

R. M. YORKS.
Railroad Cattle Guards.

No. 138,308.

Patented April 29, 1873.

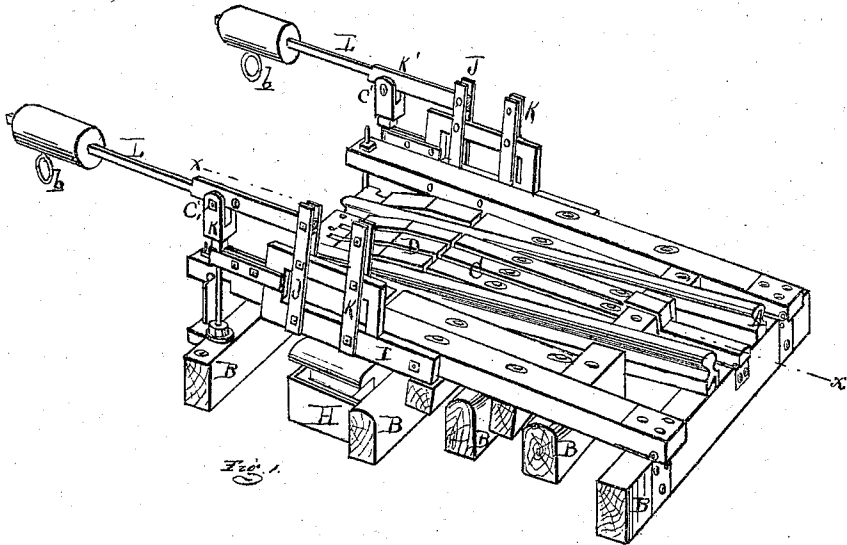


Fig. 1.

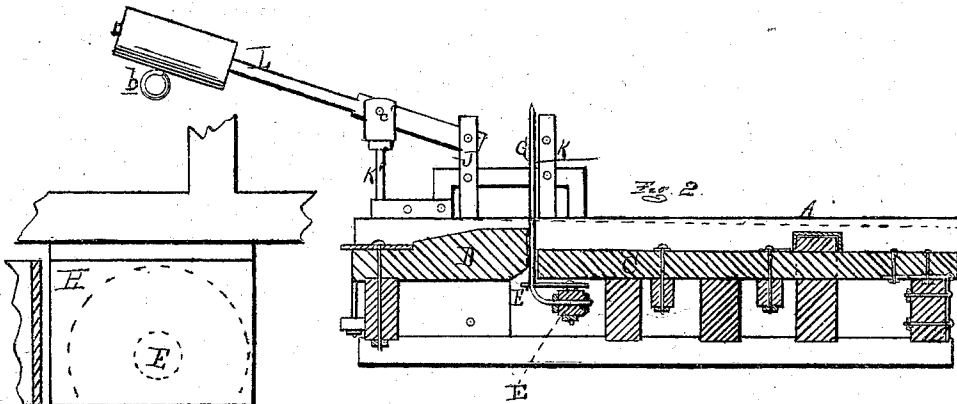


Fig. 2.

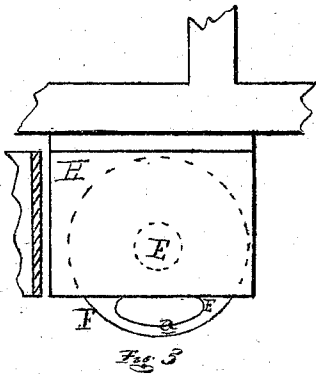


Fig. 3.

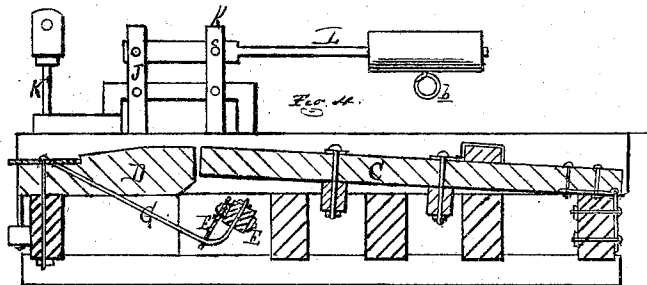


Fig. 4.

ATTEST:

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ROBERT M. YORKS, OF SCHOOLCRAFT, MICHIGAN.

IMPROVEMENT IN RAILROAD CATTLE-GUARDS.

