

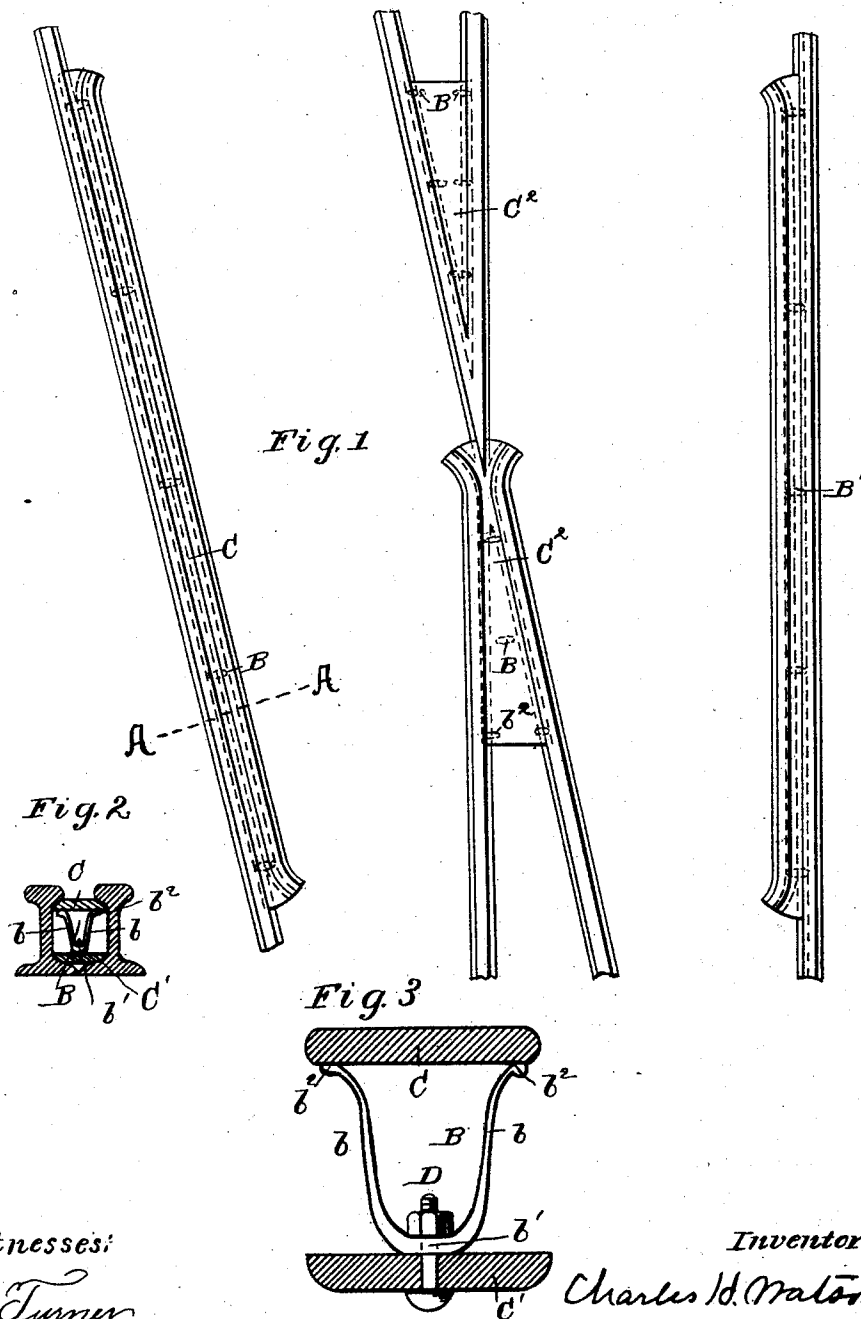
(No Model.)

C. H. WATSON.

FOOT GUARD FOR RAILWAY CROSSINGS AND SIMILAR PLACES.

No. 371,011.

Patented Oct. 4, 1887.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES H. WATSON, OF OMAHA, NEBRASKA, ASSIGNOR OF ONE-HALF
TO JOHN L. McCAGUE, OF SAME PLACE.

FOOT-GUARD FOR RAILWAY-CROSSINGS AND SIMILAR PLACES.

