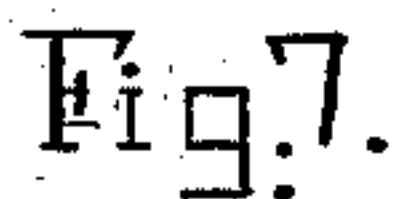
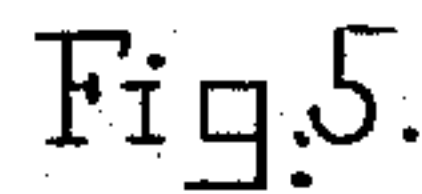
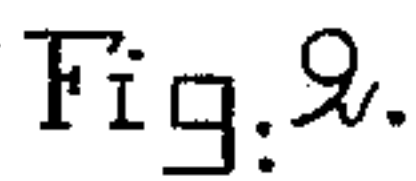
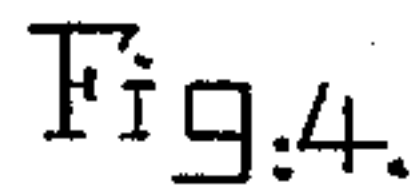
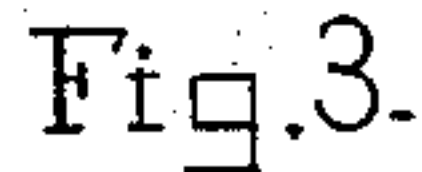
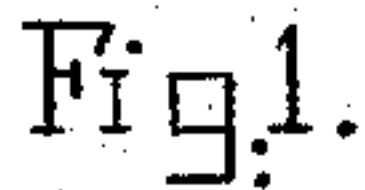


R. H. COOMBS.
ROLLER SKATE.

Patented Sept. 4, 1883.



S. N. Piper
E. B. Pratt

Robert Hudson Coombs.
by R. W. Lee atty.

UNITED STATES PATENT OFFICE.

ROBERT HUDSON COOMBS, OF BELFAST, MAINE.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 284,187, dated September 4, 1883.

Application filed June 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROBERT HUDSON COOMBS, of Belfast, in the county of Waldo, of the State of Maine, have invented a new and useful Improvement in Roller-Skates, and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side elevation, and Fig. 2 an under side view, of a skate provided with roller-spindle supporters of my improved kind. Fig. 3 is a side view, Fig. 4 an end view, Fig. 5 a bottom view, Fig. 6 a longitudinal section, and Fig. 7 a transverse section, of one of the said roller-spindle supporters, the nature of which is hereinafter defined.

This roller-spindle supporter contains not only a crucial elastic cushion interposed between its two sections, but has such sections provided with mechanism by which a skater, when skating with the skate, can cause the wheel-spindles of it to incline more or less to each other, in a manner to induce their wheels to run in a circular or curved path rather than in a straight one, as they will when the two spindles are parallel.

The foot-support piece is shown at A as provided with two pairs of wheels or rollers, B B, each pair being adapted to revolve freely on one of two spindles, C, each of which extends through and fastened firmly in two lugs, *a a*, projecting downward from the shorter arms of a cross, *c*, constituting with such lugs the lower section, D, of the spindle-supporter, the upper section of such supporter being shown at E.

The section E is secured to the lower side of a foot-support piece, A, by means of screws *s*, going through the said section and screwed into the said piece A. Such section E has extended down from its plate *d*, as shown, two inclined planes, *b b*, whose inclined faces are in contact with the shorter arms of the cross. There also projects downward from the platen two stops, *f f*, between which the longer arm of the cross *c* is arranged. These stops are to limit the lateral movement of the cross.

Between the two sections D and E is the crucial or cruciformed elastic cushion F, the body of each arm of which is cylindrical in shape. The two sections D and E are con-

nected by a pivotal screw, G, (which goes down through them and the cushion F,) and two nuts, *g h*, screwed on such screw underneath the cross *c*, as represented.

From the above and the drawings it will be seen that the spindle-supporters of the two pairs of wheels are alike in construction, and that the inclined planes of each incline in a direction opposite to those of the other. This being the case, when a skater with all the rollers of his skate resting on the floor desires to cause the skate to move in a curved or circular path he should incline his foot laterally inward, so as to move downward the inner inclined planes of the two spindle-supporters, and in like degree upward the outer inclined planes of such supporters. In so doing the lower section of each of such supporters will, by the inclined planes of the upper section, be revolved or turned on its pivotal screw, whereby the two spindles will be thrown out of parallelism and made to incline toward each other, so as to cause the wheels to run in a curved path.

The crucial elastic or vulcanized india-rubber cushion constitutes for each lower section, D, a bearing that will yield and allow the section to tip a little both lengthwise and widthwise, and to play up and down on the pivotal screw, thereby preserving the foot from the jars that it would experience in skating were there no cushion between the sections.

In practice I have found a skate having roller-spindle supporters, as described, to operate with great ease and advantage, and enable a skater to easily skate in curved as well as in straight paths, as he may desire.

I claim—

The roller-skate spindle-supporter, substantially as described, consisting not only of the section E, with its inclined planes, and the crucial sections, D, but of the crucial elastic cushion or bearing F, arranged between the said two sections, the whole being connected by a pivotal screw and one or more nuts, and arranged and adapted to operate essentially as set forth.

ROBERT HUDSON COOMBS.

Witnesses:

J. S. HARRIMAN,

CARRIE P. SANBORN.