

UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN SKATES.

Specification forming part of Letters Patent No. 37,305, dated January 6, 1863.

To all whom it may concern

Be it known that I, JAMES L. PLIMPTON, of the city, county, and State of New York, have invented a new and useful Improvement in Roller and other Skates; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention; Fig. 2, a plan or top view of the same; Fig. 3, an inverted plan or top view of the same; Fig. 4, a longitudinal vertical section of a portion of the same, taken in the line *x x*, Fig. 3; Fig. 5, a side view of a portion of the same.

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

This invention relates to an improvement in attaching the rollers or runners to the stock or foot-stand of the skate, whereby the rollers or runners are made to turn or cramp like the wheels of a wagon by the rocking or canting of the stock or foot-stand to facilitate the turning of a skate with a wide bearing upon the floor or ice.

This invention also relates to an improved fastening for securing the fore part of the boot or shoe to the skate.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the stock or foot-stand of the skate, which may be constructed in the usual way, and therefore does not require a minute description.

B B represent two blocks, which are of taper form longitudinally, and are fitted loosely on rods C, which are attached in inclined positions to the under side of the stock or foot-stand A. The rods C are inclined in reverse positions, as shown in Fig. 1, their inner ends being fitted in plates D D, which project down from the under side of the stock or foot-stand, the outer ends of said rods being bent in the form of loops or eyes *a*, through which screws *b* pass into the bottom of the stock or foot-stand A. The inclination of the rods C may be varied more or less by placing washers *c* on the screws *b*, between the loops or eyes *a* and the bottom of the stock or foot-stand, as shown in Figs. 1 and 4. By this adjustment of the rods C the canting of the stock may be regulated as desired. The blocks B B have

each two rollers, E E, attached to them, one at each side. The upper surfaces of the blocks B B, at their elevated ends, bear against india-rubber cushions or springs F. (Shown in Fig. 1.) These cushions or springs control the action or movement of the blocks B B, preventing them from rattling and working too loosely or freely when the skate is in use. By this means of applying the rollers to the stock or foot-stand A it will be seen that when the body of the wearer of the skate is inclined the stock or foot-stand A will also be inclined, and the blocks B B, in consequence of being fitted on the inclined rods C C, will "cramp" or turn, so as to cause the skate to describe a curve; hence, in order to turn in either direction, the skater is only required to incline his body in the direction he desires to move, and the rollers E will be moved or "cramped" in proper position to describe the proper curve. In Fig. 3 this "cramping" or adjustment of the rollers is shown in red outline.

This invention is applicable to the ordinary skate for ice, in the latter case runners F^x being applied to the blocks B B instead of rollers E. (See Fig. 5.)

The operation of the runners F is precisely the same as that of the rollers, so far as the cramping adjustment is concerned.

In the upper surface of the stock or foot-stand A there is made transversely a groove or recess, *d*, over which a metal plate, G, is secured. This plate is bent downward and inward at its ends, so as to extend a short distance underneath the stock or foot-stand A, and the plate G has a slot, *e*, made in each side of it, through each of which a plate, H, passes into a space between the bottom of the recess *d* and the plate G. The plates H H have each a rack, *f*, formed at their front edges, as shown clearly in Fig. 2. Each plate H is curved upward and inward at its outer end, so as to form a hook, *g*, to catch over the edge *h* of the sole of the boot or shoe. In the recess *d*, directly behind the plates H, there is placed a spring, I, which is formed of a single piece of wire bent backward at its ends, as shown at *i i'*, and also bent at its center to form a horizontal projection, as shown at *j*, in Fig. 2. This wire at its ends bears against the back edges of the plates H H, and keeps the racks *f*, at the front edges of said plates, engaged with the front edges of

the slots *e*. The plates H H are thereby retained in proper position or prevented from being forced out laterally from the stocks or foot-stand A. In order to release the plates H H, that they may be adjusted to the width of the sole, the ends of the spring I are bent down, so as to enter small vertical jogs or notches *k* at the back ends of the slots *e*, (see Fig. 1,) and thereby be free from the plates H, so that the latter may be pressed backward in the recess *d* and the racks *f* be free from the front edges of the slots *e*. This adjustment of the wire or spring I is shown in red in Fig. 1.

Any proper heel-fastening may be used. The one represented in the drawings, Figs. 1, 2, and 3, is substantially the same as that patented by me March 4, 1862.

I do not confine myself to the precise arrangement, as herein shown and described, for attaching the roller or runners to the stock or foot-stand A, as many variations may be made therefrom without deviating from the main feature of my invention, which consists in the rollers or runners being turned or cramped so as to turn, either run in a straight line, or describe a circle to the right or left by the rocking or canting of the stock or foot-stand of the skate, and when the same is canted sufficient to rest upon the outside upper corner of the blocks B B it prevents the ankle from turning farther and greatly facilitates the learner. The faces of the rollers or runners have the same square bearing upon the floor or ice in whatever position the foot-stand is canted, and this prevents the skate from slipping or sliding laterally, as is the case when

the rollers or runners are stationary and canted with the foot-stock. By my invention this contingency is fully obviated, and at the same time, in consequence of the adjusting or cramping movement of the rollers or runners, previously described, the skate is allowed to turn either to the right or left without any special effort or manipulation on the part of the wearer or skater, the adjusting movement being perfectly automatic.

The front fastening of the skate, as previously described, is extremely simple and efficient, and may be applied at a small cost to almost any variety of skate.

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

1. The attaching or applying of the rollers E or runners E^x to the stock or foot-stand A of a skate in such a manner that said rollers or runners will be turned, cramped, or adjusted so as to run the skate in a curved line to the right or left by the turning or canting of the foot-stand or stock A, as set forth.

2. The plates H H, provided with hooks *g* at their ends and racks *f* at their front edges, in combination with the spring I and plate G, the latter being applied to the stock or foot-stand A, and provided with slots *e* at its ends, and all arranged, as shown, to form a fastening at the front part of the skate, as herein shown and described.

JAMES L. PLIMPTON.

Witnesses:

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