

(No Model.)

W. R. MORRIS.

ROLLER SKATE.

No. 336,816.

Patented Feb. 23, 1886.

Fig. 1.

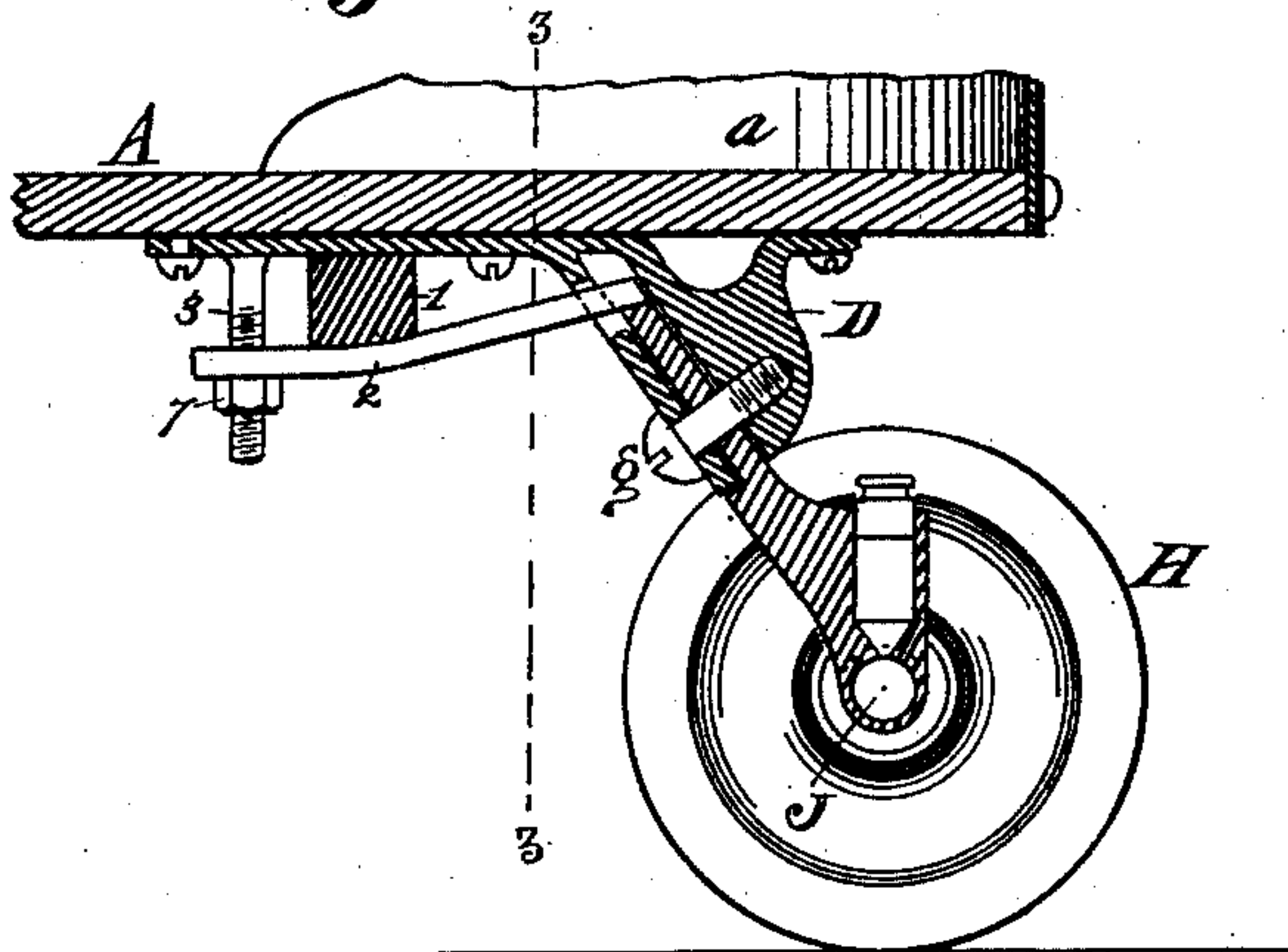


Fig. 2.

