G. W. CLINE.

CATTLE GUARD.

APPLICATION FILED JAN. 20, 1908.

904,045. Patented Nov. 17, 1908.

Fig. 1.

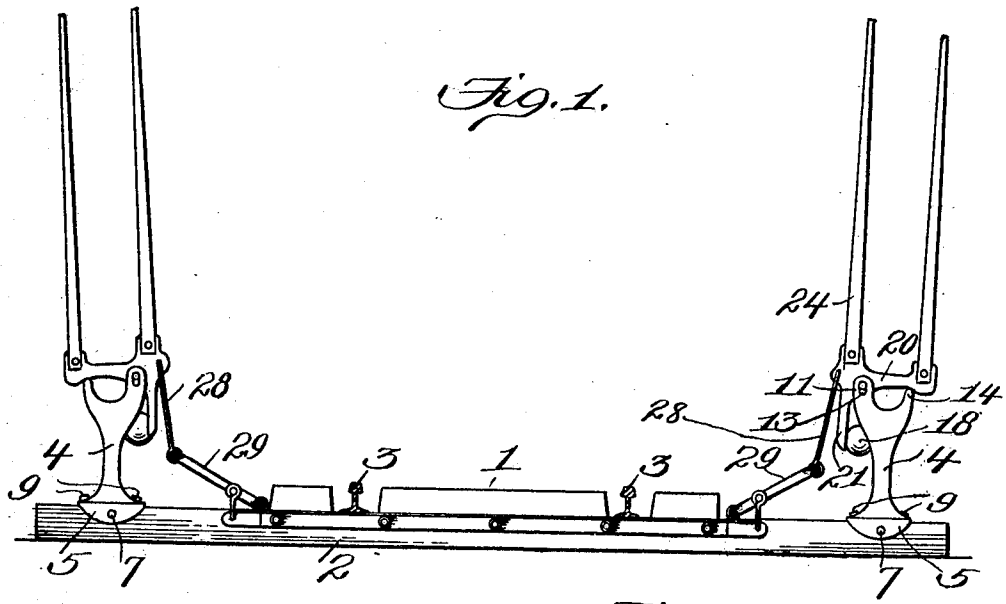


Fig. 2.

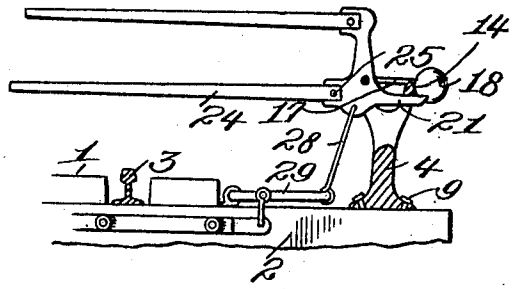


Fig. 3.

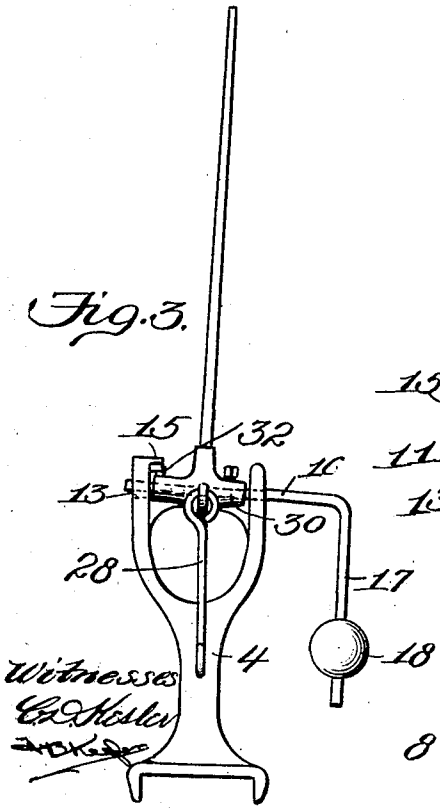


Fig. 4.

