No. 750,524. PATENTED JAN. 26, 1904.

A. R. DAWSON.

RAILWAY CATTLE GUARD.

APPLICATION FILED MAR. 30, 1903.

NO MODEL.

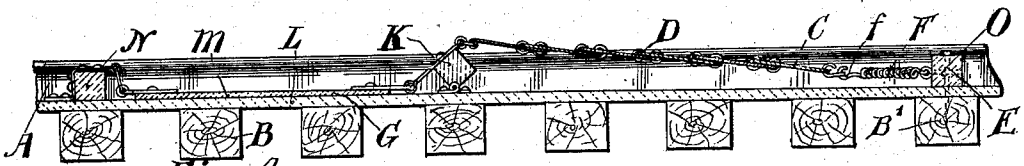


Fig. 4.

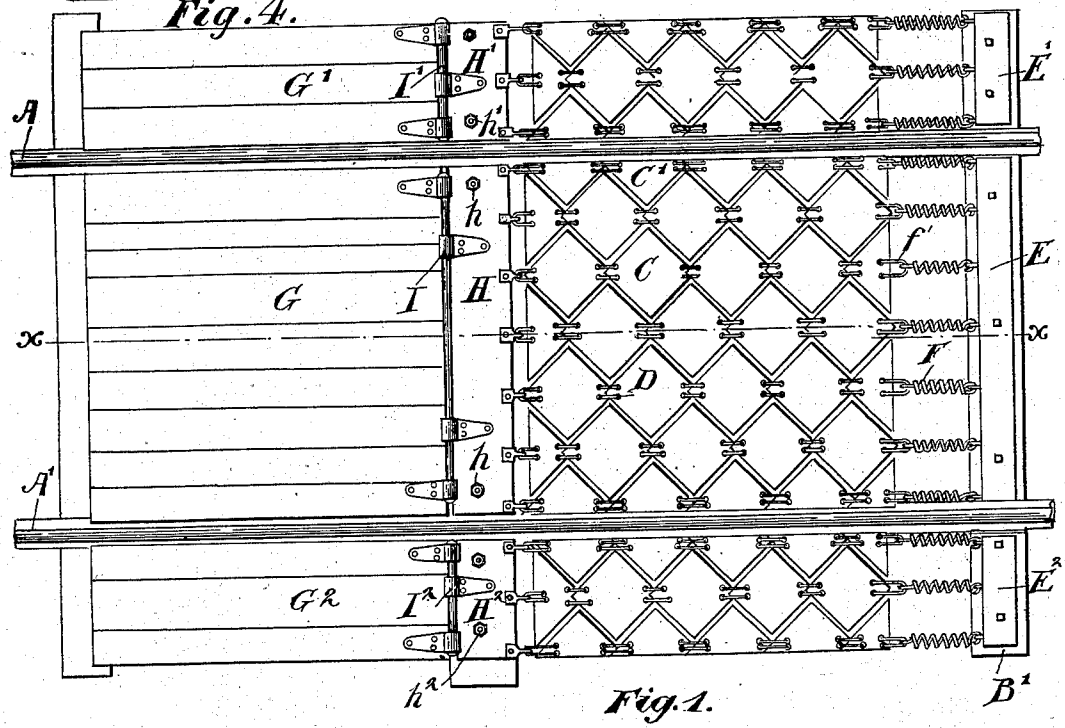


Fig. 1.

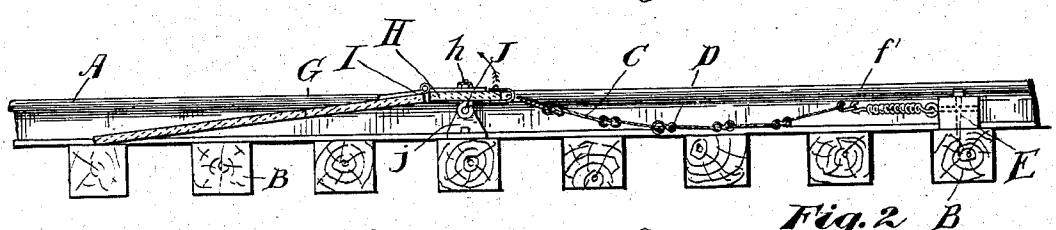


Fig. 2

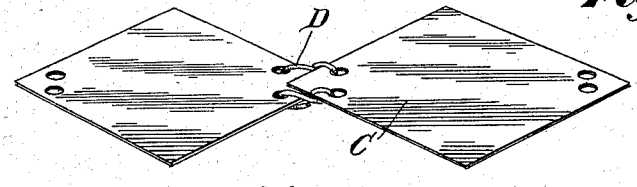


Fig. 3.

