2 Sheets—Sheet 1.

W. A. LEGGO & F. C. IRELAND

ROLLER-SKATE.

No. 191,350. Patented May 29, 1877.

FIG. 1

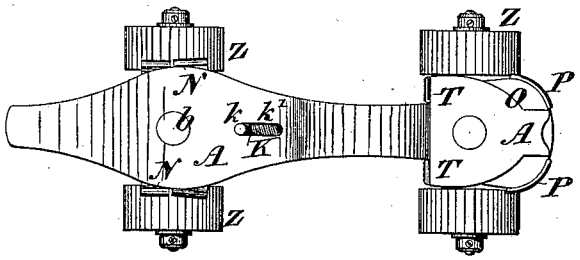


FIG. 2

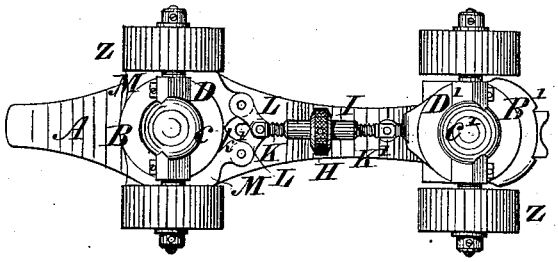


FIG. 3

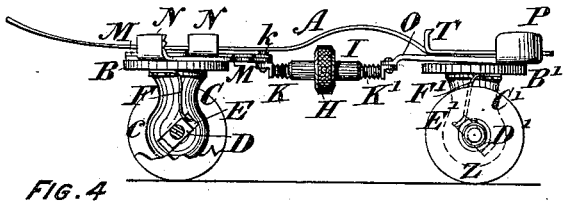


FIG. 4

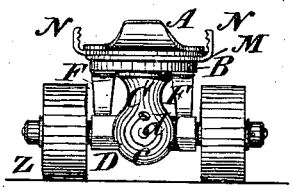


FIG. 5

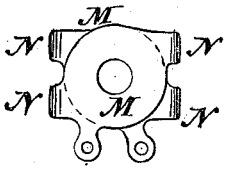
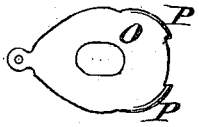


FIG. 6



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2 Sheets—Sheet 2.

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FIG. 7

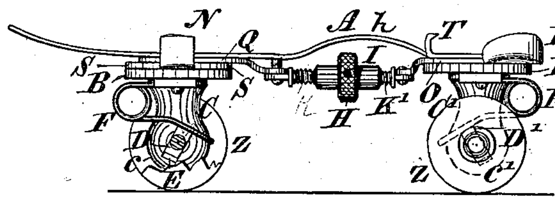


FIG. 8

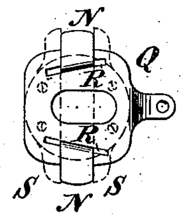
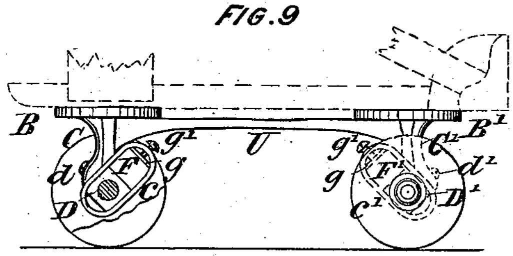


FIG. 9



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN ROLLER-SKATES.

Specification forming part of Letters Patent No. **191,350**, dated May 29, 1877; application filed December 20, 1876.

To all whom it may concern:

Be it known that we, WILLIAM AUGUSTUS LEGGO, of the city of Montreal, in the county of Hochelaga, and FRANCIS CHARLES IRELAND, of the village of Lachute, in the county of Argenteuil, both in the Province of Quebec, Canada, have invented certain new and useful Improvements in Skates; and we do hereby declare that the following is a full, clear, and exact description of the same.

Our invention, although capable of being adapted in some features to the ordinary ice-skates, is chiefly intended to apply to roller-skates; and its object is to so modify and improve their construction as to enable the skater to perform, with far more ease and precision than before, figures of all kinds.

The invention may be briefly described as consisting, mainly, in the arrangement, in combination with the foot-plate of a roller-skate, of stands projecting downward, in the lower parts of which are formed slots or openings, set obliquely, through which pass the axles, which are angular, preferably oblong in section, and properly secured in place, and fitting said slots. A spring or springs, bearing against the axles, keep them, when at rest, quite horizontal, and at right angles to the longitudinal axis of the skate, and this position will be retained so long as the skater holds himself perfectly upright; but should he incline either to the right or left, the axle will move in such a way as to take him in that direction, the springs only interposing a yielding resistance.

