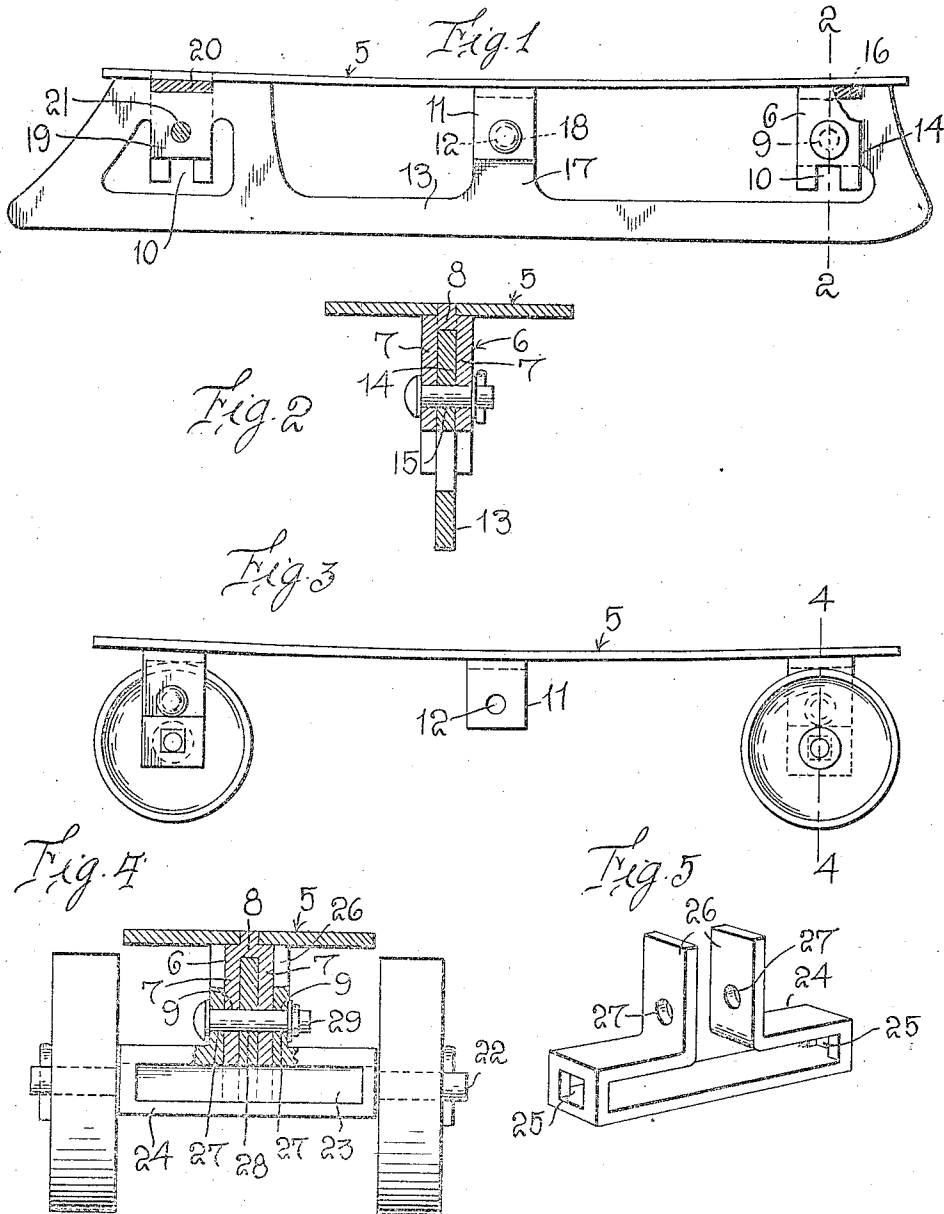


F. M. KUCHTIK,
 CONVERTIBLE ROLLER AND ICE SKATE.
 APPLICATION FILED MAY 31, 1917.

1,243,077.

Patented Oct. 16, 1917.



