H. E. HOPKINS.

RAILWAY CATTLE GUARD.

APPLICATION FILED DEC. 27, 1912.

1,105,434.

Patented July 28, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

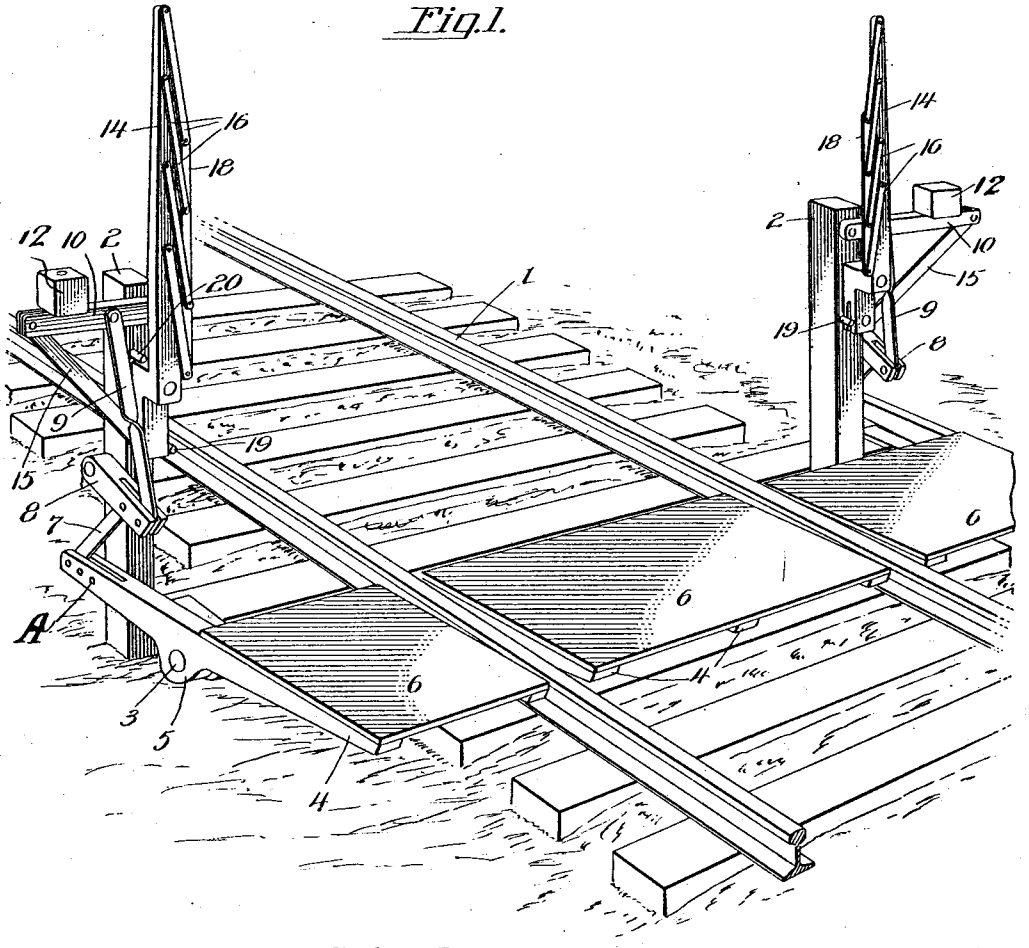
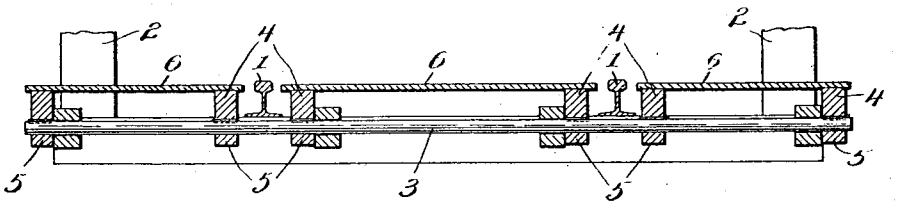


Fig. 4.



