(No Model.)

J. T. HALL.

RAILWAY CATTLE GUARD.

No. 453,808. Patented June 9, 1891.

Fig. 1

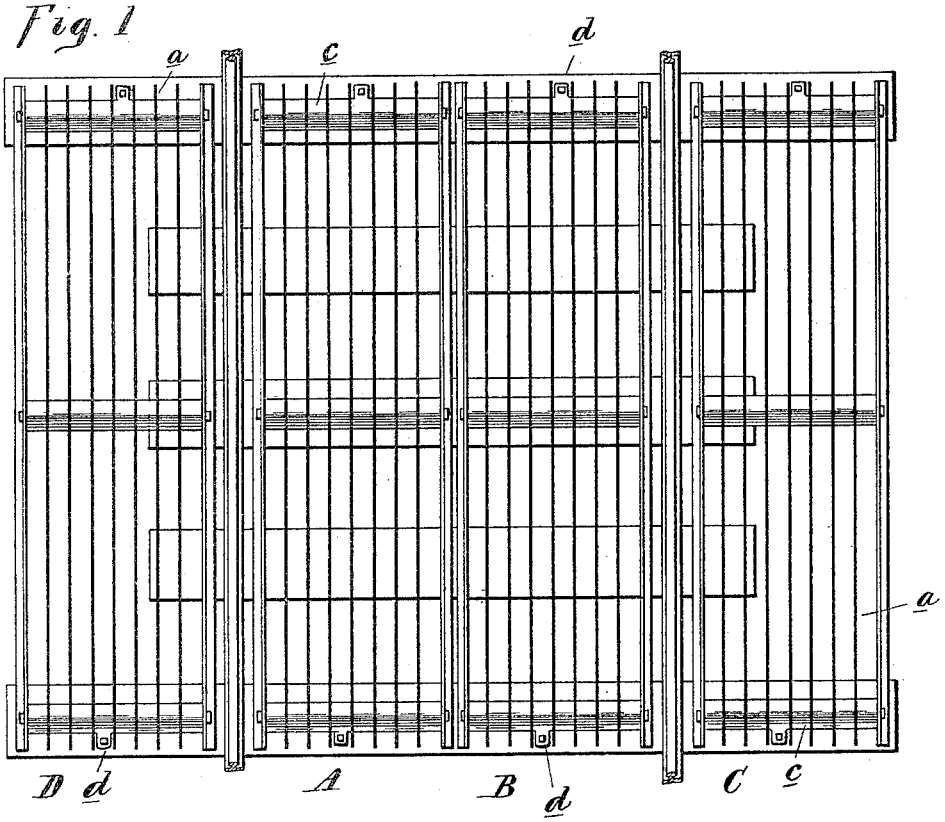


Fig. 2

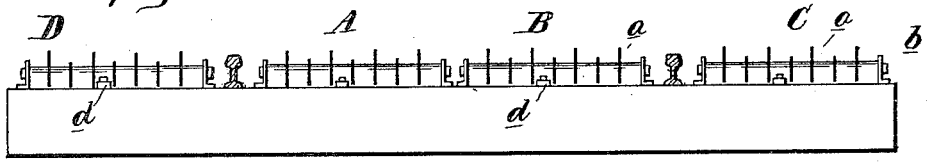
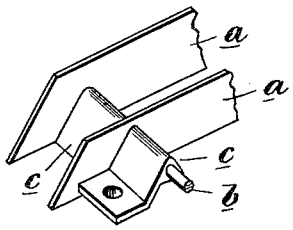


Fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES T. HALL, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE NATIONAL SURFACE GUARD COMPANY, OF SAME PLACE.

RAILWAY CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 453,808, dated June 9, 1891.

Application filed July 10, 1890. Serial No. 358,348. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. HALL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway Cattle-Guards, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in railway surface cattle-guards; and the invention consists in constructing a cattle-guard in sections of such size and form that the guards may be easily manufactured, shipped, and laid in position, and whereby they may be made more rigid and more easily laid in the track upon ties having an uneven surface, and, further, whereby repairs may be made with less trouble and expense, all as more fully hereinafter described, and shown in the accompanying drawings, in which—

Figure 1 is a plan view of my improved cattle-guard. Fig. 2 is an end elevation thereof, and Fig. 3 is a detached perspective view of a central portion of one of the guard-sections.

In the present state of the art it has been customary to construct such cattle-guards in three sections, one wide section adapted to be placed between the rails and two narrower sections, one on each side, outside the rails. In the practical application of such cattle-guards many obstacles have been found to this form of construction. In the manufacture it was found a detriment to have guards of different width, as they required connecting rods and bars of different lengths in the different sections of the same guard. In handling the connecting-rods for the central section their length was the cause of trouble, owing to the ease with which they were bent in handling, for when bent it was difficult to thread them through the apertures in the guard-rails, and when in position they were apt to spring the section out of level and cause trouble in laying them upon the track. In laying them upon the track, owing to the inequalities of the ties or road-bed, it was found more difficult to lay the wide sections than the narrow ones, and in shaping and handling the sections the difference in size of the inner and outer sections caused trouble and inconvenience, the inner section being unwieldy and heavy, and in connection with the outer sections making a cumbersome and unshapely package. To overcome this objection, I have constructed my guard in sections of smaller size, the section between the rails or inner section being formed in two or more parts.

In the accompanying drawings I have shown the guard formed in four sections, the parts or sections A B within the rails and the sections C D outside the rails. The sections which I have shown in the drawings are all alike and interchangeable—that is, they are of the same width and contain the same number of guard-rails. The object of this is to reduce the cost of manufacture by shortening the connecting-bars, reducing the size of the sections, and enabling me to manufacture all my parts exactly alike instead of having different sizes in each guard. This is advantageous in making repairs. For instance, should a section be damaged from any cause, a railroad man may order a "section" and be sure to get the correct one, whether it is to be placed within or outside the rail, and in shipping a bundle it may either be made of two sections or four sections, no care being required except to get the proper number of sections for the complete guard.

In this application I show each section composed of the longitudinal guard-rails *a*, connected by a cross-bar *b*, and separated by double inclined thimbles or spacing-blocks *c*, the rods *b* passing through suitable apertures in the guard-rails and through the spacing-thimbles. One metallic thimble *c* at each end of each section is provided with a foot *d* apertured to receive a spike, forming the means for securing the section in position upon the track. Any other means of securing the sections in position may be used and any other construction of section may likewise be used, as that is not an essential feature of my present improvement, the requirement only being that the guard shall be so constructed as to destroy the footing for animals.

With a guard thus constructed and laid upon the track should the track require repairing upon one side only the section A between the rails may be taken up, the track

repaired, and this section replaced without disturbing any of the others. The same may be done with any of the other sections where repairs are required.

What I claim as my invention is—

1. In a railway surface cattle-guard having sections between and outside the rails, the combination of four sections that are alike and interchangeable, two sections lying between the rails of the track and one on each side of the track, substantially as described.

2. A cattle-guard composed of a series of interchangeable groups of connected guard-rails adapted to be secured upon the track between and outside the rails, substantially as described.

3. A cattle-guard composed of like sections, each section consisting of a series of separated guard-rails, the portion between the rails being made in sections, substantially as described.

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

JAMES T. HALL.

Witnesses:
M. B. O'DOGHERTY,
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