(No Model.)

R. F. McFEELY.

ROLLER SKATE.

No. 333,771. Patented Jan. 5, 1886.

Fig. 1.

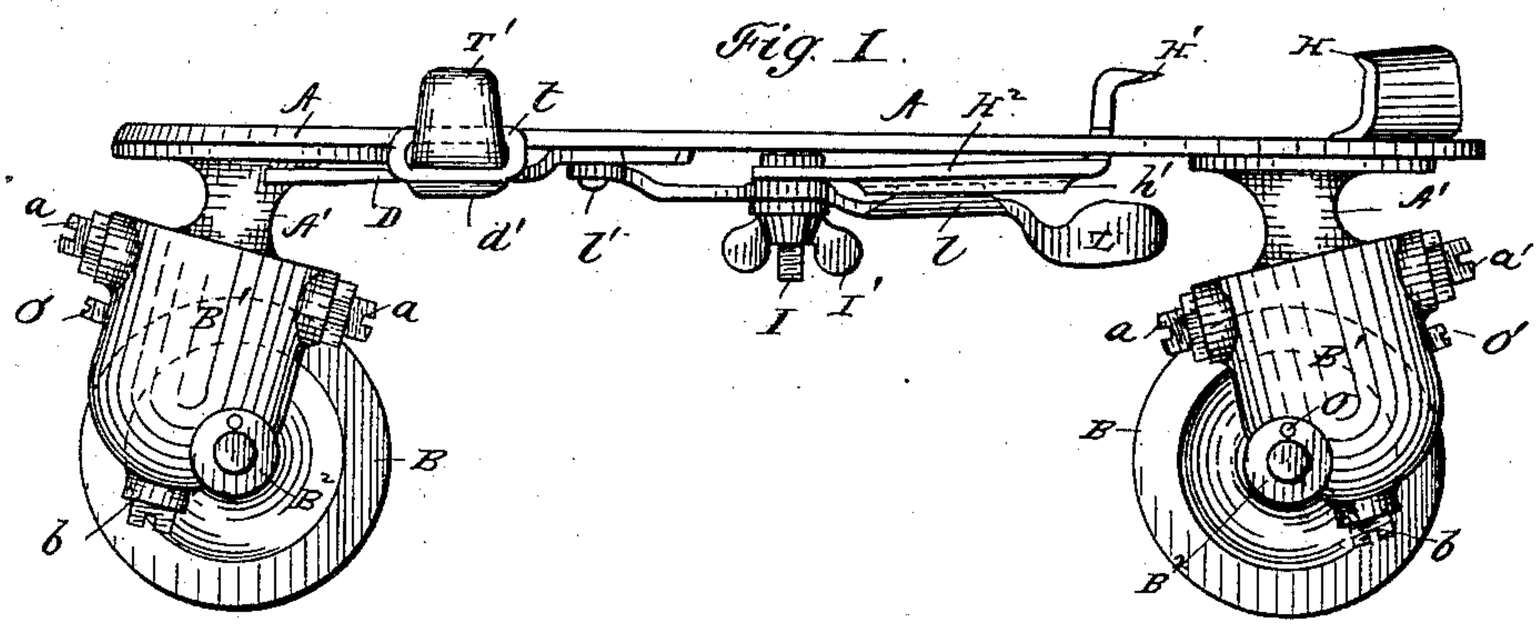


Fig. 2.

