

UNITED STATES PATENT OFFICE.

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ROLLER ATTACHMENT FOR SKATES.

SPECIFICATION forming part of Letters Patent No. 324,327, dated August 11, 1885.

Application filed April 14, 1885. (No model.)

To all-whom it may concern:

Be it known that I, JOHN H. JACOBY, of the city, county, and State of New York, have invented a new and useful Improvement in Roller Attachments for Skates; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to skates, and has for its object the interchangeable use of a single set of detachable heel, toe, and clamp plates either with rollers to constitute a roller-skate or with a runner to constitute an ice-skate.

It consists in an attachment for ice-skates constructed of a flat connecting bar or plate fitted with rollers and formed with inwardly-enlarged recesses or notches in its upper edge to receive and engage the bolts by which the detachable heel, toe, and clamp plates of the ice-skate are secured to its runner, and with a lug or tenon projecting from said upper edge at the front end of the bar to fit into a recess or mortise in the toe-plate, whereby said heel, toe, and clamp plates may be as readily and firmly attached to the roller-connecting bar as to the ice-runner, and the necessity of two independent pair of skates for use on a floor or on the ice is avoided.

In the accompanying drawings, Figure 1 is a side elevation of my improved roller attachment for ice-skates, with a set of toe and heel plates and clamping devices to be used therewith, or with an ice-skate, detached and shown in perspective above it. Fig. 2 represents my improved roller attachment with the heel, toe, and clamping plates detached from the runner of an ice-skate, and fitted thereto to form a complete roller-skate.

A represents the connecting-bar or runner of a roller-skate, and B B the brackets secured thereto, which carry the rollers C C, attached and pivoted in any approved manner. This runner or connecting-bar is made of a plate of steel corresponding in thickness to the runner of an ice-skate, but reduced in length. It is upheld edgewise by and between the brackets B B, which embrace and clamp between them the thickness of the plate. The rollers C C are mounted and secured to the brackets in any approved manner. The top edge of the

bar A is formed with inwardly-enlarged recesses or notches D and D', adapted to receive the lower heads of the bolts or studs E E', by which the heel and toe plates of the skate are customarily secured to an ice-runner. The forward end of said top edge is also formed with an offset or tenon, F, adapted to enter a mortise in the toe-plate, and the upper surface of the top edge is adapted, as at *m m*, to afford firm, even support to the heel and toe plates when secured thereon.

G represents the heel-plate of the skate, stamped out of a single piece of metal, with offsets *h h* cut out and bent downward, the one at its rear end and the other in the middle thereof. These offsets are slitted or notched to embrace closely the top edge and sides of the runner when fitted thereon, as shown in Fig. 2. When thus fitted in place on the runner, the plate is made fast thereto by a double-headed bolt, E, led through a hole pierced centrally through the plate intermediate the offsets *h h*, and whose outer wide head engages the outer countersunk edge of said hole, and whose lower head is adapted to enter and fit closely within the notched or inwardly-enlarged recess D. It is admitted into the recess by means of lateral notches *i i*, cut in the flange of the head, which, when in register with the runner, allow the head to drop down into the free opening *d*, Fig. 1, cut outwardly from the recess D, the bolt being locked in the recess by turning it so as to bring said notches *i i* at right angles to the length of the runner, as shown in Fig. 2. The bolt E, in conjunction with the offsets *h h*, will firmly secure the heel-plate G to the runner, and yet permit its ready detachment.

K represents the toe-plate, stamped out of a single plate of metal, and fitted with adjustable transverse clamps K' K', and which is also formed with slitted offsets *h' h'*, similar to the offsets *h* of the heel-plate G, and which are made to project downward so as to fit upon and embrace the top edge and sides of the runner, as shown in Fig. 2. The front or outer end of this toe-plate is adapted to rest upon the front end of the runner, and is provided with a slot or mortise, *n*, therein to receive the tenon or lug F, projecting from its top edge. When fitted in place upon the runner, with its offsets *h' h'* embracing the same

and the tenon F projecting through its mortise *n*, the detachable toe-plate K is made fast by means of a bolt, E', fitted to project from the under side of a clamping-plate, L.

5 The head of the bolt E' corresponds to the lower head of the bolt E, and is made to fit into the inwardly-enlarged recess D', and is allowed to enter the same by means of notches *v' v'* in the flange of its head.

10 The inner end of the clamping-plate L, carrying the bolt E', is widened and adapted to fit and turn upon the inner end of the toe-plate K, and when thus fitted in place its bolt projects through an opening, *j*, in the toe-plate, between its offsets *h' h'*, to engage the recess D', and thus fastens both plates to the bar A, the bolt serving also as a pivot upon which the plate L may turn.

20 The plate L is extended to form an arm, M, serving as a lever by which the plate may be readily turned, and the other end of this lever is inclined downward and formed with two downwardly-projecting ears, *r r*, adapted to embrace between them the edge of the connecting-bar A, as shown in Fig. 2, when the lever is brought into line over the same, and thereby lock the lever. The heel and toe plates are connected by an adjustable plate, P, whose rear end is bent up, as at *p* in the drawings, to afford a support for the inner front edge of the heel, and whose front end is perforated to receive a bolt, R. (See Fig. 2.)

25 The rear end of the plate is fitted with a T-headed lug, S, projecting from its under side to enter and engage the sides of a longitudinal slot, *g*, in the inner end of the heel-plate G. When thus fitted upon and secured by the lug S to the heel-plate, the plate P will project over the clamping-plate L, to which it is

30 secured by the bolt R, which is led through a slot, *r*, in said plate L, and made fast by a nut, R', (see Fig. 2,) the bolt forming a pivotal connection between the plates P and L, so as to permit the arm of the latter to be swung

in and out from the runner-bar A, as required for clamping the heel-piece P to the boot-heel. This movement of the clamping-plate L is also permitted to open and close the toe-plates K' K', fitted on the toe-piece, by causing the heads of the bolts by which the toe-clamps are fastened to the toe-piece K to pass through slots W W in the plate L, and also through slots W' W' in the toe-plate K, as is illustrated in Fig. 1.

In the use of the attachment the toe, heel, and clamp plates K, G, L, and P, detached from the runner of the ice-skate, are fitted and secured, in manner as described, to the runner-bar A, so that said bar and its rollers may, by means of said plates, be readily attached to the foot of the skates.

I do not claim as new the form and construction of the toe, heel, and clamping plates herein described, as such have heretofore been used in combination with the runners of ice-skates.

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

The herein-described roller attachment for an ice-skate, the same consisting of a flat plate or bar, A, confined edgewise in roller-brackets B B, and having inwardly-enlarged recesses D D' formed at either end thereof, and a lug or tenon, F, at its forward end, in combination with suitable supporting-surfaces, *m m*, to receive, and, in connection with suitable bolts, E E', secure, the detachable toe, heel, and clamping plates K, G, L, and P of the ice-skate, all substantially in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN HENRY JACOBY.

Witnesses:

ROBERT YOOMCUFF,
A. B. MOORE.