Inventor

Henry E. Hopkins.

Witnesses

F. C. Gibson.

Wm. L. Forth

By Victor J. Evans

Attorney

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

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2 SHEETS—SHEET 2.

Fig. 2.

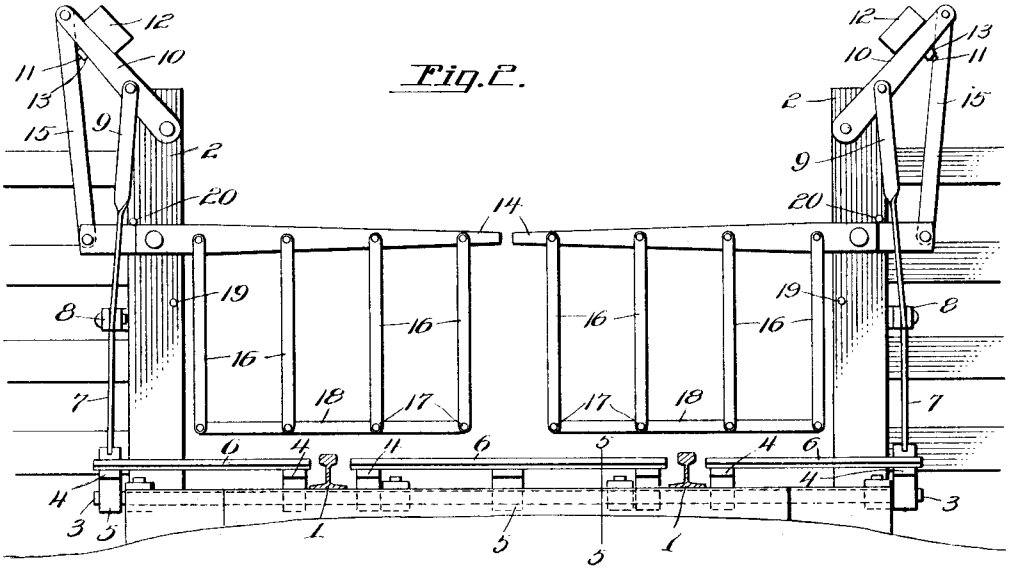


Fig. 3.

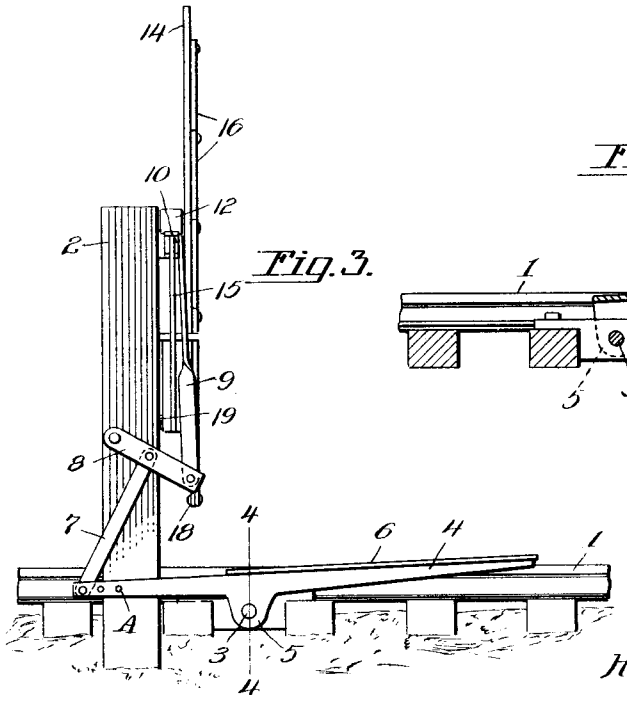
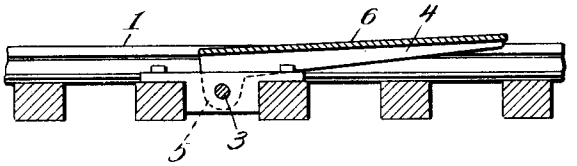


Fig. 5.