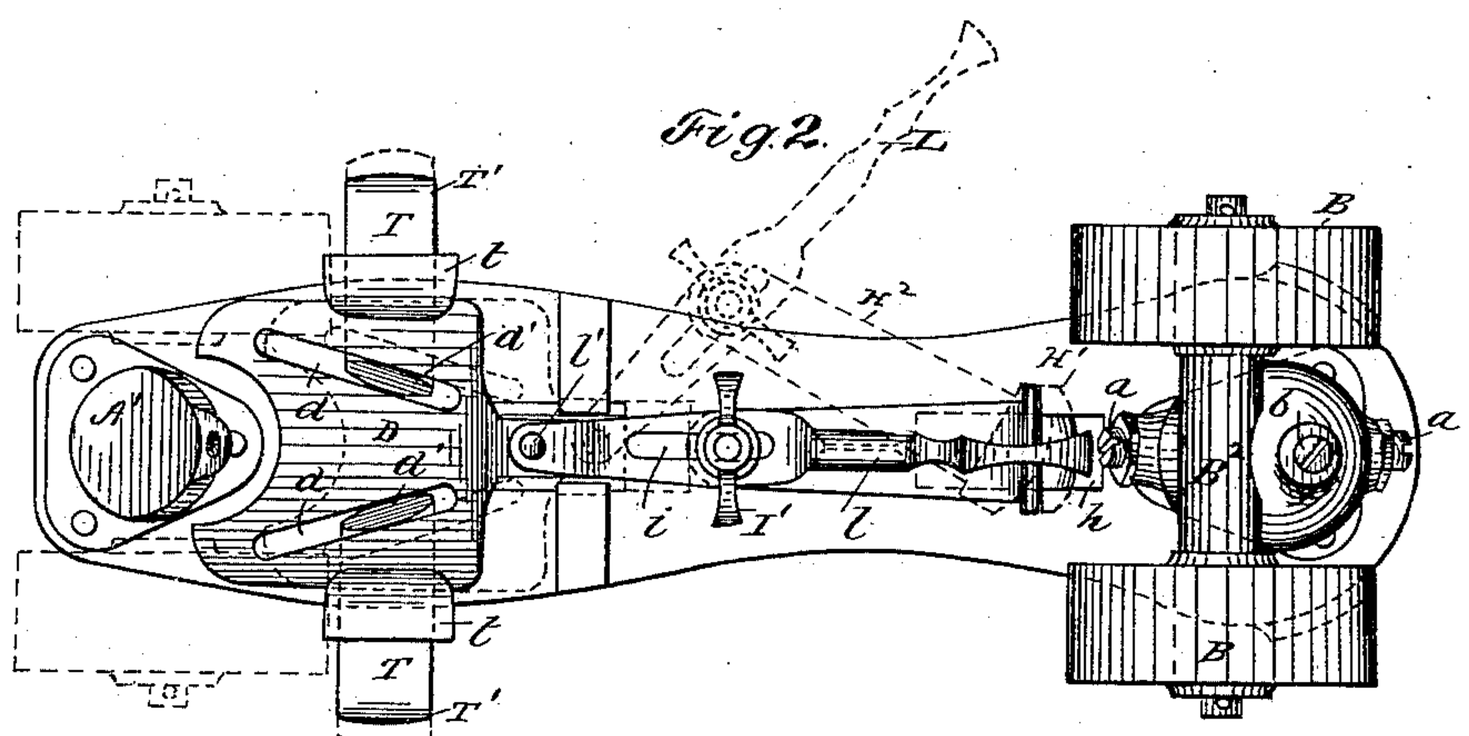


Fig. 4.

