

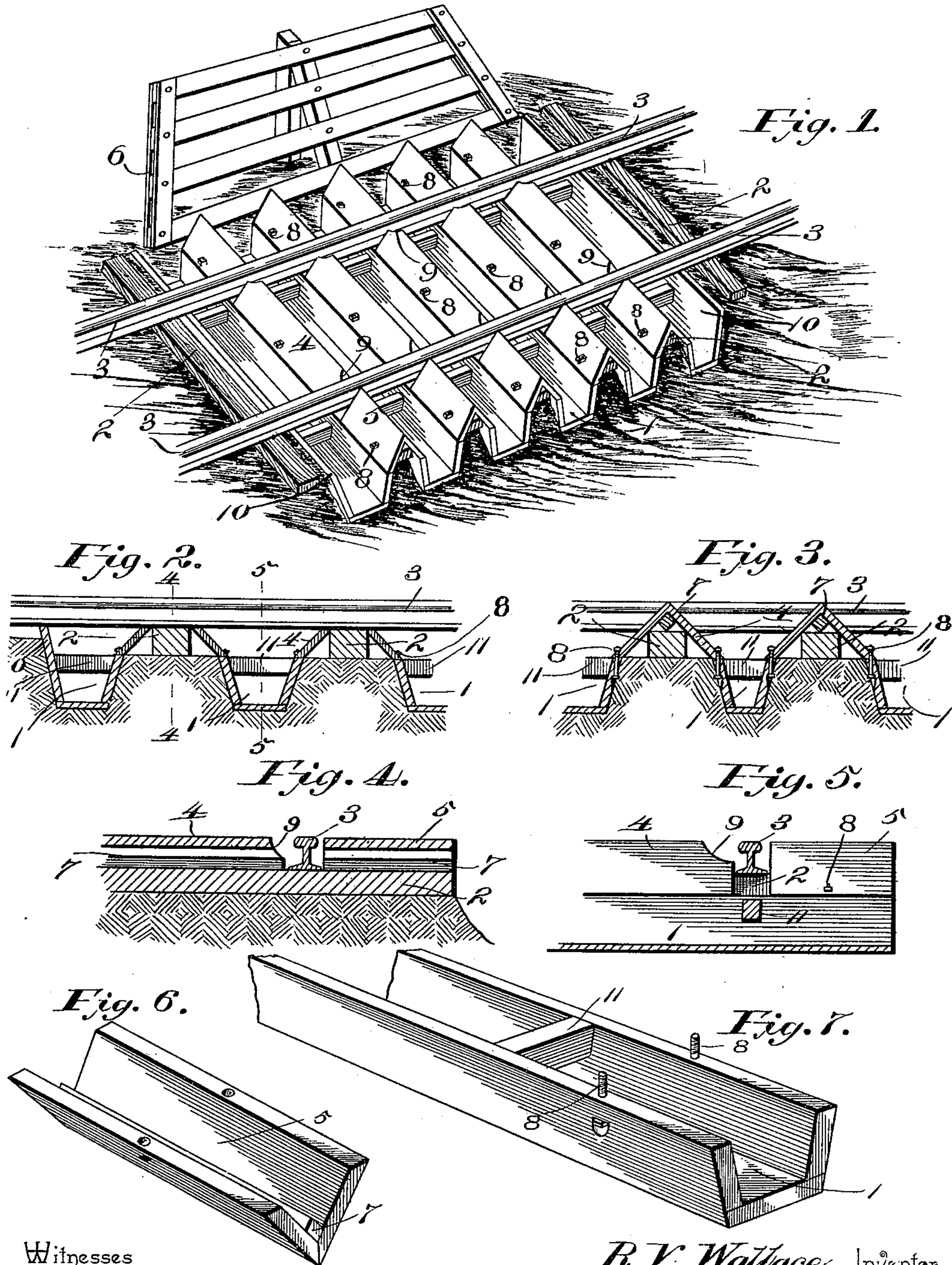
No. 627,552.

Patented June 27, 1899.

R. V. WALLACE.
CATTLE GUARD.

(Application filed Mar. 1, 1899.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

RICHARD V. WALLACE, OF MARVELL, ARKANSAS.

CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 627,552, dated June 27, 1899.

Application filed March 1, 1899. Serial No. 707,258. (No model.)

To all whom it may concern:

Be it known that I, RICHARD V. WALLACE, a subject of the Queen of Great Britain, residing at Marvell, in the county of Phillips and State of Arkansas, have invented a new and useful Cattle-Guard, of which the following is a specification.

The invention relates to improvements in cattle-guards.

10 The object of the present invention is to improve the construction of railway cattle-guards and to provide a simple, inexpensive, and efficient one adapted to shed water to keep the road-bed dry and prevent any settling of the track and capable of forming a cover for the ties to prevent them from rotting and of being readily removed to afford access to the rails and ties for the necessary repair of the track.

