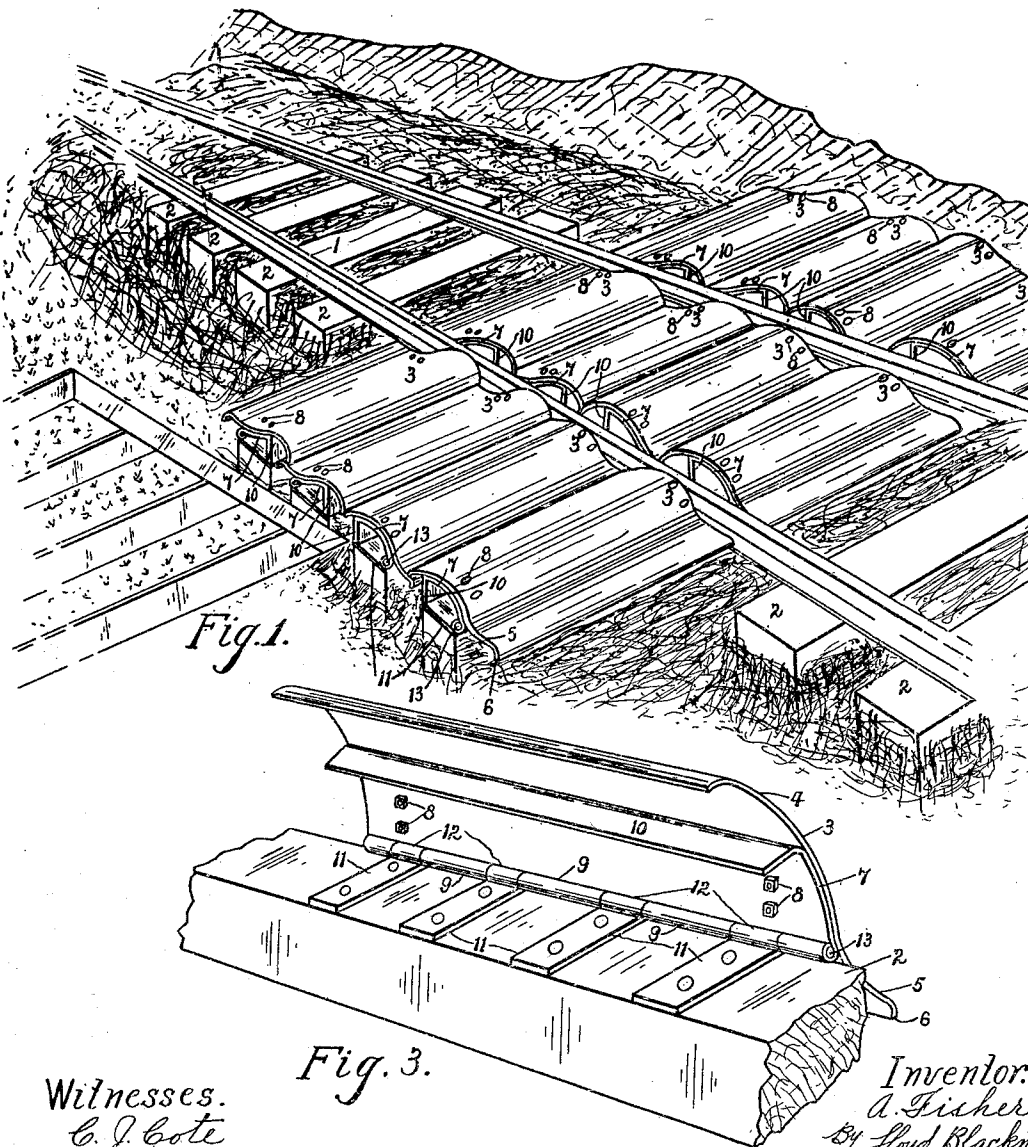
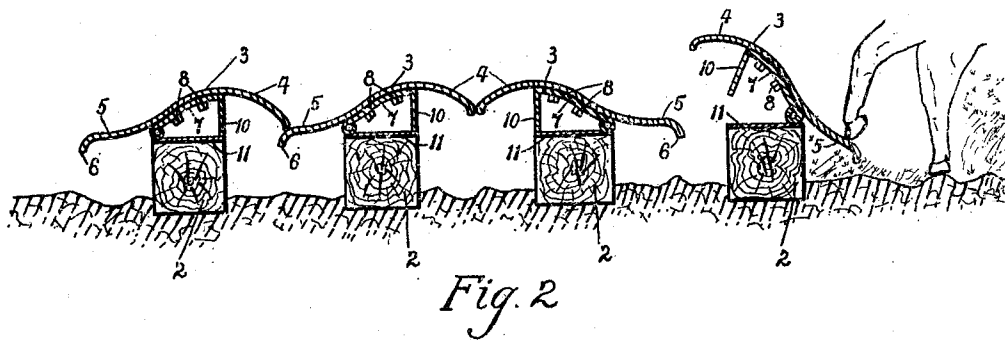


A. FISHER.
CATTLE GUARD FOR RAILWAYS.
APPLICATION FILED DEC. 10, 1909.

958,865.

Patented May 24, 1910.



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UNITED STATES PATENT OFFICE.

ALBERT FISHER, OF HOLMFIELD, MANITOBA, CANADA.

CATTLE-GUARD FOR RAILWAYS.

958,865.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed December 10, 1909. Serial No. 532,432.

