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H. CHOMIN

SKATE

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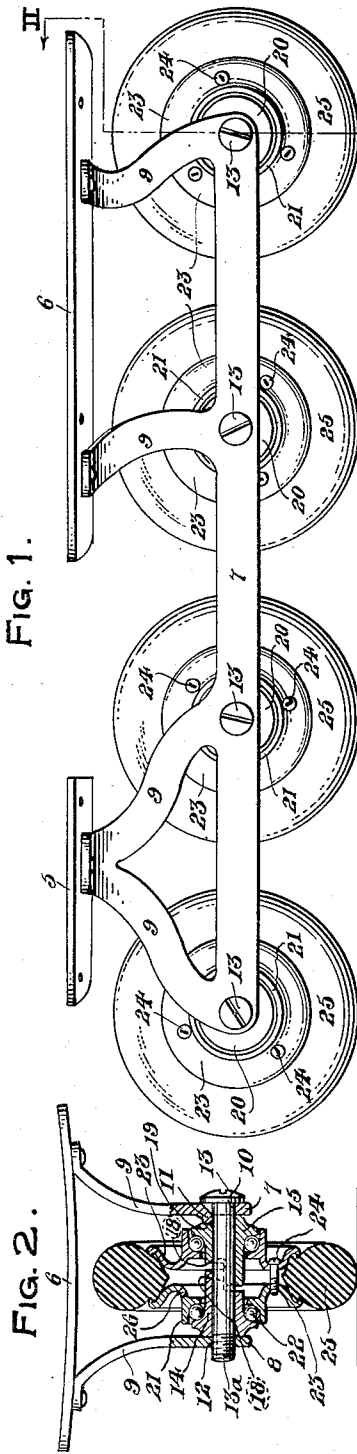


FIG. 1.

FIG. 2.

FIG. 4.

FIG. 3.

FIG. 9.

FIG. 10.

FIG. 11.

FIG. 6.

FIG. 7.

FIG. 8.

Inventor
H. Chomin

Bryant & Lavery, Attorneys

UNITED STATES PATENT OFFICE.

HARRY CHOMIN, OF FORD CITY, ONTARIO, CANADA.

SKATE.

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To all whom it may concern:

Be it known that I, HARRY CHOMIN, a citizen of Canada, residing at Ford City, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in Skates, of which the following is a specification.

This invention relates to new and useful improvements in skates of the convertible ice and roller type.

An important object of the invention is to provide frames to which either rollers or blades may be secured for adapting the same to be used as roller or ice skates.

A further object of the invention is to provide improved means for fastening the rollers or blades to the frames.

A still further object of the invention is to provide rollers of the ball bearing type with resilient tread portions that may be easily renewed when worn out.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a side elevational view of the device when the same is adapted to be used as a roller skate,

Figure 2 is an end view, partly in elevation and partly in section taken upon lines II—II of Fig. 1,

Figure 3 illustrates detail elevational views of one portion of a two-part interlocked hub employed in connection with the rollers illustrated in Figs. 1 and 2,

Figure 4 illustrates similar views to those set forth in Fig. 3 of the other portion of the two-part interlocked hub,

Figure 5 is a detail elevational view of one of the disks employed for forming a portion of one of the rollers illustrated in Figs. 1 and 2,

Figure 6 is an edge elevational view of the disk illustrated in Fig. 5,

Figure 7 is a fragmentary side elevational view showing the device when adapted for being used as an ice skate.

Figure 8 is a fragmentary side elevational view of the ice skate blade illustrated in Fig. 7 and shows the portion of the same which permits it being removably secured to the frame illustrated in Figs. 1, 2 and 7,

Figure 9 is a fragmentary sectional view taken upon line IX—IX of Fig. 7,

Figure 10 is a fragmentary sectional view taken upon line X—X of Fig. 7, and

Figure 11 is a detail perspective view of one of the elements carried by the ice skate blade illustrated in Figs. 7 to 10 inclusive which permit the blade to be removably secured to the frame illustrated in Figs. 1, 2 and 7.

In the drawing, wherein for the purpose of illustration is shown a preferred embodiment of this invention, the numeral 5 designates the heel plate and the numeral 6 the sole plate to which are secured the spaced side rails 7 and 8 by means of the arms 9. The side rail 7, as illustrated in Fig. 7, is provided with a plurality of openings 10 having inwardly struck-out tongues 11 associated therewith. The side rail 8 is provided with an equal number of threaded openings 12 which are positioned in transverse alinement with the openings 10.

