A roller skate with a detachable boot includes a truck, a seat having a plate and a back, a boot, a retaining ear and a nut both securely mounted on a sole of the boot, a slot and a key hole both defined in a plate of the seat, and a connecting piece securely formed on the plate having an ear extending through the slot. By abutting the nut and the key hole together with a threading connection of the ears and the retaining ear using a screw, the boot is able to be securely engaged on the seat and is detachable from the seat, such that replacement and easy cleaning of the boot is possible.
ROLLER SKATE WITH A DETACHABLE BOOT

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a roller skate, and more particularly to a roller skate with a detachable boot, wherein the boot is detachable from the roller skate for cleaning and replacement.

[0003] 2. Description of Related Art

[0004] Roller skating has been popular for many years, and is becoming increasingly popular due to new styles and techniques. A conventional roller skate includes a boot and a truck supporting the boot. The boot and the truck are securely and integrally formed together so the boot and the truck are undetachable.

[0005] However, shortcomings of the conventional roller skate are as following:

[0006] 1. Cleaning of the boot is not convenient. The boot may need cleaning after long-term use, but the boot and the truck are integrally formed such that cleaning, especially of cleaning inside the boot, is not easy.

[0007] 2. Need of replacement is not satisfied. A user may want to change the boot only and not the entire roller skate due to following reasons:

[0008] I. A size of a growing child’s foot may change considerably and thus the boot will quickly become too small. To purchase a new roller skate is quite wasteful because remaining parts of the roller skate are still useful and only the boot needs to be changed.

[0009] II. The user may wish to change the color and appearance of the boot to meet changes in fashion. Therefore, it is an objective of the invention to provide a roller skate with a detachable boot to mitigate and/or obviate the aforementioned problems.

SUMMARY OF THE INVENTION

[0010] The objective of the present invention is to provide a roller skate with a detachable boot, such that a boot is detachable from the roller skate for cleaning and replacement.

[0011] Other objectives, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] FIG. 1 is an exploded, perspective view of a roller skate with a detachable boot in accordance with the present invention;

[0013] FIG. 2 is a top view of the roller skate before the boot is assembled onto the roller skate;

[0014] FIG. 3 is a cross-sectional view showing a front connection of the boot and the roller skate;

[0015] FIG. 4 is a cross-sectional view showing a rear connection of the boot and the roller skate; and

[0016] FIG. 5 is an exploded, perspective view of another preferred embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0017] With reference to FIGS. 1 and 2, a roller skate in accordance with the present invention includes a truck (10), a seat (20) and a boot (30).

[0018] The truck (10) has multiple wheels and a top to support the seat (20) and the boot (30). The truck (10) is the same as products commonly available and thus further description is omitted.

[0019] The seat (20) includes a plate (200) having a configuration matching a sole (300) of the boot (30). A back (201) is formed along a boundary of a rear part of the plate (200) and extends upwardly to cover an ankle and a heel of the boot (30). The seat (20) is securely mounted on the top of the truck (10) by two connecting bolts (21). Each bolt (21) is located in a distal part of the plate (200) and penetrates through the plate (200) and into the top of the truck (10). An key hole (22) is defined in a front part of the plate (200). The key hole (22) has a wide portion (221) and a narrow portion (222) communicating with the wide portion (221). A slot (23) is defined in a middle part of the plate (200) and a connecting piece (24) is securely formed on a part of the plate (200) defining the slot (23). The connecting piece (24) has two ears (242). Each of the ears (242) has a first through hole (243) defined therein, and each ear (242) extends downwardly through the slot (23) from an opposed lateral side defining the slot (23).

[0020] A nut (31) is securely mounted on a front bottom surface of the sole (300) and is formed by a rod (311) and a flange (312) securely attached together. The flange (312) is so configured that it is able to pass through the wide portion (221) but not the narrow portion (222), and the rod (311) is so configured that it is able to pass through both the wide portion (221) and the narrow portion (222). A retaining ear (32) is securely mounted on a middle bottom surface of the sole (300) and the retaining ear (32) has a configuration which is able to extend through the slot (23). A second through hole (321) is defined in the retaining ear (32). A screw (35) with a male thread and a cover nut (36) with a female thread to mate with the male thread of the screw (35) are used for connecting the seat (20) and the boot (30). The screw (35) also has a configuration to correspond to the first through hole (243) and the second through hole (321).