To all whom it may concern:

Be it known that I, ALBERT FISHER, a subject of the King of Great Britain, residing at the town of Holmfeld, in the Province of Manitoba, in the Dominion of Canada, have invented certain new and useful Improvements in Cattle-Guards for Railways, of which the following is a specification.

The invention relates to improvements in cattle guards for railways, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel arrangement and construction of parts, whereby a plurality of S-shaped plates are hingedly supported on suitable ties extending between the rails in such manner that the foot of the animal will be always guided onto the section of the plate overhanging the tie adjacent to the hinge, and thereby cause the plate to tilt, and form a barrier to the further passage of the animal.

The objects of the invention are to devise a cattle guard for railways of simple and durable construction, which will effectually prevent cattle or other animals from walking along the railway without injuring the same, and which will guide the foot of the animal into position on the guard, so that the same will be automatically operated.

A further object of the invention is to provide a guard which will readily clear itself of snow and cinders, and will in no way be affected by the passage of trains or anything which may be dragging therefrom.

In the drawings, Figure 1 is a perspective view of a length of railway with the cattle guard placed in position. Fig. 2 is a longitudinal sectional view of the cattle guard as arranged on the railroad bed. Fig. 3 is an enlarged perspective detail view of one of the plates of the guard, showing the same in its tilted position, and the manner in which it is secured to the tie.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 are the rails of a railway, and 2 the ties supporting said rails at the guard section thereof, said ties being longer than the ordinary ties, and also preferably being heavier in construction to more firmly support the plates of the guard, as hereinafter explained.

3 are guard plates having the arched forward section 4, and the rearwardly-extend-

ing tail piece 5 terminating in the downwardly-extending flange 6.

7 are supporting plates curved to fit the under side of the guard plates 3, and securely riveted to said guard plates by the bolts 8. The supporting plates 7 extend the entire width of the guard plates 3, from the point of juncture of the arched forward section and the tail piece to the crown of said arched section.

9 are hinge knuckles formed along one edge of the supporting plates 7. 10 is a flange extending downwardly from said supporting plate immediately under the crown of the arched forward section.

11 are hinge leaves secured across the top of the ties 2, and having the knuckle 12 thereof immediately over one side edge of the ties.

13 is a hinge rod inserted through the hinge knuckles 9 and 12 and hinging the guard plate to the tie, the flange 10 of the plate 7 supporting said guard plates from the ties 2, so that the forward section of the guard plate is arched over the forward side of the tie, and the tail piece 5 extends substantially parallel on the other side of the tie with the extremity thereof immediately under the arched end of the guard plate on the next tie in the rear, as clearly shown in Fig. 2.

By the peculiar shape of the guard plate, and also the arrangement of the same, cattle or other animals cannot possibly walk along the railroad, as the moment the tail piece of the guard plate is stepped on, the arched forward section is tilted up and prevents the further passage of the animal. If, however, the animal should place its foot on the arched section of the first plate, where it is firmly supported from the tie, the section is so formed that it will slide either forwardly or backwardly on the curve of the arch of the forward section, that is to say the animal's foot will slide backwardly onto the tail piece of the first plate, or slide forwardly over the first plate onto the tail piece of the second plate, tipping one or other into a substantially upright position to form a barrier.

A further advantage in the manner of forming the plates, is the fact that nothing is required to weight the plate, in order to have it drop back to position on the ties, after it has been tilted, nor is a stop board or block necessary on the under side of the

tail piece of the plate to prevent its being tipped too far, as in any event the arched end of the guard plates will extend sufficiently over the tie to weigh the plate and return it onto the tie. These plates can be pressed out very cheaply, and the supporting plate bolted thereto, forming both the hinge and the support for the guard plate, and at the same time reinforcing the plate at the mid-section thereof, and thereby enabling the guard plate to be made of much lighter material.

In the winter time if the snow is cleaned from the rails to the ordinary height, the guards will be enabled to work, as any small amount of snow resting thereon will find plenty of space, if the guards are tipped by an animal stepping thereon, under the arched section of the guard plate in the rear. Furthermore the arched section of the plate will cause the snow to clear from the same, and in no way overweigh the said section, which is to be tilted upwardly.

The passage of trains over the guard will have no tendency whatever to raise the same and cause serious damage, as the curved upper surfaces presented by the arched sections in no way present a surface, which can be caught by a draft of air or any obstacle or chain dragging from the train.

What I claim as my invention is:

1. In a cattle guard for railways, the com-

bination with a tie extending across said railway, of a plate having an arched forward section and a rearwardly-extending tail section, a hinge securing said plate at the juncture of the arch and tail sections thereof to the rear side of said tie and a supporting plate secured to said plate on the under side of the arched section and extending downwardly to said tie.

2. In a cattle guard for railways, the combination with a tie extending across said railway, of a plate having an arched forward section and a rearwardly-extending tail section having a downwardly-turned flange at the extremity thereof, a reinforcing plate secured to the aforesaid plate and having a flange at one side thereof extending downwardly from the center of said arched section and a hinge knuckle formed at the other side thereof at the juncture of said arch and tail sections, a hinge knuckle secured to said tie at the rearward corner thereof and a hinge pin extending through said hinge knuckles and tiltably securing said plate to said tie.

Signed at Holmfield, Prov. of Manitoba Canada this 18th day of Oct. 1909.

ALBERT FISHER.

In the presence of—
D. PRITCHARD,
N. FORD.