Witnesses

F. C. Gibson.

Wm. J. Forth.

Inventor

Henry E. Hopkins.

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

HENRY E. HOPKINS, OF WAVERLY, TENNESSEE.

RAILWAY CATTLE-GUARD.

1,105,434. Specification of Letters Patent. Patented July 28, 1914.

Application filed December 27, 1912. Serial No. 738,906.

To all whom it may concern:

Be it known that I, HENRY E. HOPKINS, a citizen of the United States, residing at Waverly, in the county of Humphreys and State of Tennessee, have invented new and useful Improvements in Railway Cattle-Guards, of which the following is a specification.

The present invention relates to improvements in cattle guards, primarily adapted to be arranged at the gaps which are formed by the track in the dividing fences of adjacent farms.

An object of the invention is the provision of a railway gate which will close the gap between the fences to provide a barrier for preventing cattle, etc., passing from one field to the adjacent field when the cattle place their weight upon platforms which are provided between and adjacent the tracks for operating the gates.

Another object of the invention is to provide a cattle guard having tiltable gate bars which are normally sustained in a vertical position, and which are adapted to be swung to a horizontal position when the weight of an animal is deposited upon suitable platforms which swing the gate bars to the said horizontal position, to provide the gate bars with a swinging frame or gate that will automatically open and close in accordance with the direction with which the gate bars are swung, and which, when the said bars are arranged horizontally will provide substantially rectangular guards or gates which will prevent the passage of small animals between the gate.

Other objects and advantages of the invention will appear as the nature of the invention is more fully set forth, and in the accompanying drawings there is illustrated a simple and satisfactory reduction of the invention to practice, and in said drawings: Figure 1 is a perspective view of the improved guard, the same being shown in its inoperative position, Fig. 2 is an elevation showing the arrangement of parts when the guard is swung to close the gap between the rails and a fence, Fig. 3 is an end elevation looking toward the outer side of the improvement, and Fig. 4 is a longitudinal sectional view taken approximately on the line 4—4 of Fig. 3. Fig. 5 is a longitudinal sectional view taken in a plane with the side of one of the bearing members for the shaft.

Referring now to the drawings in detail, 1—1 indicate the rails of a railway track and 2 suitable posts which are disposed a desired distance from each of the rails 1 of the track. The posts 2 may form the end posts of a fence, as illustrated in Fig. 2 of the drawings. Mounted in suitable bearings arranged between two of the ties at a suitable distance from the posts 2 is a shaft 3, the said shaft adapted to be connected in any desired or preferred manner with ears 5 provided upon the lower faces of longitudinally extending levers 4. Two of these levers are arranged between the track and two of said levers are disposed upon the shaft 3 on the outside of the track rails. Each pair of levers 4 is adapted to have its upper face provided with a platform 6, and the outermost levers, or those disposed adjacent the post 2 are extended from their ears 5 to a short distance beyond the posts 2. The extending portions of said outer levers have their ends preferably bifurcated and provided with a plurality of spaced perforations A, while passing through two of the registering perforations is a suitable pintle whereby links 7 are pivotally connected to the extensions of the levers. These links have their opposite ends pivoted approximately centrally of fingers 8, the said fingers having one of their ends pivotally secured to each of the posts 2, and their opposite ends which project beyond the posts, pivotally secured to vertically extending twisted bars 9. By reference to Figs. 1 and 3 of the drawings, it will be noted that the links 7 are arranged angularly of the posts 2, and further that the fingers 8 are disposed at substantial right angles to the said links, when the guard is in the position illustrated in the said figures.

