

(No Model.)

J. A. DODGE.
ROLLER SKATE.

No. 306,066.

Patented Oct. 7, 1884.

Fig:1.

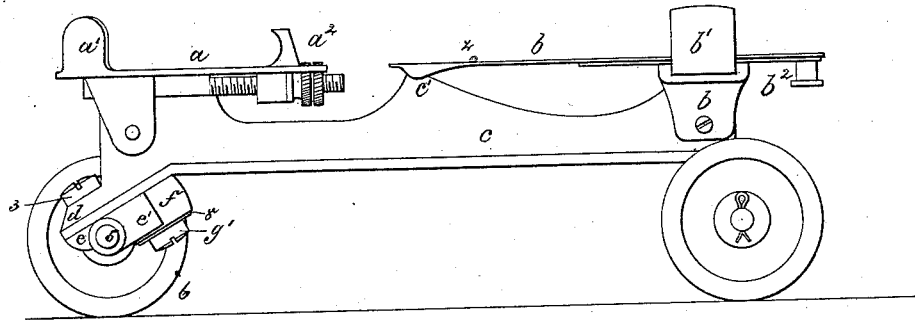


Fig:2.

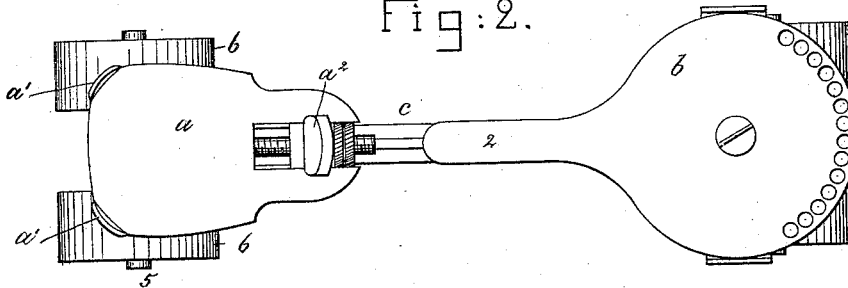


Fig:3.

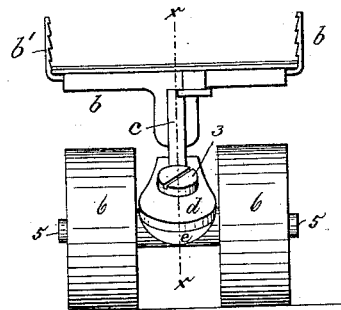


Fig:4.

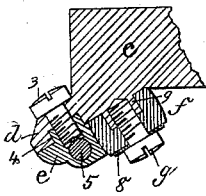
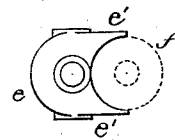


Fig:5.



Witnesses.

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by Crosby & Gregory Attys

UNITED STATES PATENT OFFICE.

JOHN A. DODGE, OF SOMERVILLE, MASSACHUSETTS.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 306,066, dated October 7, 1884.

Application filed January 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. DODGE, of Somerville, county of Middlesex, State of Massachusetts, have invented an Improvement in Roller-Skates, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to roller-skates having yielding bearings between the foot-plate or connecting-bar and the pivotal bearings for the rollers or their axles.

Heretofore rubber or other springs have been applied and arranged in connection with different parts of the skate to enable the bearings for the axles of the trucks or rolls to yield or oscillate to a limited extent while the skate is moving in a curved path, as is understood by skaters; but the rubber has been so applied that when worn and unfit for further use much difficulty has been experienced to again adapt the skate for use.

My invention has for its object the construction of a roller-skate in which a perfect yet simple and comparatively inexpensive yielding bearing is provided, wherein the parts composing the same may be so adjusted as to increase or decrease the extent to which the said bearings may yield or oscillate, and in which a new rubber or other spring may be easily substituted for a worn or unserviceable one.

To this end my invention consists, primarily, in the combination, with the foot-rest or connecting-bar of a skate provided with a tubular rubber removably and adjustably held thereto, of axle-bearings pivotally held to the said foot-rest or connecting-bar, and provided with a yoke or arms to embrace the said spring, substantially as hereinafter described, and particularly pointed out in the claims.

