

(No Model.)

J. T. HALL.
SURFACE CATTLE GUARD.

No. 453,807.

Patented June 9, 1891.

Fig. 1.

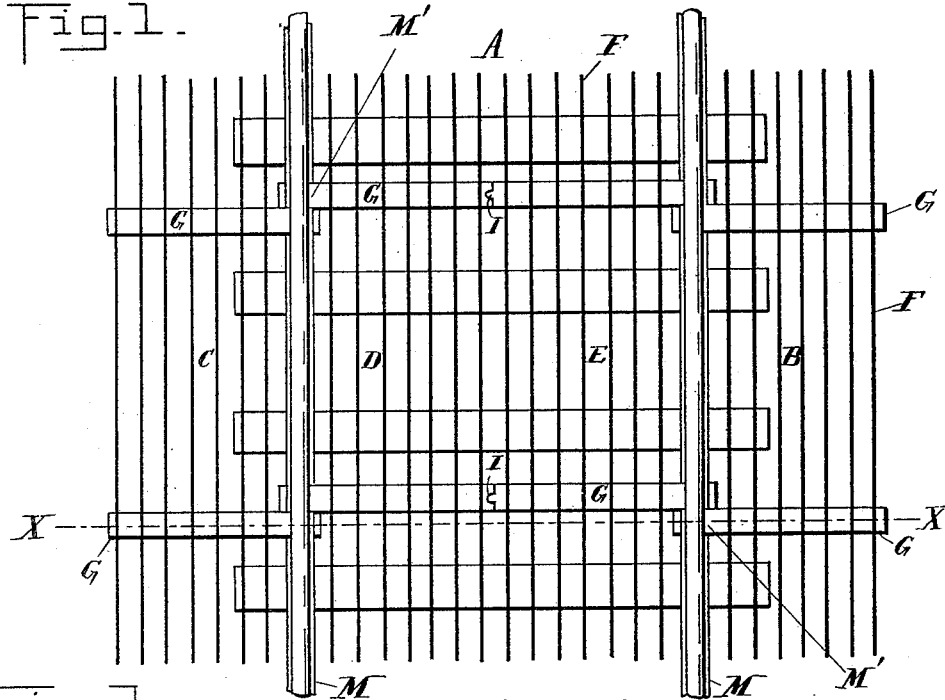


Fig. 2.

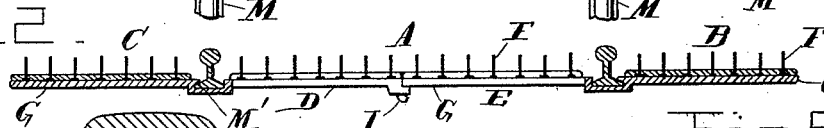


Fig. 3.

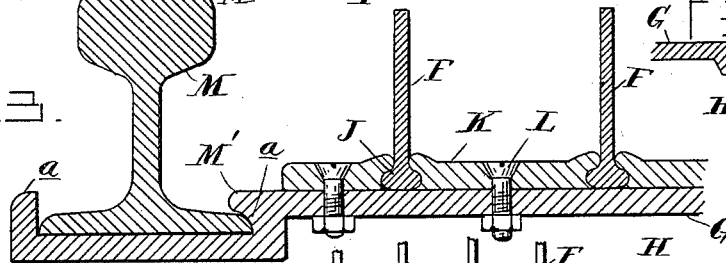


Fig. 4.

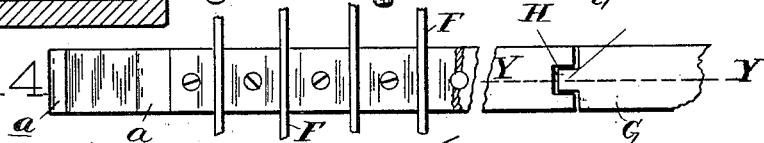
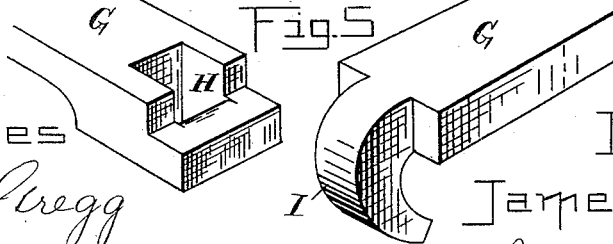


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES T. HALL, OF CHICAGO, ILLINOIS.

SURFACE CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 453,807, dated June 9, 1891.

Application filed October 1, 1889. Serial No. 325,709. (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 Surface Cattle-Guards, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to new and useful improvements in railway surface cattle-guards; and the invention consists in the peculiar manner of securing the sections upon the track and in securing the sections together, all as more fully hereinafter described.

15 In the drawings which accompany this specification, Figure 1 is a plan view of my improved guard as applied in use. Fig. 2 is a cross-section thereof on line XX. Fig. 3 is a vertical central section through the connecting-bar. Fig. 4 is a plan view thereof. Fig. 5 is a detached perspective view showing the inner ends of the connecting-bar. Fig. 6 is a section of Fig 4 on line Y Y.

