

No. 696,153.

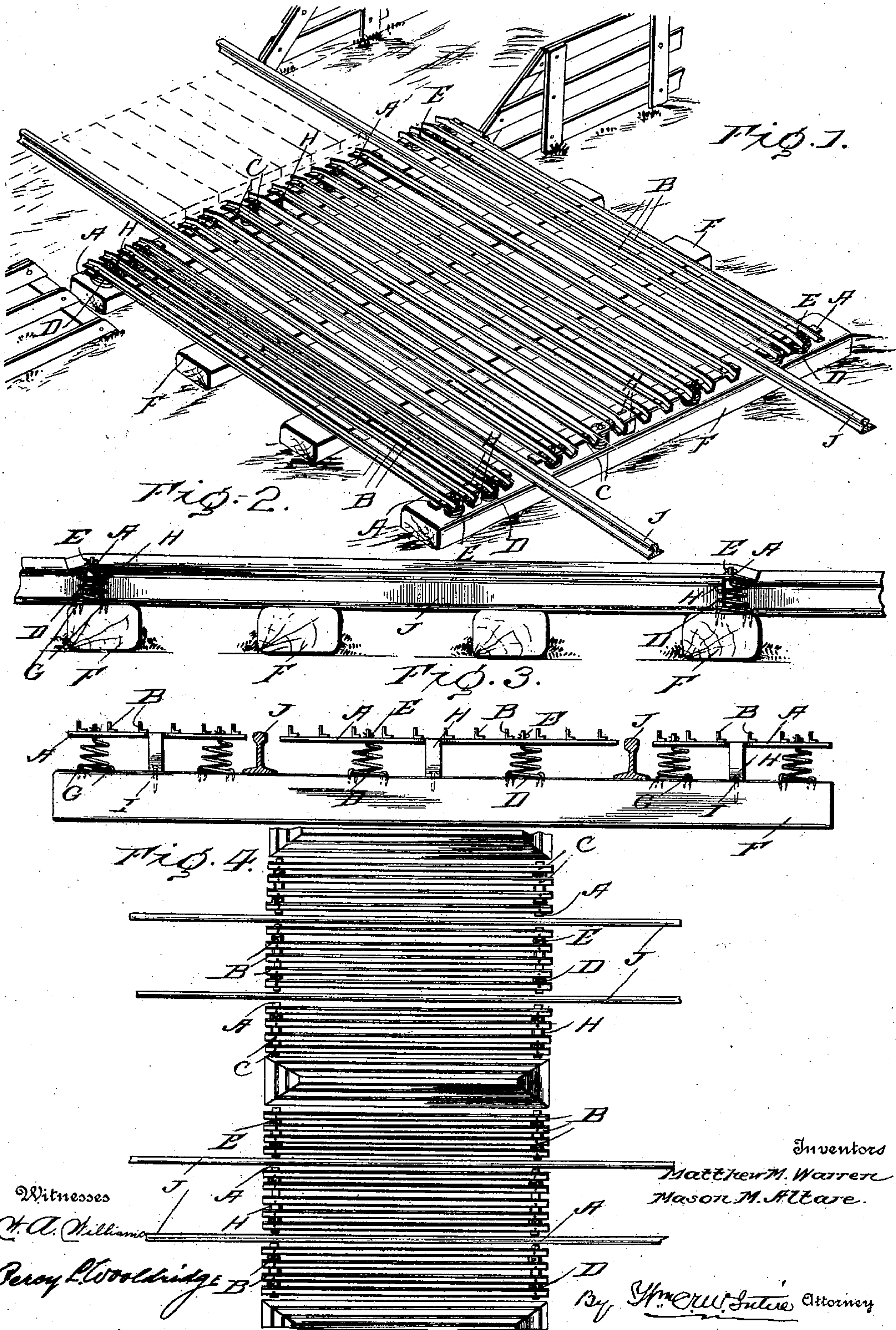
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M. M. WARREN & M. M. ALTARE.

RAILROAD CATTLE GUARD.

(Application filed Jan. 2, 1902.)

(No Model.)



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UNITED STATES PATENT OFFICE.

MATTHEW M. WARREN AND MASON M. ALTARE, OF PENCE SPRING,
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RAILROAD CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 696,153, dated March 25, 1902.

Application filed January 2, 1902. Serial No. 88,198. (No model.)

To all whom it may concern:

Be it known that we, MATTHEW M. WARREN and MASON M. ALTARE, citizens of the United States, residing at Pence Spring, in the county of Summers and State of West Virginia, have invented certain new and useful Improvements in Railroad Cattle-Guards; and we do hereby 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 appertains to make and use the same.

