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(54) Sports shoe

(57) A sports shoe of the type constituted by a shell (4) to which a cuff is articulated and on which there is a longitudinal opening that forms a first flap and a second flap, between which a tongue (10) is associated. The tongue (10) has a pin (14) that slidingly interacts with a slit (16) provided laterally on the shell. The interaction between the pin (14) and the slit (16) allows to achieve a guided movement of the tongue, ensuring optimum stability to the sports shoe.

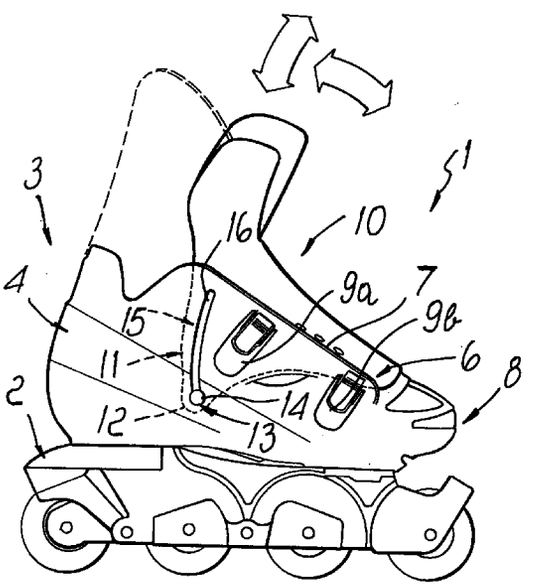

Fig. 1

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Description

The present invention relates to a sports shoe, such as for use, for example, in roller skates, ice skates, ski boots, and snowboard boots.

Conventional sports shoes are constituted by a shell made of plastic to which a cuff is articulated and on which there is a longitudinal opening that forms a first flap and a second flap, between which a soft tongue is associated.

This tongue, enables the foot to insert in the shoe more easily and to adapt the shoe to the shape of the tibia and instep of the user's foot. The tongue is generally associated, at one end, with the front of the shell of the shoe so as to allow to lift it and thus allow to insert the foot.

This conventional tongue, however, has drawbacks; although on one hand the mobility to which it must be subjected allows to insert and remove the foot and to perform the task of following tibial movements, facilitating the user's maneuvering of the skate, on the other hand this mobility can make the tongue assume positions that are incorrect and harmful both from an anatomical point of view and from a functional point of view.

Indeed, it has been observed that when the sports shoe is used by an unexperienced user, the tongue is caused to assume incorrect positions while inserting the foot, because it becomes jammed outside the flaps of the cuff and/or of the shell. This causes physical pain to the user during and after sports practice and negatively affects control of the sports implement associated with the shoe.

The aim of the present invention is therefore to solve the above mentioned drawbacks, providing a tongue that while adapting to the shape of the tibia and instep of the user, following them in their movements, cannot assume incorrect or harmful positions.

Within the scope of this aim, an object is to provide a tongue that can always be positioned correctly with respect to the shell and/or the cuff regardless of the care taken by the user while inserting the foot.

Another important object is to provide a tongue that eases the insertion of the foot.

Another important object is to provide a tongue that allows a safer sports practice by an optimum adaptation of the tongue to the tibia and to the foot instep, to correctly transmit to the sports implement the movements imparted by the user.

Another object is to provide a tongue that is obtained with low manufacturing costs and may be produced with conventional machines and apparatus.

This aim, these objects, and others which will become apparent hereinafter are achieved by a sports shoe as claimed in the appended claims.

Further chacteristics and advantages of the invention will become apparent from the reading of a detailed description of a preferred but not exclusive embodiment, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Fig. 1 is a side view of a skate with which a tongue is associated, in the lowered position, according to the invention;

Fig. 2 is a view of Figure 1, with the tongue in the raised position to allow the insertion of the foot.

With reference to the above figures, reference numeral 1 designates a skate with in-line wheels constituted by a frame 2, for the connection of the wheels, above which a shoe 3 is associated.

The shoe 3 is constituted by a shell 4 with which a cuff, not shown, is associated.

The shell 4 has a longitudinal upper opening 6 that forms a first flap and a second flap, both of which are designated by the reference numeral 7; these flaps affect the foot instep region up to the vicinity of the tip region 8 of the shoe 3.

Conventional fastening devices 9a and 9b, such as levers and toothed straps are associated with the first and second flaps 7 to allow to close the shoe 3 as a consequence of the mutual approach of the first and second flaps 7.

The longitudinal upper opening 6 is the seat of a tongue 10 that is preferably symmetrical with respect to a median plane that lies longitudinally to shoe 3, which is associated with shell 4 proximate to tip region 8.

