(No Model.)

B. WOLHAUPTER.

CATTLE GUARD.

No. 505,867. Patented Oct. 3, 1893.

Fig. 1.

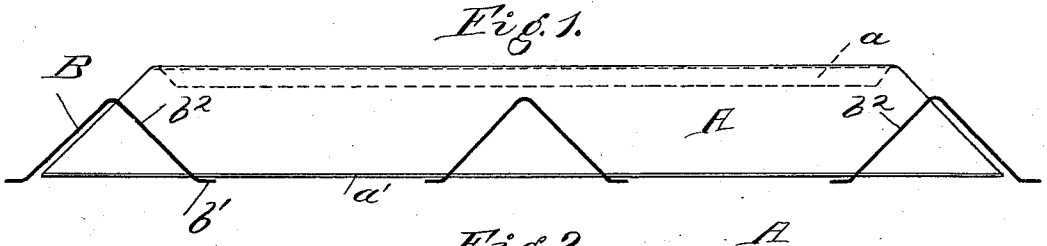

Fig. 2.

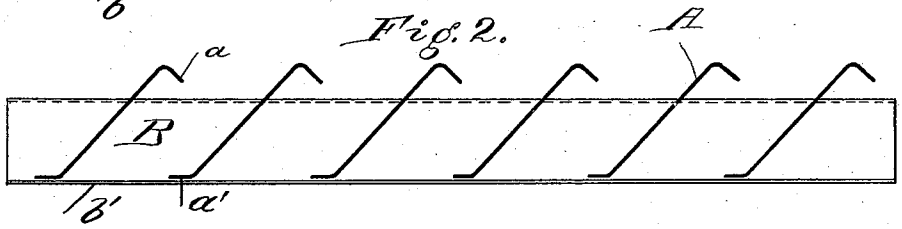

Fig. 3.

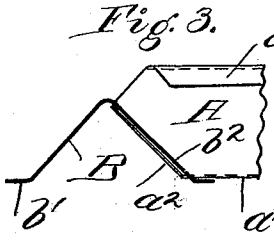

Fig. 4.

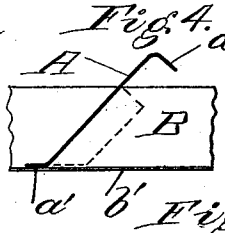

Fig. 5.

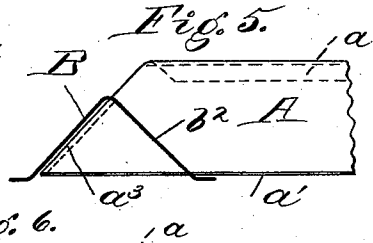

Fig. 6.

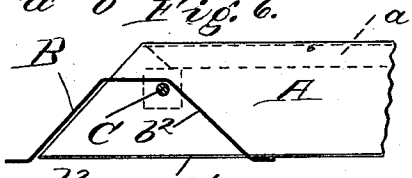

Fig. 7.

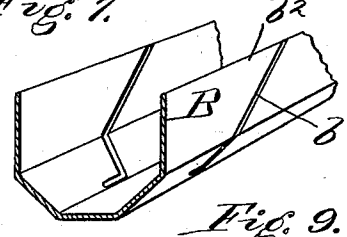

Fig. 8.

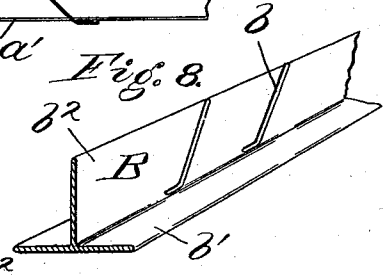

Fig. 9.

WITNESSES:

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Florence King.

INVENTOR:

Benjamin Wolhaupter

BY Walter H. Chamberlin

ATT'Y

UNITED STATES PATENT OFFICE.

BENJAMIN WOLHAUPTER, OF MORGAN PARK, ILLINOIS.

CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 505,867, dated October 3, 1893.

Application filed January 21, 1893. Serial No. 459,064. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN WOLHAUPTER, a subject of the Queen of Great Britain, residing at Morgan Park, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Cattle-Guards; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object the provision of a metallic cattle guard which shall be simple, durable and cheaply manufactured.

The invention is a direct improvement on the cattle guard shown in a previous patent issued to me March 3, 1891, No. 447,394.