Our invention relates to certain new and useful improvements in railway "cattle-guards" of that class known as "surface" guards and in contradistinction to the class involving the use of strips arranged over a pit formed in and across the road-bed.

Our invention has for its object to provide a guard which shall be simple and economic of construction and which may be readily located and removed, and consequently not interfere with any ordinary repairs which may become necessary in the road-bed or tracks.

Our invention is based upon the well-known instinct of cattle and horses which deters them from entering upon a surface that does not afford a safe footing; and it consists generically in a removable skeleton platform arranged between and each side of the rails of a railroad-track at road-crossings and supported upon springs, so that said platform shall yield to the weight of the animal, and thus give warning of its apparent insecurity, which, as we have found from experience, results in the retreat of the animal.

In order that those skilled in the art to which our invention appertains may know how to make and apply our improved cattle-guard and fully appreciate its advantages, we will proceed to describe the same in detail, referring to the accompanying drawings, in which—

Figure 1 is a perspective view of a single-track railroad with our invention applied thereto. Fig. 2 is a side elevation. Fig. 3 is an end view, and Fig. 4 is a plan view showing a double track with our invention applied

thereto and showing also the usual pen or hen-coop barriers arranged between and at the ends of the ties of the adjacent tracks.

Similar letters of reference indicate like parts in the several figures of the drawings.

A represents metal bars about one-half inch thick and two inches wide, and B represents angle-bars arranged transverse to and secured upon the bars A by rivets or screw-bolts C. The bars A at each end of the series of angle-bars B are mounted upon coil-springs D, which are secured to the bars A by passing the ends of the springs through holes in said bars and securing them in proper relation therewith by suitable keys E in an obvious manner, and the springs are secured to the cross-ties E by two or more staples G, so located as to hold said springs in proper vertical position. These springs may be of any desired number arranged equidistant under each of the end cross-bars A; but we have found that two springs under each is sufficient if arranged midway between the center and each end of said bars, as clearly shown at Fig. 2. A U-shaped box or guide H is secured to the ties F by spikes I in such manner as to embrace the end cross-bars A, as clearly shown in Fig. 3, and operates to guide the platform or framework, consisting of the cross-bars A and transverse angle-irons B, in its vertical movement under the compression and reaction of the springs D.

We have found from experience that the spring framework or platform should preferably bridge four cross-ties, as shown at Figs. 1 and 2, and that the cross-ties should preferably be ten feet long and six by ten inches in cross-section and that said ties should be ballasted to within two inches of the top. The ties should be placed equidistant apart and and so as to extend about eight feet. The longitudinal angle-irons B should be so located relatively to each other as to prevent the hoof of an animal from passing between them, and we have found that three inches distance between them is sufficient to accomplish this end. The extreme ends of the angle-irons B extend beyond the two end cross-

bars A a short distance and are bent obliquely, as clearly shown at Fig. 2, for the double purpose of preventing animals from stumbling over the same and to avoid entangling contact with any chains or other devices hanging from the under side of cars traveling upon the rails J.

The spring platforms or framework, consisting of the cross-bars A, angle-irons B, and springs D, are arranged, as shown, between and each side of the track-rails, and if deemed desirable cross-bars A may be located intermediate of the two end bars to stiffen and strengthen the frame.

When the road consists of two or more tracks, the spaces between the ties of the adjacent tracks are guarded by the ordinary hen-coop construction shown at K in Fig. 4.

While we have defined the proportions and special relation of the several parts and have shown and described special design of bars and springs, we desire it to be understood that all these mere details may be varied without departing from the spirit of our invention, which rests in the broad idea of providing a spring skeleton platform adapted to yield to the weight of an animal as soon as an attempt is made to walk upon the same, which yielding action, as hereinbefore stated, will operate as

a deterrent to further progress and induce to immediate retreat.

Having described the construction, advantages, and operation of our improved cattle-guard, what we claim as new, and desire to secure by Letters Patent, is—

1. A railway cattle-guard consisting of a series of longitudinal bars or strips secured to cross-bars to constitute a skeleton platform, and springs interposed between the cross-bars, and the cross-ties of a railroad-track and securely connected to said cross-bars and cross-ties, substantially as and for the purpose set forth.

2. A railway cattle-guard consisting of a skeleton framework and springs interposed between and secured to said framework and the cross-ties of a railroad, and guides secured to the cross-ties and embracing the ends of the framework, whereby the framework is guided in its vertical movements substantially as hereinbefore set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

MATTHEW M. WARREN.

MASON M. ALTARE.

Witnesses:

M. L. GWINN,

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