

P. Dooley

Skate Fastening.

N^o 88,459

Patented Mar. 30, 1869.

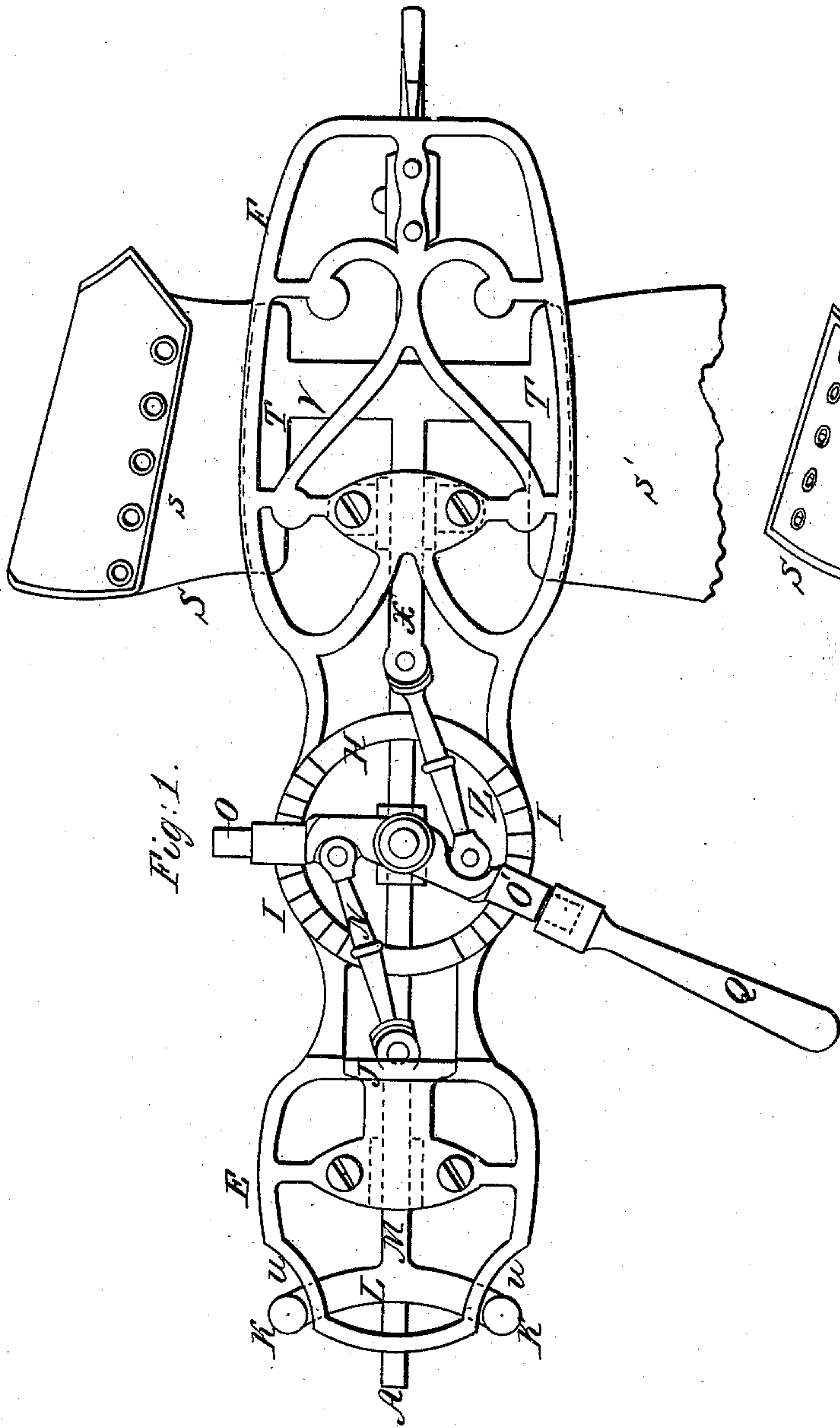


Fig. 1.