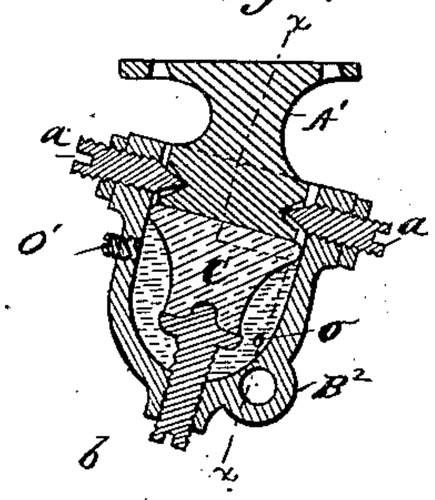
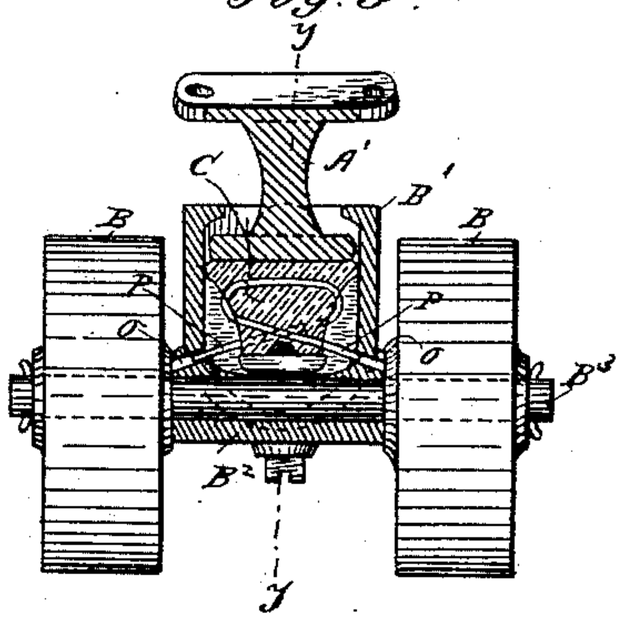


Fig. 3.



Witnesses.
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Inventor.
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per Hallock & Hallock
Attys

UNITED STATES PATENT OFFICE.

RONALD F. McFEELY, OF ERIE, PA., ASSIGNOR OF ONE-HALF TO THE JARECKI MANUFACTURING COMPANY, (LIMITED,) OF SAME PLACE.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 333,771, dated January 5, 1886.

Application filed November 28, 1884. Serial No. 149,089. (No model.)

To all whom it may concern:

Be it known that I, RONALD F. MCFEELY, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Roller-Skates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the construction of roller-skates; and it consists of improvements in the construction of the running-gear and the means for attaching the skates to the foot.

My invention is illustrated in the accompanying drawings, as follows:

Figure 1 is a side elevation with the wheels on the side observed removed. Fig. 2 is a plan view of the under side of the skate with the forward running-gear removed. Fig. 3 is a vertical section of one of the running-gears on the line *x x* in Fig. 4. Fig. 4 is a vertical section of the same parts, except the wheels, on the line *y y* in Fig. 3.

A is the foot-plate.

A′ A′ are the studs or shanks on the under side of the foot-plate, to which the running-gears are attached.

B marks the wheels.

B′ B^2 is a casting which forms the body of the running-gear, of which the part B^2 serves to hold the axle-pin B^3 and the part B′ in a socket in which the studs A′ are pivoted and the elastic bearing C is incased, and it also serves as an oil-cup.

H H′ H^2 are the heel-clamping devices.

T′ T′ are the toe-clamping devices.

D is the cam-plate which moves the toe-clamp, and L is the lever which moves both the cam-plate and the heel-clamp bar H^2.

Other designations by letters of reference will be mentioned in place hereinafter.

The construction of the running-gear is as follows: The axle-pins B^3 are inserted in the bearing box or barrel B^2 of the casting B′ B^2, and the wheels are secured thereon by linch-pins, as commonly. The part B′ of the casting B′ B^2 is a cup, and the studs or shanks A′ are pivoted therein, near the top or brim of the cup, by pivot-screws *a a*, which firmly hold the shanks in place, but allow lateral pivotal action. The lower ends of the shanks A′ are disks which completely fill the cup. Lateral pivotal action is resisted by a rubber spring, C, which is contained in the cup and is pressed against the foot of the shank A′ by an adjusting screw, *b*. The rubber spring C is in the general form of the frustum of a cone inverted, its larger base being placed against the disk-like foot of the shank A′, and its smaller base being set on the disk-like end of the adjusting-screw. This construction leaves a circumferential chamber around the rubber spring and its support which I employ as an oil-reservoir. The larger base of the rubber block fills the cup and serves as a packing to prevent the escape of oil past it toward the top of the cup. An opening, O′, is provided for filling the oil-chamber. Openings O O are provided at the bottom of the cup which lead to the journals of the wheels to convey the oil to those points. To regulate the discharge of oil from the exits O O, I place in them a wire, P, which connects with the rubber spring C in such a manner that the action of the skater, which compresses the spring C, causes a reciprocation of the wire P in the exit-channels, in the manner of a plunger or piston, and works the lubricant slowly down the channels.

