

J. A. STEPHENSON & S. J. BILLINGTON.

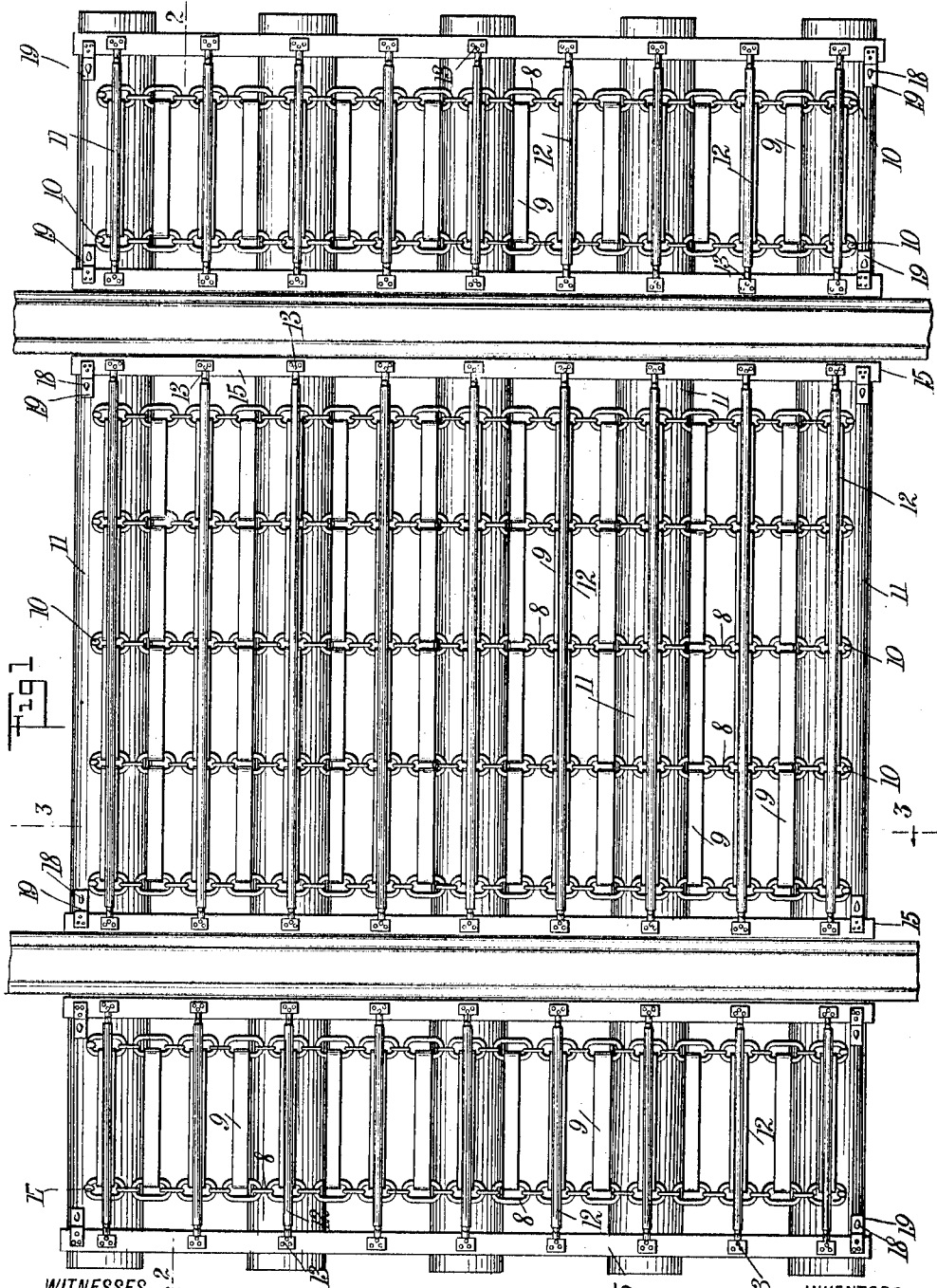
CATTLE GUARD FOR ROADWAYS.

APPLICATION FILED NOV. 17, 1911.

1,055,097.

Patented Mar. 4, 1913.

