Oct. 22, 1940. J. W. HARRISON 2,218,803

RUNNER ATTACHMENT FOR ICE SKATES

Filed June 8, 1939 2 Sheets-Sheet 1

Fig. 1.

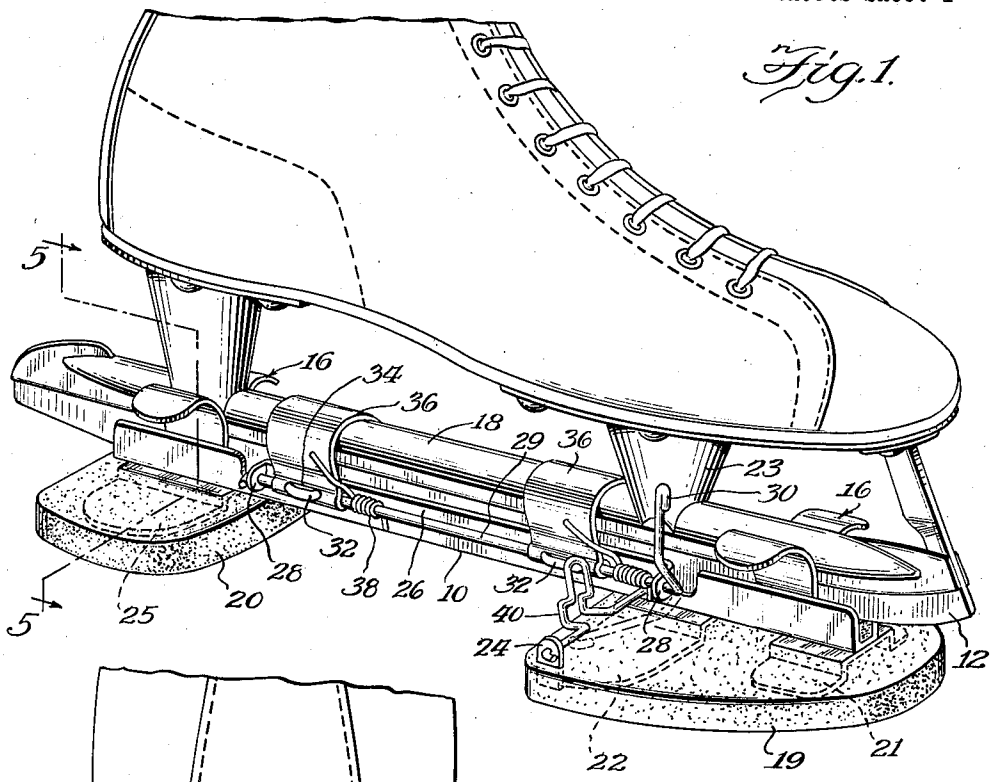


Fig. 5.

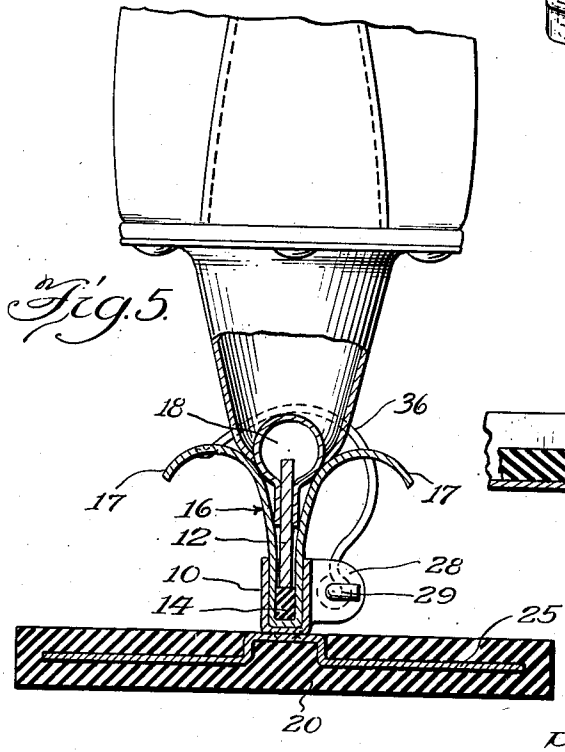
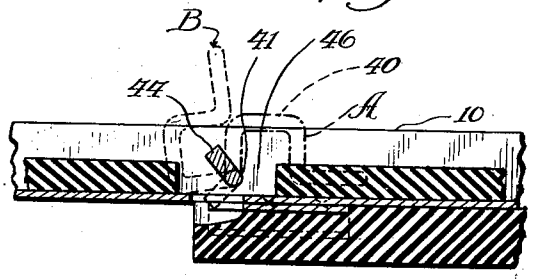


Fig. 6.



