H. FRANKENBURG.

TOE CLIP FOR THE PEDALS OF CYCLES AND LIKE VEHICLES.

APPLICATION FILED OCT. 20, 1908.

934,064. Patented Sept. 14, 1909.

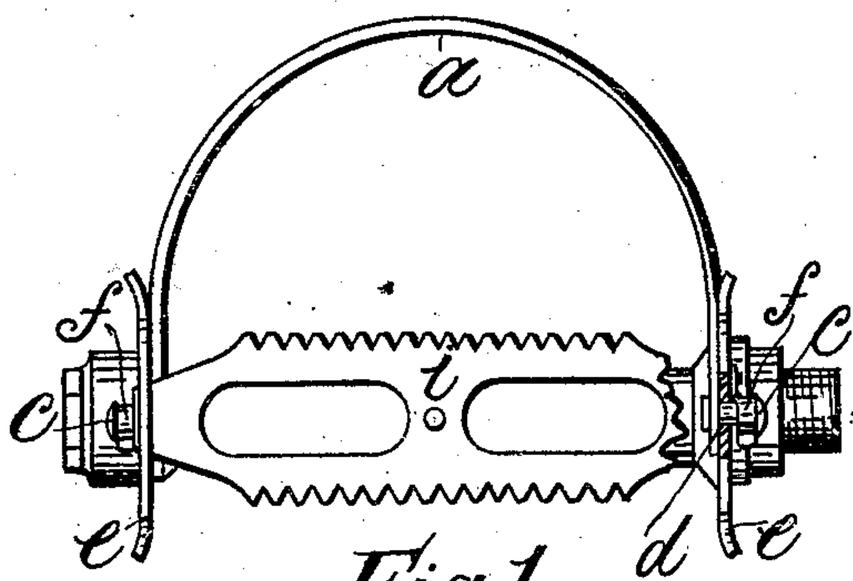


Fig. 1.

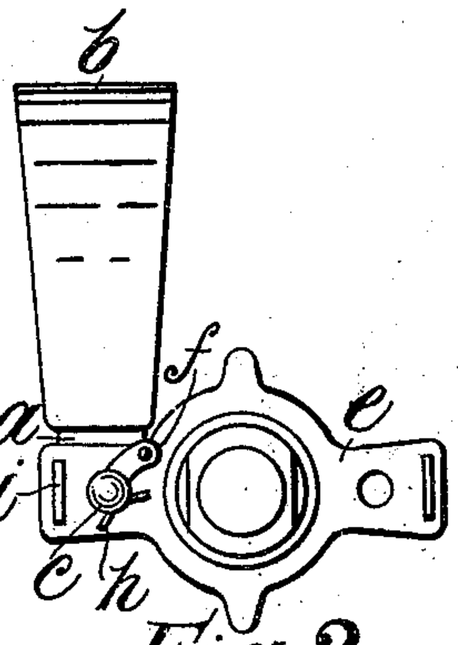


Fig. 2.

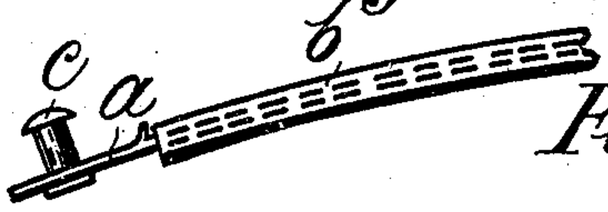
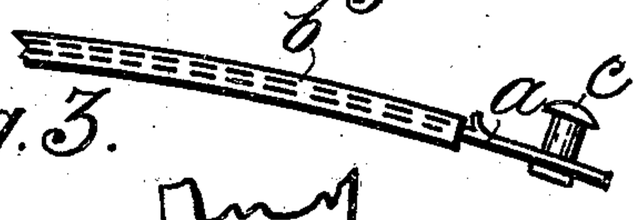


Fig. 3.



