(No Model.) 2 Sheets—Sheet 1.

J. M. LEE.

STOCK GUARD.

No. 571,232. Patented Nov. 10, 1896.

Fig. 1.

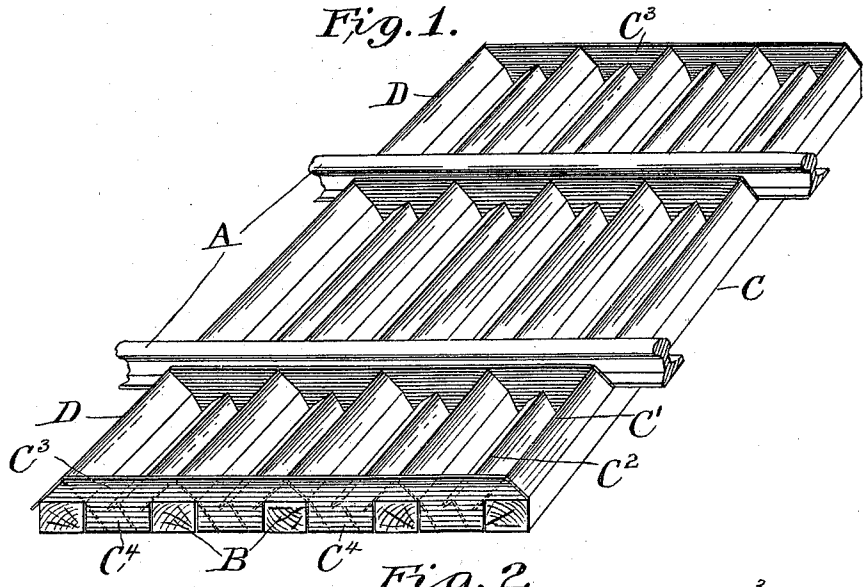

Fig. 2.

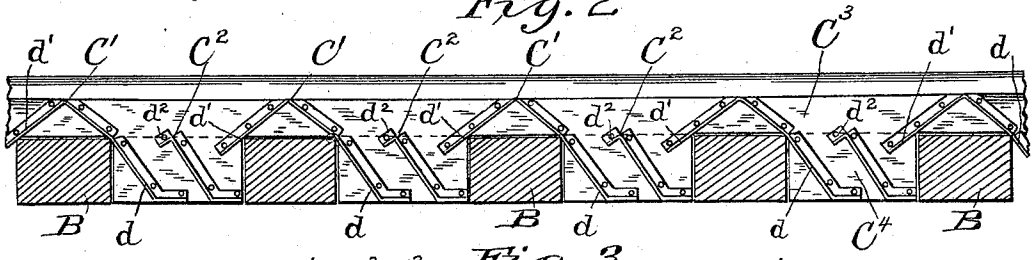

Fig. 3.

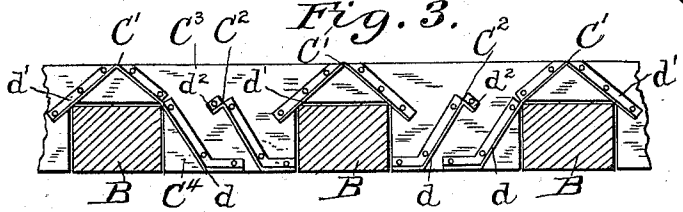

Fig. 4.

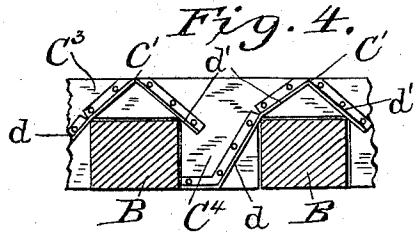

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FIG. 5.

