

(No Model.)

W. T. ROBERTSON.
TOE CLIP.

No. 559,952.

Patented May 12, 1896.

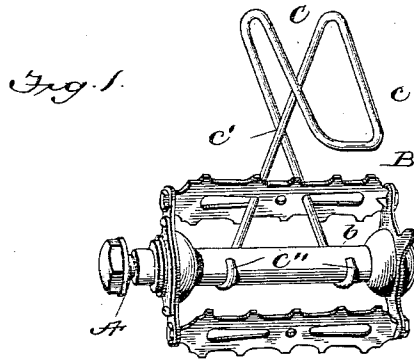


Fig. 2.

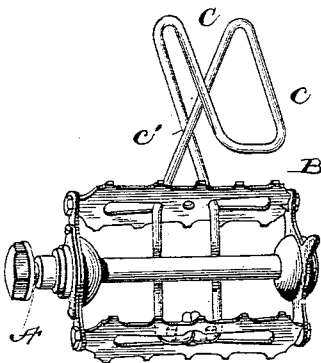


Fig. 3.

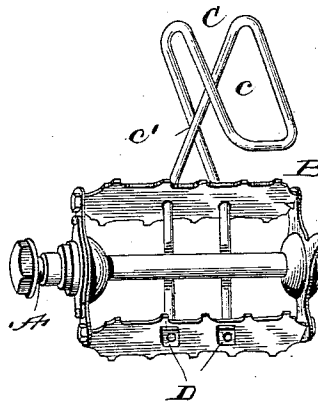
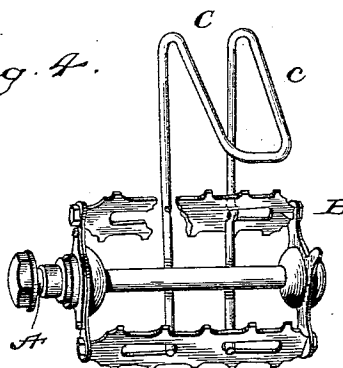


Fig. 4.



Witnesses

John J. Minnie
H. E. Anderson

Inventor
William T. Robertson
By *T. W. Robertson*
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM T. ROBERTSON, OF WASHINGTON, DISTRICT OF COLUMBIA.

TOE-CLIP.

SPECIFICATION forming part of Letters Patent No. 559,952, dated May 12, 1896.

Application filed July 21, 1893. Renewed October 16, 1895. Serial No. 565,866. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. ROBERTSON, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Toe-Clips, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention is designed to provide a toe-clip which can be readily applied to the ordinary rat-trap pedal without screws or other similar fastenings; and the invention consists in the peculiar construction, arrangement, and combinations of parts hereinafter more particularly described and then definitely claimed.

In the accompanying drawings, Figure 1 is a perspective view of a toe-clip constructed according to my proposed improvement applied to an ordinary rat-trap pedal having a shield over the crank-pin. Fig. 2 is a similar view of another form, showing it applied to a pedal without a shield over the crank-pin. Fig. 3 is a similar view of a toe-clip provided with nuts on the ends of the wire. Fig. 4 is another similar view showing modified forms of fastenings.

Referring now to the details of the drawings, and more particularly to Fig. 1, A represents the crank-pin, and B a rat-trap pedal, both of ordinary construction, and the latter having a shield b.

C is the toe-clip, made of spring-wire bent in the form shown, so as to have a loop c, a cross at c', and a hook c'', formed on each end of the wire. To attach this clip to the pedal, it is only necessary to insert the ends through the holes in one of the foot-plates of the treadle and then hook said ends under the crank-pin shield C', when the resiliency of the wire will keep the clip firmly in place.

Referring now to Fig. 2, which shows a pedal without a shield over the crank-pin, it is necessary, in order to avoid friction, that the clip shall not touch the crank-pin, and I therefore make the ends of the clip long enough to pass through the other side of the pedal, as shown. The ends may either be turned horizontally, as illustrated in full lines, or they may be bent upward, as shown in dotted lines. Care should be taken to so curve the ends under the crank-pin that the latter is not touched.

In the form shown in Fig. 3 the ends of the

wire are threaded and nuts D are provided, by which the ends are held against the near side of the pedal, the crossing of the wire at c' causing the wire to tightly embrace the metal between the holes through which the wire passes. The crossing of the wire at c', although not absolutely necessary, is a decided advantage in most cases, as otherwise there would be a tendency of the wire to slip through unless this or some other device were used to prevent it. Two forms of such devices are shown in Fig. 4, in which the wire on one side is shown as notched, while on the other it is bent into a short curve for the same purpose. With either of the forms shown in Fig. 4 the clip would be so formed that when not in the pedal the ends of the wire would be much closer together than the width of the metal between the holes in the foot-plate. With either of these last-mentioned forms shown it is not absolutely necessary that the extreme ends shall hook upon the other plate, but they may simply pass through it; or if a shield is employed on the pedal, as in Fig. 1, the extreme ends of the clip may pass under the shield without hooking thereon. The hooks on the end are, however, in my opinion, preferable.

What I claim as new is—

1. A toe-clip formed of wire, having its ends arranged to pass through the front plate of a rat-trap pedal, connect with the back plate thereof and curved between said plates to avoid the pedal-pin, substantially as described.

2. As an improved article of manufacture, a toe-clip formed of wire having its ends crossed and adapted to pass through the holes in the front plate of a rat-trap pedal and connect to another part of said pedal, substantially as described.

3. As an improved article of manufacture, the wire toe-clip herein described, having the loop c, the cross c', and hooks c'', the latter adapted to pass through holes in the front plate of a pedal and to hook on another part of said pedal, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 19th day of July, 1893.

WILLIAM T. ROBERTSON.

Witnesses:

ALEX. S. STEUART,
W. E. CLENDANIEL.