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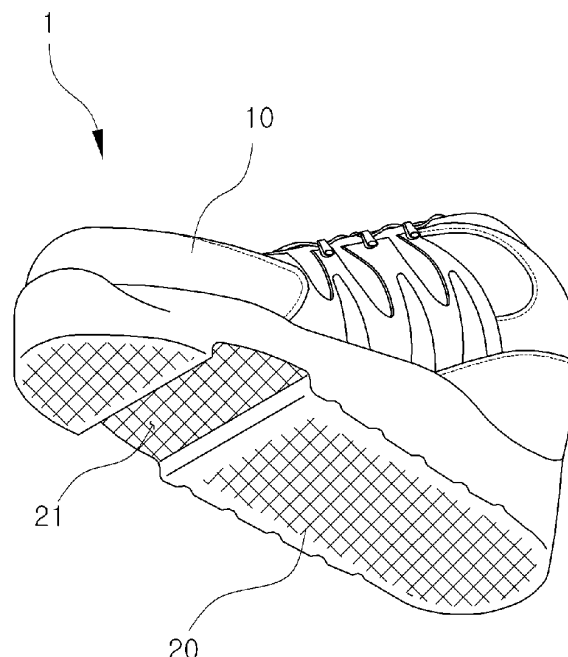
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(54) **SHOE FOR BICYCLE**

(57) The present invention relates to a shoe for a bicycle wherein a shoe can be easily coupled to a bicycle pedal and can be conveniently separated from the pedal even without the installation of a toe clip for enabling a shoe to be inserted into a bicycle pedal. The shoe for a bicycle is formed in such a way that the front portion of a sole provided beneath a main body of a shoe is high

and the back portion gradually becomes lower than the front portion, and a coupling groove is formed beneath the front portion of the sole so as to allow a pedal to be coupled or separated. Even if a toe clip for enabling a shoe to be inserted into a bicycle pedal is not installed, a shoe can be easily coupled to a bicycle pedal and can be conveniently separated from the pedal.

[Fig. 1]



Description

[0001] The present invention relates to a shoe for a bicycle, and in particular to a shoe for a bicycle which can be easily engaged to a bicycle pedal without installing a toe clip helping insert a shoe to a bicycle pedal and which makes it possible to separate a shoe from a pedal.

Background Art

[0002] A mania for enjoying a bicycle tends to install a toe clip or something at a bicycle pedal when in use.

[0003] When using the above-mentioned toe clip, a shoe does not slip on a pedal, so a force can be efficiently transferred.

[0004] As a mania for enjoying a MTB increases in the recent years, a shoe for MTB attracts a big attention. Since the shoe for the MTB is generally made from a high elastic carbon which is one of advanced materials, it is light and does not scratch well. An aluminum dual buckle engaged at an ankle and the top of a foot is very strong, so it is very effective to prevent injuries, and since its outer skin feels smooth, a convenient activity is guaranteed. The inner side is antibacterial-processed, so bad smells due to sweat can be prevented from coming from feet.

[0005] The mania for bicycles gradually increases, with the aid of which shoes and toe clips or something among accessories needed in a bicycle are a lot preferred.

[0006] In case of the above-mentioned toe clip, a beginner and a mania might be in danger now what when a bicycle stops, the shoes still remain caught by the toe clips, not escaping from the toe clips, so the rider might be stumbled and fall down along with the bicycle, consequently causing accidents.

[0007] In other words, a plurality of protrusions are formed on the pedals on which the shoes are put, for the purpose of preventing slips, and pluralities of protrusions and grooves are formed on the underneath of the shoes. In a state that the toe clips are installed at the pedals, the toe clips are installed so that the shoes are prevented from slipping or separating, whereby it is very hard to separate the shoes from the pedals with the top clips being installed thereat.

[0008] Namely, the shoes could not escape from the pedals by means of a plurality of protrusions formed at the pedals, pluralities of protrusions and grooves formed on the underneath of the shoes and the toe clips engaged to the pedals, thus causing accidents.

