Nov. 5, 1935. F. R. SMITH 2,019,738

SKATE

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Fig. 1.

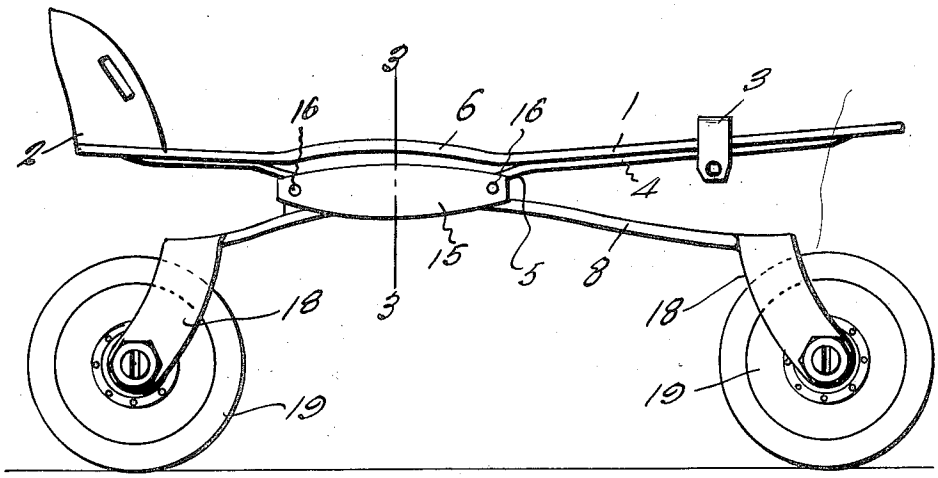


Fig. 2.

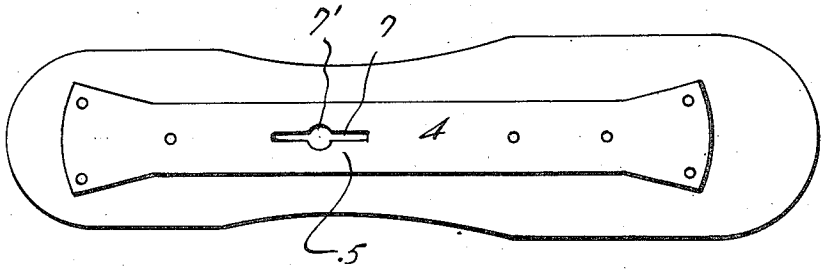


Fig. 3.

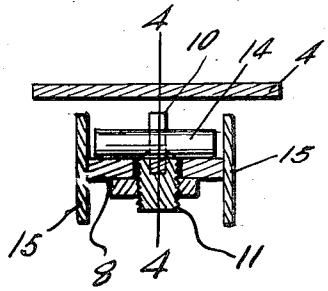
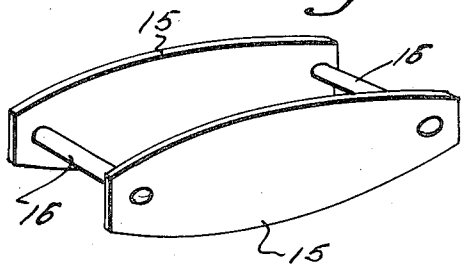


Fig. 5.



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Fig. 4.

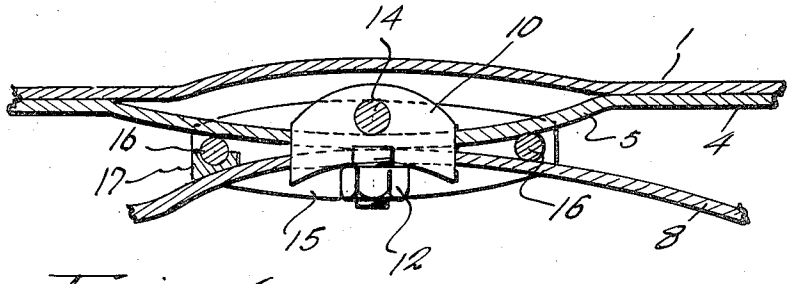


Fig. 6.

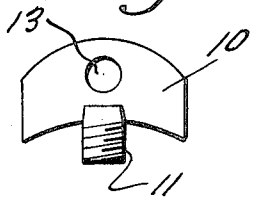


Fig. 7.

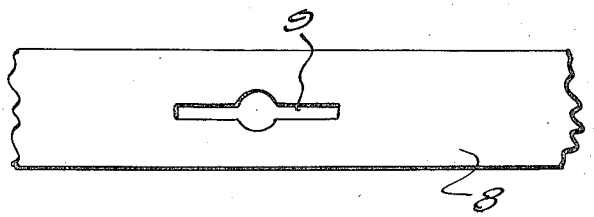
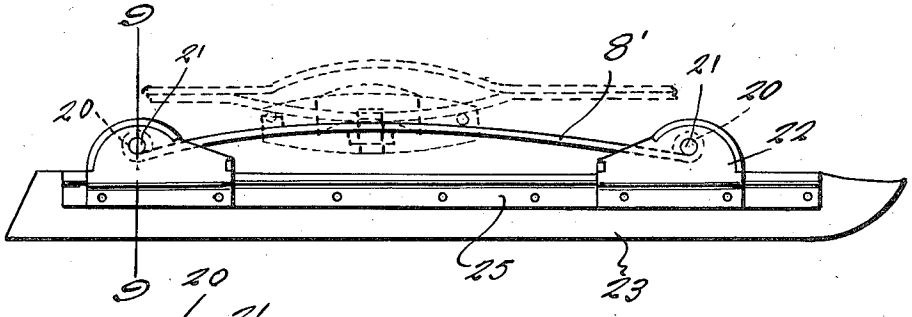


Fig. 8.