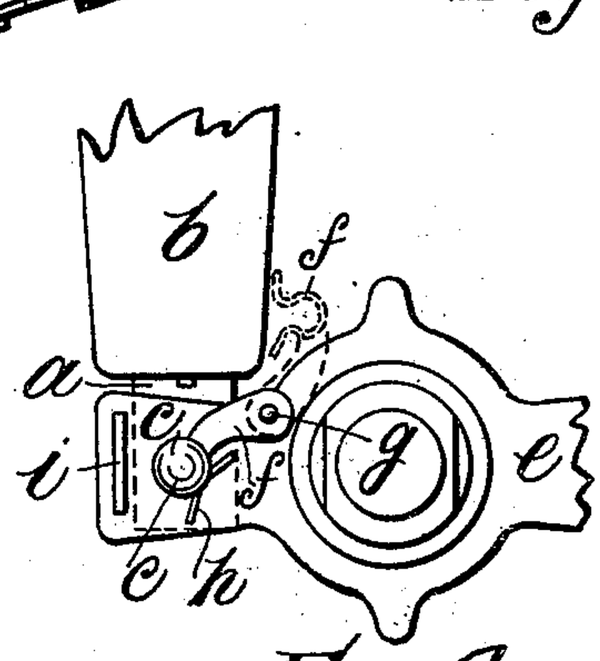


Fig. 4.

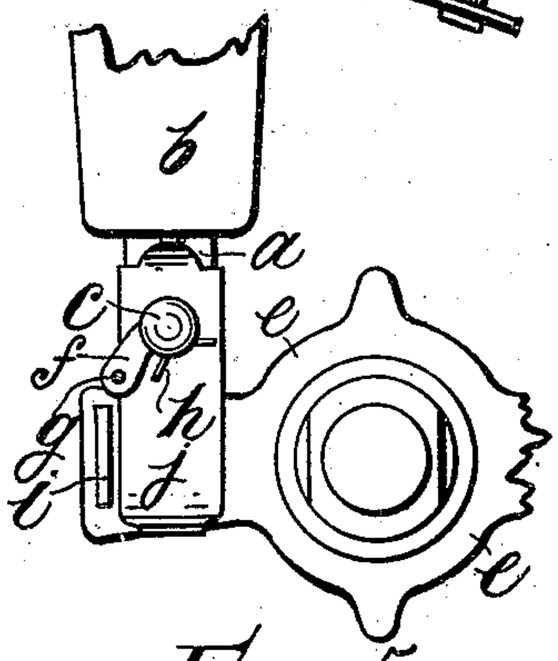


Fig. 5.

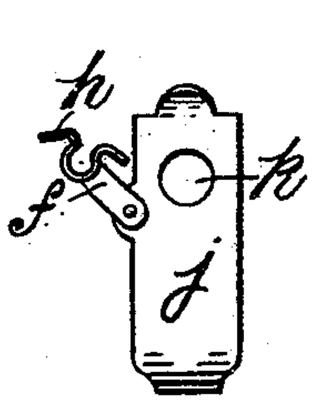


Fig. 6.

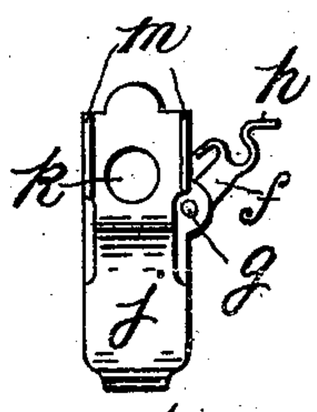


Fig. 7.

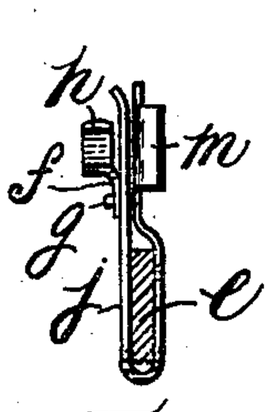


Fig. 8.

Witnesses:
Geo C Fenton
L. B. Middleton

Inventor
Hyman Frankenburg
by Hubert W. Jenner.
Attorney.

UNITED STATES PATENT OFFICE.

HYMAN FRANKENBURG, OF BIRMINGHAM, ENGLAND.

TOE-CLIP FOR THE PEDALS OF CYCLES AND LIKE VEHICLES.

934,064. Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed October 20, 1908. Serial No. 458,657.

To all whom it may concern:

Be it known that I, HYMAN FRANKENBURG, a subject of the King of Great Britain and Ireland, and resident of Birmingham, in the county of Warwick, England, cycle manufacturer and factor, have invented certain new and useful Improvements in Toe-Clips for the Pedals of Cycles and Like Vehicles, of which the following is a specification.