[0009] As mentioned above, since the use of the toe clip is inconvenient, and accidents frequently occur, a cleat pedal is alternatively used in the recent years.

[0010] When a cleat pedal is installed and used, it is needed to use exclusive shoes or shoes well fitting the cleat pedals.

[0011] Since a bicycle rider needs to purchase shoes each having separate parts installed on the underneath of the shoes for fitting the cleat pedals, the purchase of

the cleat pedals and shoes costs a lot.

[0012] In case of using the cleat pedals, it is very inconvenient to walk when a rider gets off the bicycle on account of the parts installed on the underneath of the shoes.

[0013] The riders of the bicycles therefore should carry ordinary shoes, which cause many inconveniences.

[0014] When the parts installed on the underneath of the shoes are damaged, it is impossible to use the cleat pedals unless another shoes are purchased.

Disclosure of Invention

[0015] Accordingly, the present invention is made to resolve the above-mentioned problems. It is an object of the present invention to provide a shoe for a bicycle which can be used as a shoe for a bicycle when using a bicycle, and which can be used as an ordinary shoe at the usual time.

[0016] It is another object of the present invention to provide a shoe for a bicycle which can obtain the same operations as using the cleat pedals and the toe clips without installing additional parts such as cleat pedals or toe clips.

[0017] To achieve the above objects, there is provided a shoe for a bicycle, comprising a shoe sole which is installed at an underneath of a shoe body with the front side of the shoe sole being higher, and the rear side of the shoe sole being gradually lowered than the front side of the shoe sole; and an engaging groove which is formed at a front lower side of the shoe sole, the pedal of the bicycle being engaged to and disengaged from the engaging groove.

[0018] In addition, the engaging groove is formed at a 2/4 portion from the front side of the shoe for the purpose of transferring force thereto by means of the front side of the foot sole.

[0019] In addition, there is provided a shoe for a bicycle formed of a shoe body, and a shoe sole engaged to an underneath of the shoe body, which comprises an engaging groove which is formed at a shoe sole for an engagement with a pedal of a bicycle.

[0020] In a shoe for a bicycle formed of a shoe body, and a shoe sole engaged to an underneath of the shoe body, at a shoe sole is formed of an engaging groove one surface of which is slanted in such a way that the height of one side coming into contact with the surface of the pedal is higher, and the height of the other side is lower for the purpose of ensuring the force can be reliably transferred when engaging with the bicycle pedal.

Advantageous effects

[0021] The present invention is directed to a shoe for a bicycle which can be easily engaged to a bicycle pedal without installing a toe clip helping insert a shoe to a bicycle pedal and which makes it possible to separate a shoe from a pedal.

[0022] In addition, the present invention is directed to facilitating a more convenient use of the bicycle now that the present invention can obtain the same operations as using the cleat pedals and the toe clips without installing additional parts such as cleat pedals or toe clips.

[0023] In addition, the present invention is directed to saving costs now that it does not need to purchase additionally toe clips or cleat pedals except for the already existing pedals like the conventional art for the purpose of transferring strong force to the pedals, and it does not need to purchase the exclusive shoes well fitting the cleat pedals.

Brief Description of Drawings

[0024] Figure 1 is a perspective view illustrating a shoe for a bicycle according to the present invention.

[0025] Figure 2 is a cross sectional view illustrating the construction of Figure 1.

[0026] Figure 3 is a side view of another embodiment of Figure 1.

[0027] Figure 4 is a view of a use state that a shoe for a bicycle is used according to the present invention. Modes for carrying out the invention

[0028] The construction of the shoe for a bicycle according to the present invention will be described in details with reference to the accompanying drawings.

[0029] Figure 1 is a perspective view illustrating a shoe for a bicycle according to the present invention, and Figure 2 is a cross sectional view illustrating the construction of Figure 1, and Figure 3 is a view of a use state that a shoe for a bicycle according to the present invention is used.

[0030] As shown in Figures 1 to 3, the shoe for a bicycle according to the present invention is characterized in that a shoe 1 comprises a shoe body 10 and a shoe sole 20.