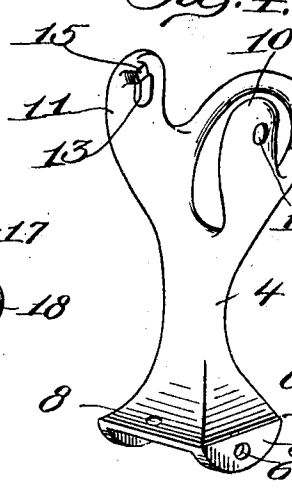
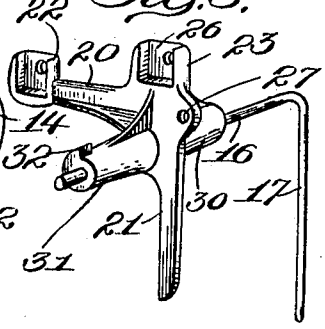


Fig. 5.



Witnesses
C. D. Kesler

Inventor
George W. Cline
By James L. Norris.
Attorney

UNITED STATES PATENT OFFICE.

GEORGE W. CLINE, OF SANDPOINT, IDAHO.

CATTLE-GUARD.

No. 904,045. Specification of Letters Patent. Patented Nov. 17, 1908.

Application filed January 20, 1908. Serial No. 411,742.

To all whom it may concern:

Be it known that I, GEORGE W. CLINE, a citizen of the United States, residing at Sandpoint, in the county of Bonner and State of Idaho, have invented new and useful Improvements in Cattle-Guards, of which the following is a specification.

This invention relates to cattle guards for preventing cattle and other stock from passing over railroad tracks or from one field to another; and the object thereof is to provide, in a manner as hereinafter set forth, a construction of cattle guard designed primarily as an improvement upon the form of cattle guard disclosed in Letters Patent No. 859,901 granted to me July 9, 1907.

Further objects of the invention are to provide a cattle guard which shall be simple in its construction, automatic in its operation, strong, durable, efficient in its use, readily set up and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown the preferred embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the accompanying drawings, in which like reference characters denote corresponding parts throughout the several views—Figure 1 is a transverse sectional view of a railway track showing the adaptation thereto of a cattle guard in accordance with this invention, the guard being open; Fig. 2 is a similar view showing one-half of the guard in a closed position; Fig. 3 is a side elevation showing one of the gates in an elevated position, together with a supporting standard for the gate; Fig. 4 is a perspective view of the gate-supporting standard, and, Fig. 5 is a perspective view of the gate shaft carrying a bracket for the gate bars.

A cattle guard in accordance with this invention embodies vertically-yielding treads referred to by the reference character 1 and which are similar in construction to the yielding treads set forth in Patent No. 859,901, and under such circumstances it is thought unnecessary to specifically describe the said treads, particularly in view of the fact that they are arranged in the same manner as those disclosed in the Letters Patent.

Referring to the drawings in detail, 2 denotes an elongated tie projecting from each side of the rail sections 3 and to the said tie in close proximity to each end is secured a gate-supporting standard 4. Each of the standards 4 is formed of metallic material and has its lower end provided with a pair of depending flanges 5 each having an opening 6. The flanges 5 extend against opposite sides of the tie 2, and through the openings 6 extend holdfast devices 7 which engage with the tie 2, thereby securing the standard 4 in position. Each of the standards 4 at its bottom is furthermore provided with an opening 8 at each side through which extend holdfast devices 9. These latter engage in the tie 2 and act as an additional means for fixedly securing the standard 4 in position. Each of the standards 4 at its top is enlarged and provided with a pair of vertically-extending arms 10, 11, the former provided with a circular opening 12 and the latter with a vertically-extending elongated slot 13. Each of the standards 4 is furthermore provided at its top with a loop 14, the function of which will be hereinafter referred to. The arm 11 is not only formed with a slot 13, but is also provided with an inwardly-extending lug 15, the function of which will be hereinafter referred to. Journaled in the arms 10, 11 is a gate-supporting shaft 16, which extends through the slot 13 and opening 12. The said shaft at one end is provided with a depending extension 17 which carries an adjustable counterweight 18.

