(No Model.)

C. F. MILLER.

ROLLER SKATE.

No. 321,443. Patented July 7, 1885.

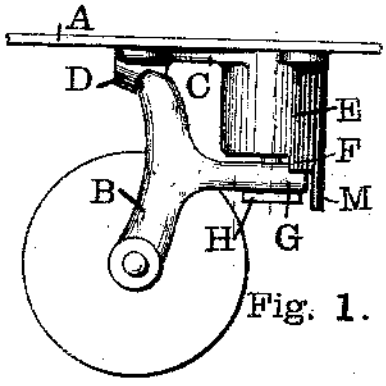

Fig. 1.

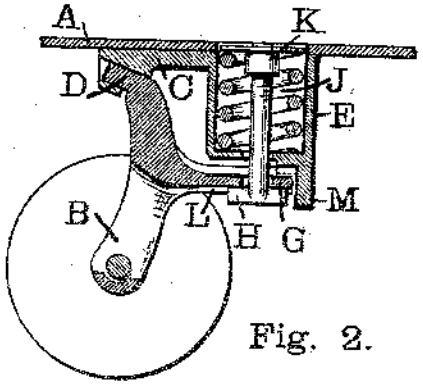

Fig. 2.

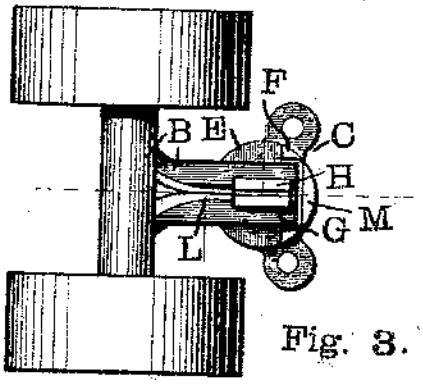

Fig. 3.

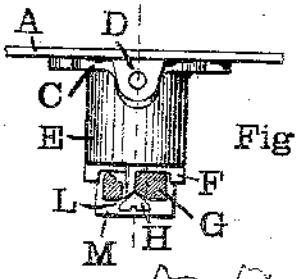

Fig. 4.

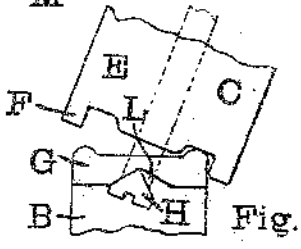

Fig. 7.

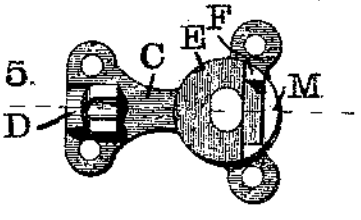

Fig. 5.

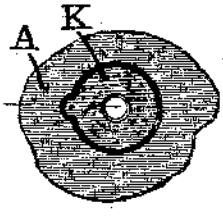

Fig. 6.

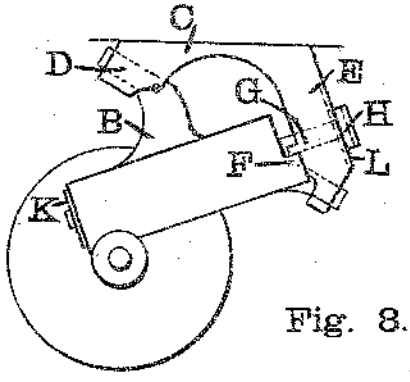

Fig. 8.

Witnesses:
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Attorney

UNITED STATES PATENT OFFICE.

CORNELIUS F. MILLER, OF HAMILTON, OHIO.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 321,443, dated July 7, 1885.

Application filed March 14, 1885. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS F. MILLER, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Roller-Skates, of which the following is a specification.

This invention relates to the truck mechanism of roller-skates, and it will be understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of the forward truck of a roller-skate, the left-hand wheel being omitted; Fig. 2, a vertical section of the same; Fig. 3, a bottom view of the same; Fig. 4, a front view of a hanger, with the lower bearing part of the housing shown in section upon two different planes, one plane cutting the axis of the straining-screw, the other plane forward of the straining-screw; Fig. 5, a bottom view of the hanger; Fig. 6, a top view of a portion of the foot-piece directly over the hanger; Fig. 7, an enlarged diagram illustrating the effect of tipping the skate, and Fig. 8 a side elevation of a truck embodying a modified construction.