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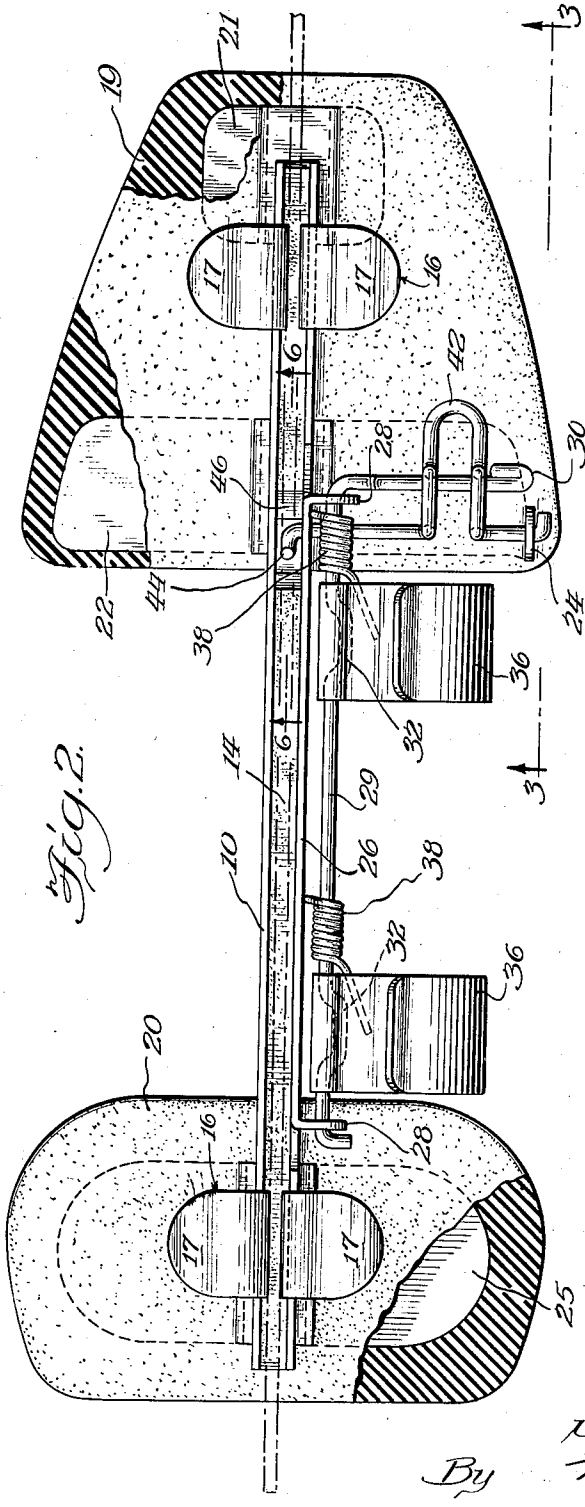


Fig. 2.

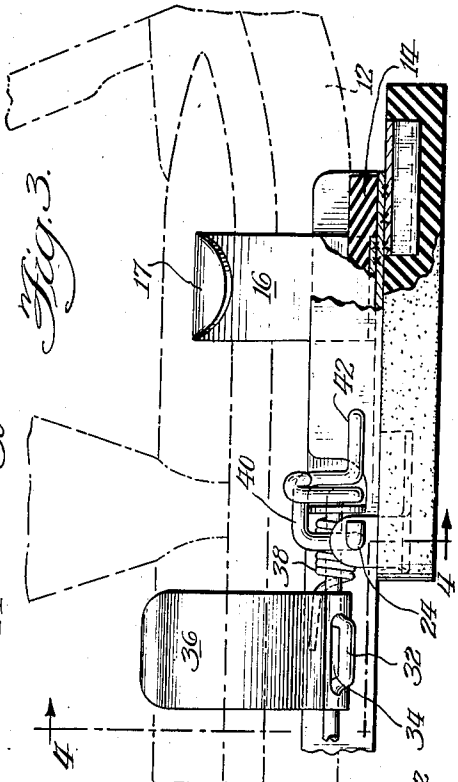


Fig. 3.

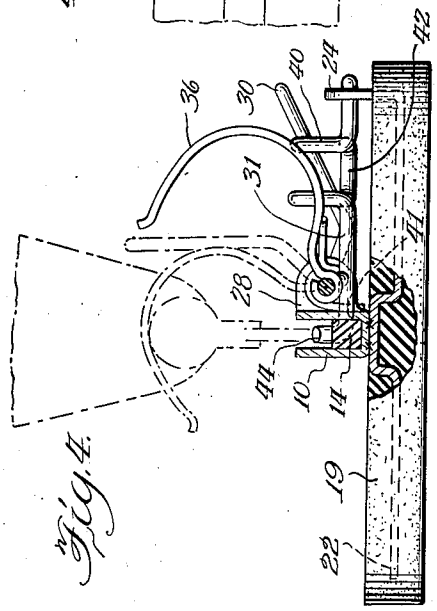


Fig. 4.

