(No Model.)

C. G. WINFIELD.

ROLLER SKATE.

No. 330,658. Patented Nov. 17, 1885.

Fig. 1.

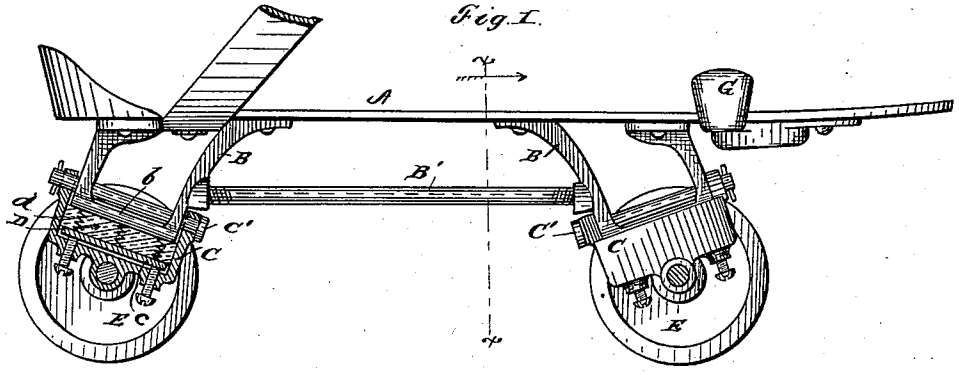


Fig. 2.

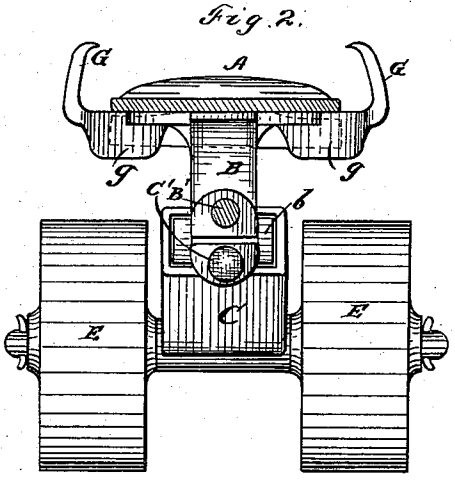


Fig. 3.

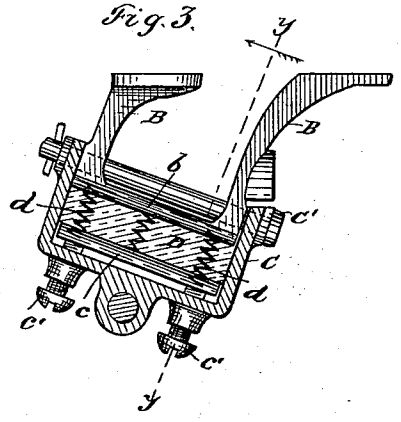


Fig. 4.

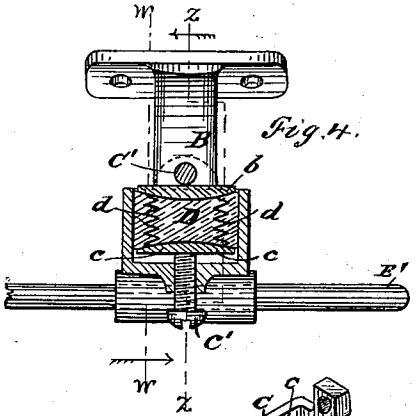


Fig. 5.

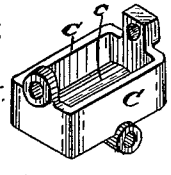


Fig. 8.

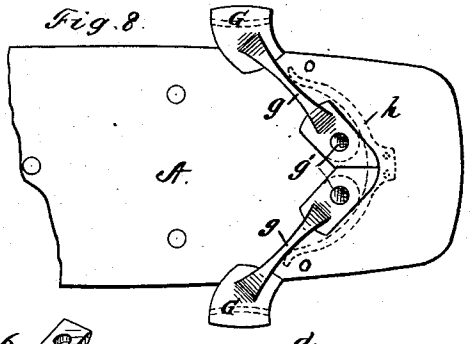


Fig. 6.