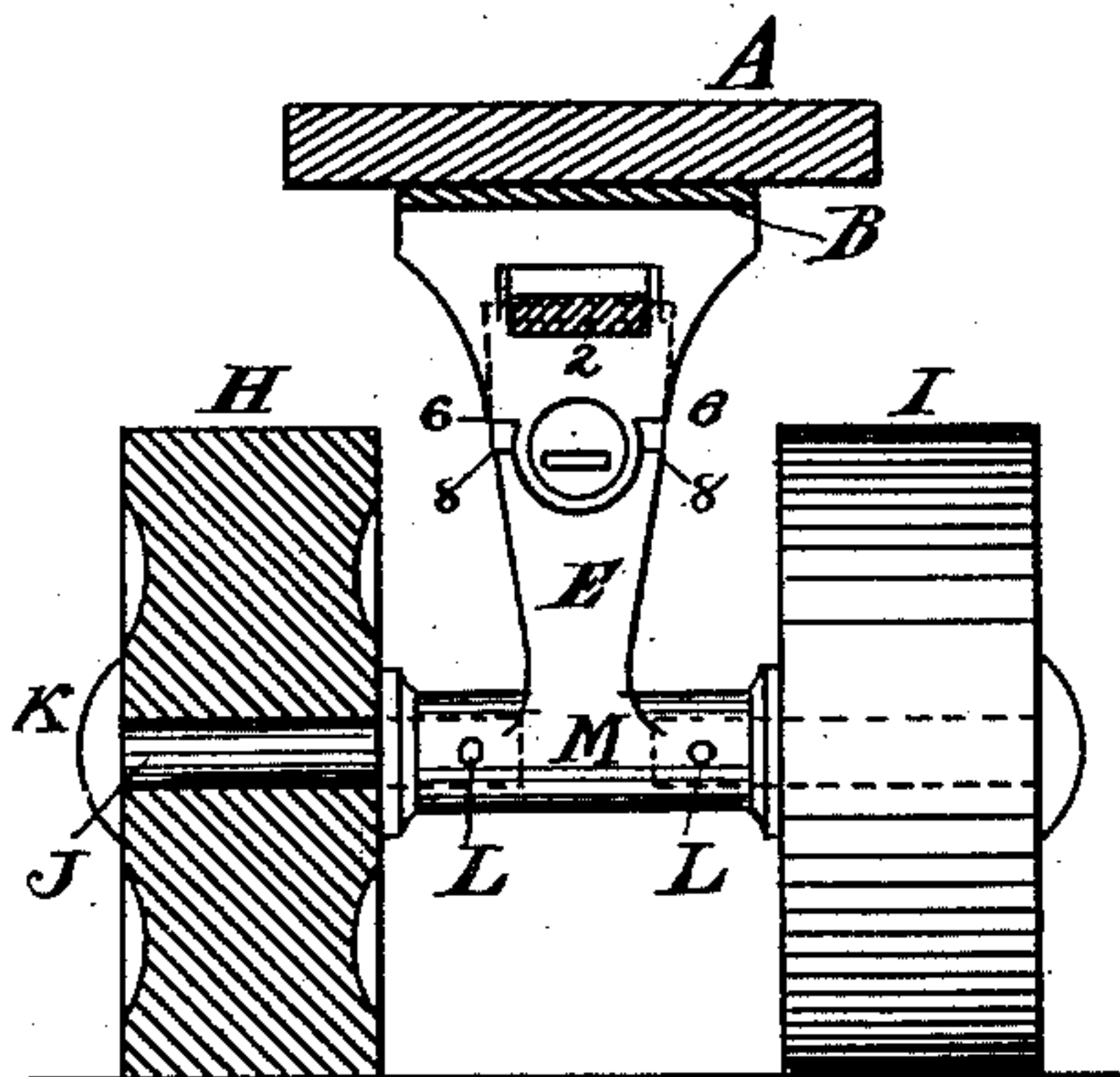


Fig. 3.