Tongue 10 has two side wings 11 that extend inside shell 4 up to the vicinity of the malleolar region.

Each one of wings 11 has a substantially triangular shape, with one corner 12 directed toward the ground.

Each corner 12 of each one of wings 11 has engagement means 13 preferably constituted by a pin 14 that is mushroom-shaped and has a stem that is associated at right angles with respect to the pair of wings 11 and from which a head protrudes which has a circular plan shape and has a diameter that is greater than the width of the stem.

First engagement devices 13 slidingly interact with a guiding means 15 formed laterally on shell 4.

A guiding means 15 is constituted by a slit 16 that is curved and substantially traces a circular arc whose convexity is directed toward the tip region 8 of shoe 2. Slit 16 is essentially interposed between the base of the shoe, which is blended with the frame, and first and second flaps 7.

Slit 16 has such a width as to allow the sliding therein of the stem of pin 14. Slit 16 downwardly has a hole 17 that is suitable to allow the insertion of the head of pin 14 during the assembly of the various components.

The use of the shoe is as follows: tongue 10 is positioned so that the pin is at hole 17, and the pin is inserted therein. Then, in order to put the shoe on, one lifts tongue 10, which performs a guided movement because the stem of pin 14 can slide in slit 16. Then one inserts the foot in the shoe and lowers tongue 10, which returns to a position that is proximate to the initial one, due to the presence of the foot, and is always guided in

its movement by pin 14.

It has been seen in practice that the tongue thus conceived achieves the intended aim and objects, since it is adaptable to the shape of the tibia and of the foot instep, following them in their movements. It has also been observed that the positions that can be assumed by the tongue before, during, or after foot insertion are extremely correct and can be reached independently without the intervention of the user, so as to allow, optimum transfer of the movements imparted by the user during sports practice,.

The materials of which the parts of the tongue are made, as well as the dimensions of the individual components thereof, can of course vary as a function of different requirements.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

Claims

1. A sport shoe comprising a shell (4) and having a longitudinal opening (6) that forms a first flap and a second flap (7), a tongue (10) associated, between said flaps; characterized in that said tongue comprises an engagement means (13) that slidingly interact with a guiding means (16) provided laterally on said shell.

2. The sports shoe according to claim 1, characterized in that said tongue has two lateral wings (11) that extend inside said shell up to the vicinity of the malleolar region, each one of said wings having a substantially triangular shape with one corner (12) directed toward the ground.

3. The sports shoe according to claim 2, characterized in that said engagement means, is constituted by a pin (14), associated with said corner (12) of each one of said wings (11).

4. The sports shoe according to claim 3, characterized in that said pin has a mushroom-like shape and comprises a stem that is associated at right angles with respect to each one of said wings and from which a head protrudes, said head having a circular plan shape and having a diameter that is larger than the width of said stem.

5. The sports shoe according to claim 4, characterized in that said guiding means is constituted by a curved slit (16) forming an arc of a circle having a concavity directed toward the tip (8) of said shoe, said slit being essentially interposed between the base of said shoe and said first or second flaps.

6. The sports shoe according to claim 5, characterized in that said slit has such a width as to allow the sliding therein of said stem of said pin, said slit having, a hole (17) that is suitable to allow the insertion of said head of said pin.

7. The sports shoe according to one or more of the preceding claims, characterized in that said guiding means is formed laterally on said tongue and said engagement means is associated with said shell.

