(No Model.)

W. H. & H. V. RHOADES.

ROLLER SKATE.

No. 333,254. Patented Dec. 29, 1885.

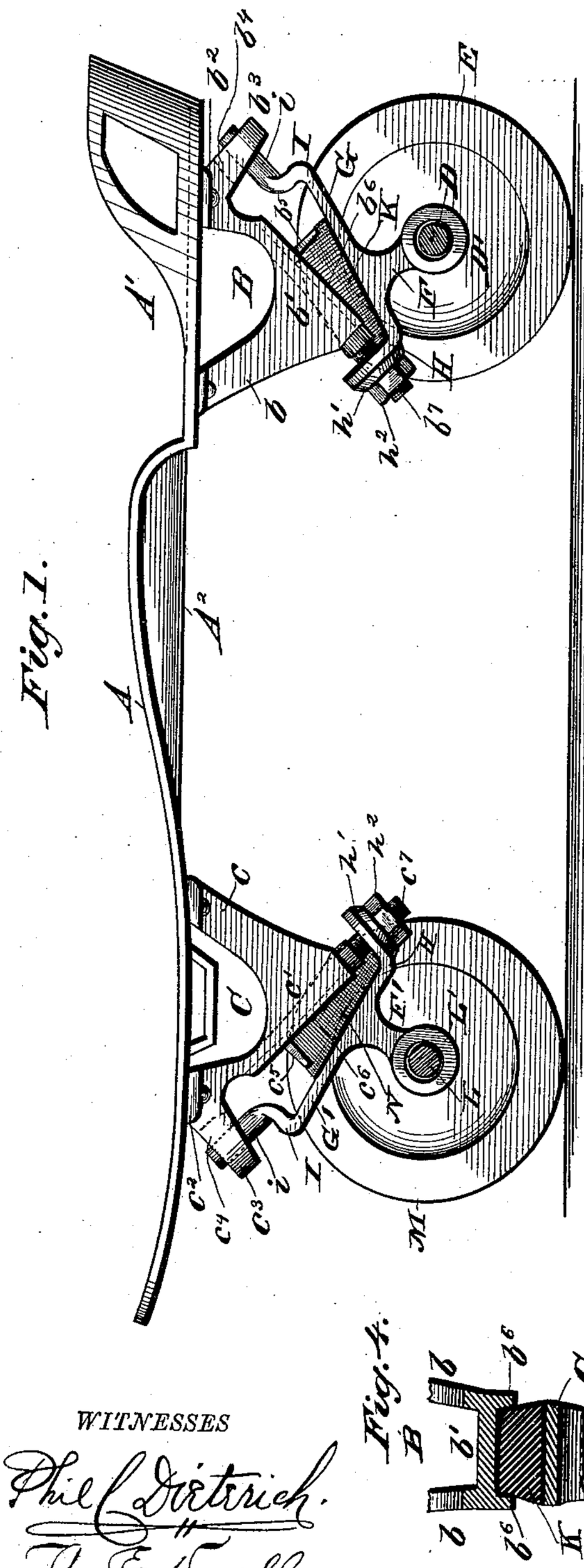

Fig. 1.

