(No Model.)

E. COOK.

RAILWAY CATTLE GUARD.

No. 520,179. Patented May 22, 1894.

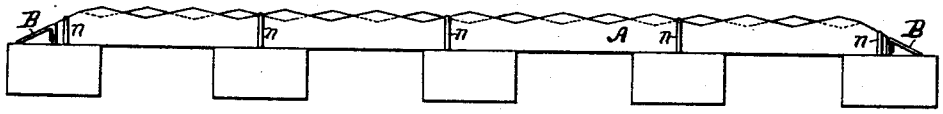

Fig. 1

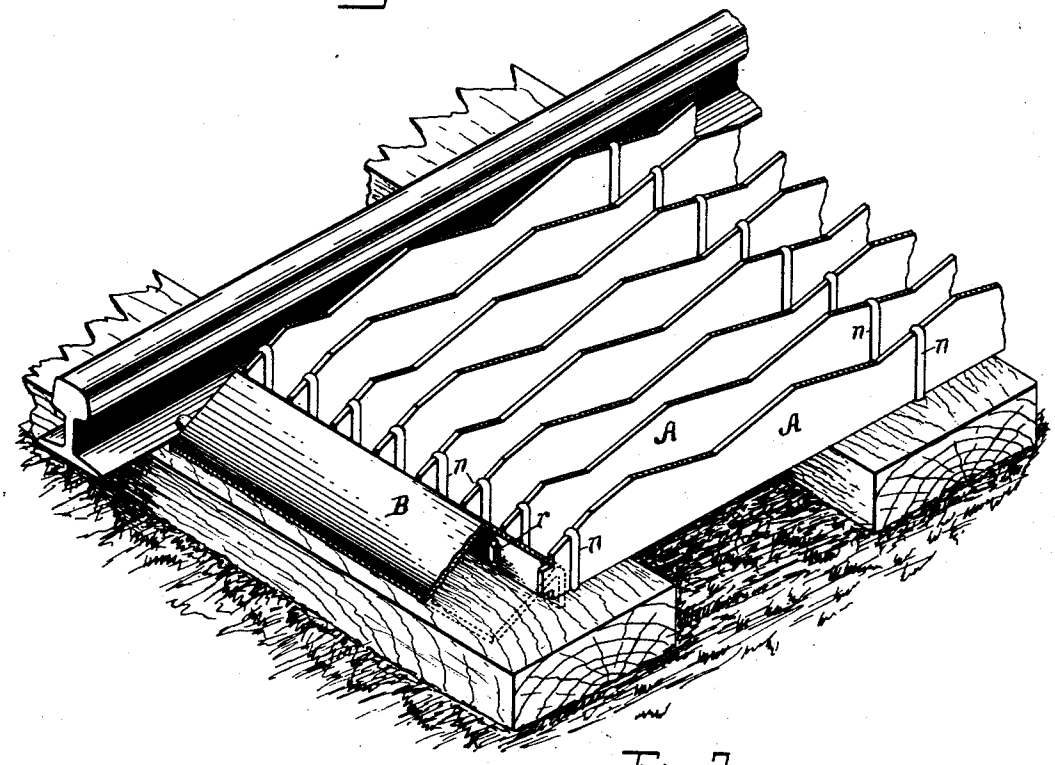

Fig. 2

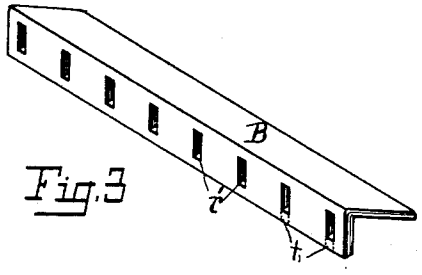

Fig. 3

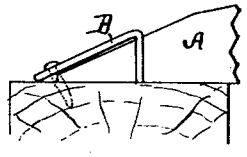

Fig. 4

Witnesses:
Walter S. Hazel
Le E. Westbrook

Inventor.
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Att'y.

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UNITED STATES PATENT OFFICE.

EUGENE COOK, OF KALAMAZOO, MICHIGAN.

RAILWAY CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 520,179, dated May 22, 1894.

Application filed September 26, 1893. Serial No. 486,505. (No model.)