When this device is to be used as a roller skate, all of the pairs of alined openings 10 and 12 receive axle bolts 13 which are retained therein by threading the ends 13^a into the openings 12. In Figs. 2, 3 and 4 there is shown a hub structure which includes the two interlocked parts 14 and 15 having bores 16 and 17 through which the axle bolts 13 pass. It will be noted by inspecting Fig. 2 that the adjacent ends of these hub parts are interlocked by a halving joint formed by the sinkings 18. The part 15 of this hub structure is provided with a shoulder 19 at its outer end against which the tongue 11 associated with the opening 10 is intended to bear for preventing rotation of the two-part hub structure. It will be noticed, by inspecting Fig. 2, that these hub parts 14 and 15 are provided with annular flanges 20 which form parts of ball bearing races. In Figs. 5 and 6 there is illustrated a disk having a ball race portion 21 which is intended to cooperate with the flange 20 formed on one of the hub parts illustrated in Figs. 3 and 4 for receiving the balls 22 illustrated in Fig. 2. These disks further include the outwardly projecting annular clamping rings 23 of reversely curved formation, as illustrated in Fig. 2. It will be seen by inspecting Fig. 2 that these disks are provided in duplicate and are clamped together by means of the bolts 24 for per-

mitting the resilient tread portion or tire 25 to be removably secured thereto. In Figs. 2 and 5 one of the disks is illustrated as being provided with an oil hole 26 which is employed for permitting the ball bearings and hub parts to be thoroughly lubricated. It will be seen by inspecting Fig. 1 that provision has been made for employing as great a number as four rollers arranged in longitudinal alinement with their axles all extending in parallelism with each other. It is to be understood, however, that only two or three rollers may be employed in case the user desires to reduce the number of the same.

In Figs. 7 to 11, there are illustrated the blades 27 which are employed for adapting the skate to be used on ice. The blade 27 carries laterally projecting axially alined split tubular elements 28 having the ears 29 by means of which the same are secured to the said blade. These tubular elements 27 are intended to receive the clamping bolts 30 which are inserted through the openings 10 and 12 formed in the side rails 7 and 8. These bolts 30 are also retained in place by the threading of the ends 30^a into the openings 12. The tubular elements 38 are split, as at 31 for receiving the tongue 11, as illustrated in Figs. 9 and 10.

It is now believed that the construction of the various elements embodying this invention and the manner of assembling the same for forming either roller or ice skates will be understood from the above detail description.

It is to be understood that the forms of this invention herewith shown and described are to be taken as preferred examples of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described the invention, I claim:—

1. In a device of the type described, heel and sole plates, a series of arms carried by

each side of said plate, a side rail carried by each series of arms, one of said side rails having a series of threaded openings formed therein, the other of said side rails having a series of plain openings formed therein, an axle bolt inserted through each of the last mentioned openings and removably threaded into one of the threaded openings, and a ball bearing roller rotatably carried by each of said axle bolts.

2. In a device of the type described, heel and sole plates, a series of arms carried by each side of said plates, a side rail carried by each series of arms, one of said side rails having a series of threaded openings formed therein, the other of said side rails having a series of plain openings formed therein with a lug associated with each opening, an axle bolt inserted through each of the last mentioned openings and removably threaded into one of the threaded openings, a dual hub carried by each of said axle bolts, the parts of each dual hub being interlocked together, one of said hub parts having a shoulder engaged by one of the aforementioned lugs, and a disk roller rotatably carried by each dual hub.

3. The combination with a skate frame including heel and sole plates, and parallel side rails carried by said plates, of a blade having a pair of alined tubular members carried by each end thereof, and means for removably connecting said alined pairs of tubular members to said side rails.

4. The combination with a skate frame including heel and sole plates and parallel side rails carried by said plates, of a runner blade, a pair of laterally, oppositely projecting tubular members carried by said runner in proximity to each end thereof, and a bolt removably carried by each pair of adjacent ends of said side rails and passing through said pairs of tubular members for connecting said blade to said skate frame.

In testimony whereof I affix my signature.

HARRY CHOMIN.