

No. 685,013.

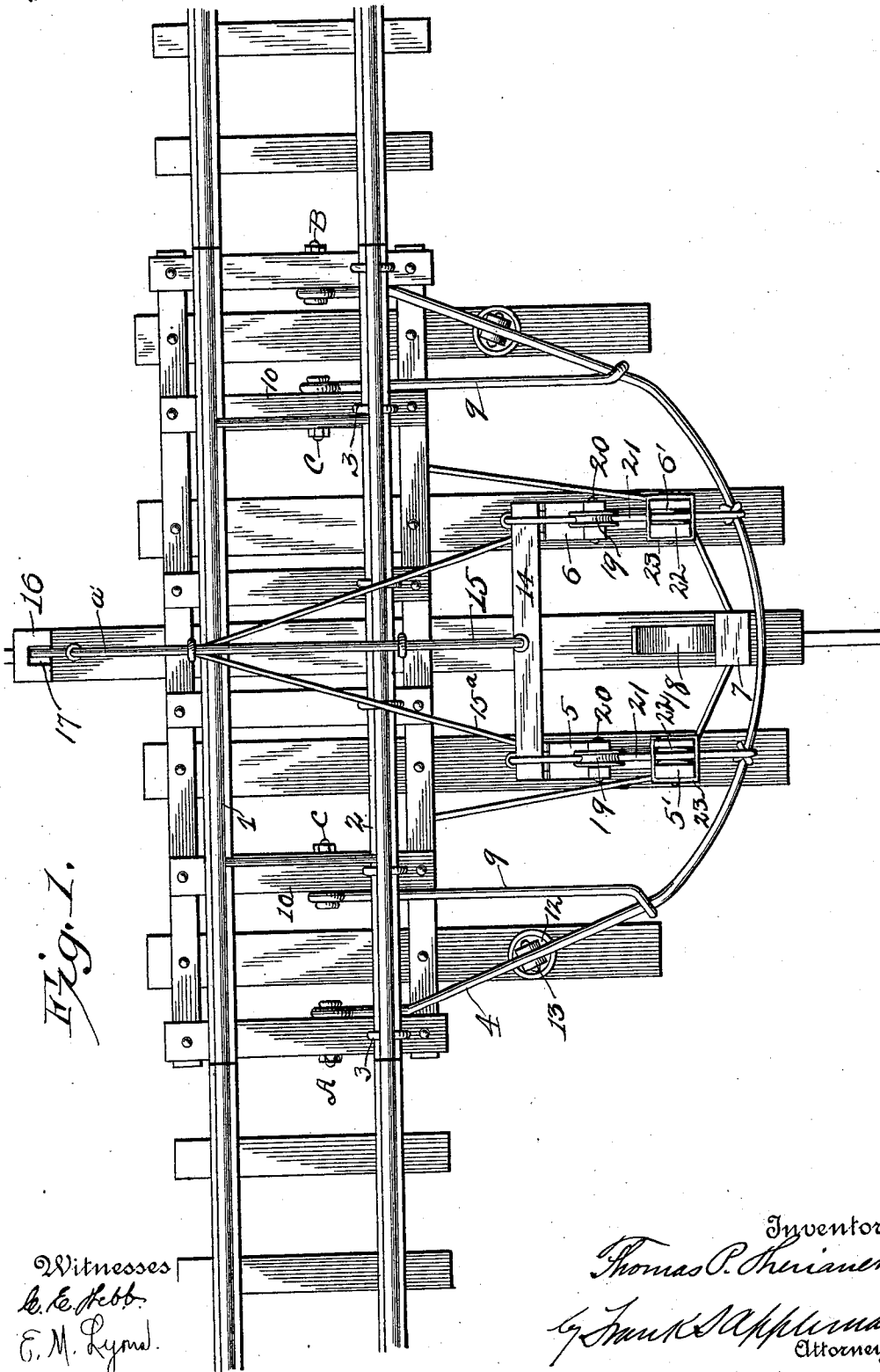
Patented Oct. 22, 1901.

T. P. THERIAULT.  
CATTLE GUARD.

(Application filed Feb. 6, 1901.)

2 Sheets—Sheet 1.

(No Model.)



