

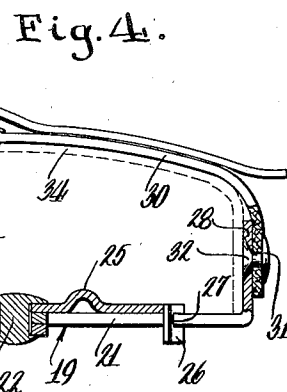
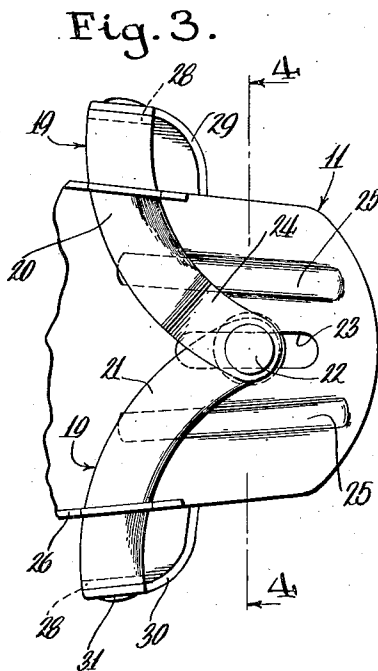
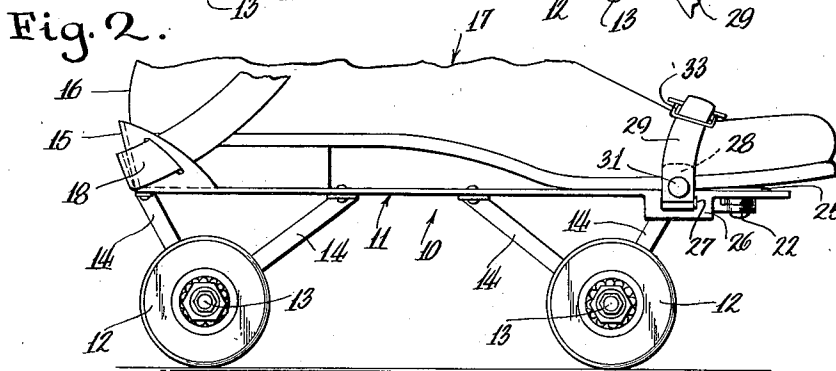
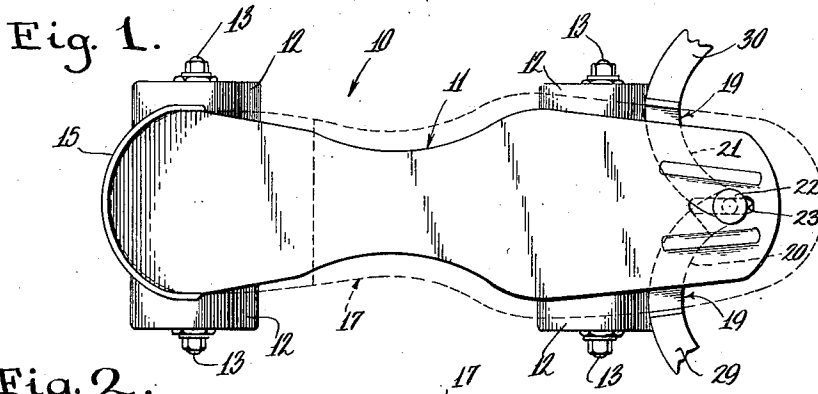
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HOLDING MEANS

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HOLDING MEANS

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This invention relates to holding means, and more particularly to means for holding a locomotion device to a shoe, and the principal object of this invention is to provide new and improved holding means of such types.