Specification forming part of Letters Patent No. **138,308**, dated April 29, 1873; application filed January 21, 1873.

To all whom it may concern:

Be it known that I, ROBERT M. YORKS, of Schoolcraft, in the county of Kalamazoo and State of Michigan, have invented a new and useful Improvement in Automatic Cattle-Guard Gates; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my cattle-guard in use as an open gate. Fig. 2 is a longitudinal vertical section of the same on the line *x x*, but showing the gate closed by the weight of an animal standing on the platform. Fig. 3 is a detail in elevation of one of the cam-wheels at the end of the picket-shaft, its inclosing-box being partially broken away to show it, the bearer on the side of the platform being also shown. Fig. 4 is a longitudinal section, the same as Fig. 2, except that the weighted levers are reversed to throw the weight upon the platform, to keep the gate closed, it being opened by a passing train.

Like letters refer to like parts in all the figures.

The nature of my invention relates to a cattle-guard gate for railways so constructed that it may be used as an open gate, which is closed by the weight of an animal stepping upon its platform, or as a closed gate which will be automatically opened by the passage over it of an engine and train of cars. The invention consists in the peculiar construction of the device and the arrangement of its various parts, as more fully hereinafter set forth.

In the drawing, A A represent the rails of a railway track resting on the cross-ties B. C is a slotted or open-planked platform, whose middle and outer members are hinged at their outer ends to one of the cross-ties. D is a stationary apron which forms a continuation of the cattle-guard platform C, the timbers of the two having the same intervals between them. The cross-ties under the apron and the adjacent end of the platform are heavy timbers whose ends are connected at each side, under the apron and platform, by a longitudinal girt framed into them, into which girt is journaled the picket-shaft E under the free end of the platform.

The shaft E has keyed to each end a disk, F, with a cam, *a*, projecting from the lower part. Through the body of the shaft the lower ends of the metallic pickets G are inserted and bolted fast. The pickets are bent to a right angle before insertion in the shaft, and above the bends a stiffening-plate, E', properly perforated, is slipped over the pickets and bolted fast to the shaft, to give them (the pickets) the required stiffness, or the shaft may be made of angle-iron, instead of separate parts. The pickets play back and forth in the rotation of the shaft between the planks of the platform and apron. The disks and cams are incased by metallic or wooden boxes H, to prevent the parts from clogging, or being obstructed by dirt or dust. To each outer sill of the platform, which is extended to the further end of the apron, is bolted a metallic bearer, I, which rests upon the cam *a* below in such a manner that if the weight of the platform be transferred to the cams they will rotate the picket-shaft a quarter turn, and thus bring the gate-pickets to a vertical position, and thus prevent the passage of animals down the track from the highway. From each bearer I rise two box-posts, J K. In the former is pivoted one end of a weighted lever, L, whose weight is movable and locked in place by a set-screw, *b*. The lever L may be pivoted in the post K by a fulcrum-pin, *c*, as in Fig. 4, in which case its weight tends to depress the platform and raise the gate, or it may be swung over and pivoted at *c'* in the top of a post, K', at the side of the apron, in which case the lever will raise the platform and lower the gate, whose bars fall between the planks of the apron, as in Fig. 1.

With the levers adjusted as in Fig. 1, the gate, being open, offers no obstruction to passing trains, while, as soon as an animal steps upon the platform, it being nearly counter-weighted by the weighted levers, he will depress it and raise the gate, which bars his passage down the line of rails, as seen in Fig. 2. To illustrate, we will suppose that the weights on the levers have been so adjusted that the platform, with an additional weight of twenty-five pounds, will be just counterbalanced by the weighted levers. Any animal weighing more than twenty-five pounds stepping on the platform will depress it and raise the gate. An

ox weighing one thousand pounds will hold up the gate against a pressure of nine hundred and seventy-five pounds applied thereto to force it down, and so on in proportion to the weight of the animal standing on the platform. As soon as the animal steps off, the platform, it being overbalanced by the weighted levers, rises, while the gate falls out of sight.

What I claim as my invention, and desire to secure by Letters Patent, is—

The platform C hinged to the ties, the apron D, picket-shaft E, pickets G, disks F F, each having a cam, *a*, the bearers I I, posts J J, and fulcrum-posts K or L, or both, and the weighted levers L, substantially as and for the purposes herein set forth.

ROBERT M. YORKS.

Witnesses:

AMOS D. ALLEN,
HENRY H. BOEKELOR.