Two of my improved trucks are to be attached to the foot-piece of a skate in the manner common to roller-skates. The axes of oscillation of the foot-piece with reference to the housings are arranged at an inclination, as usual, in order that a tendency to curvature in running may result from the tipping of the foot-piece.

In the drawings, neglecting Fig. 8 entirely for the present, A represents a portion of the ordinary foot-piece of the skate; B, the housing, fitted with an axle and two wheels in the usual manner; C, the hanger, to which the housing is articulated; D, the higher bearing of the hanger on the housing; E, a hanger-boss projecting downward to furnish the lower bearing for the housing; F, lips projecting from the bearing-face of the boss; G, the lower bearing of the housing, seating upward between the lips referred to; H, a T-headed screw passing through the lower housing-bearing and into the hanger; J, a spring surrounding the screw H, and serving to hold the lower housing bearing elastically into engagement with the hanger; K, a nut upon the screw, over the spring; L, a longitudinal groove in the lower bearing of the housing, serving as a seat for the T-head of the screw; and M, a lip pendent from the hanger-boss at the end of the lower bearing of the housing.

The action of the parts will be best understood from an inspection of the enlarged view, Fig. 7. Normally the lower housing-bearing seats squarely up against the hanger-boss between the lips F, and the tendency of the spring and T-headed screw is to maintain the parts in such position. When the skate is tipped, as seen in Fig. 7, the screw yields downward, oscillating upon its T-head, and the lower housing-bearing opens upon one side, and the load is borne entirely by the other side. When the tipping force is lessened, or ceases to act, the strain of the spring tends to return the parts into their squarely-seated normal position. The holes in the lower housing-bearing and through the foot of the boss, through which the screw passes, are to be large enough to prevent their impeding the swinging and oscillating motions of the screw. The head of the screw is slotted for a screw-driver, or a wrench may be used; and its seating in the groove L, in which it is held by the force of the spring, prevents any tendency of the screw to rattle out of adjustment, and at the same time the elastic nature of its seating in this groove permits the ready turning of the screw a half-revolution at a time, to adjust the tension of the spring.

The nut K is free to move vertically as the spring is compressed under the tipping action, or when the spring is to be adjusted by turning the screw; but it is prevented from rotation by a side tooth engaging a groove in the cavity of the boss, in which it and the spring below it are inclosed. The arrangement of the nut will be understood from Fig. 6. By carefully analyzing Fig. 7 it will be seen that as the tipping takes place the screw partakes of a certain movement of oscillation or swinging. This swinging of the screw imposes no side strain upon the nut or its thread, as the nut is at liberty to tip as much as desired, the spring yielding more upon one side than upon the other. The entire movement is at once supple and positive, and the device endows the skater with a peculiar consciousness

of a reliable footing and a certainness of action. I show the spring J as a helical wire spring; but I contemplate the employment of other forms and other material, to be arranged in the same manner, and to operate precisely the same as the helical spring shown.

In Fig. 8 I exhibit a modified construction involving the same principle. In this case the spring and its barrel are carried by the housing instead of the hanger.

I claim as my invention—

1. In the truck of a roller-skate, the combination of upper bearing, D, bearing G, having groove L, lips F at the sides of the bearing, T-headed screw H, nut K, and spring J, substantially as and for the purpose set forth.

2. In the truck of a roller-skate, the combination of hanger C, having upper bearing, D, hollow boss E, and lips F, housing B, engaging the bearing D, and having the lower bearing, G, seating upward between the lips of the hanger, the spring J within the hanger-boss, the nut K over the same, and the screw H, engaging through the lower hanger-bearing and the nut, substantially as and for the purpose set forth.

CORNELIUS F. MILLER.

Witnesses:
J. W. SEE,
W. A. SEWARD.