2 SHEETS-SHEET 1.



WITNESSES
C. J. Haschenberg
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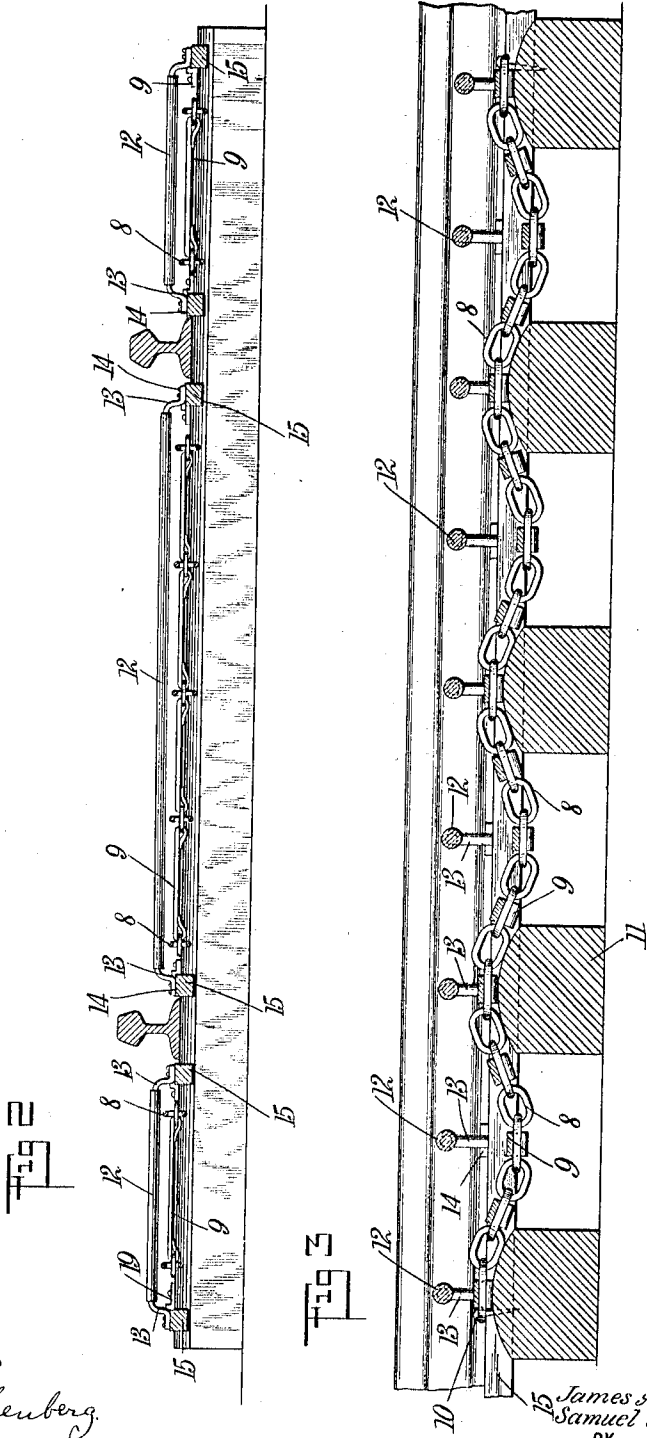
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UNITED STATES PATENT OFFICE.

JAMES A. STEPHENSON AND SAMUEL J. BILLINGTON, OF ELLISTON, MONTANA; SAID STEPHENSON ASSIGNOR TO CHARLES H. ANDERSON, OF ELLISTON, MONTANA, AND SAID BILLINGTON ASSIGNOR TO CHARLES L. FRIEDERICH, OF HELENA, MONTANA.

CATTLE-GUARD FOR ROADWAYS.

1,055,097.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed November 17, 1911. Serial No. 660,811.

To all whom it may concern:

Be it known that we, JAMES A. STEPHENSON and SAMUEL J. BILLINGTON, citizens of the United States, and residents of Elliston, in the county of Powell and State of Montana, have invented a new and Improved Cattle-Guard for Roadways, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide suitable bars and a yielding apron adapted for disposition in pathways which could be traveled by cattle, which apron and bars would operate to trap or discompose cattle on endeavoring to cross the same; to provide a construction for an apron and guard bar therefor simple, efficient and durable; and to provide a bar structure quickly and readily arranged or mounted in service position.