Figure 1 is a side elevation of a skate containing my invention, one of the rear wheels being removed to show the axle-bearing and other parts behind the said wheel; Fig. 2, a plan thereof with the said wheel applied; Fig. 3, an end elevation of the skate; Fig. 4, a partial vertical longitudinal section on line *x x*, Fig. 3, of part of the connecting-bar, the roller-axle, bearings for same, yoke, spring, and

connecting parts, and Fig. 5 is a plan of the yoke or axle support with the rubber tube shown in dotted lines.

The heel-plate *a*, provided with the ears *a'* and heel-clamp *a''*, pivotally attached to the frame or bar *c*, and the sole-plate *b*, secured to bar *c*, having the side clamps, *b'*, connected with a cam slotted disk, *b''*, and the lever 2, are all substantially the same in construction and operation as like parts shown and described in Letters Patent No. 286,792, granted to me October 16, 1883, to which reference may be had for a more detailed description thereof. In that patent the parts described are shown as applied to a skate-runner instead of to a metal bar, *c*, such as herein shown, and therein the end of the lever 2, having the downwardly-bent wings, engaged the toe or front end of the runner, while in the present instance, because of the different kind of skate employed, the end of the said lever is carried backward and engages the projection *c'*, arranged at about mid-way of the bar *c*, as clearly shown in Fig. 1. The connecting bar or frame *c* has at each end an outward and downwardly projecting flattened extension or broad circular ear, *d*, provided with an orifice, and with a collar-receiving recess of greater diameter, the former receiving the screw-bolt 3, and the latter the collar 4, formed on the axle-bearing *e*, and fitting into the said recess, said collar having a screw-threaded orifice, which receives the screw-bolt 3, thereby pivotally holding the axle-bearing *e* to the bar *c* in inclined position, as shown, the said axle-bearing having a flat surface or table, which meets the flattened ear of the bar *c*, thereby providing a broad, firm pivotal bearing. The axle-bearing *e* receives the axle 5, carrying the rollers 6, and has a yoke or wings, as at *e'*, formed therewith, and adapted to encircle for about half its circumference the india-rubber spring *f*, made as a cylindrical or tubular block, which is held in place with relation to the bar *c* by a screw or bolt, *g'*, all as clearly shown in Fig. 4. A washer, 8, may be interposed between the spring *f* and the head of the screw-bolt *g'*, and, if desired, a similar washer (not shown in the drawings) may encircle the col-

lar *g* so as to be interposed between the spring *f* and bar *c*, thereby preventing the rubber spring from bending or lapping over the edges of said bar when under pressure of the screw-bolt. The rubber spring *f* outside of the yoke *e'* may be inclosed by a metal plate extended half-way around the washer 8. Upon compression of the tubular rubber spring *f* by means of the screw-bolt *g'*, the face or periphery of said spring will bulge and press against the yoke *e'* of the axle-bearing *e*, thereby holding the parts in firmer relation, thus checking the tendency to rotatory movement of the pivoted axle-bearing. As soon as the rubber springs become worn or unserviceable they may be readily removed and new ones substituted therefor by removing the screw-bolts *g'* from the collars.

It is obvious that my improvement may be employed in a skate having a wooden or other foot-rest with suitable securing devices in lieu of the bar *c*, provided with the sole and heel plates and clamps, as shown.

I claim—

1. In a skate, the foot-rest or connecting-bar *c*, having ears *d* attached thereto or formed therewith, and provided with central orifices and collar-receiving recesses, and the

roller-carrying axles 5 and bearings therefor, having the plane surfaces and provided with screw-threaded collars 4, combined with the screw-bolts 3 to enter the said collars, substantially as set forth.

2. The connecting-bar *c* of a skate, provided with screw-threaded collars *g*, tubular india-rubber spring *f*, applied thereto, and spring-retaining screw *g'*, combined with a pivoted axle-bearing provided with a yoke, *e'*, adapted to embrace the periphery of the tubular spring *f*, substantially as described, and for the purposes set forth.

3. The rest or bar *c* and connected tubular and cylindrical spring *f*, and the axle-bearing pivoted upon the said bar and provided with a yoke or wings to embrace the said spring, combined with a screw and washer to hold the said spring in place, the screw being adapted to compress or relax the spring, as and for the purpose specified.

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

JOHN A. DODGE.

Witnesses:

B. J. NOYES,
W. H. SIGSTON.