My invention relates to what are known as "toe-clips" for cycles and like vehicles wherein pedals are employed for wholly or partially propelling the machine, the object being to provide a toe-clip of a resilient or spring-like character which can be readily attached to a "rat trap" or other pedal and be as easily removed therefrom, the invention comprising means for locking the toe-clip in position.

My invention consists essentially of a toe-clip comprising a narrow band or ribbon of steel, preferably covered by a sheathing of leather or other suitable material, such ribbon of steel being tempered so that it can be bent into substantially semicircular form to enable its ends to engage with the pedal itself or with attachments secured thereto; locking devices connected to the pedal for securing the toe-clip in position or locking devices carried by brackets or spring clips secured to the pedal.

My invention will be fully described with reference to the accompanying drawings in which,

Figure 1 is a front elevation of a pedal, partly in section, with my improved toe-clip device attached thereto, Fig. 2 elevation from the inner end of the pedal, Fig. 3 front elevation of the toe-clip removed from the pedal and distended, Fig. 4 slightly enlarged and partial end elevation of Fig. 2 showing the spring clip in securing and non-securing position, Fig. 5 similar view to Fig. 4 showing a spring clip secured to the pedal while, Figs. 6, 7 and 8 show, respectively, front elevation, back elevation and end elevation of the spring clip device shown in Fig. 5.

In carrying out my invention I provide a tempered ribbon of steel *a* which before engagement with the pedal is substantially flat or only slightly curved as shown in Fig. 3, in which view it is broken transversely to get the view into the sheet of drawings. This ribbon *a* is preferably covered with a sheathing of leather *b* so as not to injure the boots of the cycle rider. Each end of the ribbon has secured to it a flanged stud *c* adapted to pass through a hole *d* in the end plate *e* of the pedal. By reason of the temper in the steel ribbon *a* it can be bent to the form shown in Fig. 1 so that its ends fit inside the plates *e* and bear outwardly against them so as to spring the studs *c* into the holes *d*. To prevent accidental displacement of the toe-clip *a* I provide means for locking its ends in position against the plates *e*. Such means, in Figs. 1, 2 and 4 consist of pivoted spring clips *f*, one end of each being pivoted to the plate *e* at *g* while the other end is formed into a spring clip device consisting of a bent ribbon of steel *h* which can be sprung over the studs *c* by slight pressure on them the full line position in Figs. 2 and 4 showing the spring clip in engagement with and rigidly embracing the stud *c*. The small arms forming a portion of each spring clip enable it to be readily disengaged from the stud *c* and turned up into the broken line position shown in Fig. 4, when the toe-clip can be pressed inwardly to disengage its studs *c* from the holes *d*. When in position the extreme ends of the ribbon *a* bear against the front plate *i* of the pedal, so as to keep the toe-clip upright and comparatively rigid.

In the arrangement shown in Figs. 5 to 8 I have provided a spring clip device *j* so that the toe-clip may be secured to any rat-trap pedal not provided with holes such as *d*, or to obviate such holes being made. The device *j* is composed of two arms which can be sprung open so as to pass over the plate *e* of the pedal as shown in Fig. 8. Each device *j* has a hole *k* to receive the stud *c* in the manner previously described, the ends of the toe-clip being kept vertical after being sprung into position by side flanges *m*. To secure the studs in position on the clip *j* pivoted spring clips *f* corresponding to those previously described are employed.

The device referred to is of an extremely useful character enabling, as it does, the toe-clips to be readily engaged with or disengaged from the pedal, as required. I would, however, have it understood that the details of construction may be slightly departed from without affecting the essential features of the invention.

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

1. The combination, with a pedal having end plates provided with holes, of a toe-clip comprising a spring band having studs on its end portions provided with heads or flanges which pass through the said holes, and locking-devices pivoted to the said end plates and provided with spring clips at their free ends which clasp the said studs between the end plates and the heads or flanges and prevent the studs from being retracted.

2. The combination, with a pedal, of detachable end plates provided with holes and having spring arms for connecting them to the said pedal, a toe-clip comprising a spring band having studs on its end portions provided with heads or flanges which pass through the said holes, and locking-devices pivoted to the said end plates and provided with spring clips at their free ends which clasp the said studs between the end plates and the heads or flanges and prevent the studs from being retracted.

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

HYMAN FRANKENBURG.

Witnesses:

FRANK DAVIS,

WILLIAM PLATTS.