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UNITED STATES PATENT OFFICE

2,218,803

RUNNER ATTACHMENT FOR ICE SKATES

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Application June 8, 1939, Serial No. 278,038

5 Claims. (Cl. 280—11.38)

This invention relates to improvements in runner attachments for ice skates and the like.

One of the objects of my invention is the provision of an attachment for ice skates whereby a skater is enabled to walk or stand without discomfort while wearing the skates.

Another object of my invention is the provision of an attachment for ice skates whereby a skater, while wearing skates may without dulling the runner, walk other than on ice.

A further object of this invention is the provision of a device of the character set forth which is quickly and easily attachable and removable from a skate while the skate is being worn.

A still further object of this invention is the provision of a device of the character set forth having means which are automatically operable to secure said device on to a skate.

With the above and other objects in view, the invention further consists of the following novel features and details of construction to be hereinafter more fully described and illustrated in the accompanying drawings wherein,

Fig. 1 is a perspective view of a conventional ice skate showing my improved runner attachment in place.

Fig. 2 is a plan view of my improved runner attachment.

Fig. 3 is a fractional elevation view looking in the direction of the arrows 3, 3, of Fig. 2 and showing a fractional portion of a skate runner in position.

Fig. 4 is an end elevational view in partial cross section taken on line 4, 4 of Fig. 3.

Fig. 5 is an end elevational view in partial cross section taken on line 5, 5 of Fig. 1.

Fig. 6 is a fractional cross sectional view taken on line 6—6 of Fig. 2.

In the preferred embodiment of my invention, the numeral 10 designates a channel member which is adapted to receive a skate runner 12. A suitable cushion 14 of leather, rubber or other material is disposed in the bottom of the channel 10 to prevent the runner 12 from becoming dull. Secured in the channel 10 are the guide members 16 which have outwardly directed lip portions 17 which engage the tubular body portion 18 of the skate and serve as a lateral support for same.

The improved skate attachment is provided with forward and rearward tread portions 19 and 20 respectively, which are formed of rubber, leather or some suitable composition. The tread portions 19 and 20 are substantially coextensive in width with a conventional shoe sole and are mounted on transversely extending reinforcing elements which are rigidly fixed, as by welding or riveting, to the underside of the channel member 10. Two of such reinforcing elements are provided for the forward tread portion 19. The reinforcing element 21 is positioned at the forward portion of the channel member 10 and is considerably less expansive in width than the reinforcing element 22 which is positioned rearwardly thereof and which is in substantial vertical alinement with the tubular standard 23 of the skate, as shown in Fig. 3, when the attachment is in place on the runner of the skate. A perforated ear 24 integrally formed with the element 22 serves as a bearing support for the locking element presently to be described.

A reinforcing element 25 is provided for the rear tread portion 20. It will be seen that the reinforcing elements are designed so that substantially their entire areas will be imbedded in the tread portions, a practice, which facilitates the application of the tread portions to the reinforcing elements.

It is also seen that the reinforcing element 22 is proportionately of greater transverse width than the other elements 21 and 25. This is particularly desirable because when the attachment is in place, on the runner of a skate while it is being worn, the ball of the foot is normally in vertical alinement with the element 22. This lends support to the foot against lateral movement.

The clamping mechanism, by which the attachment is automatically securable on the runner of a skate, comprises an elongated rod member 29 which is rotatably supported in the perforated ears 28 which are struck out from the wall 26 of the channel member 10. The rod is provided with a laterally directed arm 30 which is preferably bent as at 31 as shown in Fig. 4. The rod member 29 is bent as at 32 to provide offset portions which are adapted to enter the slots 34 of the clamp members 36 which are mounted on the rod member 29, so that the clamp members and rod member are movable as a unit. Torsion spring elements 38 are mounted on the rod 29, with the opposite ends of the spring resting against the clamp member 36 and the wall 26 of the channel bar. These springs serve to normally maintain the clamp members 36 in locking position as shown in Figs. 1, 4 and 5.

A locking element 40 is pivotally supported at one end, in the ear 24, and at the other end, in an aperture 41, provided in the wall 26 of the channel member 10. Said latch member is substantially U shaped in elevation and is provided with a hand engaging portion 42 by which it is manually movable. The terminal portion of the latch member 40 extends through the wall 26 and serves as a trip lever 44. It is bent at right angles to the pivotal axis of said latch member and is angularly disposed relative to a horizontal plane through said pivotal axis, as is shown in Figs. 2, 4 and 6.