[0031] The shoe body 10 is of a conventionally known structure, so the detailed description thereof will be omitted. At the underneath of the known shoe body 10 is attached a shoe sole 20.

[0032] As shown in the drawings, the shoe sole 20 is configured in such a way that a heel portion "b" is formed lower, and the height gradually increases toward the front side of the shoe body 10.

[0033] An engaging groove 21 is formed at a lower front side of the shoe sole 20 for the purpose of facilitating an easier engaging and disengaging from the bicycle pedal, the heights of the front side "a" and the rear side "b" being different at the above mentioned lower front side of the shoe sole 20.

[0034] The engaging groove 21 is characterized to be formed at a 2/4 portion from the front side of the shoe 1 for the purpose of transferring force by means of the front side of the foot.

[0035] The engaging groove 21 is not limitedly formed only at about 2/4 portion from the shoe 1 as mentioned above, and its formation position might change a little depending on the size of the shoe 1.

[0036] In case of the shoe 1 which is generally used by a disabled person who has a deformation in the shape of the foot, the engaging groove 21 is not formed at a 2/4 portion from the shoe. In this case, the formation position might change depending on the shape of the user's foot.

[0037] The engaging groove 21 formed at the shoe sole 20 facilitating an easier engaging and disengaging from the bicycle pedal is not applied only to the shoe 1 in which the heights of the front side "a" and the rear side "b" are different, in other words, the engaging groove 21 might be formed at the shoe sole 20 in which the heights of the front side "a" and the rear side "b" are same.

[0038] As shown in Figure 3, it is characterized in that at the shoe sole 20 is formed an engaging groove 21 one side of which is slanted now that the height of one side "c" coming into contact with the surface of the pedal is lower, and the height of the other side "d" is higher for the purpose of ensuring that the transfer of the force when being engaged with the bicycle pedal can be reliably performed.

[0039] The operation of the shoe for a bicycle with the above constructions according to the present invention will be described as follows.

[0040] Now that the manufacture procedures of the shoe for a bicycle according to the present invention is same as the conventional manufacture procedure of the shoes, the descriptions thereof will be omitted.

[0041] When the user wears the shoe 1 of the present invention and rides on the bicycle and puts the shoe 1 on the pedal, the pedal is inserted into the inner side of the engaging groove 21 since the size of the engaging groove 21 formed at the shoe soles 20 is a little larger than the size of the pedal.

[0042] When the user steps on the pedal with the pedal being inserted into the inner side of the engaging groove 21 formed at the shoe soles 20, the stepping-on force is focused at about 2/4 portion from the front side of the foot.

[0043] As the force is focused at the above portion in the above manner, the force is transferred to the pedal engaged to the engaging groove 21.

[0044] As shown in Figure 3, since the engaging groove 21 is formed slanted, the force generating when the pedals are stepped on can be reliably transferred, and at the same time the pedals can be prevented from escaping from the engaging grooves.

[0045] As the force is applied toward the upper side of the pedal and is applied in the direction that the pedal rotates, a large torque is transferred to the rear wheel connected by way of the chain, so the bicycle can run forward.

[0046] When the user separates the feet from the pedals at the time the user stops the bicycle in order to get off the bicycle, the pedals can easily escape from the engaging grooves 21 formed at the shoe soles 20.

[0047] Since the pedals do not escape from the engaging grooves 21 formed at the shoe soles 20, in other words, since there is not anything connected with the pedals, and it is formed in an upside down cup shape,

the shoe soles 20 can be separated not interfering with a plurality of the protrusions formed at the pedals, so the shoes can be easily separated from the pedals, which consequently resolves the problems encountered in the conventional art in which the user used to have injuries since the shoes are not properly separated from the pedals.

[0048] The present invention is characterized in that it does not need to additionally purchase a toe clip or a cleat pedal except for the existing pedals like the conventional art in an attempt to transfer strong force to the pedals, and it does not need to purchase exclusive shoes for cleat pedals in the present invention.