Witnesses  
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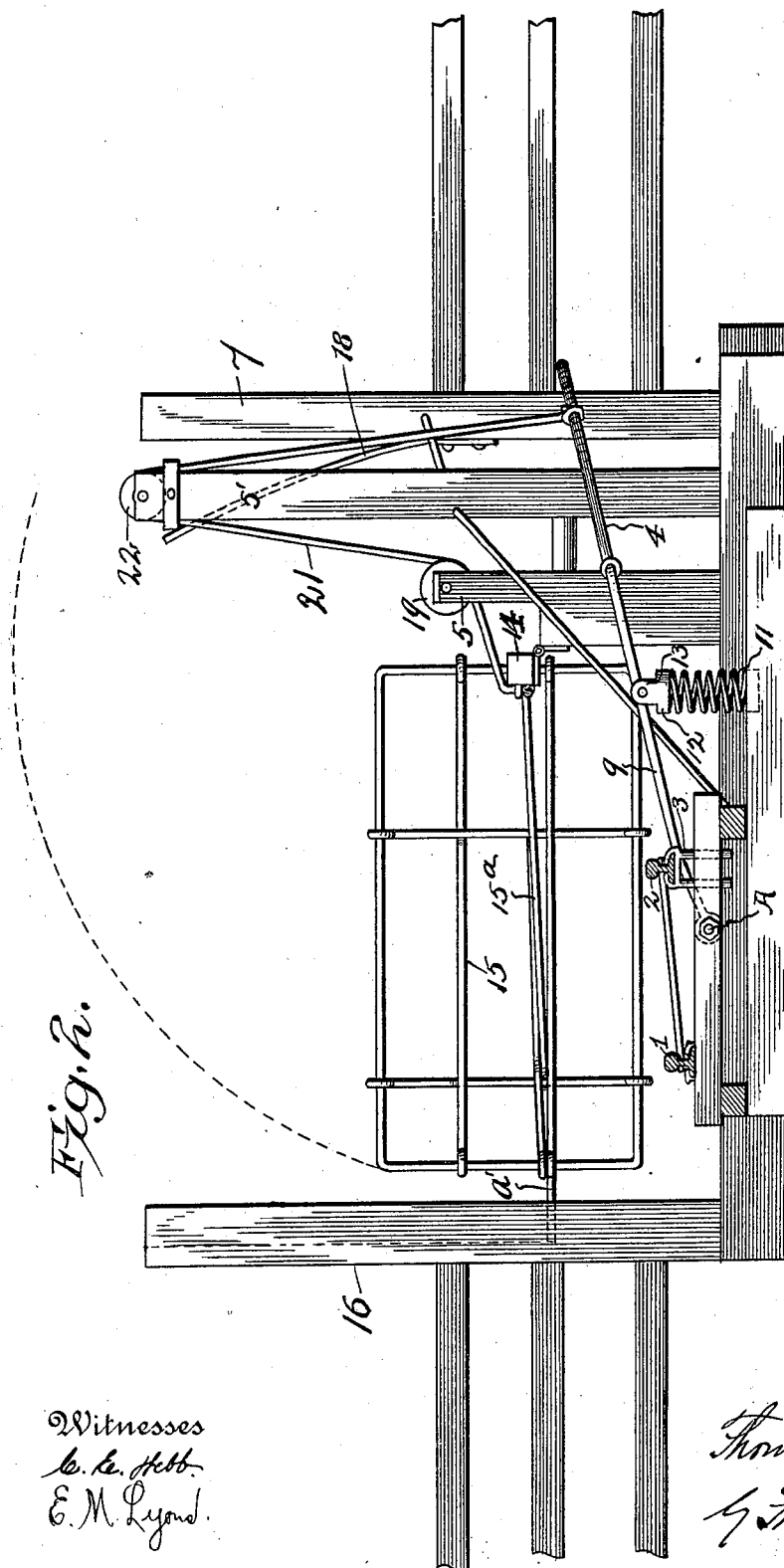
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**2 Sheets—Sheet 2.**



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# UNITED STATES PATENT OFFICE.

THOMAS P. THERIAULT, OF ST. FRANCIS, CANADA.

## CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 685,013, dated October 22, 1901.

Application filed February 6, 1901. Serial No. 46,206. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS P. THERIAULT, a citizen of Canada, residing at St. Francis, in the Province of New Brunswick, Canada, have invented certain new and useful Improvements in Cattle-Guards, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to railway-gates, and particularly to that class known as "cattle-guards."

The objects of the invention are, first, to produce a cattle-guard which extends transversely of the track in a vertical position in such manner as to normally obstruct passage along the road-bed or track; second, to provide means in such relation to one of the rails of the track as to automatically remove the gate from its normal position and to tilt it back out of line with the locomotive or car which is traveling on the track, and, finally, to provide a track-gate of the character noted which will possess advantages in points of efficiency, simplicity, and inexpensive construction.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail reference will be had to the accompanying drawings, forming part of this specification, wherein like characters denote corresponding parts in both views, and in which—

Figure 1 is a plan view of a section of a track with a gate and the operating mechanism embodying the invention applied. Fig. 2 is a view in elevation looking along the track.

