R. WINEBERG.

TOE OR BOOT CLIP FOR THE PEDALS OF CYCLES AND THE LIKE.

APPLICATION FILED MAR. 15, 1910.

990,090. Patented Apr. 18, 1911.

FIG. 1.

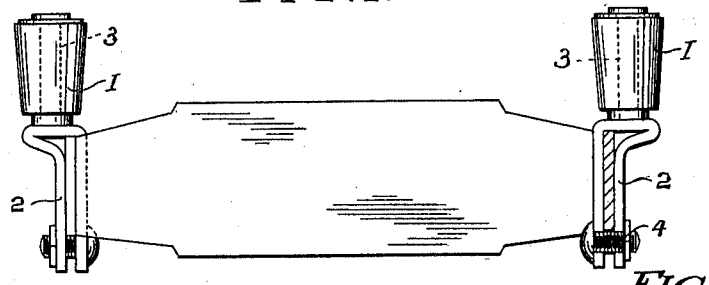


FIG. 2.

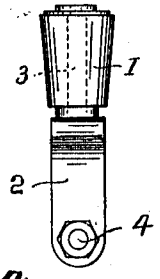


FIG. 3.

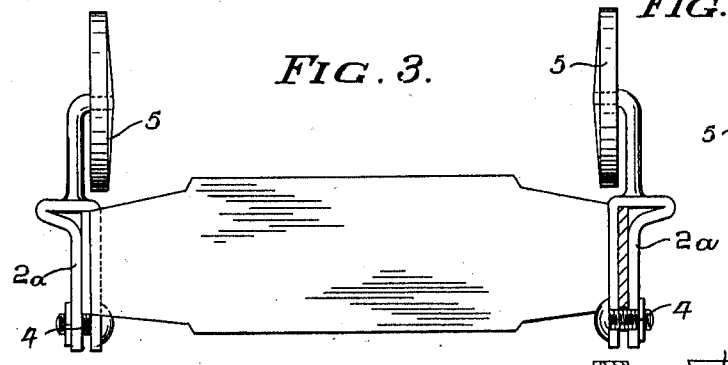


FIG. 4.

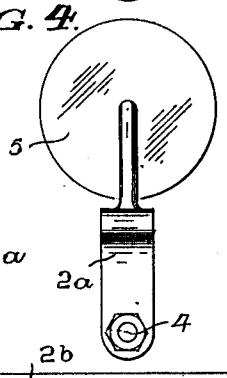
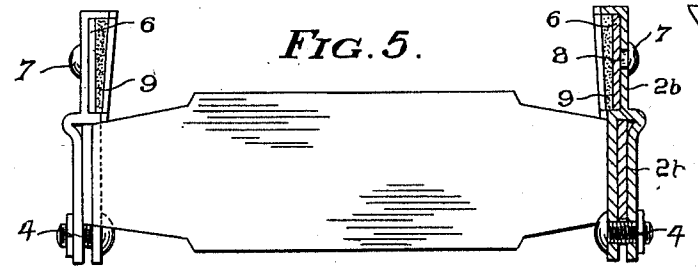


FIG. 5.



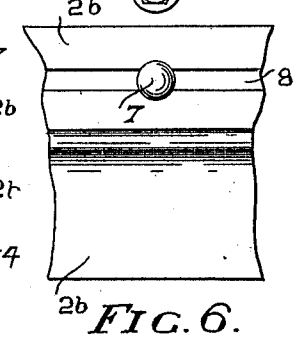


FIG. 6.

FIG. 7.

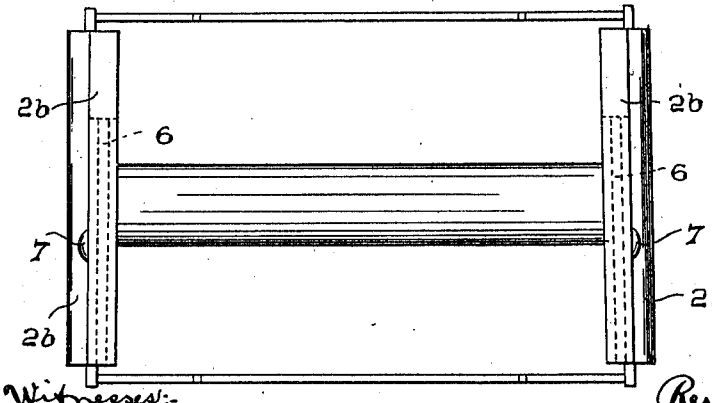
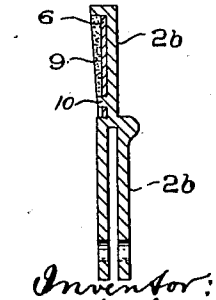


FIG. 8.



Witnesses:-
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UNITED STATES PATENT OFFICE.

REUBEN WINEBERG, OF WALSALL, ENGLAND.

TOE OR BOOT CLIP FOR THE PEDALS OF CYCLES AND THE LIKE.

990,090. Specification of Letters Patent. **Patented Apr. 18, 1911.**

Application filed March 15, 1910. Serial No. 549,460.

To all whom it may concern:

Be it known that I, REUBEN WINEBERG, a subject of the Kingdom of Great Britain, residing at 41 Sutton Crescent, Walsall, in the county of Stafford, England, cycle-maker, have invented certain new and useful Improvements in Toe or Boot Clips for the Pedals of Cycles and the Like, of which the following is a specification.