[0049] The present invention is characterized in that since the shoes for a bicycle of the present invention can be used as sneakers at the usual time when the user gets off for a moment the bicycle in the middle of riding the bicycle, there is not any inconvenience in wearing the shoes.

[0050] Since the shoe soles 20 are formed with their heights being different, the user might have exercising effects like climbing up mountains even at the usual time.

[0051] As the present invention may be embodied in several forms without departing from the spirit or essential characteristics thereof, it should also be understood that the above-described examples are not limited by any of the details of the foregoing description, unless otherwise specified, but rather should be construed broadly within its spirit and scope as defined in the appended claims, and therefore all changes and modifications that fall within the meets and bounds of the claims, or equivalences of such meets and bounds are therefore intended to be embraced by the appended claims.

Claims

1. A shoe for a bicycle, comprising:

a shoe sole which is installed at an underneath of a shoe body with the front side of the shoe sole being higher, and the rear side of the shoe sole being gradually lowered than the front side of the shoe sole; and an engaging groove which is formed at a front lower side of the shoe sole, the pedal of the bicycle being engaged to and disengaged from the engaging groove.

2. A shoe for a bicycle according to claim 1, wherein said engaging groove is formed at a 2/4 portion from the front side of the shoe for the purpose of transferring force thereto by means of the front side of the foot sole.

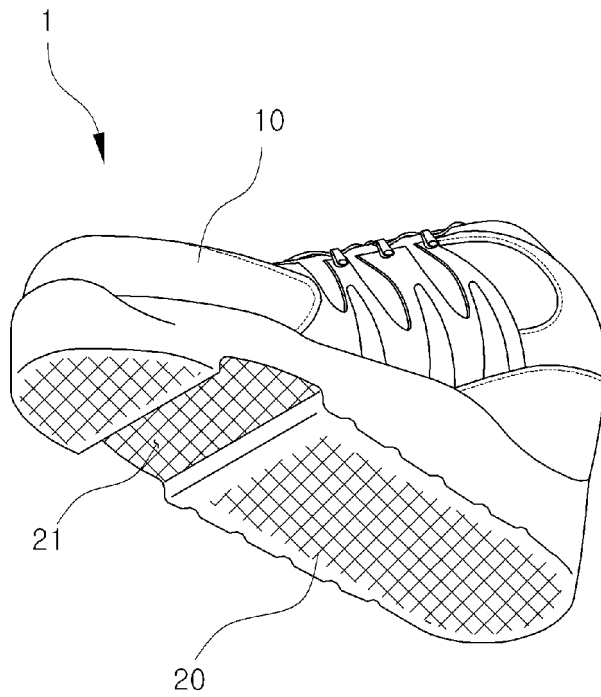
3. A shoe for a bicycle according to claim 1, wherein said engaging groove is formed at a 2/4 portion from the front side of the shoe for the purpose of transfer-

ring force thereto by means of the front side of the foot sole.

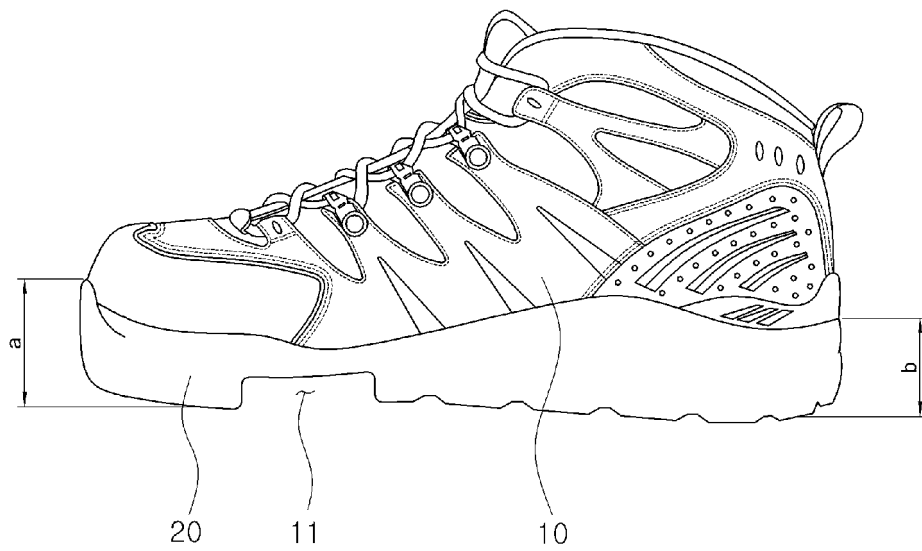
4. A shoe for a bicycle formed of a shoe body, and a shoe sole engaged to an underneath of the shoe body, comprising; an engaging groove which is formed at a shoe sole for an engagement with a pedal of a bicycle.

