

(Model.)

J. H. FENTON.

ROLLER SKATE.

No. 352,743.

Patented Nov. 16, 1886.

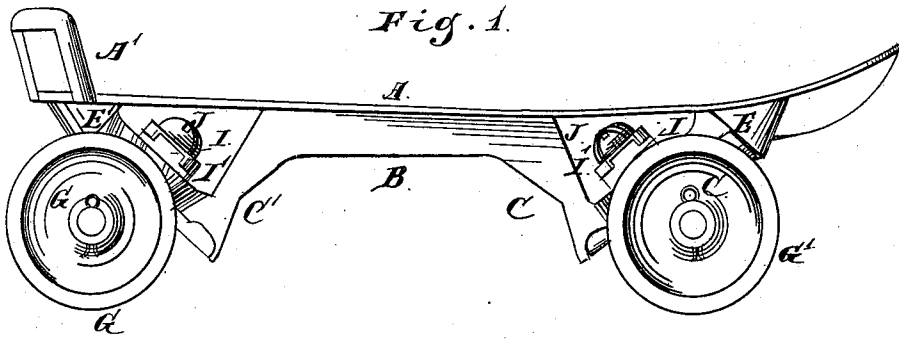


Fig. 2.

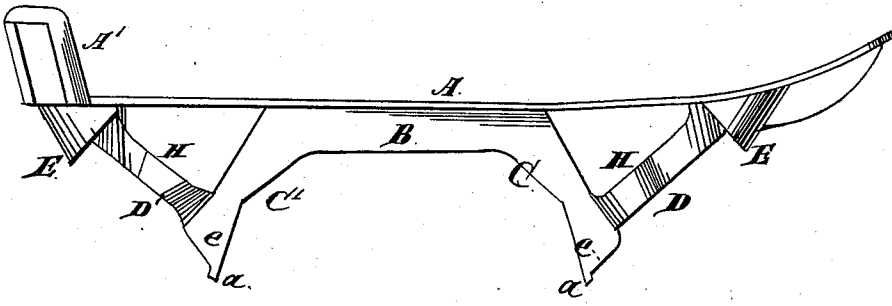


Fig. 3.

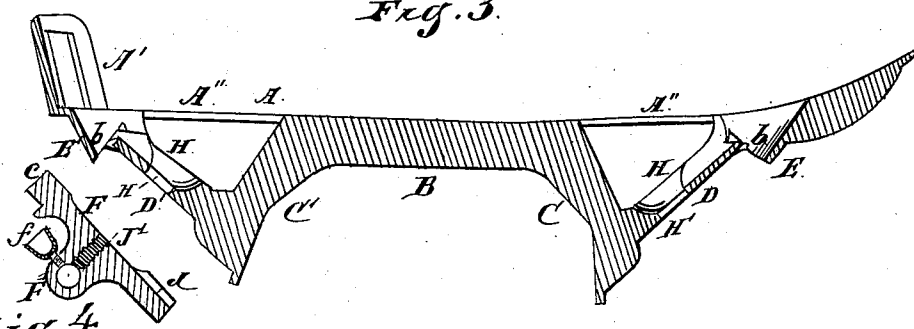


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN H. FENTON, OF CHICAGO, ILLINOIS.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 352,743, dated November 16, 1886.

Application filed June 8, 1885. Serial No. 168,096. (Model.)

To all whom it may concern:

Be it known that I, JOHN H. FENTON, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Roller-Skates, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the complete skate, with the exception of the devices for securing it to the foot of the wearer; Fig. 2, a side elevation of the frame; Fig. 3, a vertical longitudinal section of the frame; Fig. 4, a detail, being a vertical longitudinal section of the support carrying the axle and wheels.

This invention has for its object to improve the construction of roller-skates in reference to turning thereon with great ease and facility, and to improve the connection of the wheels with the bed or frame.

The object of my invention I accomplish in the manner and by the means hereinafter described and claimed.

In the drawings, A represents the plate or bed portion of the frame, formed to receive the sole of a boot or shoe, and having at its rear end a flange or open-work to form a guard for the heel of the boot or shoe, in the form shown. This plate, at the toe and heel end, has an opening, A", to permit access to be easily had to the screw by which the wheel-frame is attached to the main bed or frame.

B is a flange for strengthening purposes, depending from the under face of the plate A at the center, and running from hole to hole A" in the construction shown; C, a forward depending bracket or arm from the flange B, and C' a similar bracket or arm from the rear end of the flange B, and each bracket or arm, at its extreme lower end, in the form of construction shown in Figs. 1, 2, and 3, has a nib or point, a, located centrally of the arm or bracket, and in a line with a vertical plane passing through the center of the flange B and plate A longitudinally; D, a bar running from the forward face of the arm or bracket C in an upwardly-inclined direction to the under face of the plate A and toward the toe end of the plate, and D' a similar bar running from the rear face of the arm or bracket C' in an upwardly-inclined direction to the under

face of the plate A at the heel end. The arm C and bar D converge toward their lower extremities, where they join each other, above which point of junction they are disconnected, leaving a free open space between them for the rubber spring and head of the screw, hereinafter described. The arm C and bar D' are constructed in the same manner, and each arm, in connection with the bar to which it is joined, forms a substantially V-shaped pendent extension of the foot-plate A.