It consists of a combination of devices and appliances hereinafter described and claimed.

In the drawings: Figure 1 is a longitudinal section of the guard on a line parallel with the track rails. Fig. 2 is a cross section. Figs. 3, 4, 5 and 6 show the manner of securing the ends of the guard bars. Figs. 7, 8 and 9 show variations in the form of the cross bars.

In carrying out my invention A represents the longitudinal or guard bars of my guard which as in my previous patent are provided on the upper edge with an overhanging flange *a*. The body of the guard is inclined as shown so that this overhanging flange presents a downwardly projecting edge (not necessarily sharp however) above the plane of the lower edge of the bar next adjacent. On the lower edge of each longitudinal bar is a flange a' preferably, for convenience in manufacture, and lateral strength extending in the direction opposite to the flange *a*. This flange may be located at any convenient angle to the main body of the guard, but I prefer that shown in Fig. 2. In order to support the longitudinal bars in their proper inclined position and to give strength and rigidity to the structure I provide the cross bars B. These cross bars may be of any suitable cross section, so long as there are one or more upright portions b^2 having inclined slots *b* to receive the body of the longitudinal bars. The lower end of each of these slots is provided with a notch or recess into which the flange a' projects and by which the flange is held. Thus when the longitudinal bar is slipped into this slot it is held by the flange from upward movement. As I said above the cross bars may be of any suitable cross section, but I prefer to make them of an inverted V shape as shown in Figs. 1, 2, 3, 4, 5, and 6. When made in this shape they are provided with flanges b' through which suitable fastening devices may be passed to secure the cross bars to the ties. Or these flanges might be turned down as shown in Fig. 9 and extend down between the ties.

To prevent longitudinal movement of the guard bars I extend the ends of the guard bars through one upright portion b^2 of the end cross bars, but not through the other. The metal on the end of the guard bar may then be turned at an angle to the body of the bar in any desired direction. In Figs. 3 and 4 I have shown it turned in one direction as at a^2 and in Fig. 5 I have shown it turned in the opposite direction at a^3.

The construction wherein the end of the guard bar is turned may be employed where the end cross bars are not attached to the ties. Where the end cross bars are attached to the ties the end of the longitudinal bar may be extended only into the cross bar without turning of the metal on the end as in Fig. 1. Or if desirable a bolt C may be employed extending longitudinally through the cross bar and transversely through the end of each guard bar, the bolt being properly secured at each end. While I have shown in Fig. 8 a form of cross bar in which there is but one upwardly projecting flange it is obvious that such a form would be convenient for use more particularly for one or more of the middle cross bars, that is to say such a form could not be conveniently used for an end cross bar without a bolt or some other fastening to secure the end of the guard bar to the cross bar.

I am aware that it is not broadly new to extend guard bars transversely through slots in the cross bars, and such a construction I do not broadly claim, but

What I claim is—

1. In a cattle guard the combination of inclined guard bars and cross bars provided with inclined slots through which the guard bars extend, the wall of each slot provided with a recess into which enters a flange lo-

cated adjacent to the lower edge of the guard bar and means for preventing a longitudinal movement of the guard bar, substantially as described.

2. In a cattle guard the combination of inclined guard bars provided adjacent to the upper edge with a flange extending at an angle from the body of the bar and cross bars provided with inclined slots through which the longitudinal bars are passed the wall at the lower end of each slot being provided with a recess into which enters a flange on the lower edge of each cross bar, and means at the end of each guard bar for preventing a longitudinal displacement of the guard bars, substantially as described.

3. In a cattle guard the combination of inclined guard bars each one having on its upper edge a flange which extends substantially at a right angle to the body of the guard bar, and on the lower edge another flange which extends in the opposite direction, and cross bars provided with inclined slots so shaped as to receive the body and the lower flange of the guard bar, the ends of each guard bar being passed into, but not through the cross bar at each end, substantially as described.

4. In a cattle guard the combination of inclined cross bars each provided with a flange on its upper and lower edges and cross bars provided with inclined slots adapted to embrace and hold the guard bars against upward displacement, the ends of said guard bars being passed into but not through the cross bars at the end, and the metal on the ends of each longitudinal bar being turned at an angle to hold the guard bar against longitudinal displacement, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

BENJAMIN WOLHAUPTER.

Witnesses:
FLORENCE KING,
W. H. CHAMBERLIN.