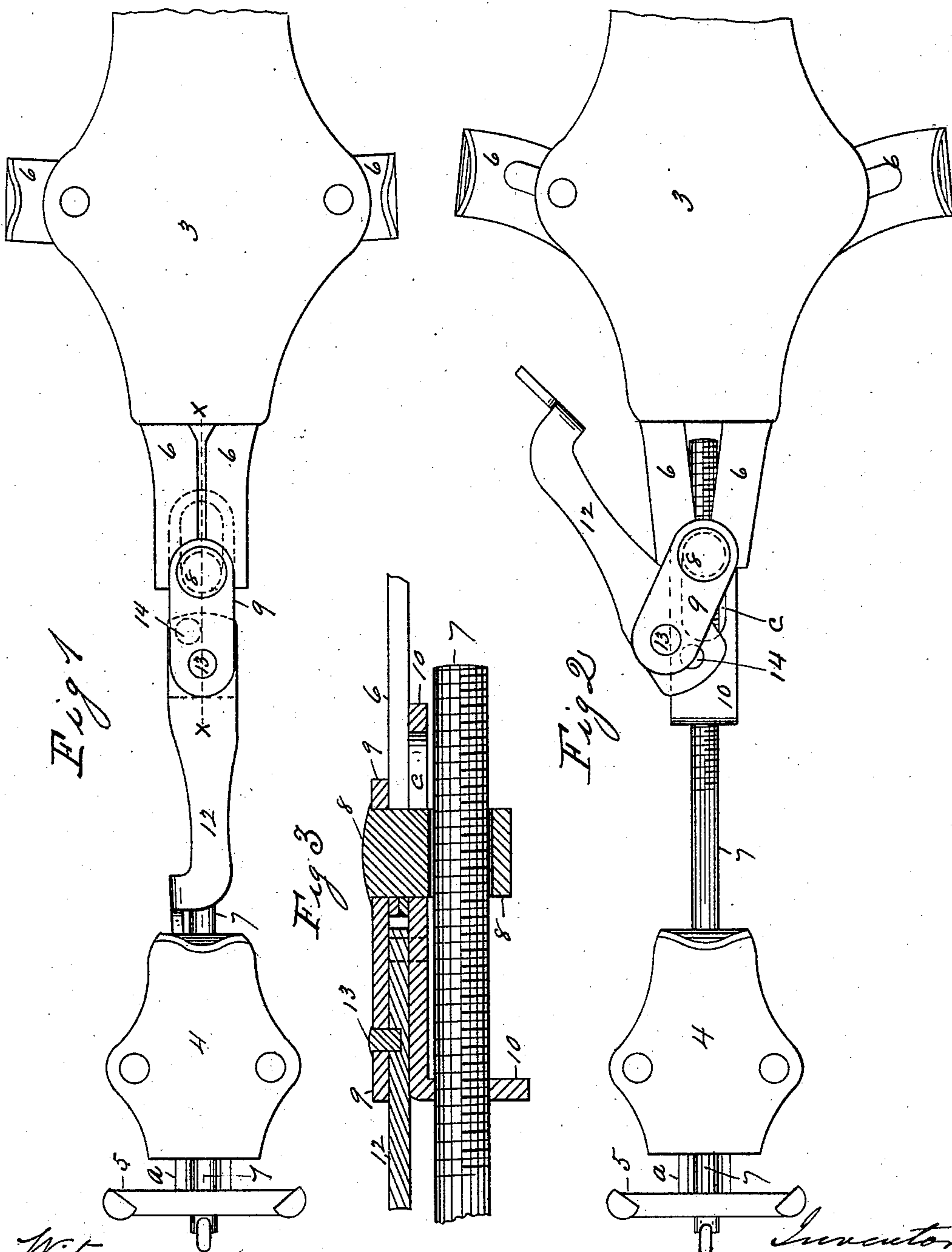


(No Model.)

E. H. BARNEY.
SKATE FASTENING.

No. 361,113.

Patented Apr. 12, 1887.



Witnesses.
M. F. Rice.
G. M. Chamberlain.

Inventor.
Everett H. Barney
By Chapman
Att'y

UNITED STATES PATENT OFFICE.

EVERETT H. BARNEY, OF SPRINGFIELD, MASSACHUSETTS.

SKATE-FASTENING.

SPECIFICATION forming part of Letters Patent No. 361,113, dated April 12, 1887.

Application filed March 7, 1887. Serial No. 229,940. (No model.)

To all whom it may concern:

Be it known that I, EVERETT H. BARNEY, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Skate-Fastening, of which the following is a specification.

This invention relates to skates, and pertains to improvements in fastening devices therefor; and the invention consists in the peculiar construction and arrangement of the said fastening devices, all as hereinafter fully described, and pointed out in the claims.