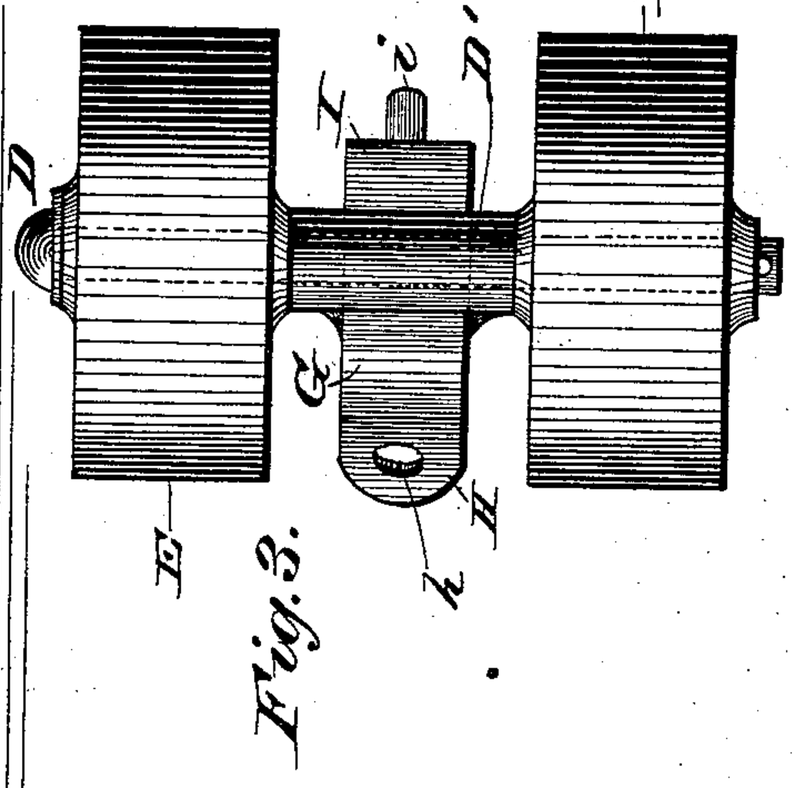

Fig. 3.

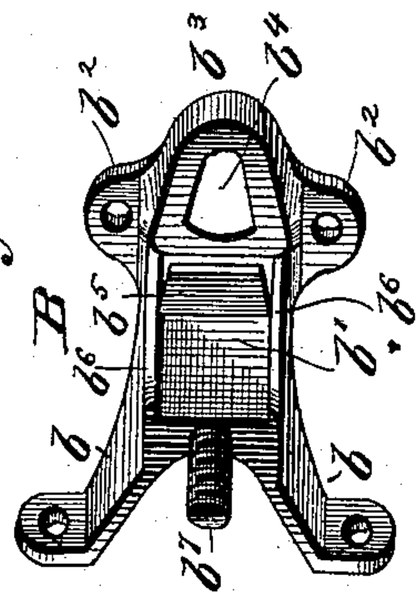

Fig. 2.

Fig. 4.

WITNESSES

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WILLIAM H. RHOADES AND HAL V. RHOADES, OF COLUMBUS, OHIO.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 333,254, dated December 29, 1885.

Application filed June 30, 1885. Serial No. 170,280. (No model.)

To all whom it may concern:

Be it known that we, W. H. RHOADES and H. V. RHOADES, of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Roller-Skates; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a side view of our improved roller-skate, partly in section. Fig. 2 is a plan view of one of the frames. Fig. 3 is a plan view of one of the axles, wheels, and plates. Fig. 4 is a sectional detail.

This invention relates to improvements in roller-skates, having special reference to the attaching of the roller-wheels to the foot-plate; and it consists in the combination and novel arrangement of parts hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings by letter, A designates the foot plate or bed of the skate, having the depressed flanged heel portion A′, and the longitudinal strengthening-rib A^2 on its under surface. The said heel portion and rib being well known and in actual use, form no portion of the present application. The frames by which the front and rear rollers are connected with the foot-plate are the same in construction; but the said frames are secured to the heel and toe portions of the foot-plate in reverse directions, and thereby a new result is obtained. Therefore the two frames are not a mere duplication of parts, but form together with the foot-plate a combination for a useful purpose.

B is the frame by which the rear wheels or rollers are connected with the heel of the foot-plate. This frame B is provided with the forward inclined arms, *b b*, having their upper ends flanged laterally outward and riveted or bolted to the under surface of the heel portion of the foot-plate.

b′ is the plate portion of the frame B, running upward and backward from the united lower ends of the arms *b b*, and provided at its upper ends with lateral ears b^2 b^2, secured to the foot-plate by bolts or rivets.

b^3 is a loop standing at an angle of ninety degrees from the under surface of the plate portion *b*, below the ears b^2. The opening of the loop b^3 forms the slot b^4.

b^5 is a transverse flange standing at an angle of ninety degrees from the under surface of the plate portion *b* at a proper distance from the lower end thereof, and b^6 b^6 are depending flanges from the side edges of the said plate portion, running from the flange b^5 to the lower end of the plate portion *b′*.

b^7 is a threaded stem standing centrally from the united lower ends of the arms *b b*, in line with the plate portion *b′*.