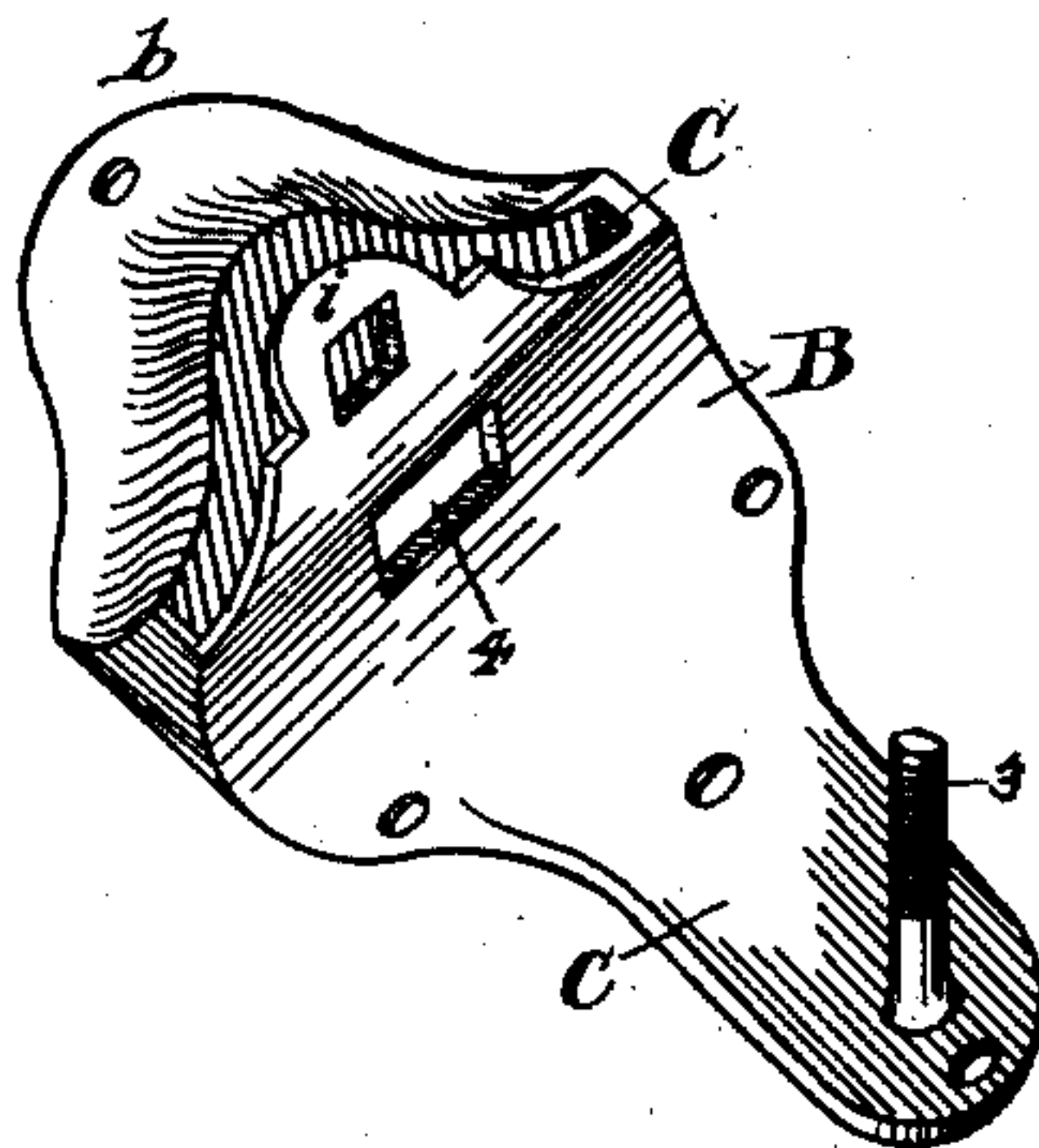
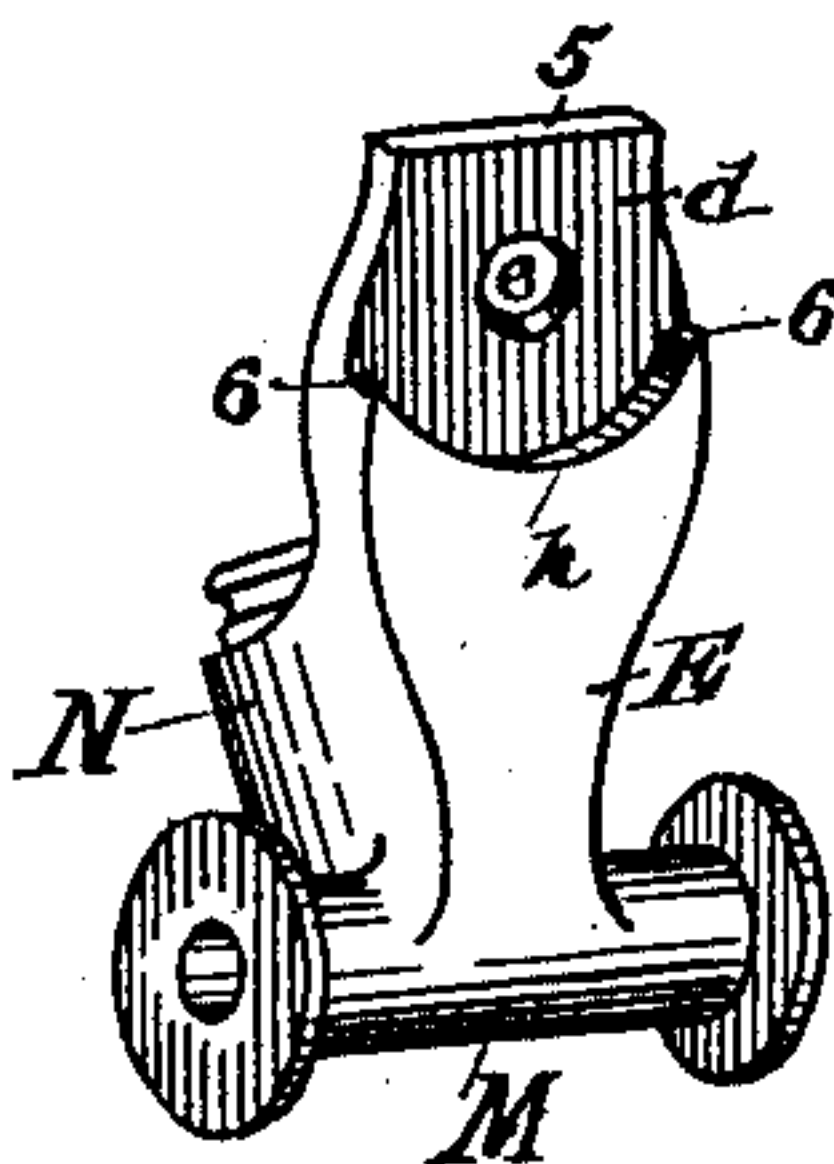