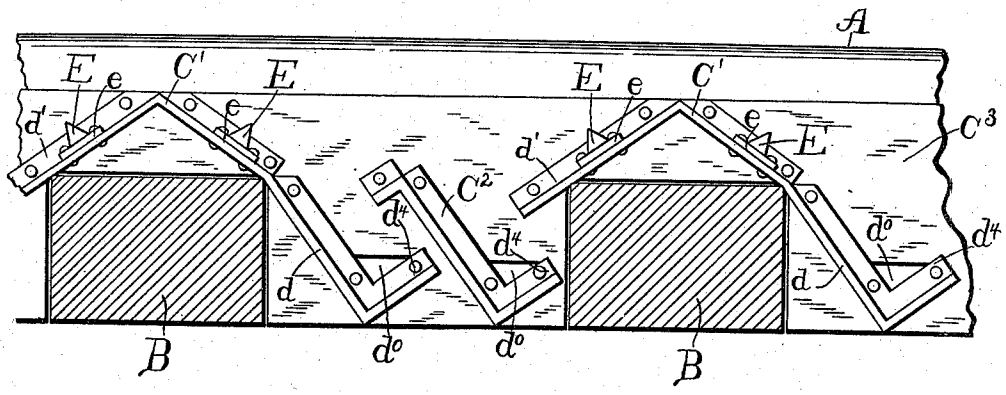
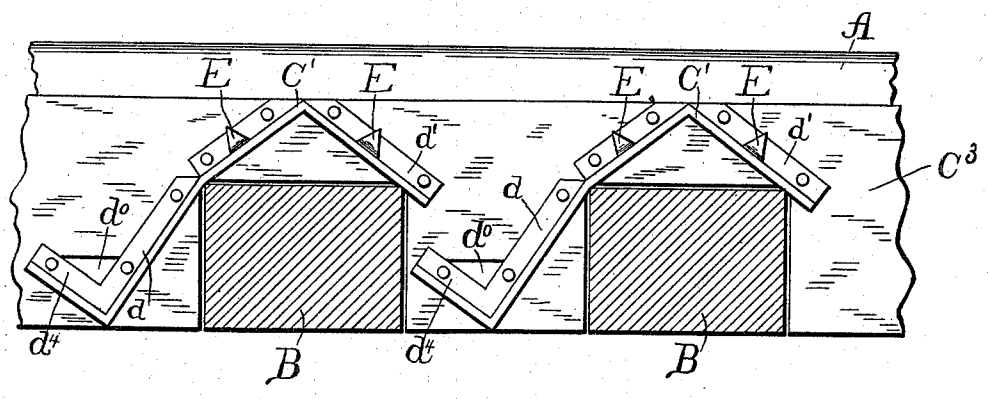


FIG. 6.



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UNITED STATES PATENT OFFICE.

JACOB MARTIN LEE, OF HOUSTON, TEXAS.

STOCK-GUARD.

SPECIFICATION forming part of Letters Patent No. 571,232, dated November 10, 1896.

Application filed March 10, 1896. Serial No. 582,637. (No model.)

To all whom it may concern:

Be it known that I, JACOB MARTIN LEE, a citizen of the United States, residing at Houston, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Stock-Guards; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in stock-guards for railway-tracks; and it consists of certain novel features and combination of parts, hereinafter described and claimed.

My invention will be understood by reference to the accompanying drawings, wherein the same parts are indicated by the same letters throughout the several views.

Figure 1 is a perspective view of one form of my cattle-guard in position upon a railroad-track. Fig. 2 is a section taken across the guard lengthwise of the track. Fig. 3 is a section across a modified form of cattle-guard, for use where it is desired to turn the cattle from either side thereof. Fig. 4 is a similar view of a further modification of my invention, for use where the ties are laid close together. Figs. 5 and 6 are modified forms showing channel-ways for draining purposes and teeth to catch the animals' feet.

A represents the rails of the track, and B represents the cross-ties.

C represents that part of the cattle-guard which lies between the tracks, and D D represent the two outer parts on opposite sides of the track.

The guard is constructed of a plurality of angular or beveled caps or arches C′, which fit over the ties, and a plurality of inclined slats C^2, which extend crosswise of the track between the ties, may also be provided. These caps or arches C′ and the inclined slats C^2 are riveted to end pieces or slats C^3.

Referring now more particularly to Fig. 2, it will be seen that the end slats C^3 are cut away at intervals to fit over the ties and have portions C^4, which extend downward between the said ties to a point approximately even with their bottom faces. The caps or arches C′ have each a prolongation d on one side, which extends downward in a sloping manner as far as the bottom edges of the downwardly-extending portions C^4 of the side pieces, and on the opposite side a prolongation d', which extends but a short distance below the top of the tie. The inclined slats C^2 are set at approximately the same inclination as the prolongation d of the caps or arches C′ and midway between each pair of caps or arches. A flange d^2 is provided upon the top of each of said inclined slats, which flanges extend in the same direction as the prolongations d' on the caps C′.