Fixedly secured upon each of the shafts 16 is a gate. Each of the gates embodies an L-shaped bracket, the arms of which are indicated by the reference characters 20 and 21. The former is provided with a pair of vertically-extending U-shaped extensions 22, 23, the former positioned at the free or outer end of the arm 20 and the latter at the inner end of the arm 20. The U-shaped extensions 22, 23 constitute sockets for the reception of the inner ends of the gate bars 24. Holdfast devices 25 extend through the bars 24 and engage in the walls 26 of the sockets for securing the bars 24 to the L-shaped bracket. The arm 20 at its junction with the arm 21 is formed with an opening 27 in which engages the upper end of a link

28, the lower end of said link 28 being pivotally connected to a crank 29 which in turn is pivotally connected to the treads 1. Projecting from each side of the arm 21 is a hollow annular extension. These extensions are indicated by the reference characters 30, 31, the latter being formed with a protuberance 32. The extensions 30, 31 are mounted upon the shaft 16 and it is evident, in view of the fact that the extensions are carried by the shaft 16, that when the tread 1 is lowered the gates will be shifted so as to extend transversely of the track and that when pressure is relieved from the tread the action of the weight 18 will cause the shafts to resume their normal positions as shown in Fig. 1.

The lug 15, in connection with the protuberance 32, constitutes a means for maintaining the gates in an upright position so that they cannot be accidentally lowered or blown across the track by the wind. When the gates are in an upright position the weight 18 will cause one end of the shaft to extend upwardly in the slot 13 so that the protuberance 32 will be positioned at the rear of the lug 15 and the protuberance 32 and lug 15 will be maintained in such position through the action of the weights 18 until pressure is applied to the tread 1. When pressure is applied to the tread 1 the gates are not immediately rocked on their pivots owing to the fact that the free end of the shaft 16 must first be lowered so that the protuberance 32 will be shifted clear of the lug 15.

Setting up a guard in accordance with this invention does not necessitate the employment of four elongated ties as set forth in Letters Patent No. 859,901, and furthermore it overcomes the necessity of employing a pair of supporting standards for each of the gate-supporting shafts, as well as means independent of the supporting standards for supporting the gate and arresting the movement of the gate when swung transversely of the track-bed. In the construction in accordance with that disclosed herein the arm 21 of the L-shaped bracket constitutes means, in connection with the loop 14, to arrest the transverse movement of the gate and the loop 14 constitutes a means for supporting the gate when in an upright position. Furthermore the manner of setting up the supporting standards in accordance with this invention overcomes the necessity of employing a pair of independent bearing blocks for the gate-supporting shaft as disclosed in Patent No. 859,901 and under such conditions a guard in accordance with this invention is more compact, simple and less expensive.

What I claim is—

1. A cattle guard comprising a gate-supporting standard comprising a pair of vertically-extending arms one of which is provided with a circular opening and the other of which is formed with an elongated slot, said standard further embodying a loop arranged at one side of said arms.

2. A cattle guard comprising a swinging gate consisting of an L-shaped bracket formed with a pair of sockets and bars having one end secured in said sockets, said bracket having a cylindrical extension projecting laterally from each side thereof, one of said extensions provided with a protuberance and said bracket formed with an opening at a point in proximity to one of the sockets.

3. A cattle guard comprising a gate-supporting standard provided with a pair of arms and a loop, one of said arms having an elongated slot and an inwardly extending lug and the other of said arms provided with an opening, a gate-supporting shaft extending through said opening and slot, an L-shaped bracket provided with a pair of cylindrical extensions mounted upon said shaft, one of said extensions formed with a protuberance adapted to engage said lug, bars secured to said bracket, and a counterbalance weight carried by the shaft, the loop of the standard constituting means for supporting said bars in an upright position and one of the arms of said bracket adapted to engage the loop to arrest the downward movement.

4. A cattle guard comprising a gate-supporting standard provided with a pair of arms and a loop, one of said arms having an elongated slot and an inwardly extending lug and the other of said arms provided with an opening, a gate-supporting shaft extending through said opening and slot, an L-shaped bracket provided with a pair of cylindrical extensions mounted upon said shaft, one of said extensions formed with a protuberance adapted to engage said lug, bars secured to said bracket, and a counterbalance weight carried by the shaft, the loop of the standard constituting means for supporting said bars in an upright position and one of the arms of said bracket adapted to engage the loop to arrest the downward movement, combined with a pressure-operated means connected to said bracket and adapted when pressure is applied thereto to first lower one end of the shaft and then turn the shaft, thereby swinging the bracket and bars.