For fuller comprehension, however, of our invention, reference must be had to the annexed drawings, in which similar letters indicate like parts, and where—

Figure 1 is a plan view of our skate, looking down. Fig. 2 is a bottom view thereof. Fig. 3 is a side view, partly in section. Fig. 4 is a front view of the skate. Fig. 5 is a detail of the fastening for the sole. Fig. 6 is a detail of the fastening for the heel. Fig. 7 is a side view, partly in section, of a modification of our fastening. Fig. 8 is a view of a modification of our fastening. Fig. 9 is a side view, partly in section, of a modification of our skate.

A is the foot or boot plate, which may be of steel, brass, or any other suitable material, and either correspond to the outline of the boot or not, as desired. To these foot or boot plates are firmly secured, by screws, pins, or in any other suitable way, plates B B′, placed, preferably, as shown in Fig. 3, under the ball and heel plate A. From these plates B B′ project downward standards C C′. The lower parts of these standards C C′ are enlarged, as shown at *c c′*, in order to form sockets to receive the axles D D′ of the two pairs of rollers Z. These axles D D′, which, as shown in the drawings, are in the center part of their length rectangular in section, and larger one way than the other, pass through slots E E′, formed in the standards C C′ at the enlarged portions *c c′*, and are secured therein by pins *d d′*, or in any other usual way, admitting of oblique lateral motion thereof on said pins in the oblique slots. The slots E E′ are also rectangular, corresponding in size to the smaller measurement of the axles, and somewhat longer than their longer sides, and are formed obliquely, inclining inward at any angle desired. Against the inner and upper sides of the axles D D′—*i. e.*, behind the front axle D, and in front of the rear axle D′—press springs F F′, which, as shown in Fig. 3, may be double, or each formed of one coiled spring, as in Fig. 7, and, as in both these instances, carried outside the sockets, and secured to the plates B B′; or these springs may be formed of rubber or other elastic substance, or of metal and spiral, and be contained within the slots E E′. In this latter arrangement a small plate, *g*, may be introduced in each slot, and the spring be adjusted by compression-screws *g′*; or these features may be omitted, and the spring fill up the whole space of the slot not occupied by the axle.

In some cases a small amount of elastic or other filling may be placed in the slot, the opposite side of the axle to the spring.

The wheels or rollers Z may be of any suitable size and material, revolving freely on their axles, and secured thereto in any usual way.

The skates may be fastened on by straps; but in many cases we prefer to secure them to

the boots by means of clamps, operated by mechanism which we will proceed to describe.

H is a turn-nut mounted on a sleeve, I, in which is cut a right-and-left thread, operating simultaneously screws K K′. In one form of fastening the screw K is, by means of a pivot-pin, *k*, passing up through the plate A, working in a slot, *k′*, and acting as a guide, attached to links L L, pivoted to projections from double plates M M, working on the center-pin *b* of the plate B, between which and the foot-plate they are placed. The clamps N N, formed on these plates M, are, by the turning of the nut H, closed on or loosened from the boot through the action of the toggle-joint, and simultaneously with this action the screw K′, attached to the plate O, on which are formed the heel-clamps P, brings these in contact with, or loosens them from, the heel of the boot.

In the modification shown in Figs. 7 and 8, instead of the plates M M working on the center-pin of the plate B, a single plate, Q, is used, placed, as before, between the plate B and foot-plate A, and having formed in it converging slots R, in which are inserted the inner turned-up ends of the clamps N, which are prevented from moving in the direction of the skate by the extensions S S, formed in one with or secured to the plate B, but free to move laterally, and are drawn in or pushed out, so as to grasp or let go of the boot by the forward or backward movement of the plate Q, which is, as seen, slotted, so as not to interfere with the center-pin.

In the periphery of the turn-nut H are formed any suitable number of apertures, *h*, in which may be introduced a nail, piece of wire, &c., to tighten up the screws K K′ after they have been turned as far as possible by hand.

It will seen that in our invention the movable clamps P are in rear of the boot-heel, and press it against fixed bearing-projections T, secured to the plate itself.

In some instances the foot-plate may be entirely omitted, and the plates B B′ screwed directly to the sole and heel of the boot, and in such a case a rib, U, will be arranged to connect the two stands; or this rib may act as a web to foot-plate secured to the boot by screws only, or by screws and straps combined.

Having thus described our invention, what we claim is as follows:

In a roller-skate, the combination, substantially as specified, of the stands, projecting downward from the boot or foot plate, and provided with oblique slots, the angular roller-axles, seated in said oblique slots, and pivoted to the stands, and the springs bearing on the axles.

Montreal, 12th day of December, A. D. 1876.

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F. C. IRELAND.

Witnesses:
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