The space between the edge of the flange d^2 on the inclined slat C^2 and the front face of the inclined prolongation d of the cap or arch immediately behind said slat, as also the space between the front face of the inclined slat C^2 and the edge of the prolongation d' on the cap immediately in front of said slat, should be just great enough to admit the hoof of a horse or cow. The object of this construction is that when the animal puts its foot upon the guard it will find no footing on top thereof, but its hoof will slide down one of the inclined faces of the guard until it rests in one of the spaces either between the front face of one of the inclined slats and the prolongation d' of the arch in front of the same, or else between the front face of the prolongation d of one of the arches and the flange d^2 on the top of one of the inclined slats. With the foot in this position it will be impossible for the animal to take a step forward, because the ankle will be held against forward movement either by one of the flanges d^2 or by one of the prolongations d', as the case may be, and thus it will be seen that as soon as the animal puts its foot down solidly upon the guard its farther forward progress will be arrested, but the animal can readily draw its foot out backward without injury.

In Fig. 3 I show a modification which is constructed in the same manner as the guard shown in Fig. 2, except that this guard is constructed to turn stock from either side thereof.

In the form of guard shown in Fig. 3 the middle arch has projections d' on either side thereof, and the prolongation d is omitted, and the slats C^2 and the prolongations d on the other arches slope upward in opposite directions on either side of the middle arch.

The form of guard shown in Fig. 4 is in-

tended for use where the ties are laid closely together, and in this form the slats C^2 are omitted and the arches set near each other, so that when the animal puts its foot down the hoof will slide down the front of the arch and become caught between it and the prolongation on the back of the arch immediately in front of the same.

The ends of the caps or arches C′ are provided with flanges, by means of which the said caps or arches are riveted to the end slats C^3. Similar flanges are provided on the ends of the inclined slats C^2, by means of which the ends of the said slats are riveted to the said side slats. In this manner the different parts of the guard may be held together firmly, and each section of the guard may be put into place or removed very readily, and not being fastened to the ties or track in any way it will be seen that the section-hands may readily remove any portion of the guard for purposes of repairing the road-bed, replacing a worn-out tie, or other similar purposes.

In the form of device shown in Figs. 5 and 6 teeth E are provided, while the ends of the plates are turned up, as at d^4, to form a trough, and the dirt accumulating therein is washed out by heavy rains through the openings d^0, provided in the end slats C^3.

The teeth E may be either stamped out of the plates forming the cattle-guard, as shown in Fig. 6, or may be stamped out of or secured to separate plates *e*, as shown in Fig. 5. The purpose of these teeth is to prevent cattle from walking on their knees on the cattle-guard and thus crossing over, as has been found to be occasionally the case. Moreover the said teeth prick the feet and ankles of the cattle, and thus prevent them from walking on the cattle-guard.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a cattle-guard for railroads, the combination with a plurality of beveled caps or arches, each having a flange or projection on one side, and adapted to fit over the cross-ties, and a plurality of inclined slats each provided with a backwardly-extending flange on its upper edge, and arranged approximately midway between said caps or arches; of a pair of end pieces cut away to fit over the cross-ties, to which said caps or arches and said inclined slats are secured at their ends, substantially as described.

2. In a cattle-guard for railway-tracks, the combination with a series of beveled caps or arches adapted to fit over the cross-ties and each having a projection or flange on one side thereof extending beyond the side of the cross-tie; and a series of inclined slats set midway between said caps or arches at approximately the same inclination as the face of the cap of the arch immediately behind said slat, and having a flange extending backward from its top at approximately the same inclination as the other face of said cap or arch; of a pair of end pieces or slats cut away to fit over the cross-ties, and to which the ends of the said caps or arches and said inclined slats are riveted, substantially as described.

3. In a cattle-guard for railroads, the combination with a plurality of beveled caps or arches adapted to fit over the cross-ties and each having its ends flanged, of a plurality of teeth projecting outward from the surface of said plates, an inclined slat bent backward at its upper edge and secured between said end slats, and a pair of end slats secured to said flanges and adapted to fit over the cross-ties, substantially as described.

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

JACOB MARTIN LEE.

Witnesses:
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ROB ROBB.