5. A cattle guard comprising a gate shaft supporting standard adapted to straddle and be secured to a railway tie, said standard at its upper end formed with a pair of arms, one of which is provided with an opening and the other of which is provided with a slot and an inwardly extending lug, said standard further provided at one side of the arms with a loop.

6. A cattle guard comprising a supporting standard formed with a loop, a shaft mounted in the standard, an L-shaped bracket car-

ried by said shaft, bars secured to the bracket, one of the arms of said bracket adapted to engage said loop for supporting the bars in an upright position and the other of the arms adapted to engage the loop to limit the downward movement of the bars.

7. A cattle guard comprising a supporting standard formed with a loop, a shaft mounted in the standard, an L-shaped bracket carried by said shaft, bars secured to the bracket, one of the arms of said bracket adapted to engage said loop for supporting the bars in an upright position and the other of the arms adapted to engage the loop to limit the downward movement of the bars, combined with means connected with said bracket for shifting the shaft in one direction, and means carried by the shaft for automatically shifting it in the opposite direction.

8. A cattle guard comprising a supporting standard formed with a loop, a shaft mounted in the standard, an L-shaped bracket carried by said shaft, bars secured to the bracket, one of the arms of said bracket adapted to engage said loop for supporting the bars in an upright position and the other of the arms adapted to engage the loop to limit the downward movement of the bars, combined with means connected with said bracket for shifting the shaft in one direction, and means carried by the shaft for automatically shifting it in an opposite direction, said standard provided with an inwardly-extending lug, and said bracket provided with means adapted to engage said lug for maintaining said bars in an upright position.

9. A cattle guard comprising a supporting standard, means for securing the lower end of the standard to a support, a swinging gate journaled in the standard, a stationary means forming a part of the standard and engaged by the gate for supporting the gate in an upright position, and means forming a part of the gate and adapted to engage the said last-mentioned means for arresting the downward movement of the gate.

10. A cattle guard comprising a supporting standard, means for securing the lower end of the standard to a support, a swinging gate journaled in the standard, stationary means forming a part of the standard and engaged by the gate for supporting the gate in an upright position, means forming a part of the gate and adapted to engage the said last-mentioned means for arresting the downward movement of the gate, a pressure-operated means engaging with the gate for swinging the gate in one direction, and means for automatically returning the gate to an upright position when said pressure-operated means is released.

11. A cattle guard comprising a supporting standard, a swinging gate journaled in said standard and embodying an L-shaped bracket, a stationary means forming a part of the standard and adapted to be engaged by one of the arms of the bracket for supporting the gate in an upright position, said means further adapted to be engaged by the other arm of the bracket for limiting the closing movement of the gate.

12. A cattle guard comprising a supporting standard, a swinging gate journaled in said standard and embodying an L-shaped bracket, a stationary means forming a part of the standard and adapted to be engaged by one of the arms of the bracket for supporting the gate in an upright position, said means further adapted to be engaged by the other arm of the bracket for limiting the closing movement of the gate, a pressure-operated means connected with the bracket for swinging down the gate when pressure is applied to said means, and means for automatically returning the gate to an upright position when said pressure-operated means is released.

13. A cattle guard comprising a supporting standard, a swinging gate journaled in said standard and embodying an L-shaped bracket, a stationary means forming a part of the standard and adapted to be engaged by one of the arms of the bracket for supporting the gate in an upright position, said means further adapted to be engaged by the other arm of the bracket for limiting the closing movement of the gate, a pressure-operated means connected with the bracket for swinging down the gate when pressure is applied to said means, means for automatically returning the gate to an upright position when said pressure-operated means is released, and means forming a part of said standard and engaging with said bracket for maintaining the gate in an upright position until said pressure-operated means is operated.

14. A cattle guard comprising a supporting standard having a pair of arms and a loop at the top thereof, a swinging gate journaled in said arms, said loop adapted to be engaged by the gate for supporting the latter in an upright position, and means forming a part of the gate and adapted to engage the loop for arresting the downward movement of the gate.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE W. CLINE.

Witnesses:
HARRY BOND,
A. B. CLINE.