The construction of the means for clamping the skate to the foot is as follows: H H are the fixed jaws on the heel of the foot-plate. H′ and T′ T′ are movable jaws, the former acting upon the forward face of the heel and the latter act against the sides of the sole of the shoe. The movement of the jaw H′ is backward against the heel, and the movement of the jaws T′ T′ is lateral against each side of the sole. The clamp H′ is part of a bar, H^2, which passes down through the slot *h* in the foot-plate, and extends along the under side of the foot-plate and is pivotally connected with the actuating-lever L by the stud-pin I. This connection is made in a slot, *i*, in the lever L, and is effected by a thumb-screw, I′, on the stud-pin, and can thus be made adjustable, so as to accommodate the clamp to various-sized boot-heels. The clamps T′ are part of bars T, which slide in loops *t*, fixed to the foot-plate. The inner ends of the bars T are provided with lugs *d′*, which fit in cam-slots *d* in

the cam-plate D. The cam-plate is held in place and guided by lips on the inside of the loops *t*, and is pivotally connected with the actuating-lever L at *l'*. By swinging the lever L out, as shown by dotted lines in Fig. 2, the clamps T' T' and H' are thrown off from the boot. This lever can be thrown out at either side of the skate and produce the same effect, and hence the skate can be put on one foot as easily as on the other. This is desirable, for if the skate is worn constantly on one foot the wheels will wear on one side and become beveled. The lever L is kept in place when set, as shown in full lines in Figs. 1 and 2, by the lips *l l* on the lever catching over the rib *h'* on the bar H^2.

What I claim as new is—

1. In a roller-skate, the combination, substantially as set forth, of a foot-plate, shanks or studs extending from said foot-plate, running-gear frames having cup-like sockets, in which said shanks are pivoted, so as to allow of lateral pivotal movement, springs contained in said cups to resist said lateral movement, and adjusting-screws extending from said cups to regulate the tension of said springs.

2. In a roller-skate, the combination, substantially as set forth, of a foot-plate, shanks extending from said foot-plate, running-gear frames having cup-like sockets, in which said shanks are pivoted, so as to allow of lateral pivotal movement, springs contained in said cup to resist said lateral movement, a lubricant-chamber within said cup, and passages extending from said space to the axle-journals to convey said lubricant to said journals.

3. In a roller-skate, the combination, substantially as set forth, of a foot-plate, shanks extending from said foot-plate, running-gear frames having cup-like sockets, in which said shanks are pivoted, so as to allow of lateral pivotal movement, springs contained in said cups to resist said lateral movement, a lubricant-chamber within said cup, passages from said lubricant-chamber to the axle-journals, and plungers fitted in said passages, which are moved by the same action which compresses said springs.

4. In a roller-skate, the combination, substantially as set forth, of the foot-plate A, having heel-clamp jaws H H and toe-clamp guide-loops *t t* thereon, and the slot *h*, the lever L, bar H^2, with jaw H', the cam-plate D, with slots *d d*, the pivots I and *l'*, and the clamp-bar T T, having lugs *d' d'*, and jaws T' T'.

5. In a skate-clamping device, the combination, substantially as set forth, of the bars T T, with lugs *d' d'*, and the jaws T' T', the cam-plate D, with cam-slots *d d*, which receive said lugs *d' d'*, the lever L, and the jaw-bar H^2, said lever being pivoted to said cam-plate and jaw-bar by the pivots *l'* and I.

6. In a skate-clamping device constructed substantially as herein shown, the combination, with the lever L and jaw-bar H^2, of the rib *h'* and the lips *l l*, arranged substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

R. F. McFEELY.

Witnesses:
JNO. K. HALLOCK,
ROBT. H. PORTER.