Fig. 4.



Attest.

J. Watson Sims
Jos. S. Roebuck Jr.

Inventor

William R. Morris
by Wood & Boyd
His Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM R. MORRIS, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO
PARIS C. BROWN, OF NEWPORT, KENTUCKY.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 336,816, dated February 23, 1886.

Application filed June 16, 1885. Serial No. 168,870. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. MORRIS, a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain
5 new and useful Improvements in Roller-Skates, of which the following is a specification.

My invention relates to an improved hanger-frame for a roller-skate.

One of the objects of my invention is to provide a light strong bracket and rocker-frame,
10 which can be cheaply and easily made and adjusted.

Another object of my invention is to provide an improved spring or cushioning device
15 for bringing the rocker-frame of the rollers back into its normal position which is cheaper and more durable than cushioning devices hitherto employed.

Another object of my invention is to utilize
20 the spring-bar against which the end of the rocker-frame bears as it cants and which receives the retractile force of the spring-bar when the pressure is removed to bring the axes of the rollers into horizontal plane. This
25 improved form of spring has several advantages over the elastic cushioning devices hitherto employed. First, it is much more durable; second, the pressure is uniform upon both sides of the rocker-frame; third, a greater
30 range of adjustment may be obtained than in the devices hitherto employed.

Another object of my invention is to provide stud-axes for the rollers, which are secured in an axial sleeve between the rollers,
35 and avoid screws, linchpins, or other suitable fastening devices, all of which will be fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

40 Figure 1 is a central vertical longitudinal section of my improvement attached to a skate-bottom. Fig. 2 is a front elevation on the line $z z$, Fig. 1. Fig. 3 is a perspective view of the hanger-bracket. Fig. 4 is a perspective view of the rocker-frame.