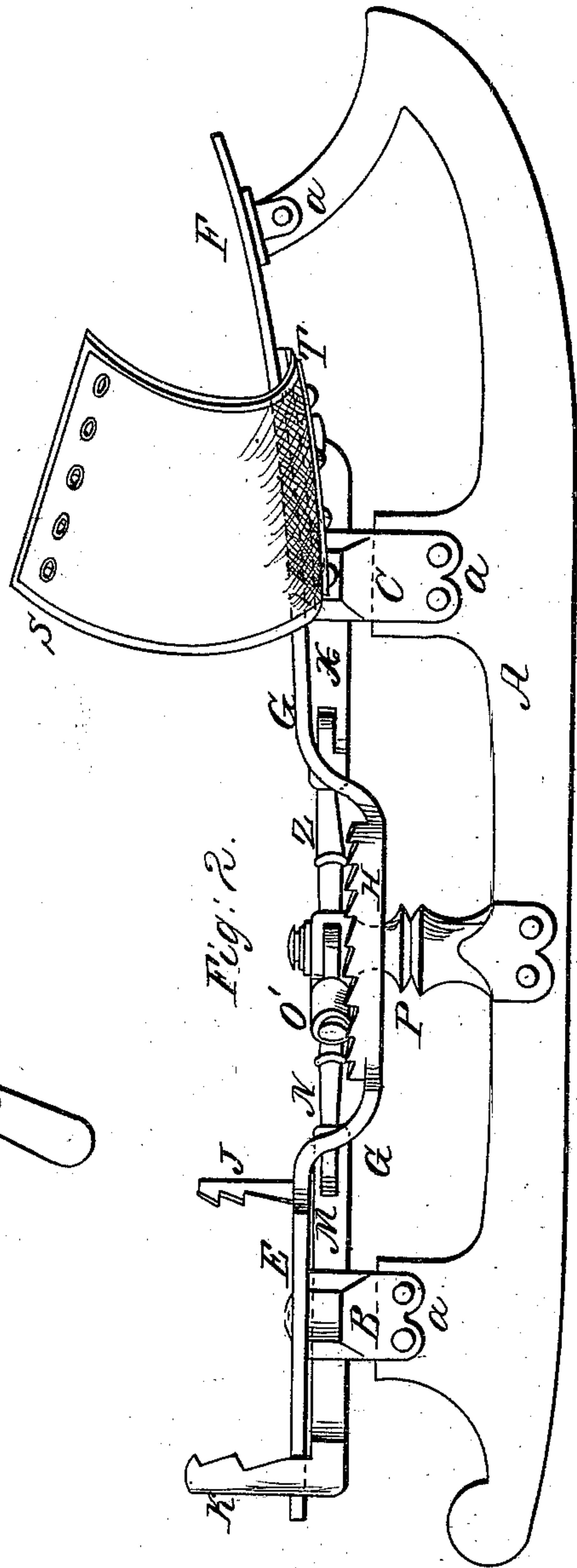


Fig. 2.

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PATRICK DOOLEY, OF NEWARK, NEW JERSEY.

Letters Patent No. 88,459, dated March 30, 1869.

IMPROVEMENT IN SKATE-FASTENINGS.

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, PATRICK DOOLEY, of Newark, in the county of Essex, State of New Jersey, have invented a new and useful Improvement in Skates; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 is a plan view of a skate made according to my invention.

Figure 2 is a side view, or elevation.

This invention relates to means for adjusting, securing, and fastening a skate to the foot of the wearer, as is hereinafter described and explained.

The letter A designates the runner, which is secured at the knees, *a*, to the ball, or toe and heel-plates, by brackets B C D.

The heel-plate E is connected to the ball, or toe-plate F by a frame, G, the middle portion of which consists of a ring, H, upon whose upper surface are cut ratchet-teeth I. Such ratchet-teeth, however, need not necessarily extend entirely around the ring, but can be formed on the side portions of the ring, as is shown in this example, the front and rear portions being, if desired, left smooth. The office of said ratchet will be explained as the description proceeds.

My improved skate has a clamping, or fastening-device, both for the heel of the foot and for the ball, or front part.

The heel-plate E has on its front part a vertical flange, J, which may extend across the plate E, or may be made of less length, as may be preferred by the maker.