Arranged upon one of the faces of each of the posts 2, at a right angle to the side of said posts 2 to which the finger 8 is secured and which for the sake of convenience will be termed the outer face of the said posts, is a weight-carrying bar 10, the upper end of each of the links 9 being pivotally connected thereto at a suitable distance from the pivotal connection of said bar 10 with the post 2. The opposite or free end of each bar 10 is bifurcated, and the weight 12 arranged upon the bar is formed with a threaded stem which passes through the opening in the said member 10, as indicated

by the numeral 11, while the numeral 13 designates a nut which engages with the threaded stem and sustains the weight at an adjusted position upon the bar 10.

Pivotally connected to the outer face of each of the posts 2 is a gate bar 14, each of said bars being of sufficient length to close the gap between the posts, when swung in a manner hereinafter to be described but which do not contact. The inner ends of each of the gate bars 14 project a suitable distance beyond each of the posts 2, and the said ends each has pivotally connected therewith a link or arm 15, and each of said arms has its free end pivotally connected with the free end of each of the weighted bars 10. Each of the gate bars is provided with a foldable frame which form the guards proper, and these frames comprise a number of spaced rods 16 which are loosely connected with each of the guard bars 14, the rods having their lower ends connected with a bar 18 through the medium of pivots 17.

The operation of the device may be briefly described as follows: We will suppose the guard to be in the position illustrated in Fig. 1 of the drawings. The weight 12 having swung the gate bars 14 to their vertical position and into contact with the stops 19, and the said weight having tilted the finger 8 and the link 7 to cause the link 7 to bear against the extending portions of the outer lever 4 and thus tilt the platforms 6. When an animal steps upon any of the platforms the levers 4 will rotate the shaft 3 causing an upward movement of the links 7 which swing the fingers 8 also in an upward direction. The bars 9 likewise are moved upwardly, swinging the weighted bar 10 and its weight to the position illustrated in Fig. 2, and causing the rod 15 to swing the gate bars 14 to a horizontal position or until contacted by the stops 20 provided upon the posts 2. The swinging frame will automatically assume the position illustrated in the said Fig. 2, so that the guard effectively prevents the passage of either large or small animals from one field to another. When the platform is relieved from the weight of the animal, the weights 12 will automatically swing the elements comprising the gate to the position illustrated in Figs. 1 and 3, the frames connected with the gate bars automatically collapsing as will be readily understood.

From the above description, taken in connection with the accompanying drawings, the simplicity of the device, as well as the advantages thereof will, it is thought, be perfectly apparent to those skilled in the art to which such inventions appertain without further detailed description.

Having thus described the invention, what I claim is:

1. In a railway guard, levers journaled upon a shaft, a link for certain of said levers, platforms for the levers, a pivoted finger centrally connected with the link, a twisted bar connected with the free end of the finger, a pivoted weight carrying arm pivotally connected with the twisted arm, a bar pivoted to the free end of the weight carrying arm, a pivoted gate bar connected to each of the pivoted bars and a guard frame comprising swinging rods and a pivoted connecting bar for the rods, and the said rods being loosely connected with the gate bars.

2. In a railway cattle guard, posts adapted to be disposed in the opposite sides of the rails, levers between the rails and on the outside of the rails, a shaft for the levers, a platform for the levers, the outer levers being provided with extensions, a link adjustably connected with each of said extensions, a finger pivotally connected to each of the posts and loosely connected with each of the links, a vertical bar connected with the free end of each of the fingers, a member pivotally connected with the free end of each bar, said member being also pivotally connected with the post, said member being slotted and provided with an adjustable weight, a gate bar pivoted adjacent one of its ends to each of the posts, a swinging foldable frame connected with each of the gate bars, and a connecting member between the weight carrying member and each of the gate bars.

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

HENRY E. HOPKINS.

Witnesses:
J. B. BELL,
J. A. SLAYDEN.

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