45 A represents the foot-plate for a roller-skate, which may be of wood, metal, or any other suitable material.

a represents a supporting-rim, of the usual form of construction.

B represents the hanger-bracket. I have shown it made of a separate piece from the foot-board and provided with ears $b c$, through which holes are pierced for rivets or screws to pass to secure the bracket to the foot-board.
55 It is obvious that when a metallic foot-board is employed the bracket could be made integral with the foot-board.

C represents a mortise pierced in the downwardly-projecting pendent arm D.
60

E represents the rocker-frame, to the lower end of which the roller-axle is attached.

d represents a tenon on the upper end of the rocker-frame.

e represents a bearing for the transverse
65 axial bolt g , which passes through one partition of the mortise C, through the tenon d , and taps into the pendent arm D.

h represents a segmental groove formed above the tenon d , which rests upon the arc i ,
70 formed on top of one of the flanges of the mortise, so as to form additional means of support for the frame E upon the bracket B and to relieve the transverse bolt g from part of the thrusts or strains due to the inclined po-
75 sition of the hanger-frame and bolt.

1 represents a cushion, preferably made of rubber or other material, inserted between the foot-board and the bar 2, which is adjustably held in contact with the cushion by screw-
80 bolt 3.

4 represents a slot pierced through the pendent arm of the bracket B, through which the bar 2 projects, so as to bring it in contact normally with the shoulder or end 5 of the tenon d .
85

I prefer to make the bar 2 elastic, as well as to employ an elastic cushion, 1; but the elastic force operating on the shoulder 5 of the hanger-frame can be obtained in three ways: first, by having the bar 2 highly elastic, so as to afford the requisite amount of yielding capacity to allow the hanger-frame E to cant or rock any desired distance; second, by having the bar 2 elastic, and, third, by having both bar and cushion elastic, and in the
95 latter a greater range of elasticity is obtained.

A lesser amount of elasticity can be obtained by having the bar 2 made inelastic and the cushion 1 of rubber. In this case the requisite amount of elasticity can be obtained by
5 adjusting the tension of the rubber.

7 represents an adjusting-screw for adjusting the tension of the cushion and bar.

When the frame B is canted toward the roller *i*, one edge of the shoulder or tenon 5
10 presses down upon the bar 2, while the opposite edge moves away from it, the shoulder 5 moving in the arc of a circle.

When the pressure on the frame B is released, the edge of shoulder 5, in contact with
15 bar 2, will receive the entire thrust or retractile force of the spring, which will bring it back into a horizontal position.

6 represents lugs or stops formed on the outer edges of the pendent arm of the tenon,
20 which strike against lugs 8 on the frame E, to limit the canting motion of the rocker-frame.

J represents a stud-axle, provided with a round head, K. It projects inward and is secured by a pin, L, in sleeve M. Both journal-axes are of the same construction. The
25 head K can be slightly countersunk into the face of the wheel, so as to have it more out of the way. This mode of securing the axle to the sleeve M avoids the use of outside fastenings, such as screws and linchpins, which are
30 objectionable.

N represents an oil-cup, formed above the sleeve M, through which lubricant is introduced for oiling the axle J.

Having described my invention, what I desire to claim as new is— 35

1. A hanger-frame for a roller-skate, composed of the metallic bracket B, having the inclined pendent arm D and mortise C, in combination with the roller-frame E, having the
40 tenon *d*, secured within the mortise by the inclined bolt *g*, substantially as herein specified.

2. The combination of the bracket B and roller-frame E, having the tenon *d* and mortise C, and segmental bearing *h i*, substantially
45 as specified.

3. In combination with the bracket B and roller-frame E, a spring-bar projecting through and under the end of the tenon *d* for cushioning the movement of the rocker-frame, substantially
50 as specified.

4. In combination with the tenon *d* of the roller-frame, the spring-bar adjustably supported upon the cushion, substantially as herein specified. 55

5. In combination with the tenon *d* of the roller-frame, the yielding bar adjustably supported upon the elastic cushion, substantially as specified.

In testimony whereof I have hereunto set
60 my hand.

WILLIAM R. MORRIS.

Witnesses:

ROBERT ZAHNER,
M. E. MILLIKAN.