, having the rigidly-attached non-rotating screw-stud 25, adapted to rise and fall in the said smooth-surfaced recess without turning, and the screw-nut 27, bearing against the upper and lower walls of the transverse opening and rotating upon the screw-stud, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL WINSLOW.

Witnesses:
CHAS. R. JOHNSON,
DAVID MANNING, Jr.