It is seen, that the cushion 14 does not extend throughout the full length of the channel 10,

but is divided as at 46 to provide clearance for the movement of the trip lever 44. Referring to Fig. 6, it is seen that the aperture 41, in the wall 26 of the channel, is positioned below the top surface plane of the cushion 14 and that when the latch member 40 is in position A, as illustrated by the dotted lines, in Fig. 6, the trip lever 44 assumes the position illustrated by the solid lines and projects above the top surface plane of the cushion 14.

In order to attach my device on a skate, it is merely necessary to move the arm 30 so that it will assume a substantially horizontal position, as shown by the solid lines in Fig. 4. This movement causes the clamp members 36 which are rigidly mounted on the rod member 29, to move simultaneously in the same arcuate direction. The latch member is then swung over to position A, Figs. 4 and 6, to engage the arm 30 and to lock same against pivotal movement.

Upon inserting the runner 12 of the skate in the channel 10, the runner is brought into engagement with the trip lever 44. A slight downward pressure against the trip lever will cause the latch member 40 to move to position B, Fig. 6. The arm 30 is thereby released and the torsion springs 38 cause the arm 30 and clamps 36 to be pivotly moved to assume the positions indicated in Fig. 1 and by the dotted lines in Fig. 4. The clamp members 36 engage the tubular body portion 18 of the skate and securely hold the attachment on the skate.

To remove the skate the arm 30 is moved downwardly to bring the clamp members 36 out of engagement with the tubular body portion 18. The arm may be locked in the manner above described to condition the attachment for a subsequent application to a skate runner.

It is thus seen that a convenient and automatically operable device has been provided for attachment to a skate runner. With this device it is merely necessary to set the mechanism in unlocked position and by placing the device on a floor surface and inserting the runner in the channel member the clamp elements are automatically released to grip the tubular body portion of the skate. The above act is thereby accomplished without any contortion of discomfort to the skater.

It is to be understood that the form of my invention, herewith shown and described, is to be taken as a preferred example 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 my invention or the scope of the appended claims.

I claim:

1. An attachment for ice skates comprising a channel member adapted to receive a skate runner, clamping members pivotly movable laterally of said channel member and adapted for engagement with a skate body, means associated with said clamping members for normally maintaining said clamping members in engagement with said skate body, locking means for maintaining said clamping members in non-engageable relation with said skate body, actuating means located in said channel member and associated with said locking means whereby the engagement of a skate runner with said actuating means in said channel serves to effect a release of said locking means and to cause the clamping members to move into engagement with said skate body.

2. An attachment for ice skates comprising a channel member adapted to receive a skate runner, clamping members pivotly movable laterally of said channel member and adapted for engagement with a skate body, spring means for normally maintaining said clamping members in engagement with said skate body, locking means for maintaining said clamping members in non-engageable relation with said skate body, actuating means in said channel associated with said locking means and operable upon engagement with a skate runner, when said skate runner is inserted in said channel member whereby said locking means are released to cause the engagement of said clamping members with said skate body.

3. An attachment for ice skates comprising a channel member adapted to receive a skate runner, tread portions under said channel member, clamping members for engagement with a skate body, means for pivotly moving said clamping members laterally of said channel member and for normally maintaining same in engagement with said skate body, locking means for selectively maintaining said clamping members in non-engageable relation with said skate body, actuating means associated with said locking means and operable upon engagement with a skate runner when said skate runner is inserted in said channel member whereby said locking means are released to cause the engagement of said clamping members with said skate body.

4. In an attachment for ice skates, a channel member adapted to receive a skate runner, an elongated member having a laterally directed arm and being rockably mounted in longitudinal alinement with said channel member, clamping members fixedly mounted on said rod member and adapted for engagement with a skate body, spring means for normally maintaining said clamping members in engagement with said skate body, locking means engageable with said arm for maintaining said clamping members in non-engageable relation with said skate body, actuating means positioned in said channel member and associated with said locking means for releasing said locking means whereby said clamping members are caused to be moved into engagement with said skate body.

5. An attachment for ice skates comprising a channel member adapted to receive a skate runner, clamping members pivotly movable laterally of said channel member and adapted for engagement with a skate body, spring means for normally maintaining said clamping members in engagement with said skate body, a locking element for maintaining said clamping members in non-engageable relation with said skate body, depressible means in said channel and associated with said locking element for releasing said locking element, said depressible means adapted to be actuated upon the insertion of a skate runner in said channel member whereby said locking element is released and said clamping members are caused to engage said skate body.

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