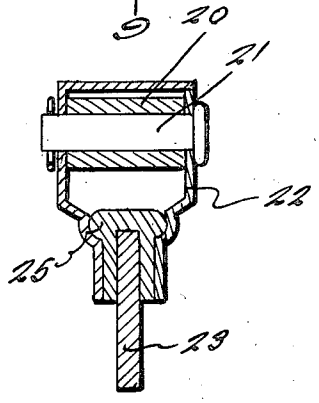


Fig. 9.

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UNITED STATES PATENT OFFICE

2,019,738

SKATE

Frank R. Smith, Sandusky, Ohio

Application June 9, 1933, Serial No. 675,118
Renewed April 4, 1935

2 Claims. (Cl. 208—173)

This invention relates to improvements in skates, the general object of the invention being to provide means whereby the skate can be easily and quickly converted from a roller skate into an ice skate or vice versa and also to provide a single leaf spring which carries the rollers or the blade or runner and to which the foot receiving member is detachably connected.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a side view of the invention as used as a roller skate.

Figure 2 is a bottom plan view of the foot member.

Figure 3 is a section on line 3—3 of Figure 1.

Figure 4 is a section on line 4—4 of Figure 3.

Figure 5 is a perspective view of the two connected plates.

Figure 6 is a view of the member which connects the foot member with the spring.

Figure 7 is a fragmentary plan view of the spring.

Figure 8 is a view of the blade or runner used with the invention when the same is used as an ice skate.

Figure 9 is a section on line 9—9 of Figure 8.

In these drawings, the numeral 1 indicates the foot member which is provided with the usual heel receiving part 2 and the members 3 for receiving the toe strap and the numeral 4 indicates an elongated plate which is riveted or otherwise connected to the bottom of the member 1 and has a downwardly bowed intermediate part 5 which is placed below a slightly upwardly bowed part 6 on the member 1. This bowed part 5 is formed with a slot 7 and a hole 7' which is located at the center of the slot and a leaf spring 8 has a similar opening 9 therein. A substantially arcuate shaped plate 10 passes through the two slots or openings 7 and 9 and has a threaded stud 11 attached to its lower edge for passing through the center hole of the opening 9 and receives a nut 12 which fastens the plate to the spring. The plate 10 is formed with an opening 13 for receiving a pin 14 which engages the upper face of the bowed part 5 on the plate 4 and thus connects this part 5 with the spring 8. A pair of side plates 15 is connected together by the rods 16, as shown more particularly in Figure 5 and these rods pass between the bowed part 5 and the adjacent part of the spring 8, as shown in Figure 4, with the plates located one on each side of said parts 5 and 8. A member 17 is connected to the spring 8 and has a semi-circular recess therein to receive the rearmost rod 16.

Figure 1 shows the forks 18 connected with the ends of the spring 8 and these forks support the rubber tired wheels 19.

Figure 8 shows a spring 8' having eyes 20 at its ends for receiving the pins 21 which pass through the hangers 22 which have their lower portions connected to the blade or runner 23 so that in this case the invention is applied to an ice skate instead of a roller skate, as shown in Figure 1. A reinforcing member 25 is attached to the upper edge of the blade and has portions thereof engaged and connected with the hangers.

Thus it will be seen that either the spring 8 with the wheels 19 attached thereto can be used with the rest of the device to form a roller skate, or the spring 8' with the runner attached thereto can be used with the rest of the device to form an ice skate.

By removing the nut 12, the foot plate 1 and plate 4 and the member 10, with the pin 14 can be lifted off of one spring and placed on the other spring so that the change from a roller skate to an ice skate can be readily made and the member 10, with its stud 11 and the pin 14, not only serve to detachably connect the spring 8 or 8' with the plate 4, but also act to hold the parts in alignment and the plates 15 and the rods 16 also act to hold the parts in alignment. The plates 15 prevent the pin 14 from slipping out of place when the parts are attached.

The spring 8 or 8' will absorb shocks and reduce vibration, thus giving the skater greater pleasure and comfort and it will also accelerate speed of the skater because of its recoil under the weight of the skater at the beginning of each stroke.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:—

1. A skate of the class described comprising a

foot plate, a reinforcing plate fastened to the under side thereof and having a downwardly bowed intermediate portion formed with a longitudinally extending slot, a leaf spring upwardly bowed and having a longitudinally extending slot in an intermediate portion thereof, an arcuate shaped plate passing through the two slots and having a threaded stud at its lower edge, a nut on said stud, a pin detachably connected with the arcuate shaped plate and engaging a portion of the upper face of the downwardly bowed part of the reinforcing plate, a pair of side plates, one on each side of a portion of the spring and the downwardly bowed portion and rods connecting the plates together and passing between the downwardly bowed portion of the reinforcing plate and an intermediate portion of the spring and surface engaging means connected to the ends of said leaf spring.

2. A skate of the class described comprising a foot plate, a reinforcing plate fastened to the under side thereof and having a downwardly bowed intermediate portion formed with a longitudinally extending slot, a leaf spring upwardly bowed and having a longitudinally extending slot, in an intermediate portion thereof, a plate passing through the two slots and having a threaded stud on its lower end, a nut on said stud, a pin detachably connected with the plate and engaging a portion of the upper face of the downwardly bowed portion of the reinforcing plate, means for holding said pin in place, and surface engaging means connected to the ends of said frame.

FRANK R. SMITH.