In the drawing accompanying this specification and forming a part of this application, there is shown, for purposes of illustration, an embodiment which the invention may assume, and in this drawing:

Figure 1 is a top plan view of a roller skate, illustrating an embodiment of the invention, a shoe being shown in dotted outline,

Figure 2 is a side elevational view of Figure 1, showing the shoe attached to the skate, the shoe being fragmentarily shown,

Figure 3 is an enlarged fragmentary bottom plan view illustrating the embodiment of the invention, and

Figure 4 is a vertical sectional view corresponding generally to the line 4—4 of Figure 3.

The embodiment of the invention is herein shown as particularly adapted for use with the shoe engaging portion of a skate, such as the roller skate 10 shown in the drawing. However, it is to be understood that the invention is not limited to skate constructions, but is equally suitable for cooperation with the shoe engaging portion of other locomotion devices which are adapted to be secured to a shoe or the like. Referring to the particular locomotion device illustrated in the drawing, the roller skate 10 comprises a shoe plate 11, and wheels 12 rotatable on axles 13 carried by struts 14 secured to the shoe plate 11.

One end of the shoe plate 11 is preferably provided with means for holding the heel portion of the shoe to the shoe plate. In the construction illustrated, the shoe plate 11 is formed with a heel cup 15 for receiving the heel portion 16 of the shoe 17, a strap 18 extending through slots in the heel cup 15 and being adapted to firmly overlie the adjacent part of the shoe, thus holding this part of the shoe to the shoe plate 11.

The opposite end of the shoe plate 11 is formed with holding means so constructed and arranged as to engage opposite side portions of the shoe and hold the shoe against sidewise movement, and also to overlie the shoe to hold the shoe against movement away from the shoe plate 11. As herein shown, the holding means comprises a pair of transversely extending jaw means 19, each having a portion movable toward or away from the adjacent side surface of the shoe plate 11. The jaw means are preferably in the form

of a pair of similar arcuate shaped arms 20 and 21, the inner ends of the arms being pivoted together, as by means of a rivet 22 extending through apertures in the ends of the arms 20 and through a longitudinally arranged slot 23 formed in the shoe plate 11. The rivet 22 is preferably headed over the undersurface of the lower arm 20 and the upper surface of the shoe plate 11. As best seen in Figures 3 and 4, the arm 20, at its pivot end, is formed with an offset 24 so as to permit the greater portion of the arm 20 to closely underlie the shoe plate 11 while at the same time permitting swinging movement of both arms 20 and 21. The shoe plate 11 is preferably formed with ribs 25 disposed on opposite sides of the slot 23, so that when the shoe 17 is positioned on the shoe plate 11, the undersurface of the shoe sole will bear on the ridges of the ribs 25, thus providing a space for the free sliding movement of the upper headed portion of the rivet 22.

Opposite side surfaces of the shoe plate 11 are formed with means for guiding the arms 20 and 21, and as shown in this embodiment, the guiding means comprises ears 26 extending downwardly from the shoe plate 11, and preferably formed integral therewith. Each ear 26 is formed with a slot 27 of a size to freely and slidably pass the outer end of a respective arm. The outer extremity of each arm 20 and 21 is formed with an upwardly extending angular part 28, preferably of such length so as to extend above the sole of the toe portion of the shoe 17, as best shown by the dotted lines in Figure 2.

Straps 29 and 30 are secured to the angular parts 28, in any suitable manner, as by means of rivets 31. Each rivet 31 has a head 32 received within a countersunk aperture formed in the respective angular part 28, the shank of the rivet being headed over the adjacent portion of the strap. The straps are adapted to be adjustably connected, as for instance by means of the buckle arrangement 33 herein shown.

