V. E. KENT.

CATTLE GUARD.

APPLICATION FILED JAN. 9, 1912.

1,046,195.

Patented Dec. 3, 1912.

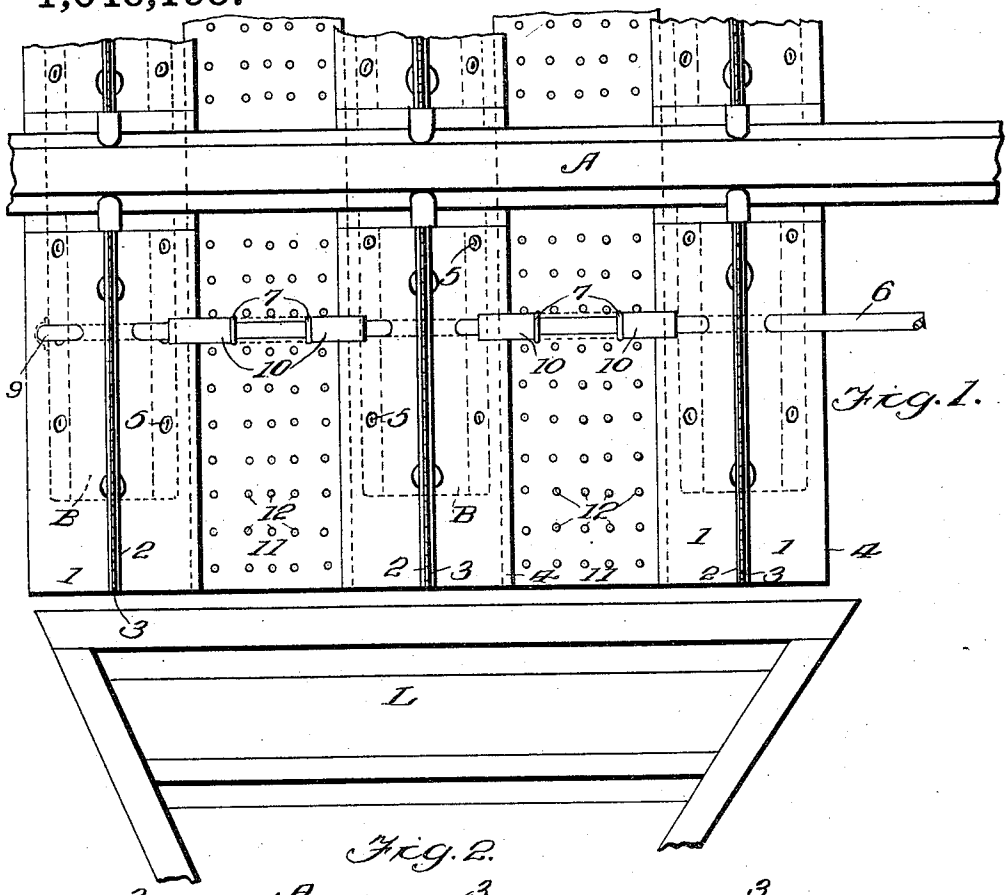


Fig. 1.

Fig. 2.

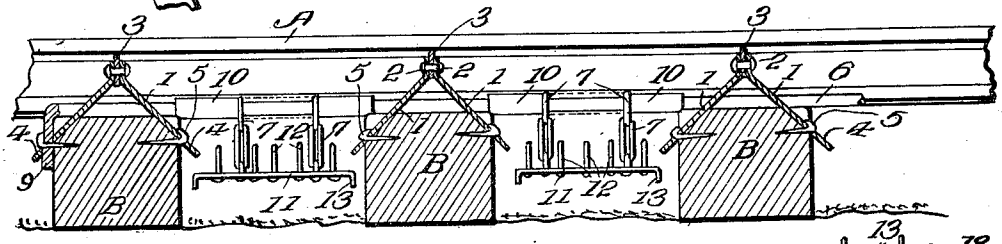


Fig. 3.