The flange J is stationary, and is serrated on its rear side. Its height ought to be less than the height of the heel of the boot or shoe under which the skate is to be worn.

At the end of the heel-plate are two movable vertical clamps, K K, whose inner faces are serrated.

The clamps K rise from the ends of a cross-bar, L, under the heel-plate, and from the middle of the said cross-bar, and at right angles to it, extends a slide, M, to which is hinged, or pivoted the rear end of a connecting-rod, or link, N, whose forward end is hinged, or pivoted to a horizontal lever, O, of the second order, whose inner end is mounted, so that it can turn freely, on a centre-post, or standard, P, which rises from the runner of the skate through the centre of the ring H.

The lever O constitutes, also, a detent, which works in connection with the ratchet-teeth I, over which it has its motion, a tooth of proper form being cut on the under side of said lever for that purpose.

The end of the lever O projects a little beyond the circumference of the ring H, so that it can be seized and operated by the hand, or by a wrench, like that shown at Q in the drawing.

The slide M works in a groove made in the top of

the rear bracket B, being held in place by the heel-plate.

The lever and detent O is fitted loosely to the post P, so that its end can, when desired, be raised up far enough to bring its tooth clear of the teeth of the ratchet, which it is necessary to do whenever the clamps K K are to be moved backward or outward, to release the heel of the boot or shoe to which the skate may have been fastened.

From the above description, it will be seen that any forward movement of the detent-lever O causes the clamps K to be moved forward toward the heel of the skater, and the heel becomes compressed and held between the fixed clamp, or flange J and the movable clamps K, the inner faces of both the fixed and movable clamps being serrated to enable them to take a firm hold of the heel.

The fastening-device, for the front, or toe of the foot, is moved and operated lengthwise of the skate by a like detent-lever and slide, but the fastening-device itself is of a different construction, and consists of a movable socket, or cap S, which is made of flexible material, and in two parts, *s s'*, whose upper edges come up over the foot, and are adjusted at a greater or less distance from each other by means of lacing-strings, or other suitable means.

The lower edges of the parts *s s'* of the cap are secured to the elongated right-angled ends T T of a cross-bar V, which is arranged to move under the toe-plate F, and which cross-bar V is joined midway of its length to a slide X, which is confined between the under surface of the toe-plate and the bracket C, working in a groove in the top of the bracket.

The rear end of the slide X is pivoted to the forward end of a link, Z, which extends backward to a detent-lever, O', of a like construction to the detent-lever O, and which, like that, turns freely on the centre-post P, both levers being secured to the post, so as to extend from opposite sides thereof, by a nut, W, which confines their inner ends between said nut and a shoulder formed below the top of the post, sufficient play being allowed between the nut and shoulder to permit both the detent-levers O O' to be raised out of engagement with the ratchet-teeth, as before explained of the detent-lever O.

The elongated ends T T of the cross-bar V are arranged to slide underneath and against the under surfaces of the outer sides, or edges of the toe-plate, and they are consequently braced by the toe-plate when the cap is drawn backward by the detent-lever O', so as to tighten the cap on the foot.

It will be observed that by my invention the detent-levers serve to move and operate the fastening-devices, such as the clamps and toe-cap, and also to lock them, by means of the ratchet-teeth, after they are tightened or drawn up. They are applicable to clamps and fastenings of different construction from those shown in this example, and can be applied and arranged with

ease to any skate where movable clamps or other fastenings can be used.

The cap is adjustable to the size and shape of the foot, being composed, as shown, of two parts, *s s'*, which can be opened more or less before this cap is pulled back by the detent-lever.

The back of the heel-plate is cut away at *U U*, or so shaped as to allow the movable clamps to move forward without being interfered with by the plate.

The post *P* is, in this example, secured to the runner between the knees *a a*, but in practice the post will be secured to an additional knee, which will be formed at the proper point, so that the post will not be too near the bottom of the runner.

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

The detent-levers *O O'*, pivoted to the same standard, but independent of each other, to one of which is connected, by link and slide, the movable cap *S*, and to the other, the heel-clamps *K*, in combination with the ratchet *H*, when the parts are arranged to operate as described.

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Witnesses:

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