One embodiment of the present invention is disclosed in the structure illustrated in the accompanying drawings forming a part of this specification, in which like characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a top plan view showing a section of railroad bed and a cattle guard constructed and arranged in accordance with the present invention as applied thereto; Fig. 2 is a vertical cross section of the railroad bed and guard, taken on the line 2—2 in Fig. 1; and Fig. 3 is a longitudinal section of the railroad bed taken on the line 3—3 in Fig. 1.

As seen in the accompanying drawings, there are three aprons usually employed. One of the said aprons is adapted to cover the space between the railway rails of a railroad bed. The smaller or narrower aprons are disposed at the side of the railroad bed, and are adapted for extension, as shown in Fig. 1 of the drawings, beyond the ends of the railway ties to cover the intermediate space between the ends of the said ties and any fence or bank which may be adjacent the railroad bed, and utilized for the prevention of the passage of cattle.

The aprons are composed of a series of chains 8, 8. The chains 8, 8 are of equal length, and are united each to the other at suitable intervals by the flat metal straps 9, 9. The straps 9 are looped at their ends,

the loops being passed through convenient lengths in the chains 8. When each chain is secured to an adjacent chain by means of the strap 9, a mat-like construction or apron is formed. The disposition of the straps 9 is such as to provide an unsteady and evasive foothold for cattle, it being designed to worry the cattle to prevent any persistence in the attempt to cross the section of road bed having the guard as herein shown. The apron is secured in place by driving the spikes 10, 10 into the railway ties, the chains 8, 8 being arranged to flex or slack to permit any of the sections or portions thereof to drop down between the ties 11 of the railway construction.

To prevent the cattle falling upon the apron, and to give a more even support to the cattle if thrown, there are provided the bars 12. The bars 12 are preferably constructed of suitable sized piping of proper length. The bars 12 are suspended at each end upon upwardly projected brackets 13. The brackets 13 are provided with foot plates 14 which are fastened to the sills or side bars 15, any suitable means for fastening the brackets to the said side bars being employed. The brackets 13 are projected upward from the bars 15 to maintain the bars 12 at a desired height above the apron and the chains 8, 8, thereof. The brackets 13 are each provided with a rounded end which form bearings whereon the bars 12 may be rotated. The bars 12 are spaced apart to suit the convenience or desire of the owner or engineer installing the cattle guard.

The side guards shown in Figs. 1 and 2 are in all respects the same construction as above described with regard to the central apron. The tabs 19 are angular in form and are rigidly and permanently secured to the side bars 15. When a guard formed by the side bars 15, bars 12 and brackets 13 is laid upon the ties 11, the fastening spike is driven through the perforations formed in the tabs 19 into the body of the railway ties. If the construction or disposition of the railway ties does not coincide with the construction of the apron, a bridge piece of any suitable design may be extended between two of the ties, and to the bridge piece at one end of the apron the tabs 19 are secured.

With a guard constructed and arranged

as above set forth, the operation is as follows: When cattle attempt to cross the apron the hoof of the animal is planted either on one of the bars 12 or between the same to rest upon the straps 9 or chains 8. If the hoof rests upon the bar 12, this being rotatively mounted, will roll and cause the animal to stumble. If, on the other hand, the hoof be planted upon any part of the apron structure, this will yield and in this manner cause the animal to stumble. This is the purpose of the guard, to throw the animal in the attempt to cross the guarded section of the road bed. When the animal regains his footing, as he may without injury to himself, and having gotten clear of the guard, he does not venture again upon it; or, if a second time, a third attempt is rarely made.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:—

A cattle guard such as described, having

a plurality of rigid side bars fixedly mounted on railroad ties; a flexible apron secured to said ties by the ends thereof, said apron embodying a plurality of side chains and cross bars connecting the same at short intervals, said apron having a maximum length greater than said side bars; a plurality of rotary bars extending between said side bars at suitable intervals; and brackets fixedly mounted on said side bars and extending upward therefrom to form bearings for said rotary bars, said rotary bars being separated from said apron when disposed above the same to prevent the upward lift or displacement thereof.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES A. STEPHENSON.
SAMUEL J. BILLINGTON.

Witnesses:

SEWELL A. KONGSGAARD,
CHARLES H. ANDERSON.

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