25 In the previous construction of surface cattle-guards of this type, consisting of metallic bars set upon edge in the form of a grating, it has been customary to construct them in three sections, one section being placed between the rails and one on the outside of the rails between the rails and the side fences, which latter are usually brought up to the track at crossings. My guard is made substantially in the same manner, A being the central section and B C the side sections; but instead of making the central section of a single piece, as heretofore, I construct it in two parts D E.

30 F are the metallic bars assembled together to form the grating and secured in any desired manner upon the cross-bars G. These cross-bars on the central section A extend from the rail to the middle of the section, the inner ends of the bars in the part D being provided with a suitable aperture H to receive a hook I on the inner end of the bars in part E.

35 In the drawings I show my metal bars provided with heads J, secured in position by clips K by means of bolts L passing through them and through the cross-bars. It is evident that a number of other ways may be

used of securing the guard-rails to the cross-bars, and I do not herein claim as my invention the peculiar means of securing the guard-rails to the cross-bars, but desire to use any known device for that purpose. The ends of the cross-bars of the central sections are provided with shoulders a, forming therein suitable recesses to receive the foot of the rails M. The cross-bars in the sections B and C are likewise provided upon their inner ends with similar shoulders. The parts being thus constructed and arranged, they are intended to be applied as follows: The outer sections B C are engaged upon the ties by raising their outer ends and inserting the shouldered ends of the cross-bars under the rail between the ties and then lowering the sections until the cross-bar is engaged upon the bottom of the rail, as shown in Fig. 3. The two inner half-sections are then brought to their positions, the hooks I being engaged in the apertures H as the inner edges thereof are depressed, when the shouldered ends of the cross-bars will engage under the rail and hold the section in position. In this construction it is evident that the weight of the sections of the guard will hold the shouldered ends of the cross-bars tightly in engagement with the under side of the rail, so that no spikes or other securing devices will be required to retain the guard in position.

It is a great advantage to divide the guard into four sections, as it may thus be more readily and easily handled, more quickly applied, and much more conveniently packed for shipment.

I preferably construct a hook M' to engage over the inner edge of the rail to prevent the possibility of the sections being disengaged, except by raising the outer edge. It is evident that if the hook M' is omitted the bearings upon the end of the cross-bars will secure the guard in position upon the track only against lateral displacement, and that the weight of the cattle-guard will rest upon the ties or the ground. If it is desired to sustain the weight of the cattle-guard in whole or in part upon the rails, the hook M', engaging over the flange of the rail, is used. In either case the cattle-guard is secured in position against accidental displacement by the bearings upon the ends of the cross-bars; but

in the latter case only (where the hook M' is used) is the guard supported in position on the cross-bars. I do not herein broadly claim a guard supported by the track-rails.

5 What I claim as my invention is—

1. A railway surface cattle-guard of the kind described, composed of the inner section A, consisting of two parts detachably secured together, and of the outer sections B
10 C, substantially as described.

2. In a railway surface cattle-guard of the kind described, the section A, located between the rails, consisting of two parts hinged together and detachably secured to the rails,
15 substantially as described.

3. A cattle-guard consisting of parallel guard-rails supported independently of the track-rails and connected together by cross-bars, which are secured in position by engaging with the track-rails, substantially as
20 described.

4. A railway surface cattle-guard consisting of inner and outer sections, each composed of guard-rails secured to cross-bars, the section between the rails being formed in
25 two parts and all said sections being held in place by bearings on the ends of the cross-bars engaging with the rails, substantially as described.

5. A surface cattle-guard composed of a central section between the rails and of two outer sections, each consisting of a series of parallel guard-rails supported by cross-bars having their ends contiguous with the track-
30 rails secured thereto, the cross-bars of the central section being constructed of two piv-

otally-connected parts, substantially as described.

6. A surface cattle-guard composed of a central section between the rails and of two
40 outer sections, each consisting of a series of parallel guard-rails supported by cross-bars having their ends contiguous to the rails secured thereto, the cross-bars of the central section being constructed in two parts and the
45 two parts thereof being pivotally connected together, substantially as described.

7. In a railway surface cattle-guard consisting of bars set upon edge and secured to cross-bars adapted to engage under the foot
50 of the rails between the ties, the combination of the sections B C with half-sections D E, the meeting ends of the cross-bars of the half-sections being provided with apertures H and hooks I, and the parts being arranged to
55 operate substantially as and for the purposes described.

8. A cattle-guard consisting of four sectional groups of guard-rails, two sections arranged between and two outside the track-
60 rails, substantially as described.

9. A cattle-guard consisting of a series of guard-rails arranged in independent sectional groups between the rails.

In testimony whereof I affix my signature, in
65 presence of two witnesses, this 3d day of September, 1889.

JAMES T. HALL.

Witnesses:

THOS. M. NELSON,

WILLARD F. CHANDLER.