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CONVERTIBLE ROLLER AND ICE SKATE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK M. KUCHTIK, a subject of the Emperor of Austria, who have applied for naturalization papers in Canada to become a subject of the King of England, residing at Kitchener, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in Convertible Roller and Ice Skates, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an improved convertible roller and ice skate, and has for its primary object to provide improved means whereby the foot plate of the skate can be interchangeably connected to an ice skate blade and the spaced sets of skate rollers.

It is a more particular object of the invention to provide attaching brackets fixed to the under side of the foot plate on its toe and heel ends for attachment to an ice skate blade or to a part mounted between spaced skate rollers upon the axle thereof, the bracket members being notched to receive the roller axle.

It is another object of the invention to provide a convertible skate of the above character which is simple in its construction, may be manufactured at small cost, and is highly serviceable and convenient in practical use.

With the above and other objects in view, my invention consists in the novel features of construction, combination, and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawing, in which,

Figure 1 is a side elevation showing the foot plate attached to an ice skate blade, one of the attaching brackets being partly broken away;

Fig. 2 is a transverse section taken on the line 2—2 of Fig. 1;

Fig. 3 is a side elevation showing the device when used as a roller skate;

Fig. 4 is a section taken on the line 4—4 of Fig. 3; and

Fig. 5 is a perspective view of the attaching member removed from the roller axle.

Referring in detail to the drawing, 5 designates the metal foot plate of the skate. This plate may be provided with screw receiving openings for attaching the same to the sole of a boot or shoe or any other suit-

able attaching means may be provided. To the under side of this foot plate, at its toe and heel ends, the attaching brackets 6 are secured, each of said brackets having spaced, parallel portions 7 and an intermediate connecting portion 8, the latter being secured by rivets, screws, or other suitable securing means to the foot plate 5. The spaced parts 7 of said brackets project substantially at right angles to the plane of the foot plate and are provided with alined openings 9 for a purpose which will presently appear. In the lower end of each portion 7 of the bracket, a rectangular notch or recess 10 is centrally formed. An additional bracket member 11 is also centrally secured to the under side of the foot plate 5 and is similar in form to the brackets 6, though of less length than the latter bracket, the spaced portions of said bracket 11 being provided only with the openings 12.

13 indicates an ice skate blade which may be of any ordinary or approved form and is provided at its toe end with a longitudinally extending, inwardly projecting lug 14 disposed in spaced relation above the runner portion of the blade. This lug has an opening 15 therein and the upper edge of the lug is spaced from the upper edge of the toe portion of the blade, whereby the shoulder 16 is provided. The blade 13 also has an upstanding, rectangular lug 17 centrally formed thereon and provided with an opening 18. Upon the vertical heel portion of the skate blade, a rectangular portion 19 is formed, spaced above the blade runner, and in line with this rectangular portion, a longitudinal notch or recess 20 is formed in the upper edge of the heel of the skate blade. The portion 19 of the blade has an opening 21 therein.

In attaching the foot plate 5 to the blade 13, the toe lug 14 fits between the spaced portions of the brackets 6 on the toe of the plate 5, the lug 17 is engaged in the bracket 11, and the heel portion 19 of the skate blade is disposed between the spaced parts of the attaching lug 6 on the heel end of the foot plate 5. The intermediate portion of the bracket 6 on the toe of the foot plate is seated upon the upper edge of the lug 14 and engaged at its forward end against the shoulder 16 while the intermediate portion of the bracket on the heel end of the foot plate is seated in the longitudinal notch or

recess 20. Suitable bolts are then inserted through the coinciding openings of the several brackets and the lugs 14, 17, and 19 of the skate blade, removable cotter pins being engaged through openings in the ends of said bolts. Thus, the foot plate is securely attached to the skate blade, though it may be easily and quickly removed from connection therewith, and when so attached, the toe and heel brackets 6 effectually prevent any tendency of said foot plate and the skate blade to shift longitudinally with respect to each other, thus relieving the connecting bolts of undue strain.