SPECIFICATION forming part of Letters Patent No. 371,011, dated October 4, 1887.

Application filed June 21, 1887. Serial No. 242,017. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. WATSON, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Foot-Guards for Railway-Crossings and Similar Places, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in foot-guards of the character of those used in connection with railway-track crossings, frogs, switches, &c., for the purpose of preventing the feet of operatives and others from being caught at the angles of the rails.

The object of the invention is to provide a yielding guard-plate—that is to say, one which will yield to the wheels of the cars when passing, but will retain its normal position when subjected to ordinary weights, such as that of the human body and the like; and it consists in combining with a metallic plate springs of a novel and peculiar character, by which the plate is held with a force more uniform from end to end than are the corresponding parts of such devices held as heretofore made.

Figure 1 is a top plan view of parts of two railway-tracks at the points where they cross. Fig. 2 is a cross-section on the line A A, Fig. 1. Fig. 3 shows a section of the guard device detached and on an enlarged scale.

In the drawings, C C represent the guard-plates proper, they being formed of sheet or plate metal of sufficient thickness and of such shapes as to conform to the parts to which they are to be applied. That at C is represented as being applied to two parallel rails, while those at C² are more nearly triangular in form, and are inserted in the angles between converging rails.

The guard-plate, whether of the shape shown at C or that at C², is supported upon springs. These are represented generally by B B, each spring being more or less nearly U-shaped in conformation—that is to say, formed with legs *b* and a central connecting part, *b'*, the legs *b b* diverging somewhat upwardly from the part *b'*, and at their upper ends being curved or rounded outwardly, as shown at *b²*. The springs are bolted to a bottom plate, C', which can be either fastened securely to the lower parts of

the rails or to the ties or sleepers of the track. I prefer, however, to have them detached so rest loosely upon the part below, which supports them, the springs being of such character as to automatically hold both the base-plates C' and the guard-plates C in proper position without requiring supplemental fastening devices. The plate which fastens the spring to the base-plate is represented by D. The guard-plate C is shaped so as to fit against the under side of the tread of the rails. When the wheels of the cars strike the guard-plate, it yields downwardly, the springs permitting the downward movement and immediately forcing the plate back into position after the wheels have passed.

Springs of the character herein shown—that is to say, U-shaped or bifurcated springs, having one part bearing under one side of the guard-plate and another part bearing against the opposite side of the plate, the several springs being arranged in series from end to end of the plate—are much superior to the flat plate-springs or band-springs and to the coiled springs which have been used. By means of devices such as shown the guard-plate can be held with a uniform resistance from end to end, so that under all of the ordinary weights short of that of a car it will be practically rigid in position, without any tendency to vibrate or oscillate either laterally or longitudinally, and in this way I overcome serious objections incident to the devices heretofore employed.

It will be readily seen that a guard of the character herein shown and described can be cheaply manufactured, and that the device as a whole is simple in construction and in the arrangement of its parts, so that there is no material liability to have said parts disarranged, and that it can be put into place or removed without trouble.

What I claim is—

1. In a foot-guard for railway-crossings and other places, the combination, with the rails, of the yielding guard-plate, and the springs having their lower ends fastened and having their upper ends arranged to bear upwardly beneath the side edges of the guard-plate and to yield laterally relative to said plate, substantially as set forth.

2. In a foot-guard for railway-crossings and

other places, the combination, with the rails, of the yielding guard-plate, the U-shaped or bifurcated springs each having opposite legs, *b b*, bearing upwardly and laterally, and the loose base-plate *C'*, to which each of said springs is secured at the bottom, substantially as set forth.

3. In a foot-guard for railway-crossings and other places, the combination of the yielding guard-plate and a series of separate springs having arms fastened at the bottom and bearing upwardly and laterally against the said guard-plate along both of its side edges, substantially as set forth.

4. In a foot-guard for railway-crossings and

other places, the combination of the loosely-supported base-plate *C'* and the series of several independent U-shaped or bifurcated springs fastened along said base-plate by devices secured to their lower ends, each spring having two oppositely-moving arms and adapted to move upwardly against the guard-plate, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. WATSON.

Witnesses:

ISAAC W. HALL,

THOS. H. SMITH.