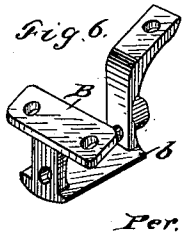
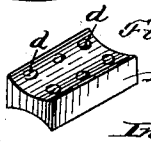


Fig. 7.



Witnesses.
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R. H. Porter.

Inventor.
Chas. G. Winfield.
Per. Hallock & Hallock
Att's

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES G. WINFIELD, OF CONNEAUT, OHIO, ASSIGNOR TO R. A. FULMER OF SAME PLACE.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 330,658, dated November 17, 1885.

Application filed March 31, 1885. Serial No. 160,796. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. WINFIELD, a citizen of the United States, residing at Conneaut, in the county of Ashtabula and State of Ohio, have invented certain new and useful Improvements in Roller-Skates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to roller-skates; and it consists in improvements on the construction of the same, as will be hereinafter described, and pointed out in the claims.

The invention is illustrated in the accompanying drawings, as follows:

Figure 1 is a side elevation of my improved skate, with the rear truck in vertical section. Fig. 2 is an elevation view, looking as indicated by the arrow on line *x x* in Fig. 1. Fig. 3 is an enlargement of the section view of the rear truck, shown in Fig. 1. Fig. 4 is a vertical transverse section on the line *y y* in Fig. 3. Figs. 5, 6, and 7 are perspective views of the socket C, hanger B, and spring D, respectively. Fig. 8 is a plan view showing the construction of the toe-clamps G G.

The first part of my invention relates to the construction of the spring D and the parts on which it is seated.

The second part of my invention relates to the construction of the toe-clamp.

The general construction of my skate is similar to that of many others in common use, and it may be varied considerably without affecting my invention.

A is the foot-plate; B B, the hangers on the under side of the foot-plate, which carry the running-gears. B′ is a brace-rod between the two hangers.

C C are the frames of the trucks, and are socketed to receive the hangers and the springs.

C′ C′ are the pintles by which the trucks are jointed to the hangers.

E are the wheels, and E′ the axles.

D are the springs, which give elasticity to the joints between the trucks and the hangers.

c is a plate in the bottom of the socket of the frames C, which serve as the lower seats for the springs D, and *b* is a wide foot on the ends of the hangers B, to serve as the upper seats of the springs. The springs D are made concave on their upper and lower surfaces, and the seats *c* and *b* are made convex to fit the concavity of the spring. The spring D is a block of rubber, and it may be strengthened by molding it upon coiled springs *d d*, of which there may be as many as desired. The object in making the seats *c* and *b* convex and the spring D with its upper and lower faces concave is to so compress the spring as to insure a positive reaction when the pressure is removed. If the two seats *c* and *b* were perfectly flat, their approaching edges, when the joint is flexed or bent would tend to push the spring sidewise, but when rounded, as shown, they compress the spring vertically without exerting so much lateral pressure.

The coiled wire springs *d*, I prefer to place along the sides of the spring D, where the greatest vertical pressure occurs.

The lower plates, *c*, can be adjusted so as give tension to the springs by screws *c′ c′*.

The construction of the toe-clamp is as follows:

G G are the jaws of the clamp, and are on the spring-arms *g g*, which allow them to be expanded by the insertion of the foot between them, and they will grasp and hold the foot by their reactive force.

The arms G may be made of spring-steel, or they may be pivoted and operated by a spring, such as *h*. (Shown in dotted lines in Fig. 8.)

What I claim as new is—

1. In a roller-skate, the combination, substantially as set forth, of the socketed truck-frame C, convex seat-plate *c*, hanger B, having convex foot *b*, pivoted to said truck-frame, and the spring D, having its upper and lower faces concaved and inserted between the parts *c* and *b*.

2. In a roller-skate, the combination, with

the truck-frame and the hanger, of a spring consisting of a block of rubber having metallic springs embedded therein, substantially as and for the purposes mentioned.

3. In a roller-skate, the combination, with the foot-plate, of toe-clamping jaws G G, mounted on spring-arms *g g*, substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES G. WINFIELD.

Witnesses:
JNO. K. HALLOCK,
ROBT. H. PORTER.