To all whom it may concern:

Be it known that I, EUGENE COOK, a citizen of the United States, residing at the city of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Railway Cattle-Guards, of which the following is a specification.

My invention relates to railway cattle guards and more particularly to that class of cattle guards made up of metal bars between and outside the rails.

The objects of my invention are to supply a cattle guard that shall present an uneven and unstable footing no matter where an animal may step upon it without causing injury to the animal, and also provide a cattle guard that shall present no projections anywhere to engage with broken brake beams or other articles that may be dangling from a passing train. I accomplish these objects by the devices illustrated in the accompanying drawings, in which—

Figure 1 shows a side view of my invention. Fig. 2 is a view in perspective of a portion of a cattle guard embodying my invention. Fig. 3 is a detail view of the end fender B that incloses and guards the ends of my improved cattle guard. Fig. 4 is a detail view of a different way of applying my fender.

My cattle guard is made up of thin parallel guard rails A of the same height placed side by side on edges between and at each side of the rails of a railroad. The upper edge of each guard rail is irregular. The irregularity consists of angular projections and depressions, the angles being obtuse. The depressions of one guard rail come exactly opposite the projections of the adjacent guard rails as seen in Fig. 1. These guard rails A are secured to the tie directly by means of staples *n* driven into the ties or by some other suitable means. At each end of the guard rails I place a sloping projecting fender B. This fender is made of sheet metal, as boiler iron, bent to an angle and placed angle side up over the ends of the guard rails, suitable recesses being mortised or notched into one side to receive the ends *r* of the guard rails which may be riveted into them or not as preferred. The fender is secured to the tie by means of spikes in the usual form.

I desire to say that my fender B can be used to advantage on surface cattle guards of other forms, and also that the angular depressions and projections of the guard rails can be used to advantage in other guards also. The fender B could be dispensed with in my guard and it would be effective but it is best to use the fender B.

I desire to say that I am aware that railway cattle guards have been constructed with thin vertical guard rails having their upper edges serrated but in those guards the object in making them saw toothed was to prick an animal's feet or legs when it attempted to cross. My guard accomplishes a different object by making the footing thoroughly uneven.

I am also aware that guard rails have been scalloped upon their upper edges but such scalloping leaves a considerable portion at the top of each scallop flat so that a footing can be maintained with little difficulty.

I am also aware that cattle guards have been constructed of parallel guard rails having angular projections and depressions, the guard rails being inclined at an angle of about forty-five degrees. Guards constructed in this manner will afford a sure footed animal a footing upon the inclined sides and an animal that slips will be seriously injured if not destroyed by the points of the guard rails wounding the flesh just above the hoofs.

I call attention to these different styles of guards to show differences and advantages of my improved guard over them. My guard consisting of thin guard rails having obtuse points on the upper side will not injure an animal stepping upon it but will always present an uneven footing, the foot being tipped either forward or back or to one side no matter where an animal steps, the rails being of course so near together that an animal cannot step between.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a cattle guard, sets of vertical, parallel guard rails, A, having broad, angular depressions and projections alternating on their upper edges, the depressions and projections alternating laterally as well as longitudinally, in combination with the fasteners, *n*, and the

sloping fenders, B, at the ends of the guard rails, substantially as described for the purpose specified.

2. In a railway cattle guard, thin, vertical, parallel guard rails, all having angular depressions and projections broad in proportion to their height on their upper edges, the projections of each guard rail being opposite the depressions of the adjacent rails so that the footing shall be thoroughly uneven, and so that it will not injure an animal, in combination with suitable means of supporting the guard rails, substantially as described.

3. In a cattle guard, thin, vertical guard rails in series, each having broad, angular depressions and projections the depressions of one rail being opposite the projections of its adjacent rails and so adapted to make the footing thoroughly uneven and so that it will not injure an animal, for the purpose specified.

4. A railway cattle guard composed of thin, vertical guard rails placed side by side the tops of the rails being formed into broad, angular depressions and projections alternating with each other in both the longitudinal and lateral direction of the railway track to make the footing uneven for the purpose of turning stock without injuring them.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

EUGENE COOK. [L. S.]

Witnesses:
CORA WESTBROOK,
W. G. HOWARD.