In Figs. 3 and 4 of the drawing, I have shown the manner of attaching the foot plate 5 to spaced sets of rollers so that the device may be used as a roller skate. To this end, I provide an axle 22 for each set of rollers, said axle having cylindrical end portions upon which the rollers are revolutely mounted, and a rectangular, intermediate portion shown at 23. Upon this latter portion of the roller axle, a connecting member shown in detail in Fig. 5 of the drawing, is engaged. This member consists of a single metal plate bent upon itself to provide an elongated loop 24, the end portions of which are provided with rectangular openings 25 to receive the squared section 23 of the roller axle. The end portions of this metal plate are vertically extended in spaced relation to each other, as at 26, and provided with the aligned openings 27 therein. In attaching the foot plate 5 to the spaced sets of rollers, the parallel portions of the bracket members 6 on the toe and heel ends of the plate 5 are inserted downwardly between the spaced portions 23 of the attaching member on the roller axle, and a washer 28 is fitted between the spaced, parallel portions 7 of each bracket member. It will be understood that the rectangular portion 23 of the roller axle fits within the notches 10 in the lower ends of the spaced portions of the bracket. Thus, turning or rocking movement of the bracket upon the axle or between the spaced ends 26 of the connecting plate is obviated. Suitable bolts 29 are then inserted through the registering openings 27 and 9, whereby the sets of rollers are held in secure connection with the bracket members.

From the foregoing description, taken in connection with the accompanying drawing, the construction, manner of use, and several advantages of my improved convertible skate will be clearly and fully understood. The device is of very simple construction and can, therefore, be manufactured at small cost. The foot plate can be very easily and quickly attached either to the ice skate blade or to the sets of skate rollers, and when used in either connection, it will be seen that the skate will be very

strong and durable and the possibility of breakage of the various parts in the ordinary use of the skate is, to a large extent, obviated. The skate may, of course, be made of any desired length and the foot plate can be of any preferred shape. The form, construction, and relative arrangement of the several parts are likewise susceptible of considerable modification and I, therefore, reserve the privilege of adopting all such legitimate changes as may be fairly embodied within the spirit and scope of the invention as claimed.

Having thus fully described my invention, what I desire to claim and secure by Letters Patent is:—

1. In a skate, a foot plate, a coupling bracket fixed to said foot plate and having spaced portions, surface contacting means having a part intimately engaged with the spaced portions of the bracket, and also contacting with the foot plate at opposite sides of said bracket, said spaced portions of the bracket and said part having registering openings, and a coupling bolt engaged through said openings.

2. In a skate, a foot plate, coupling brackets fixed to the toe and heel ends of said foot plate, two sets of rollers, each set having an axle, each of said brackets being provided with a notch to receive the axle of a set of rollers, and a connecting plate mounted on said roller axle and having means for detachable connection to said coupling bracket.

3. In a skate, a foot plate, coupling brackets fixed to the toe and heel ends of said foot plate, two sets of rollers, each set having an axle, each of said brackets being provided with a notch to receive the axle of a set of rollers, a connecting plate on said roller axle, said plate being provided with spaced, parallel end portions between which the coupling bracket is adapted to be disposed, and means for detachably connecting the bracket to said end portions of the plate.

4. In a skate, a foot plate, coupling brackets fixed to the toe and heel ends of the foot plate, two sets of rollers, each roller set having an axle, a plate engaged upon the axle between the spaced rollers and having parallel end portions extending above the axle between which one of the coupling brackets is adapted to be engaged, said bracket and the end portions of the plate having registering openings, and a removable connecting bolt for insertion through said opening.

5. In a skate, a foot plate, coupling brackets fixed to the toe and heel ends of the foot plate and each having spaced parallel portions provided in their ends with rectangular notches, two sets of rollers, each roller set having an axle provided with a rectangular, intermediate portion, a plate

bent upon itself to provide an elongated
loop extending between the spaced rollers
and said loop having openings in its ends to
receive the roller axle, the end portions of
5 the plate being disposed in spaced, parallel
relation above the axle and adapted to re-
ceive the spaced portions of a coupling
bracket between them, the notches in the
coupling bracket receiving the roller axle,

and means to detachably connect the bracket 10
to the spaced end portions of said plate.

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

FRANK M. KUCHTIK.

Witnesses:

JACOB KOCH,

ANTON MALLUSCHER