In the drawings, 1 and 2 denote the rails of a track, the former of which is seated on the cross-ties as in ordinary construction and the latter is suspended slightly above the upper surfaces of the cross-ties for the purpose to be presently explained.

Yokes 3 have their upper portions forked and bent in to embrace the base of the rail 2, and the legs of the yoke extend down through holes in the cross-ties to act as guides for preventing turning of the rail.

A lever 4 has one end pivoted on the bolt

A, secured to a cross-tie, extends out from the track a considerable distance, and has its opposite end turned back and pivoted to a bolt B of a cross-tie stationed a distance from the one to which the first-named end is pivoted, the said lever thus describing a curve and embracing certain posts 5, 6, 7, 5', and 6'. The lever has the arms 9 connected thereto, and the arms have their inner ends pivoted to the bolts C in the ties 10. The lever and the arms serve to support the rail in its slightly-elevated position and take motion from the descent of the rail when an engine or car passes thereover. The springs 11 are suitably anchored at the side of the road-bed, and the upper ends of the springs support the plates 12, said plates having lugs 13, between which the lever is secured. The tension of the spring is such as to exert an upward pressure, so as to hold the rail normally suspended through the agency of the lever and arms. A cross-beam 14 is hinged to the posts 5 and 6, and a gate 15 is secured to and projects therefrom over the track. The parts are so arranged as to cause the gate to tilt vertically that it may not obstruct the passage of rolling-stock. Brace-wires 15<sup>a</sup> extend from the beam to the front end of the gate to increase the rigidity of the structure. A post 16 is stationed on the side of the track opposite the posts 5 and 6, and the inner surface of said post 16 is provided with a channel 17, in which a projecting arm *a'* on the gate travels and is guided. A post 7 is stationed back and intermediate of the posts 5 and 6 and is provided with a spring buffing-plate 18, against which the gate abuts as it swings clear of the track. The object of the plate 18 is to absorb jar and prevent the end of the gate from passing the center of gravity and to insure its return as a guard for the track when the weight of the car is removed from the rail and the outer end of the lever is elevated by the springs. Pulleys 19 are mounted on pins 20 in the posts 5 and 6, and the flexible connections 21 running thereunder and connected to the beam and to the lever effect the elevation of the end of the gate as the lever is depressed. The posts 5' and 6' are also provided with pulleys 22, the last-named posts being of greater height than the posts 5 and 6. Thus the flexi-

ble connection rides over the pulleys 22 and under the pulleys 19 to the beam. The peripheries of the pulleys are preferably serrated to insure a positive engagement of the flexible connections. Guides 23 encircle the upper ends of the posts 5' and 6' and confine the flexible connections in order to prevent jumping of the connections as the lever operates.

10 Having fully described the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a cattle-guard, a normally-suspended rail, a spring-pressed lever having its two ends extending under the rail and pivoted, arms extending under the rail and connecting to the lever, springs for holding the lever and rail normally elevated, a beam suitably hinged, a gate carried by the beam, two pairs of posts having pulleys in their upper ends and flexible connections secured to the lever and beam; said connections running over one set of pulleys and under the other set of pulleys, substantially as described.

2. In a cattle-guard, a normally-elevated rail, a lever and arms engaging the under surface of the base of the rail, springs for supporting the lever, a post having a channel formed in one side, a gate having an arm slidable on the channel, posts stationed across

the track from the first-named posts, a beam hinged to the posts and carrying the gate, other posts of greater height than the posts to which the beam is hinged, pulleys on the ends of the several posts, flexible connections operating over the pulleys to swing the beam, a post to the rear of and intermediate of the posts carrying the pulleys and a buffer-spring on the post to receive the impact of the gate as it is elevated.

3. In a cattle-guard, a normally-suspended rail, a spring-pressed lever actuated by the rail, a pair of posts on one side of the track, a beam pivoted to the posts, two posts of greater height than the first-named post stationed at the rear thereof, a post stationed intermediately but to the rear of the second-named posts, a buffer-plate thereon, a gate carried by the pivoted beam, pulleys mounted on the ends of the aligned posts and flexible connections secured to the lever and operating over the pulleys on the rear posts and under the pulleys on the front posts and so attached to the beam as to swing the same.

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

THOMAS P. THERIAULT.

Witnesses:

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HOWARD PIERCE.