To secure the skate 10 to the shoe of a user, the user spreads apart the angular parts 28 of the holding means so as to permit the shoe sole to be freely placed in position overlying the shoe plate. The angular parts may be so moved, either by moving the rivet 22 rearwardly in the slot 23, or by moving one of the angular parts 28 from the adjacent side surface of the shoe plate 11, it being understood that movement of one of the angular parts 28 will cause corresponding movement of the other angular part. The shoe is then positioned on the shoe plate, with the heel

portion 16 fitting within the heel cup 15, and the strap 18 is tightened about the instep of the shoe 17. The straps 29 and 30 are then connected, as, in this embodiment, by threading the free end of the strap 29 through the buckle arrangement 33 formed on the strap 30, and the straps are tightened about the vamp or upper toe portion of the shoe 17. Such tightening action of the straps causes the toe portion of the shoe to be pressed into engagement with the adjacent portion of the shoe plate 11, the straps simultaneously exerting a pull on the angular parts 28, so as to move these angular parts into engagement with opposite sides of the shoe, to hold the shoe against movement sidewise of the shoe plate 11.

Thus the shoe is not only held to the shoe plate 11, but is also properly positioned with respect to the shoe plate, since the angular parts 28 are connected to move simultaneously and correspondingly with respect to each other. If desired, the angular parts 28 and those portions of the straps 29 and 30 which overlie the shoe may be lined with a yieldable non-marring material, such as felt or the like, shown by the dotted lines 34 in Figure 4.

The holding means provided by this invention securely holds a shoe to the shoe engaging portion of a locomotion device, without causing injury to the sole or other parts of the shoe as is true of prior art devices. Also, since the straps 29 and 30 need only to be connected and adjusted to secure the shoe to the shoe plate 11, such securement can be effected in a relatively short time, and the shoe can be tightly secured to the shoe plate 11 without danger of stripping threads or breaking other parts of the holding means.

From the foregoing it will be apparent to those skilled in the art that we have accomplished at least the principal object of our invention, and it also will be apparent to those skilled in the art that the embodiment herein described may be variously changed and modified, without departing from the spirit of the invention, and that the invention is capable of uses and has advantages not herein specifically described; hence it will be appreciated that the herein disclosed embodiment is illustrative only, and that our invention is not limited thereto.

We claim:

1. A locomotion device, comprising, a portion constructed to be engaged by the tread face of a part of the foot or footwear of the wearer, a pair of jaw means constructed to be engaged against the opposite sides of said part, means mounting said jaw means with said portion and connecting said jaw means, so constructed and arranged that

both of said jaw means must move toward engagement with said opposite sides simultaneously, and holding means extending between said jaws means, over said part, constructed and arranged both to press said part firmly against said portion and to hold said jaw means firmly engaged against said opposite sides.

2. A locomotion device, comprising, a portion constructed to be engaged by the tread face of a part of the foot or footwear of the wearer, a pair of jaw means constructed to be engaged against the opposite sides of said part, means mounting said jaw means with said portion and connecting said jaw means, so constructed and arranged that both of said jaw means are freely and simultaneously movable toward or away from engagement with said opposite sides, and a pair of strap means, respectively connected to said jaw means, and including means for connecting said strap means together to form a band extending between said jaw means, over said part, and constructed and arranged both to press said part firmly against said portion and to hold said jaw means firmly engaged against said opposite sides.

3. A locomotion device, comprising: plate means, constructed to be engaged by the tread face of a part of the foot or footwear of the wearer, said plate means having an elongated slot; a pair of jaw means, constructed to be engaged against the opposite sides of said part; means mounting said jaw means with said plate means and connecting said jaw means, so constructed and arranged that both of said jaw means are simultaneously movable toward or away from engagement with said opposite sides, and including pin means pivotally connecting said jaw means and confined to movement longitudinally of said elongated slot, said pin means having a headed extremity slidably engageable with that surface of said plate means which is engaged by said part, so as to prevent displacement of said pin means, and said headed extremity and said surface being so constructed and arranged that said headed extremity is held out of such engagement with said part as would interfere with movement of said pin means; and a pair of strap means, respectively connected to said jaw means, including means for adjustably connecting said strap means together to form a band extending between said jaw means over said part, and constructed and arranged both to press said part firmly against said plate means and to hold said jaw means firmly engaged against said opposite sides.

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