(No Model.)

W. J. MORRIS.

ROLLER SKATE.

No. 283,915. Patented Aug. 28, 1883.

Fig. 1

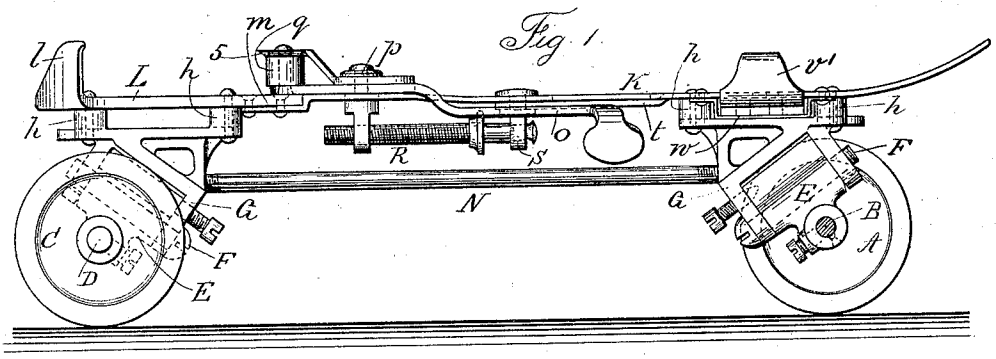


Fig. 2

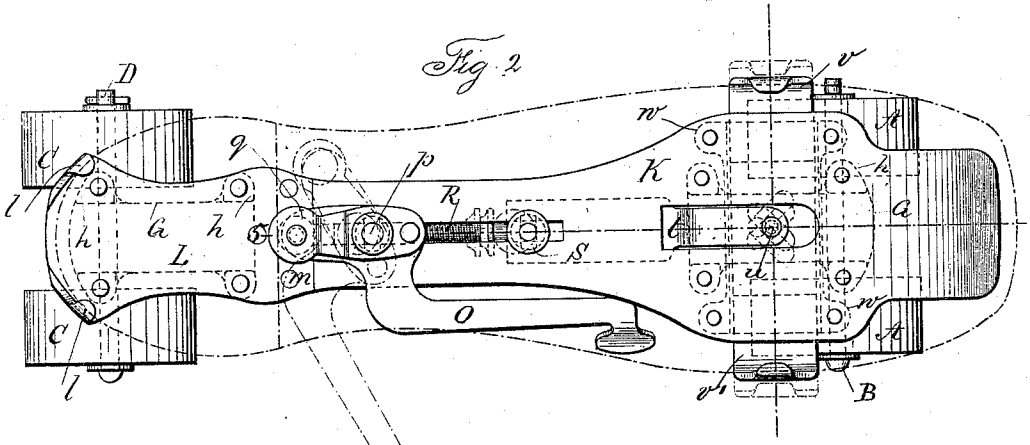


Fig. 3

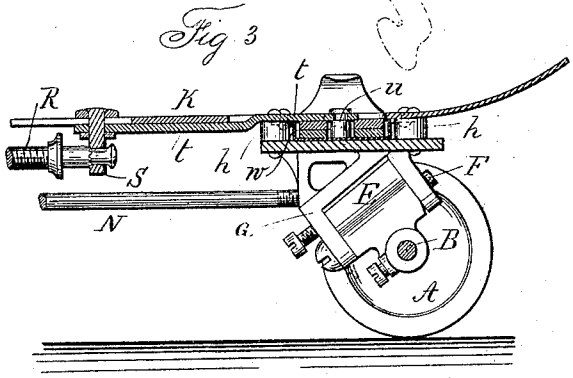
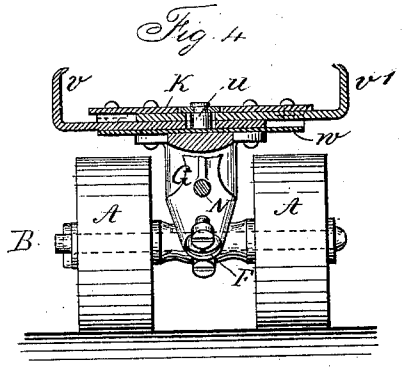


Fig. 4



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UNITED STATES PATENT OFFICE.

WILLIAM J. MORRIS, OF TORRINGTON, CONNECTICUT, ASSIGNOR TO THE UNION HARDWARE COMPANY, OF SAME PLACE.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 283,915, dated August 28, 1883.

Application filed May 7, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. MORRIS, of Torrington, in the county of Litchfield and State of Connecticut, have invented an Improvement in Roller-Skates, of which the following is a specification.

