

No. 775,231.

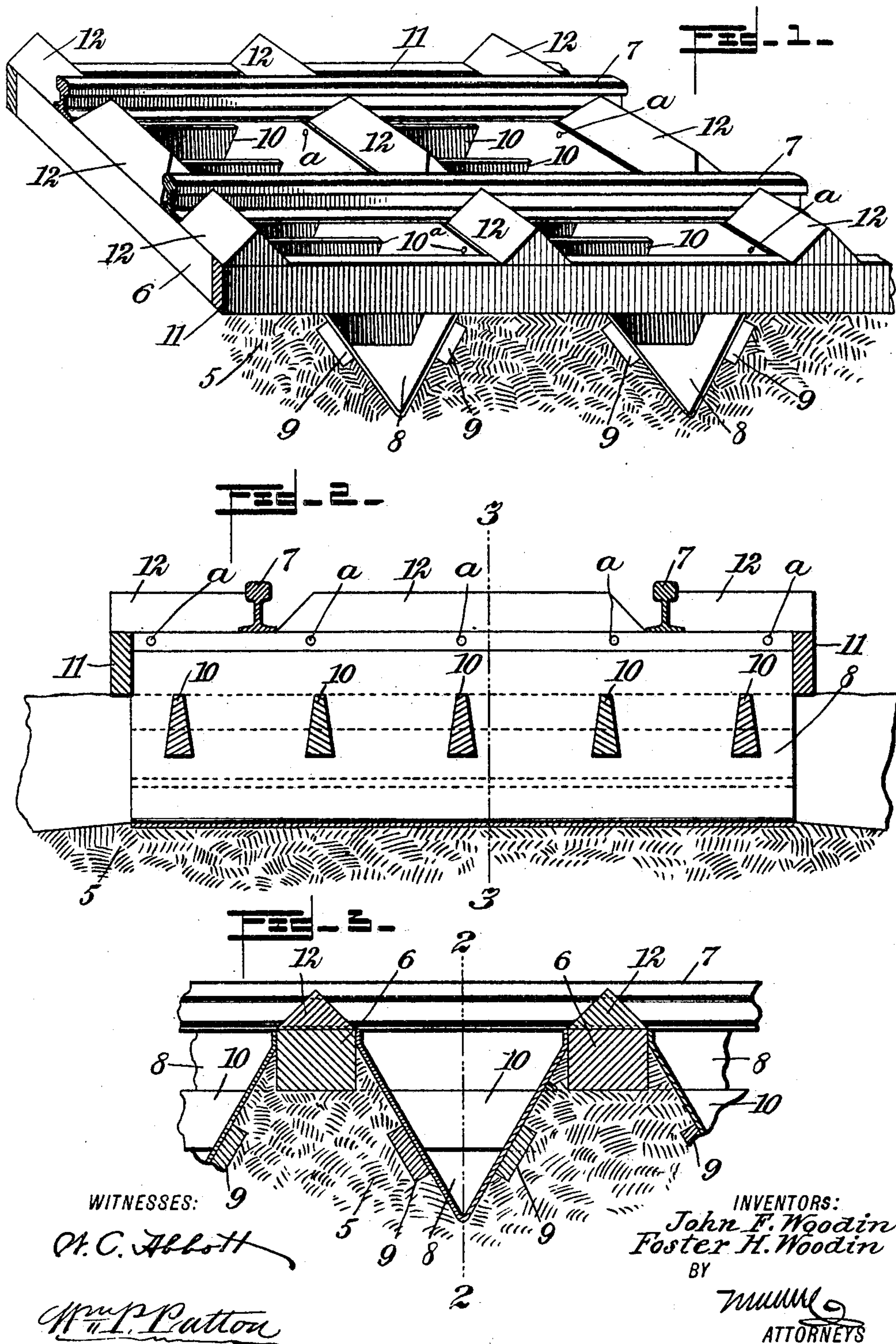
PATENTED NOV. 15, 1904.

J. F. & F. H. WOODIN.

CATTLE GUARD.

APPLICATION FILED AUG. 13, 1904.

NO MODEL.



UNITED STATES PATENT OFFICE.

JOHN FOSTER WOODIN AND FOSTER HARTMAN WOODIN, OF LEXA,
ARKANSAS.

CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 775,231, dated November 15, 1904.

Application filed August 13, 1904. Serial No. 220,639. (No model.)

To all whom it may concern:

Be it known that we, JOHN FOSTER WOODIN and FOSTER HARTMAN WOODIN, citizens of the United States, and residents of Lexa, in the county of Phillips and State of Arkansas, have
5 invented a new and Improved Cattle-Guard, of which the following is a full, clear, and exact description.