The angle of inclination of these bars is one that gives a nearly-horizontal bearing for the foot when the main bed or plate is turned down at the heel and raised at the toe, or thrown up at the heel and turned down at the toe, in use, by which the bearing for the foot is brought nearly in a vertical plane over the axle of the wheels, enabling the user to handle the skate in turning or making circles with great ease and facility, as the wheels are brought into position in relation with the toe or heel to furnish a pivot on which the foot of the wearer can spin around without describing a large circle, as is the case where there is but little, if any, inclination between the wheel-frame and its bearing or support on the main bed or frame.

E is a depending flange at the upper end of the bar D, having its interior surface circular to form a bearing, b, for the upper end of the frame carrying the wheels; and E', a similar flange at the upper end of the bar D'.

F is the rocking bar of the wheel-frame, one for the front and rear of the skate, to coact with the bars D and D', each bar having a cross-socket, F', with a suitable opening for the axle. Each frame at its upper end has a round end, c, which, when the parts are together, rests on the bearing-face b, and its lower end is provided with a circular depression, d, to rest on the rounded surface e at the lower end of the pendants C C', and these parts b, c, d, and e form the bearings for permitting of the necessary rocking movement of the frames which carry the wheels. As shown, the concave c is on the frame-bar F, and the convex surface e is on the end of the pendant; but it is evident that the position of these parts could be reversed and the concave surface be on the end of the pendant and the convex surface on the end of the bar, and

when the parts are together the end of the bar F abuts against the inner face of the stop *a*, and prevents downward sliding or movement of the bar; and instead of having this stop *a* as shown in Figs. 1, 2, and 3, such stop can be located as shown in Fig. 4, in which case the adjoining face of the bar F has a recess for the stop to enter.

G represents the axles supported in the sockets F', and having at each end a wheel, G', an axle and wheels being provided for the forward and back end of the skate; H, an opening or bearing in the respective bars D D', and H' an opening leading from the bearing H through the respective bars D D', for the passage of the screw by which the wheel-frame is attached to the main frame; I, a rubber spring, one for each bearing H, and each spring encircled by a cap, I'.

J is a screw, one for each wheel-frame, the stem of each screw passing through the rubber spring or bumper I, cap I', and hole H', and entering a screw-threaded opening, J', in the bar or frame F, for connecting the frame with the wheel-frame of the main frame. The cap I' has a depending flange open at one side, and is slotted lengthwise with the skate bottom or frame, so that when forced down to place the screw will be held against backward turning in the operation of skating by the pressure of the rubber spring, which acts to draw a flat face on the screw against an engaging flat face on washer.

The wheels are keyed or otherwise suitably secured onto the axle, so as to revolve thereon, the axle being supported in the socket or bearing F', and, as shown, an oil-cup, *f*, is provided for lubricating the axle where it passes through the socket F'. The axle-frame is secured in place by slipping the upper end, *e*, into the socket E, and bringing its lower end, *d*, to rest on the bearing-surface *e* at the end of the pendants, with the stop *a* engaged to prevent downward slipping, and the bumper or spring I is placed in its bearing or support H, the cap I' placed thereon, and the screw J passed down through the cap-bumper and into the bar F, holding the bar F in position to give the required amount of rock for use, and at the same time sufficiently firm so as not to be readily displaced; and when the wheels are in position it will be seen that the angle at which their frames are connected with the main frame is one which enables the foot to be turned down at either the toe or heel into a position approximately approaching that which the foot assumes when a person is spinning on his heel or toe, thus enabling the skater to balance himself on his heel or toe in the same manner as when a person spins naturally on the heel or toe, bringing the center of balance more nearly in a vertical line, as is the natural position for spinning; and it will thus be seen that a spinning position can

be assumed by the skater, by which the turning in describing circles or otherwise, or in reversing for any purpose, can be quickly done.

The plate or bottom A, rib or flange B, and supports C, D, E, C', D', and E' can be cast or formed in a single piece from steel or other suitable material, and, as shown, a flange is extended forward from the front socket, E, to strengthen the toe end of the plate A. The inclination shown is that to be used for ordinary skating; but where it is desired to do exceedingly fancy skating, and a quick spin in turning, the inclination can be still more abrupt.

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

1. A foot-plate, A, having a central depending flange, B, and constructed at each end with an arm and a bar which converge toward their lower extremities where they join, the upper extremities of the arms joining, respectively, the front and rear ends of the flange, and said arms and bars respectively disconnected above their joined extremities to provide between them an unobstructed space, substantially as described.

2. A foot-plate, A, having at each end an arm and a bar which converge toward their lower extremities where they join, and disconnected above their junction, to provide between them an unobstructed space, each bar having at its lower extremity a rounded bearing-surface, *e*, and a pendent rib, *a*, said foot-plate constructed at the upper extremity of each bar with a flange having a concave bearing, *b*, combined with the rocking bars F, having the upper journal ends, *c*, and lower bearing-surfaces, *d*, substantially as described.

3. A foot-plate having at each end an arm and a bar which converge toward their lower extremities where they join, and disconnected above their junction, to provide between them an unobstructed space, each bar provided with a bearing, H, a perforation, H', leading therefrom, a bearing, *e*, and rib *a* at its lower end, combined with the rocking bars F, the springs I, arranged in said bearings H, and headed screws J, extending through the springs into the rocking bars, substantially as described.

4. The foot-plate A, having front and rear openings, A', and constructed at each end with an arm and a bar which converge toward their lower extremities where they join, each bar having a bearing, H, and perforation H', combined with the rocking bars F, seated on said bars, the springs I, arranged in said bearings, and the headed screws J, passing through the springs into the rocking bars, substantially as described.

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Witnesses:

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