Witnesses.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 750,524. Patented January 26, 1904.

UNITED STATES PATENT OFFICE.

ALBERT ROSS DAWSON, OF HAMILTON, CANADA.

RAILWAY CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 750,524, dated January 26, 1904.

Application filed March 30, 1903. Serial No. 150,314. (No model.)

To all whom it may concern:

Be it known that I, ALBERT ROSS DAWSON, grocer, of the city of Hamilton, in the county of Wentworth, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Railway Cattle-Guards, of which the following is a specification.

My invention relates to improvements in cattle-guards; and the objects of my invention are to produce a device which shall effectually prevent cattle or other animals from straying from cross-roads onto railroads or from passing through any similar places which cannot be closed by an ordinary gate, further objects being to make the device such that it will not interfere with the road-bed in any way, will be cheap and simple in construction, and will offer no obstruction to the passage of trains in any position; and it consists, essentially, of a plurality of sets of plates of any suitable shape suitably linked together in lines preferably parallel with the rails and secured by springs to a stationary support at one end, a platform adapted to be depressed by cattle endeavoring to cross the guard, and suitable mechanism connecting the platform and the plates, whereby on the depression of the platform the plates will be pulled tight and owing to their spring-supports will be caused to vibrate, thereby presenting to the cattle an unsteady and dangerous passage which will prevent their crossing, the various parts of the device being constructed and arranged in detail as hereinafter more particularly described.

Figure 1 is a plan view of my cattle-guard. Fig. 2 is a section through the same on the line X X, Fig. 1. Fig. 3 is a detail perspective view of two of the plates of one form which may be used, indicating one method of securing them together. Fig. 4 is a sectional view of an alternative form of constructing the device.

In the drawings like letters of reference indicate corresponding parts in each figure.

A A′ are the rails, and B represents the ties or sleepers, which are of the ordinary construction.

C represents the plates, which are adapted to be strung together in various ways. These plates may be made square or diamond-shaped, as shown, or, if desirable, they may be made in any other suitable form; but it is preferable that they should be of such a form that the cattle cannot see the ground between them. These plates are secured together by any suitable device, such as the links D, the principal requirement of the securing device being that it should permit of their free vibrating motion. When connected by links, as shown, I preferably secure each pair of plates together by two parallel links, the object of this construction being to hold the plates from turning edgewise, as they would be inclined to do if only held by single links.

E E′ E^2 are three end supporting-pieces, which are secured rigidly to the ties B′, the piece E being between the rails and the other two pieces at the two sides of the track, respectively. Springs F are secured to these supporting-pieces by any suitable means, such as eyebolts *f*, and the opposite ends of the springs are secured to hooks *f*′, by which each spring is fastened to the end plate of one series. If diagonally-arranged square plates are used, the triangular spaces in proximity to the rails and the sides of the guard will be filled in with half-plates C′, and suitably-shaped plates would be used to fill up these spaces whatever the form of the full-sized plates might be.

G G′ G^2 are three depressible platforms located, respectively, between the rails and at opposite sides of the track. A suitable tilting member is interposed between the inner end of the tilting platform and the sets of plates, and each line or series of plates is secured at its inner end to this member in such a way that the plates will hang loosely, as shown in Fig. 2, under ordinary circumstances. The construction for this portion of the device which I preferably employ consists of three boards H H′ H^2, which are attached by any suitable hinges I I′ I^2 to the platforms G G′ G^2, respectively. These boards are pivotally mounted upon horizontal rods J by means of eyebolts *h h*′ h^2 or any other equivalent device. The horizontal rods J are supported by suitable angle-brackets *j*. It will thus be seen that when the platform is depressed by the weight of an animal the pivotally-supported

board will be tilted in the direction indicated by the arrow in Fig. 2. The result will be that the plates secured to the board which is tilted will be pulled up tight very suddenly, and the springs will be more or less stretched. Consequently the plates will all be caused to vibrate each line of plates independently, and this motion has the effect of startling the animals to such an extent as to prevent their proceeding any farther.