This invention relates to cattle-guards for
10 railroads, and has for its object to provide novel details of construction that afford a cattle-guard which is very simple, durable, easy to place in position and remove, and that very effectively guards a railroad-track against
15 the travel thereover of horses, cattle, or other beasts in either direction.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

20 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved cattle-guard in position on a railroad. Fig. 2 is an enlarged transverse sectional view substantially on the line 22 in Fig. 3, and Fig. 3 is a longitudinal sectional view substantially
25 on the line 3 3 in Fig. 2.

30 The road-bed 5 is graded and ballasted, as usual. Cross-ties 6, that support the track-rails 7, are disposed transversely on the road-bed and are equally spaced apart a proper distance at a point where the cattle-guard is located.
35

Between adjacent sides of the preferably rectangular-bodied cross-ties 6 a V-shaped metal trough 8 is embedded in the road-bed, and two or more of such troughs may be employed and located in sequence, as may be found expedient. The troughs 8 are of such dimensions as adapts them to extend at their ends exterior to the road-bed, so that proper drainage of water therefrom may be effected,
40 and as a protection against rust a suitable coating is applied upon the outer and inner surfaces of the troughs.

The side edges of the troughs 8 are secured by any suitable means in contact with the op-

posed and parallel sides of two cross-ties 6, 50 as indicated at *a* in Fig. 2. Upon the outer sides of each trough 8 reinforcing-strips of wooden planks or scantling 9, having proper width and thickness, are secured. These strips are of a length equal to that of the troughs 8 55 and are positioned oppositely on each trough at a proper distance above the bottom thereof.

In each trough a number of spaced braces 10 are secured nearly opposite the reinforcing-pieces 9, and said braces may be tapered or 60 given wedge form from their lower edges to their upper edges, as appears in Fig. 2, the number of said braces being sufficient to confer necessary support to the plate-metal troughs against side pressure of the road-bed 65 material thereon.

To preserve the parallelism of the cross-ties 6, whereon the edge portions of the troughs 8 are secured, stringers of timber, such as are indicated at 11 11, may be secured upon the 70 ends of the cross-ties, these stringers affording stability to the ties and troughs between them. The spaces between the track-rails 7 and at their sides on upper surfaces of the cross-ties 6 are covered by cap-blocks 12, which 75 are triangular in cross-section and have one of their angles projected upward, said cap-blocks when secured in place preventing cattle from getting foothold, and as the inclined sides of the cap-blocks are nearly in the same 80 planes with the sides of the troughs 8 it will be seen that a beast attempting to walk upon the railroad at a cattle-guard of the described construction will fail to get support and will slip with its fore feet and legs down into the 85 adjacent trough 8. The depth given the troughs 8 will prevent an animal, such as a cow or horse, from taking an onward step after entering a trough 8, so that a single animal or a number of cattle will be effectively 90 stopped from passing over the cattle-guard.

Owing to the simplicity of construction and the relative position given to the improved cattle-guard, it may be moved from one point on a railroad to another and be readily placed 95 in position without requiring any material change in the road-bed other than to excavate trenches for the reception of the troughs 8.

It is also a feature of advantage that the inclination given to the sides of the troughs 8 correspondingly increases the area of contact with the road-bed, also insuring stability when
5 in position.

The troughs 8 may be cast into form, be made of plate metal, or, if preferred, may be formed of wooden planks rendered waterproof by any suitable means, and it will be obvious
10 that if the troughs are formed of material thick enough and having sufficient rigidity to resist lateral pressure the reinforcing-pieces of scantling 9 and the braces 10 may be dispensed with, so that we do not limit the scope
15 of our invention to the imperative use of these adjunctive features of construction.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

20 1. A cattle-guard comprising a V-shaped trough, a plurality of reinforcing-strips secured longitudinally on the exterior surfaces of the inclined sides of the trough, the trough and strips being embedded between adjacent
25 cross-ties of a railroad, and slope-sided cap-

blocks mounted on said ties, their sloped sides nearly conforming in inclination with that of the inclined walls of the trough.

2. A cattle-guard comprising a plurality of V-shaped metal troughs, reinforcing-strips 30 secured longitudinally on exterior surfaces of the troughs for strengthening them, a series of spaced transverse braces bearing at their ends on inner surfaces of each trough and secured thereto, said troughs being em- 35 bedded in the road-bed of a railroad between the spaced cross-ties, and slope-sided cap-blocks secured one on each tie, the sides of said blocks conforming nearly in inclination with that of corresponding walls of each 40 trough.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN FOSTER WOODIN.
FOSTER HARTMAN WOODIN.

Witnesses:

GEO. WALKER,
N. F. BRUCE.