5. A shoe for a bicycle formed of a shoe body, and a shoe sole engaged to an underneath of the shoe body, comprising; an engaging groove formed at the shoe sole in such a way that the height of one side "c" coming into contact with the surface of a pedal is lower, and the other side "d" is higher, so one side of the engaging groove is slanted, for the purpose of ensuring that force when being engaged with the pedal of the bicycle can be reliably transferred.

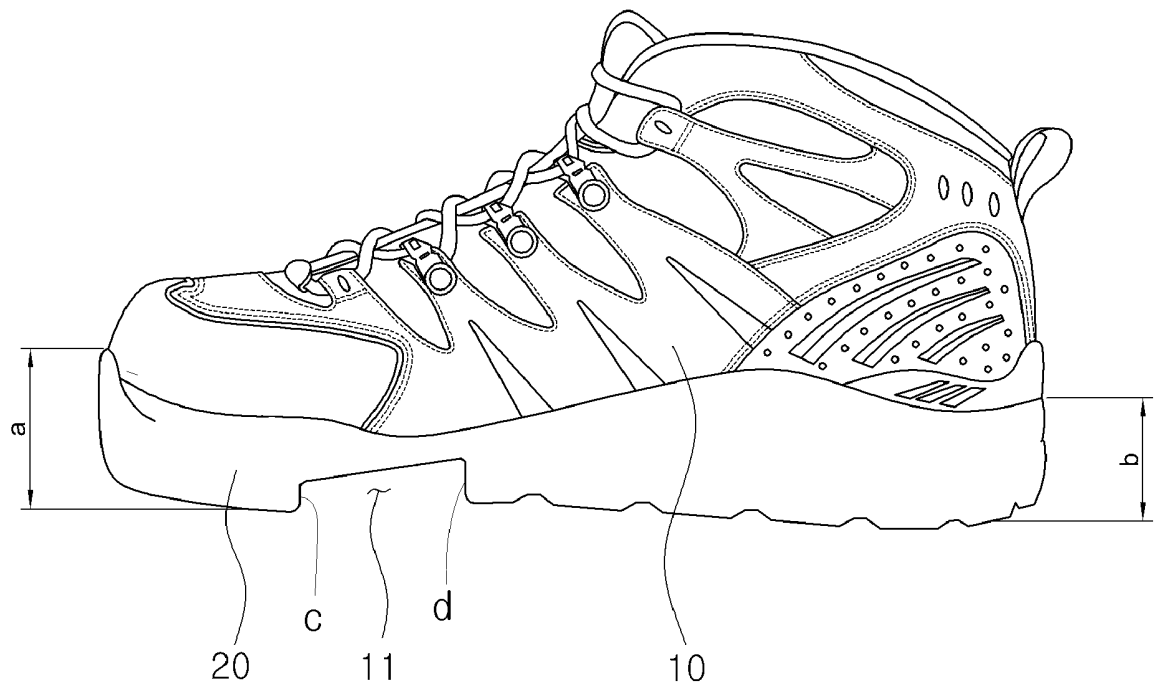
[Fig. 1]



[Fig. 2]



[Fig. 3]



[Fig. 4]