C is a frame similar to the frame B, but secured to the toe portion of the foot-plate in a reversed position to the latter frame. The frame C is provided with arms *c c*, a plate portion, *c′*, ears c^2 c^2, a depending loop, c^3, and slot c^4, a transverse flange, c^5, depending flanges c^6 c^6, and threaded stem c^7, in all respects similar to the corresponding parts of the frame B.

D is the rear axle, surrounded by the collar D′ and provided with end journals, *d d*, upon which turn the wheels E E, the hubs of the wheels lying against the ends of the collar.

F is an arm rising from the central portion of the collar and bearing on its upper end a plate, G. The lower end, H, of plate G is bent upward at right angles therefrom and has through it an opening, *h*, through which the threaded stem b^7 passes, and is retained by the washer *h′* and nut h^2. The upper end I of the plate G is bent upward therefrom at right angles, and has standing centrally from its upper edge a stem, *i*, which enters and lies in the bottom of the slot b^4.

K is a block of rubber, having its upper surface converging inward toward its lower surface, as shown. The said block lies upon the plate G with its front end against the arm H, its rear end against the flange b^8, and its upper surface below and against the plate portion *b′* of the frame B.

L is the front axle, surrounded by a collar, L′, similar to the collar D′ of the rear axle, D, and having the journals *l*, similar to the journals *d* and bearing the front wheels, M, in all respects similar to the rear wheels. The collar L′ has rising from it an arm, F′, similar to the arm F and bearing on its upper end a plate, G′, similar to the plate G. The parts of the plate G′ are lettered in the drawings

similar to the identical parts of the plate G. The plate G′ engages with the frame C and is held thereon by a washer, h', and nut h^2 in the same manner that the plate G engages and is held on the frame B.

N is a rubber block similar to the block K. The block N lies on the plate G′ between the arm H and flange c^5 and below the plate portion c' of the frame C.

The action of the front and rear axles and wheels on their respective frames is identical, but in reverse directions, so that with the foot-plate they make an effective combination.

The action of the rear axle and attached frames is as follows: The plate G has the rubber block lying upon it, the ends of the block bearing against the flanged end H of the plate and the transverse flange b^5 of the plate portion b' of the frame B. The upper surface of the block is pressed upon by the plate portion b'. The flanged end I of the plate G is upward and backward from the flange b^5, as shown in the drawings, and the stem b^7 renders easily through the hole h. Now, when the foot presses on the foot-plate the block K, besides being compressed between the frame B and the plate G, is compressed between the flanges H and b^5, as the plate G is free to move longitudinally on the frame B. In addition to the longitudinal movement, the stem i, when the wheels E pass over any obstruction, will rise in the slot b^4 without disengaging therefrom, so as to avoid concussion or shock. The block N is compressed similarly, but in an opposite direction, to the block K, so that when both are compressed together the plates G G′ are held firmly in their supports.

Having described our invention, we claim—

1. In a roller-skate, the combination of the foot-plate, the frame secured to the under surface thereof, and having a threaded stem at one end and an upwardly-running slot at the other end, the plate provided with a depending collar surrounding the axle and having at one end a stem which passes through the slot of the frame, and at the other end an opening through which the threaded stem of the frame passes, the securing-nut and washer on the threaded stem, and a block of rubber having its upper and lower surfaces converging downward and inward and lying between the plate and the frame, with its inner end against the upturned inner end of the plate, and its outer end against a flange depending from the frame, substantially as specified.

2. In a roller-skate, the combination, with the foot-plate A and frame B, provided with the threaded stem b^7, flange b^5, and slot b^4, of the axle D, supporting the wheels E, plate G, provided with the depending collar D′, flanged ends H and I, and sleeves i, retaining-nut h^2 on the stem b^7, and rubber block K, having its ends resting against the inner flange, H, of the plate and the flange b^5 of the frame, substantially as specified.

3. The combination, in a roller skate, with the foot-plate A and frames B and C, secured to said plate near its rear and front ends, respectively, of the axles L and D, plates G G′, depending collars L and D′, retaining-nuts h^2, and rubber blocks N and H, having their upper and lower surfaces converging inwardly, so that they both will receive tension toward the center of the foot-plate with the weight of the person, substantially as specified.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

WILLIAM H. RHOADES.
HAL V. RHOADES.

Witnesses:
DAVID E. WILLIAMS,
M. D. PHILLIPS.