20 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

25 In the drawings, Figure 1 is a perspective view of a railway cattle-guard constructed in accordance with this invention. Fig. 2 is a vertical sectional view taken longitudinally of one of the rails, the same being shown in elevation. Fig. 3 is a central longitudinal sectional view. Fig. 4 is a transverse sectional view on line 4 4 of Fig. 2. Fig. 5 is a similar view on line 5 5 of Fig. 2. Fig. 6 is a detail perspective view of one of the sections of the transverse guards which form caps or covers for the ties. Fig. 7 is a detail perspective view of a portion of one of the troughs or boxes.

35 Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a series of transverse boxes or troughs located between the cross-ties 2 of a track and designed to be sunk into the ballast, with their upper edges level with the top of the road-bed, and these troughs or boxes 1, which may be constructed of any suitable material, either wood or metal, have horizontal bottoms and inclined upwardly-diverging sides and are adapted to convey water from the center to the sides of the road-bed to keep the same dry and prevent the rails 3 from

settling. The adjacent sides of the contiguous troughs or boxes are connected by transverse guards composed of central and end sections 4 and 5, the central sections being arranged between the rails and the end sections being located at the outer side thereof and extending therefrom to side bars 6 of ordinary construction. Each transverse guard is substantially V-shaped in cross-section and is composed of two oppositely-inclined sides united at their upper edges and supported at the apex by an interiorly-arranged rib 7, extending longitudinally of the guards and presenting upper inclined faces to conform to the configuration of the inner faces of the sides of the said transverse guards. The ribs rest upon the upper faces of the cross-ties and form a solid structure for the guards, which are detachably secured to the troughs or boxes 1 by bolts 8, provided with nuts and adapted to permit the sections 4 and 5 to be readily removed to afford access to the cross-ties and the rails in order that the necessary repairs of the track may be made.

The ends of the central sections 4 of the transverse guards are beveled or cut away at 9, as shown, in order to provide a clearance-space for the flanges of the car-wheels, and the outer sides 10 of the end troughs or boxes are extended upward to the base of the rails to form a guard for preventing any of the ballast from falling into the troughs or boxes.

The troughs or boxes, which are continuous, are provided at points immediately below the rails with supporting cross-pieces 11, interposed between the sides of the troughs or boxes, arranged at the upper edges thereof and adapted to prevent the said sides from collapsing when a heavy train is passing over the device. The cross-pieces, which are arranged in alinement, as clearly illustrated in Fig. 2 of the accompanying drawings, are located above the bottoms of the troughs or boxes to provide spaces for the passage of water to permit the same to flow freely from the center of the cattle-guard to either side of the same.

The cattle-guard, which will be constructed of sufficient length to prevent cattle from jumping across it, is preferably composed of five transverse guards, as it has been found by experience that when the cross-ties are

arranged or spaced apart the distance of two feet from center to center this number of transverse guards will make the device of ample length to accomplish such result.

5 The invention has the following advantages: The cattle-guard, which is simple and comparatively inexpensive in construction, is adapted to effectually prevent stock from crossing it, and it is capable of always keep-
10 ing the road-bed dry and of shedding water at the sides thereof and of preventing the track from settling. It covers the cross-ties and prevents them from rotting, and the sections of the transverse guards may be readily
15 removed to afford access to the cross-ties and the rails in order that the necessary repairs may be made.

Changes in the form, proportion, size, and the minor details of construction within the
20 scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. A device of the class described comprising
25 ing a series of transverse troughs designed to be arranged between the cross-ties and extending below the same, and the transverse guards detachably secured to the upper edges of the adjacent sides of the troughs, forming
30 covers for the cross-ties and composed of central and end sections, substantially as and for the purpose described.

2. A device of the class described comprising
35 a series of transverse troughs designed to be arranged between the cross-ties, and a series of transverse guards connected with

the upper edges of the sides of the troughs and composed of sections arranged between the rails and at the outer sides thereof, said
40 guards being substantially V-shaped in cross-section and provided with interior ribs extending longitudinally of them and conforming to the configuration of and adapted to support their apexes, substantially as described.
45

3. A device of the class described comprising a series of transverse troughs designed to be arranged between the cross-ties, transverse guards forming covers for the cross-ties and connected with the sides of the troughs,
50 and the cross-pieces interposed between the sides of the troughs and arranged in alignment at points directly beneath the rails, substantially as described.

4. A device of the class described comprising
55 a series of troughs having inclined sides and designed to be arranged between the cross-ties, the outer sides of the end troughs being extended upward to the base of the rails, the transverse guards forming covers
60 for the cross-ties and provided with supporting-ribs, and cross-pieces interposed between the sides of the troughs, substantially as described.

In testimony that I claim the foregoing as
65 my own I have hereto affixed my signature in the presence of two witnesses.

RICHARD V. WALLACE.

Witnesses:

JOHN I. MOORE,
M. E. WEST.