

UNITED STATES PATENT OFFICE.

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SKATE-STRAP.

Specification of Letters Patent No. 25,993, dated November 1, 1859.

To all whom it may concern:

Be it known that we, EDWARD BEHR and L. FROELICH, of the city, county, and State of New York, have invented a new and useful Improvement in Attaching Skates to the Feet; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section of a skate with our invention applied to it, *a z*, Fig. 3, indicating the plane of section. Fig. 2 is a transverse vertical section of ditto, taken in the line *y y*, Fig. 3. Fig. 3 is a horizontal section of ditto, taken in the line *x z*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain a facile mode of adjusting the straps of the skate so that the latter may be quickly and snugly secured to the foot, and also readily detached therefrom.

The invention is an improvement on modes of operating the toe and heel straps of the skate, which were formerly patented by E. Behr, the Letters Patent respectively bearing date March 29, 1859, and May 10th, 1859.

The within-described invention consists in a novel arrangement of parts, whereby both the toe and heel straps may be adjusted and the skate secured to the foot by the turning of a single rod, and the straps relaxed on the foot and the skate consequently detached therefrom by the simple pressing of a button at the side of the stock near each strap.

To enable those skilled in the art to fully understand and construct our invention we will proceed to describe it.

A represents the stock of the skate, and B, the runner or iron. These parts may be constructed in the usual or any proper way.

C is a metal plate attached to the heel of the stock, and projecting above it a short distance to form a stop for the heel of the boot or shoe.

D is the heel strap, one end of which is firmly attached to the side of the stock, A, at the heel, as shown at *a*, and the other end passes through a mortise in the stock at

the opposite side of the heel and is attached to a cylinder, E, which has an internal screw thread and is fitted on a screw section, *c*, of a rod, F, which is fitted longitudinally and centrally in the stock, A, and is allowed to turn freely therein. The screw portion, *c*, of rod, F, is rather longer than the cylinder E, as shown clearly in Fig. 1. On the back part of the cylinder, E, there is a ratchet, *d*, into which a pawl, *e*, catches and is retained therein by a spring, *f*, said pawl working on a pin, *g*.

G is the toe strap, one end of which is attached to the side of the stock, A, as shown at *h*, the same side as that to which the heel strap is attached. The opposite end of this strap also passes through a mortise, *i*, in the opposite side of the stock, and is attached to a cylinder, H which is provided with an internal screw thread and fitted on a screw section, *j*, of rod, F, this arrangement being precisely similar to that of cylinder, E. On the front end of cylinder, E, there is a ratchet, *k*, into which a pawl, *l*, catches, said pawl being kept engaged with said ratchet by means of a spring, *m*.

To the outer end of each pawl, *e l*, a rod, *n*, is attached, said rods projecting through the side of the stock, and each having a button, *o*, on its outer end. The rod, F, projects through the heel of the stock, and has a button, *p*, attached. The ratchet, *k*, of cylinder, H, has its teeth in a reverse position to those of cylinder, E. The screw portions, *c j*, of rod, F, are smaller in diameter than the other portion, and shoulders, *r s*, are consequently formed at the inner ends of the screw sections.

The operation is as follows:—In order to attach the skate to the foot, the latter is passed through the heel and toe straps, and the stock, A, placed against the sole of the foot. The rod, F, is then turned from left to right and the cylinder, H, is consequently brought in contact with the shoulder, *s*, of rod F, and the cylinder, H, will be rotated and the strap, G, wound on it until said strap is adjusted snugly around the foot. The rod, F, is then turned in a reverse direction, viz: from right to left, and the cylinder, E, will thereby be brought in contact with shoulder, *r*, and said cylinder

rotated, and the heel strap, D, drawn snugly over the instep of the foot. It will be seen that when the cylinder, H, is brought in contact with the shoulder, s, the cylinder, E, 5 recedes from shoulder, r, and when cylinder, E, is brought in contact with shoulder, r, the cylinder, H, recedes from shoulder, s. The pawls, e l, prevent the casual turning of the cylinders. To detach the skate from 10 the foot all that is required is to depress the buttons, o o, and thereby release the ratchets, d k, from the pawls.

The top of the stock, A, may be covered by a brass plate, t, to cover and fully protect 15 the rod and working parts herein described.

Having thus described our invention

what we claim as new, and desire to secure by Letters Patent, is:—

The rod, F, fitted longitudinally in the stock, A, provided with screw sections, c j, 20 with cylinders, E H, fitted thereon, and one end of the heel and toe straps, D G, attached to said cylinders, the latter being provided with the ratchets, d k, into which the pawls, e l, catch, substantially as and 25 for the purpose set forth.

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Witnesses:

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