In the drawings forming part of this specification, Figures 1 and 2 are plan views of a skate provided with fastening devices embodying my improvements, Fig. 1 showing said devices in the position which they occupy when the skate is fastened to the boot, and Fig. 2 showing said devices in the position they occupy when the skate is released from the boot, the forward end of the skate in both of said figures being shown broken off. Fig. 3 is a side view, somewhat enlarged, of the screw-threaded end of the clamp-rod of the skate and of the rear portions of the sole-clamp, said figure showing in section detail parts of the skate-fastening devices, hereinafter fully described.

The runner of the skate is not shown in either of said figures; but the sole-plate 3 and heel-plate 4 are secured to the runner of the skate by the usual well-known bracket-connections. The heel-clamp 5, having thereon the trough-like projection *a*, has the usual sliding connection under the heel-plate 4 by the entrance of said projection *a* between the sides of the heel-plate bracket, in the well-known manner of constructing said part.

The sole-clamps 6 are constructed and attached to the sole-plate 3 in the well-known manner, whereby when they are, by the fastening devices of the skate, as hereinafter described, given a longitudinal movement under the sole-plate, their upturned ends are clamped against and released from the edges of the shoe-sole.

The screw-threaded clamp-rod 7 is a well-known feature of skate construction, and passes through the heel-clamp 5 toward the rear end of the sole-clamp, as shown in Fig. 2, its rear portion lying within the said grooved

extension *a* on the heel-clamp, and its rear end having an engagement with the latter to draw it toward the rear end of the heel-plate 4 when operated by the clamp-lever of the fastening devices, as below described.

The rear ends of the sole-clamps 6 are united by a pivot, 8, which passes loosely through a link-strap, 9, and through the ends of said sole-clamps, as shown, and said pivot 8 is perforated transversely of its axis to permit the screw-threaded end of the clamp-rod 7 to pass through it without engaging with it, so that said rod may have a free longitudinal movement through said pivot. A yoke, 10, whose main portion extends in the direction of said clamp-rod, has its rear end bent at right angles to said rod, and is tapped to provide for screwing the latter into it, whereby said yoke has a screw-connection with the rod. The said main portion of the yoke 10 has a slot, *c*, formed therein, through which passes the said pivot 8, and in which slot the said pivot is permitted to have a free movement longitudinally when the fastening devices are operated by the clamping-lever thereof to fasten and unfasten the skate, and in like manner, under some circumstances, the yoke has a free movement longitudinally relative to said pivot. The said link-strap 9, one end of which has a pivotal connection with said pivot 8, has its rear end pivotally connected to the clamp-lever 12 by the pivot 13, and said clamp-lever has a pivotal connection with the said yoke 10 by the pivot 14, the latter pivot being set or located to one side of a longitudinal center line, *x x*, drawn through the link-strap 9, (see Fig. 1,) and the said pivotal connection of the link-strap 9 with said clamping-lever is at a point to one side of the center of said pivot 14, so that when the said lever is swung to the position shown in Fig. 1 (that being the one it occupies when the skate is fastened) said pivot 13 swings past the center of the pivot 14.

The operation of my improvements is as follows: In placing the skate on a boot and fastening it thereto the heel-clamp 5 is adjusted to a proper position to allow of engaging it with the heel by turning the clamp-rod 7, thus screwing it in or out of the rear end of the yoke 10. This having been done, (the clamp-lever being meanwhile in the position shown

in Fig. 2,) the clamp-lever 12 is swung to the position shown in Fig. 1, thereby, by its said connection with the toe-clamps 6, drawing the latter against the sole of the boot, and at the same time forcing the heel-clamp against the heel thereof by causing, by said motion of the lever, the pivots 8 and 14 to be drawn toward each other, and when the end of the clamp-lever is brought to the position shown in Fig. 1 the extent of the movement of the heel-clamp and the rear ends of the sole-clamps toward each other is reached, and the said pivot 13 having been brought to a position to one side of the pivot 14, as shown, the locking of the clamp-lever is completed, and all strain which is exerted against the clamps only tends to draw the end of said lever more and more toward the side of the clamp-rod, and therefore it cannot swing outward and permit the skate-fastenings to become loosened.

What I claim as my invention is—

1. In combination, the sole-clamps and the screwed clamp-rod 7 of a skate, the yoke 10, having a screw-connection with said rod, a clamp-lever, 12, having a pivotal connection

with said yoke to one side of the longitudinal center thereof, and the link-strap 9, having one end pivoted to the rear ends of the sole-clamps and its opposite end pivoted to said lever, substantially as set forth.

2. Skate-fastening devices, combined with the sole-clamp and the heel-clamp screw-rod of a skate, consisting of a pivot, 8, passing through the rear ends of the sole-clamps, having a perforation through it transversely of its axis, through which the end of said rod passes freely, a yoke, 10, having a slot therein, through which said pivot extends, and whose rear end has a screw-connection with said rod, a clamp-lever having a pivot-connection with said yoke to one side of its longitudinal center, and a link-strap, 9, having one end connected to said pivot 8 and its opposite end pivotally connected to said clamp-lever, substantially as set forth.

EVERETT H. BARNEY.

Witnesses:

G. M. CHAMBERLAIN,

H. A. CHAPIN.