Roller-skates have been made with wooden sole-plates and straps for securing the same to the foot, and skates for ice have been secured to the sole of the boot or shoe by clamps operated by a lever. In ice-skates there is sufficient strength in the runner to allow for the use of separate sole and heel plates, the lever acting upon the respective clamps, and being between the sole and heel plates. In roller-skates the sole-plate is at a greater distance from the surface traveled over than in ice-skates; hence there is more leverage and strain upon the connecting parts. I obtain the required strength and grasping-power for securing the roller-skates to the sole of the boot or shoe by combining with the pairs of rollers, their stocks, and connecting-rod a sole-plate that extends from the front of the skate to the heel-plate, which heel-plate is thicker and stronger than the sole-plate, and the sole-plate is permanently connected thereto. By this construction I am enabled to use a regular style of heel-plate for different sizes of roller-skates and to use a sole-plate that is cut out by dies; but the shank is varied in length or cut off previously to being united to the heel-plate, so that different lengths of skates are made by one set of tools, and the requisite strength is obtained for the skate, and lightness is secured.

In the drawings, Figure 1 is an elevation of the skate, one front roller being removed. Fig. 2 is a plan of the same. Fig. 3 is a section through the front clamps longitudinally, and Fig. 4 is a section of the clamps transversely of the skate.

The front rollers, A A, are upon an axle, B. The back rollers, C C, are upon an axle, D. Each axle is provided with a rocker-block, E, supported by the axis-screw F, that passes at an inclination through the rocker-block and through the jaws of the stock G. There is a block of rubber between the rocker-block and the stock. The parts, however, have been made before, and, being known, do not require further description. The stock G, however, is made with reference to the introduction of the transverse clamps. The back and front stocks are by preference the same, as it is not necessary to make one stock different from the other, and the stock takes a broad and reliable bearing against the sole or heel plate, having the studs *h h* near the angles thereof, through which pass the rivets that secure the stocks to the respective sole and heel plates, and there is a space between the top of the stock and the under side of the sole-plate *k* for the transverse clamps hereinafter described.

The heel-plate L is made with the upright clamping-spurs *l*, with penetrating-lips turned inwardly toward the heel, so as to grasp the leather when the front of the heel is pressed. This heel-plate is preferably of wrought-iron or steel.

The sole-plate K is cut out by dies in the shape shown in Fig. 2, or nearly so. The shank, being long and having parallel sides, or nearly so, can be cut off or made of any desired length, so that the one die can be used for cutting out sole-plates adapted to several lengths of roller-skates. The back end of the sole-plate is riveted or otherwise secured to the front part of the heel-plate, as at *m*.

The rod N connects the respective stocks, the ends of the rod being screwed into the stocks. This serves to strengthen the parts.

The lever O swings upon a pivot-stud, *p*, and it carries at the shorter end a jaw with a roller, *q*, the rounded edge 5 of the jaw forming a holdfast that enters the leather at the front of the heel, and the roller presses against the same surface and clamps the heel between itself and the claws *l*.

The stud *p* passes through a slot in the shank of the sole-plate, and it has through it the screw R, that at the other end enters the stud S of the sliding plate *t*, the front part of which is in a slot in the sole-plate K, and it is provided with a stud, *u*, entering the diagonal slots in the sole-clamps *v v'*, that pass across the under side of the sole-plate, between the same and the

stock G, at front pair of rollers. There are also loops *w*, of sheet metal, to guide the outer parts of the sole-clamps.

When placing the skate upon the foot, the heel is between the spurs *l* and roller *q*, with the lever O in the position shown by dotted lines in Fig. 2, and the screw R is adjusted until the sole-clamps come up to the edges of the boot or shoe sole, after which the lever is pressed back into the position shown in Fig. 2 in full lines, and the clamps grasp the sole and heel firmly. It is to be understood that the slots in the sole-clamps being inclined, as shown, the pin *u* in them moves the sliding clamps inwardly as the pin is forced toward the toe of the skate by the action of the lever. The reverse movement liberates the parts and allows the roller-skate to be removed. The sole-clamps are close to and above the front pair of rollers, where they take a proper hold upon the sole of the boot or shoe. If a screw were introduced transversely at this place to operate the clamps, the rollers would have to be much smaller or the skate higher in order to give room for the screw above the rollers. By my improvement I am able to operate the clamps with the least amount of space between the foot-stock and the front rollers.

I claim as my invention—

1. The combination, with the front and back pairs of rollers, the axles, rocker-blocks, and stocks, of the connecting-rod N, the heel-plate L, and spurs *l*, the sole-plate extending back and fastened to the heel-plate, the lever O, screw R, slide, and sole-clamps *v v'*, substantially as set forth.

2. In combination with the front and back pairs of rollers and their axles and rocker-block, the stocks G, with studs *h*, riveted to the sole and heel plates, respectively, the transverse clamps occupying the space between the front stock, G, and the sole-plate, and mechanism, substantially as set forth, acting longitudinally of the roller-skate, to draw the clamp inwardly, substantially as set forth.

3. In combination with the pairs of rollers in a roller-skate, and the axles and rocker-blocks, the stocks G, riveted to the sole and heel plates, respectively, the lever O, roller *q*, and holdfast 5, and the heel-plate having spurs, substantially as set forth.

Signed by me this 26th day of April, A. D. 1883.

WM. J. MORRIS.

Witnesses:
M. B. DUNBAR,
J. F. CALHOUN.