An alternative construction which might be substituted for the tilting boards H H' H² is shown in Fig. 4, in which a scantling K is suitably hinged to a base-board L. The depressible platform M is secured by links at the ends thereof to the scantling K and a rigid support N, which is also secured to the base-board. A scantling or end support O is provided at the opposite end of the guard and is rigidly secured to the base-board, means being provided for securing the springs to this scantling. It will thus be seen that when the platform is depressed, as shown in the drawings, the scantling K will be tilted, thus pulling the chain of plates into the tight position, causing them to vibrate. One of the advantages of this construction is that all the parts are secured to the base-board, which is simply laid on the ties, and consequently may be removed without inconvenience whenever it is desirable.

It will now be seen that I have invented a very cheap and simple cattle-guard, which may be attached at any desirable place on a railroad without disturbing the ties or the rails in any way and without interfering with the ordinary traffic on the road. It is also to be noted that my device cannot injure the animals in any way, for even if an animal stepped on the plates its foot would only go down a few inches till it came to a solid footing, from which it would have no difficulty in extricating itself.

The construction of the device as shown is susceptible of very considerable changes which would come within the scope of my invention.

What I claim as my invention is—

1. In a cattle-guard the combination with a depressible platform of a plurality of series of plates adapted to obscure the view of the ground beneath, and means whereby the platform when depressed will cause the plates to shake and vibrate as and for the purpose specified.

2. In a cattle-guard the combination with the depressible platform of a plurality of sets of plates suitably linked together and adapted to obscure the view of the ground beneath, springs secured to the end plate of each set the opposite ends of the springs being secured to a stationary part, said sets of plates being normally loosely hung, and means whereby the platform when depressed will pull the sets of plates tight thereby causing them to vibrate as and for the purpose specified.

3. In a cattle-guard the combination with a depressible platform and a plurality of sets of plates, the plates of each set being linked together loosely in lines parallel with the rails, and spring connections for securing the outer end of each set to a suitable stationary support, of a tilting board, a hinged connection between the platform and one side of the board, and suitable means for securing the inner end of each set of plates to the other edge of the tilting board as and for the purpose specified.

4. In a cattle-guard the combination with a plurality of sets of square plates, the plates of each set being diagonally disposed with respect to the rails, and secured together loosely at their adjacent corners, the side corners of one set of plates extending into the angles between the plates of adjacent sets, and each set extending parallel with the rails, of means for supporting the ends of each set of plates and means whereby the plates will be caused to vibrate when an animal endeavors to cross the guard as and for the purpose specified.

5. In a cattle-guard the combination with a plurality of plates loosely secured together in sets, of means for suspending said plates loosely in a substantially horizontal position, and means operated by the weight of an animal endeavoring to cross the guard for causing the plates to shake and vibrate as and for the purpose specified.

6. In a cattle-guard the combination with a plurality of plates loosely secured together in sets, of spring means for suspending said plates loosely in a substantially horizontal position, and means operated by the weight of an animal endeavoring to cross the guard for causing the plates to shake and vibrate as and for the purpose specified.

7. The combination with a rigidly-formed depressible covering for the space between the rails, of a vibratory covering connected thereto designed to be vibrated by the depression of the rigidly-formed covering as and for the purposed specified.

8. The combination with a rigidly-formed depressible covering for the space between the rails, of a vibratory covering connected thereto designed to be vibrated by the depression of the rigidly-formed covering and spring means connected to the vibratory covering for inducing a maximum vibration as and for the purpose specified.

Signed at the city of Ottawa, in the Province of Ontario, this 27th day of March, 1903.

ALBERT ROSS DAWSON.

Witnesses:

EDWARD R. FETHERSTONHAUGH,

J. A. SYMES.