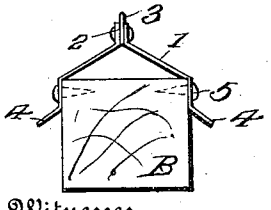
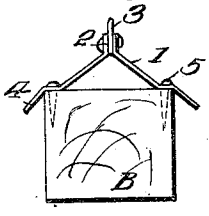


Fig. 4.



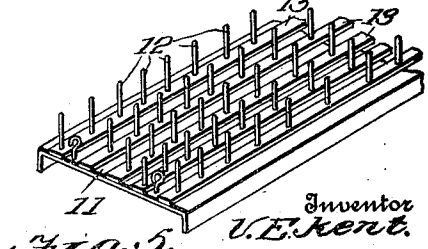


Fig. 5.

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UNITED STATES PATENT OFFICE.

VICTOR E. KENT, OF JOHNSON CITY, TENNESSEE, ASSIGNOR OF ONE-THIRD TO JAMES A. MARTIN AND ONE-THIRD TO RICHARD F. BREWER, BOTH OF JOHNSON CITY, TENNESSEE.

CATTLE-GUARD.

1,046,195. Specification of Letters Patent. Patented Dec. 3, 1912.

Application filed January 9, 1912. Serial No. 670,334.

To all whom it may concern:

Be it known that I, VICTOR E. KENT, citizen of the United States, residing at Johnson City, in the county of Washington and State of Tennessee, have invented certain new and useful Improvements in Cattle-Guards, of which the following is a specification.

This invention relates to railway cattle guards, and more particularly to that general class of guards shown and described in my prior application filed in the United States Patent Office on the 29th day of August 1911, under Serial No. 646,699.

The invention aims to provide certain improvements in the construction and arrangement of the parts which will decrease the cost of manufacture and increase the efficiency of the guard.

The invention further aims to produce a cattle guard the construction of which is such as to facilitate assembling of the various parts, and at the same time increase the strength thereof.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

For a full understanding of the invention reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a plan view showing a portion of the improved cattle guard mounted on a section of track; Fig. 2 is a side elevation of the same; Figs. 3, 4 and 5 are modifications of details of the device.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawing by the same reference characters.

In illustrating the improved invention a cattle guard constructed in accordance therewith is shown applied to a section of railway track, in which A designates the rails and B the cross ties. The upper corners of each tie are preferably cut away at an angle to produce flat surfaces which afford bearings for stationary guard sections, preferably each formed of inclined metal plates 1 having their upper margins 2 disposed parallel with each other and disposed on opposite sides of a blade 3 or the like which latter carries upstanding saw or spike teeth, as desired. The lower margins 4 of the plates 1 overhang the adjacent sides of the cross tie and may be secured thereto by spikes 5.

Interposed between the ties carrying the stationary guard sections are movable sections which are flexibly suspended from supporting rods 6, preferably by chains 7. These rods 6 are parallel with the rails A and rest on the upper faces of the ties near the ends thereof, being secured to the latter preferably by spikes 8 which pass through eyes formed in the angularly disposed ends 9 of the rods. The stationary guard sections on the ends of the ties are, of course, provided with transverse alined openings to permit the rods to pass through said sections beneath the guard teeth thereof and rest on the ties. This construction makes it possible to dispense with the spikes 5 or other fastening devices in the portions of the guard through which the supporting rods pass, said portions being held in place on the ties by the adjacent rod 6, which latter when released from the ties and lifted up, raises the adjacent guard sections in unison therewith. If desired the rods may be of a tubular construction to decrease their weight and may also be formed in sections which span the ties instead of each being made in a single piece.

In order to prevent movement of the chains 7 longitudinally of the rods and consequent lateral displacement of the movable guard sections, tubular stops 10 or the like are placed on the rods 8 between the stationary sections and the chains, thus preventing each chain from sliding over toward the adjacent tie. If desired one of these stops may also be placed between the chains as indicated by the dotted lines, thus preventing movement of the chains toward each other.