This invention relates to an improved construction of toe and boot clips.

The object of the present invention is to eliminate the friction of the sole of the rider's foot rubbing against stationary clip members which retards the quick withdrawal of the foot in cases of emergency.

A feature of this invention consists in providing an intermediary member between the leather sole and the stationary clip member which insures that the leather sole shall not be a rubbing surface, but that the rubbing surfaces shall be the surfaces of the intermediary member and the stationary clip member.

A further feature of this invention is present in that, notwithstanding the leather on the rider's foot wedges itself between the inclined clip members, the foot can be quickly withdrawn, the quick withdrawal being effected although the leather binds or clutches on the surface of the intermediary member, as such surfaces are not rubbing surfaces.

The invention is particularly described by reference to the accompanying drawings in which;—

Figure 1 is an elevation, partly sectional, showing the toe clips attached to the pedal side plates although they may be fitted to the front plate if desired. Fig. 2 is a face view of one of the clips separately. Fig. 3 shows the clips in the form of disks. Fig. 4 showing the clip separately. Fig. 5 is a view of the toe clips taking the form of slidable plates. Fig. 6 being a side view and Fig. 7 a plan. Fig. 8 is a modification of that shown in Figs. 5, 6 and 7.

According to this invention with reference to Figs. 1 and 2 there is arranged oppositely at each side of the pedal a sleeve or stud 1 or a roller rotatable around a vertical axis carried on a suitable support or clip bracket fixed to the side plates or front plate. The rotatable sleeves or studs 1 or rollers project upward beyond the top or tread of the pedals and are a convenient distance apart to admit of the rider's boot being gripped when placed between them. The support carrying the said sleeves may preferably be in the form of a lug 2 with an upwardly projecting member or vertical pin 3 on which the sleeves, studs or rollers rotate, the lug or clip bracket 2 being secured to the side plates by pins 4 though I do not limit myself to this particular form, the features of my invention being the rotatable sleeves, studs, rollers or balls in whatever way they may be mounted. The sleeves or studs may be of conical form as shown or other suitable form and made in any suitable material adapted for the purpose. Instead of conical sleeves, the clips may be formed by rotatable balls as will be understood. The rotatable sleeves, studs, rollers or balls serving as runners for the boot constitutes a toe clip and readily assist the forward or backward movement of the boot whereby the latter is quickly clipped or released in case of emergency. Moreover the leather sole of the rider does not rub against the clip but has rolling movement in relation to the rollers 3, the rubbing surfaces being the inner periphery of the rollers and spindle.

Figs. 3 and 4 show a modification in which the rotatable clips may be formed by disks or plates 5 adapted to rotate on a horizontal axis on the lug 2^a. With this construction the clips will rotate in a vertical plane and act as runners for carrying the boot into and out of a clipping position accordingly as it is moved between them.

The sleeves, studs, balls, rollers or disks have the advantage that it is immaterial to what position they have been turned, they are still adapted to receive the foot for carrying it into a clipping position.

Figs. 5, 6 and 7 show a further modification wherein runner or slidable plates 6 serve as the clip for the boot. The said plates are carried by, and slide in, the supporting lugs 2^b, a retaining pin 7 working in the guide slot 8 holding the plates in position therein. The runner plates are downwardly tapered at their sides and this taper may be formed by a layer of canvas, rubber, felt or other material 9 by being thicker at the top than at the bottom or this taper may be formed by the metal itself, the taper preventing the boot leaving the pedals in the upward movement of the latter. The plates are preferably inclined to each other

as shown in Fig. 7 or they may be parallel with each other and adapted to move forward or backward by means of the pin or stud 7 working in the slot 8 so that the boot being placed between them and pushed forward it is gripped by the plates forming the clip, but is released when the boot is drawn backward. This release is readily accomplished when required, so that the plates serve as runners for sliding the boots into a clipping position as heretofore described. In this construction also the leather sole does not rub against the clip, the rubbing surfaces being the adjacent surfaces of the runner plates 6 and supporting lugs 2^b.

In Fig. 8 the plate 6 has a groove whereby it engages with a projection 10 on the lug 2^b, the plate 6 being slidable on the projection 10. The plate 6 may be fitted in other ways which will suit the purpose so long as it is slidable.

What I claim as my invention and desire to secure by Letters Patent is;—

1. In a toe or boot clip, a member disposed on, and projecting above, each side of the cycle pedal, and movable pieces mounted on said members, which movable pieces are moved by the rider's foot when such foot is being positioned on, or being removed from, the pedal, and between which the foot is wedged for the purpose of retaining such foot during propulsion.

2. In a toe or boot clip, a member disposed on, and projecting above, each side of the cycle pedal, and rotatable pieces mounted on said members, which rotatable pieces are moved by the rider's foot when such foot is being positioned on, or being removed from, the pedal, and between which the foot is wedged for the purpose of retaining such foot during propulsion.

3. In a toe or boot clip, clip brackets attached on either side of the cycle pedal, an upwardly projecting member mounted on said clip brackets and a movable member fitted to said upwardly projecting member.

4. In a toe or boot clip, a clip bracket the legs of which pass on either side of the pedal plate, a screw fixing such bracket in position, a spindle projecting upwardly from the clip bracket, and a conical roller mounted on said spindle.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

REUBEN WINEBERG.

Witnesses:
LEWIS W. GOOLD,
ARTHUR H. BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."