[0021] With references to FIGS. 3 and 4, when assembling the boot (30) onto the seat (20), the boot (30) is first placed in a position where the flange (312) extends through the wide portion (221) and the retaining ear (32) extends through the slot (23). Then the boot (30) is slid backward to a position in which a periphery defining the narrow portion (222) surrounds the rod (311). The flange (312) which has a configuration that is not able to pass through the narrow portion (222) is stuck to a bottom surface of the plate (200) defining the narrow portion (222) and prevents the boot (30) upwardly detaching from the seat (20). Finally, the screw (35) extends through the first through holes (243) and the second through hole (321) and threadingly engages with the cover nut (36), thus the boot (30) is securely connected to the roller skate.
To detach the boot (30) from the roller skate, the screw (35) is unscrewed from the cover nut (36) and then the screw (35) is separated from the connecting piece (24). Then the boot (30) is pushed in a forward and upward direction to allow the flange (312) to pass through the wide portion (221), whereby the boot (30) is completely detached from the seat (20).

With reference to FIG. 5, another preferred embodiment is shown. The key hole (22) and the nut (31) of the first embodiment are replaced with a connecting piece (52), a slot (51), a retaining ear (41), a screw (53) and a cover nut (54) which function in the same manner as the connecting piece (24), the slot (23), the retaining ear (32), the screw (35) and a cover nut (36). The remainder of the components of the cap are unchanged from the first embodiment.

From the above description, it is noted that the invention has the following advantages:

1. Easy cleaning. The boot is able to be detached from the roller skate for easy cleaning of the boot.

2. Interchangeability. The boot is replaceable which allows boots of different sizes, colors, appearances, and designs to be replaced in order to overcome the changing foot size of a growing child or to satisfy changing desire of a user.

It is to be understood, however, that even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and function of the invention, the disclosure is illustrative only, and changes may be made in detail, especially in matters of shape, size, and arrangement of parts within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A roller skate with a detachable boot comprising: a truck with multiple wheels; a seat securely formed on the truck and having a plate firmly engaged with the truck; a slot defined in the plate; at least one ear extending from a periphery defining the slot and having a first through hole defined therethrough; and a boot having a sole and a retaining ear securely formed on the sole with the retaining ear extendable into the slot and the retaining ear having a second through hole defined to correspond to the first through hole of the ear, whereby allowing a screw to extend through the first through hole and the second through hole and threadingly engages a cover nut, the boot is detachably connected with the plate of the seat.

2. The roller skate with a detachable boot as claimed in claim 1, wherein a key hole having a wide portion and a narrow portion is defined in the plate, and a nut having a flange is formed on the sole, whereby abutting the flange to a part of the plate defining the narrow portion of the key hole, the boot is detachably connected with the plate of the seat.

3. The roller skate with a detachable boot as claimed in claim 2, wherein a back is securely formed on the seat and extends upwardly from the seat to protect an ankle of a user.

4. A roller skate with a detachable boot comprising:

   a truck with multiple wheels;
   a seat securely formed on the truck and having a plate firmly engaged with the truck;
   multiple slots defined in the plate;

   at least one ear extending from each periphery defining the slot and having a first through hole defined therethrough; and

   a boot having a sole and multiple retaining ears securely formed on the sole with the retaining ears each extendable into the slot and each of the retaining ears having a second through hole defined to correspond to the first through hole of the ear, whereby allowing screws to extend through each of the first through holes and the second through holes and threadingly engages a cover nut, the boot is detachably connected with the plate of the seat.

5. The roller skate with a detachable boot as claimed in claim 4, wherein a back is securely formed on the seat and extends upwardly from the seat to protect an ankle of a user.