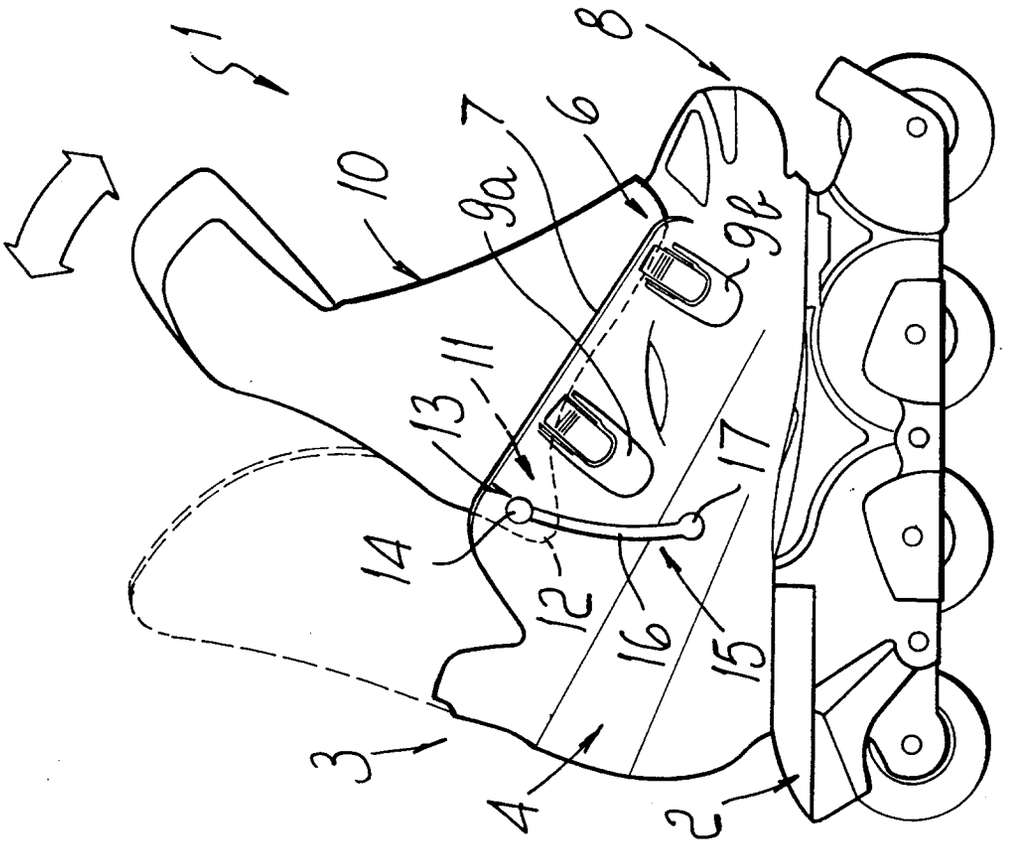
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Fig. 2

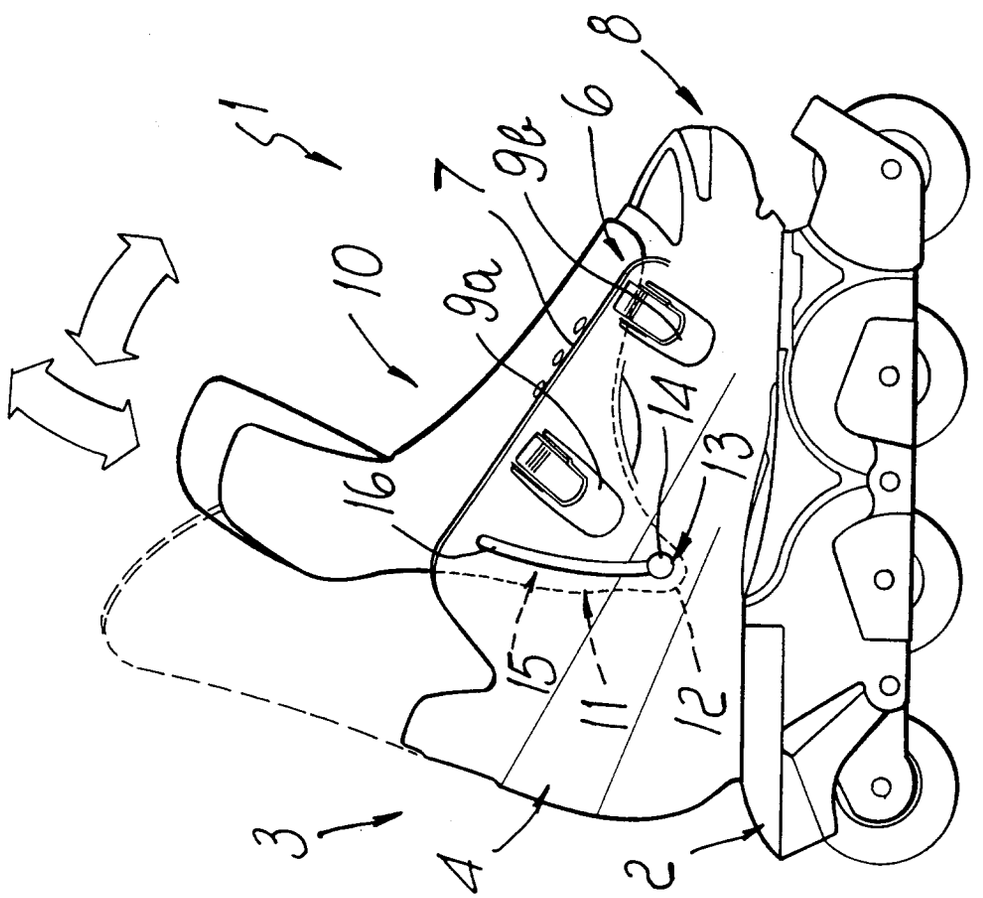
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Fig. 1