

(No Model.)

S. L. SCHWARTZ.
ROLLER SKATE.

No. 597,025.

Patented Jan. 11, 1898.

Fig. 1.

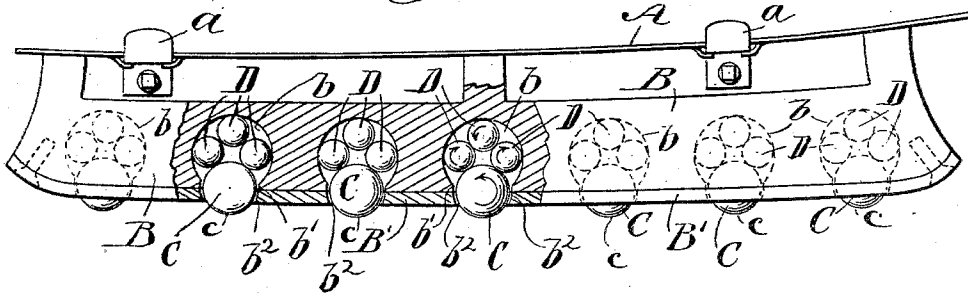
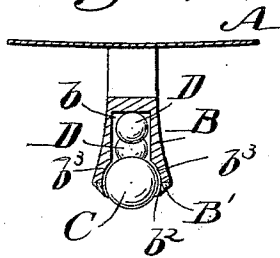


Fig. 2.



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SAMUEL L. SCHWARTZ, OF NEW YORK, N. Y.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 597,025, dated January 11, 1898.

Application filed March 30, 1897. Serial No. 629,931. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL L. SCHWARTZ, a citizen of the United States, and a resident of New York city, county of New York, and State of New York, have invented certain new and useful Improvements in Roller-Skates, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to that class of roller-skates which embody ball-bearings; and it has for its object to provide a simple and improved skate of this character in which the ball-bearings will themselves form the direct frictional supports upon which the skate travels.

In the drawings, Figure 1 is a side elevation of my improved skate, partly in section. Fig. 2 is a vertical transverse sectional view.

Referring to the drawings, A designates the foot-plate, which may be of any suitable or adapted construction and may carry any desired form of fastening devices, as shown at a , by which it may be connected to the shoe of the wearer.

The foot or top plate A is supported upon a longitudinally-arranged frame or body B, which is preferably in the general shape or form of a runner, extending longitudinally and centrally under the top plate. This runner or body is provided with a longitudinally-arranged series of recesses b , in which the bearing-balls are arranged, these recesses being preferably circular in longitudinal section, as shown, a segment of said circle at the bottom being cut away to form a bottom opening b' .

Secured against the bottom edge of the runner or frame B and extending longitudinally therewith is a bottom plate B' , which is provided with a series of openings b'' , adapted to register with the bottom openings b' of the main recesses b and provided with segmentally-curved walls, in which a main bearing-ball will be partially retained. The relative construction and arrangement are such that a segment c of the surface of the main bearing-balls C projects below the bottom plate B' , which projecting portions collectively form the roller-bearing surface of the skate. The

remaining portion of the main balls C is housed within the openings b'' and within a segmentally-enlarged recess b''' at the bottom portion of the recesses b . (See Fig. 2.)

Housed within the circular recesses of the body or runner B are supplementary bearing-balls D, preferably three in number. The supplementary bearing-balls may be relatively arranged in triangular position, so that two bottom balls rest upon the main bearing-ball C at opposite sides of the latter, while the third ball rests at the top between said pair of bottom balls. This arrangement of the balls provides an especially effective bearing, in which the balls freely rotate upon each other in opposite directions. For instance, the rotation of the main bearing-ball C will turn the front ball of the bottom pair of supplementary balls in an opposite direction, and said front ball will turn the top ball in an opposite direction, and the latter will turn the rear ball of the bottom pair in an opposite direction, as will be indicated by the arrows in Fig. 1.

I do not restrict myself to the precise relative arrangement or number of balls as herein shown and described, but reserve the right to use any adapted construction and arrangement of ball-bearing in which the balls will directly form the roller-bearing of the skate.

The bottom strip B' is preferably removably secured to the body or runner B to permit of the removal of the balls and the cleaning of the same and their retaining-recesses.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A roller-skate having circular recesses in its body portion or runner, said recesses opening at the bottom, in combination with a main bearing-ball projecting from said bottom opening, and a supplementary series of three bearing-balls comprising a pair arranged at the upper portion of and at each side of the main bearing-ball and a top ball intermediately arranged between said side bearing-balls, whereby all the centers of the balls are in the same plane, substantially as and for the purpose set forth.

2. The herein-described roller-skate, comprising the body or runner having the recesses opening at the bottom, the bottom strip se-

cured to said runner and provided with openings registering with the bottom openings of said recesses, the main bearing-balls projecting from the openings in the bottom retaining-
5 strip, and the series of supplementary bearing-balls arranged in the recesses in such a manner that two of the said balls bear upon the main ball and one upon the two, whereby the centers of all the balls are in the same
10 plane, substantially as set forth, whereby the balls revolve in opposite directions and the

main bearing-ball directly forms a roller-bearing of the skate, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as
15 my invention I have signed my name, in presence of two witnesses, this 29th day of March, 1897.

SAMUEL L. SCHWARTZ.

Witnesses:

C. SEDGWICK,
B. McCOMB.