The construction of the movable guard sections is preferably that shown in Fig. 2 in which a sheet metal plate 11 is used and has upstanding teeth 12 riveted therein, and its lateral edges 13 turned down at an angle to strengthen the device. Each movable section is spaced from the adjacent ties to

allow oscillation of the guard and a space is thus produced which is protected by the overhanging margin 4 of the adjacent stationary section, thus preventing any animal from obtaining foothold therein.

The form of the movable section shown in Fig. 5 in which the spikes 12 are riveted or bolted to a plurality of longitudinal strips secured to the movable sections, could also be used. Any other form of tooth could of course be placed on the movable sections and still be within the scope of the invention. Other modifications of the stationary guard sections are shown in Figs. 3 and 4, but the form used in Fig. 2 is deemed most advantageous, since there is an uninterrupted inclined surface extending to the margins 4 which overlap the adjacent movable sections and thereby prevent stock from gaining a foothold in the space between the adjacent tie and the movable section. The smooth inclined surface of the stationary section prevents an animal from obtaining a foothold on the upper surface of the ties and the movable sections, because of their unstable suspension and the spikes therein, do not prove a satisfactory path. Moreover the tubular stops effectually prevent the movable sections from being crowded to one side should an animal attempt to avoid the margins 4 and thereby gain a foothold between a tie and the adjacent movable section.

The improved construction shown and described in this invention materially simplifies the manufacture and assembling of the cattle guard and promotes the efficient operation of the device. It will be noted that both the movable and the stationary guard sections extend beyond the ends of the ties and approach the wing fence L, thus forming a barrier between the fence and the ties and effectually obstructing the progress of persons or animals attempting to pass along the track between opposite wing fences.

Having thus described the invention, what is claimed as new is:—

1. The combination with a railroad track, of a cattle guard including spaced supporting rods carried by the ties, movable guard sections suspended between the ties, flexible connections between the supporting rods and the movable guard sections, and tubular spacing members carried by the supporting rods and adapted to center the movable guard sections between the adjacent ties.

2. The combination with a railroad track, of a cattle guard including toothed guard sections mounted on the ties and overhanging the sides of the latter, and other guard sections disposed between the ties below the plane of the first mentioned sections and beneath the overhanging portion thereof and movably supported.

3. The combination with a railroad track, of a cattle guard including stationary toothed guard sections mounted on the ties and having inclined sides projecting downwardly beyond the sides of the ties, spaced supporting rods resting on the ties and passing through the adjacent portions of the stationary guard sections, movable toothed sections disposed between the ties, flexible connections between the supporting rods and the movable sections, and means engaging the flexible connections to prevent their movement longitudinally of the supporting rods.

4. The combination with a railroad track, of a cattle guard including spaced supporting rods carried by the cross ties, movable toothed guard sections disposed between the ties and spaced therefrom, flexible connections between the movable sections and the supporting rods, stationary guard sections mounted on the ties and having inclined projecting margins overhanging the movable guard sections and protecting the space between the latter and the ties, and stops interposed between the stationary sections and the flexible connections.

5. In a cattle guard, spaced guard sections each including a body having oppositely inclined surfaces, a bar extending through the bodies of the sections and secured at its ends thereto, and a guard section suspended for swinging movement from the bar between the first mentioned guard sections.

6. In a cattle guard, spaced guard sections each including a body having oppositely inclined surfaces, spurs projecting from the ridges of the bodies, and a guard section supported for swinging movement between the first mentioned sections.

7. In a cattle guard, spaced guard sections each including a body having oppositely inclined surfaces, a bar extending between and connecting the said sections, and a guard section suspended from the bar between the first mentioned sections.

8. In a cattle guard, spaced stationary guard sections, a bar extended between and secured at its ends to the said sections, and a movable guard section comprising a flat sided body suspended for forward and rearward and lateral swinging movement between the first mentioned guard sections and from the said bar, and spurs upstanding from the body.

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

VICTOR E. KENT. [L. S.]

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."