M. McANENY & P. SCHOBERT.

Automatic Railroad-Gate.

No. 218.546. Patented Aug. 12, 1879.

Fig. 1.

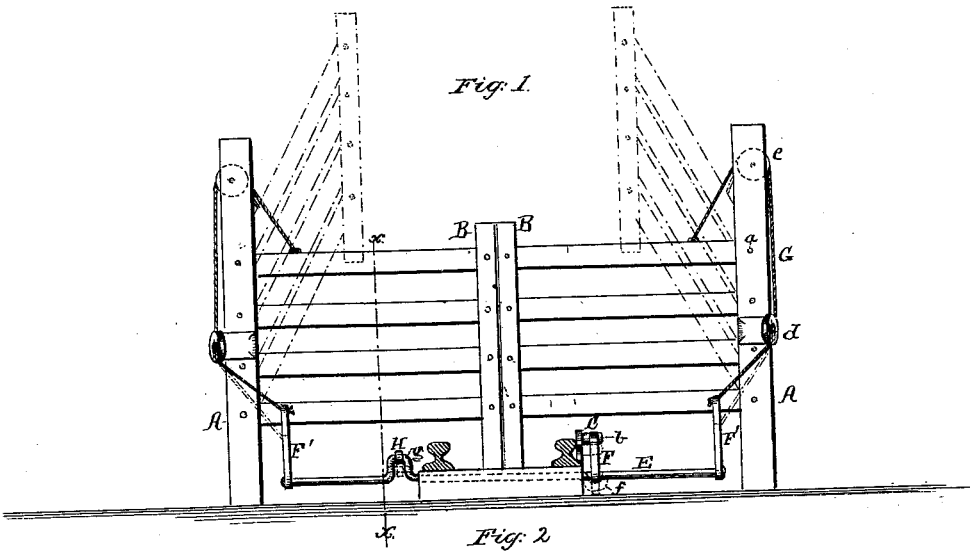


Fig. 2

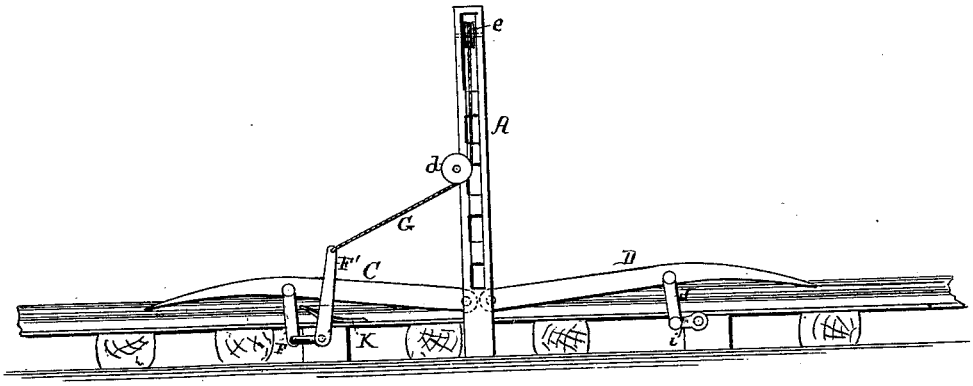
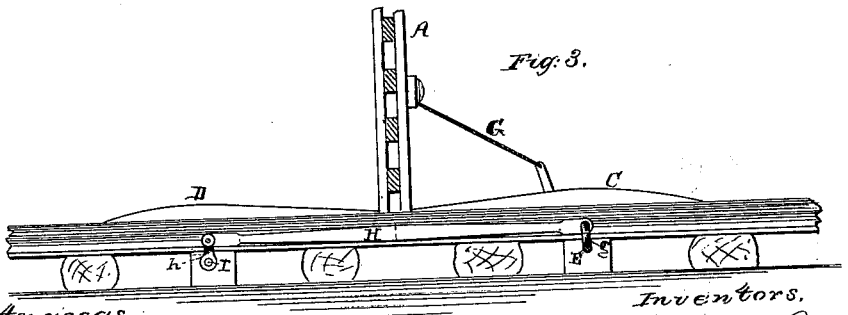


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

MICHAEL McANENY AND PETER SCHOBERT, OF LANSING, IOWA.

IMPROVEMENT IN AUTOMATIC RAILROAD-GATES.

Specification forming part of Letters Patent No. **218,546**, dated August 12, 1879; application filed June 20, 1879.

To all whom it may concern:

Be it known that we, MICHAEL MCANENY and PETER SCHOBERT, of Lansing, in the county of Allamakee and State of Iowa, have invented certain new and useful Improvements in Automatic Railroad-Gates; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The present invention relates to that class of gates for railroad-crossings in which an approaching train, through the intervention of proper mechanism, serves to effect the opening of the gates, the weight of the latter, aided in some cases by a spring, being sufficient to close the same after the train has passed.

The invention consists in a novel construction and combination of crank-shafts, connecting-rods, levers, and other devices for operating a rising-and-falling gate composed of pivoted bars, as will be hereinafter more fully described, and then set forth in the claim.

In the accompanying drawings, Figure 1 is a front elevation of a railroad-gate constructed according to our invention. Fig. 2 is a side elevation thereof; and Fig. 3 is a longitudinal section taken through one of the gate-sections.

The letters A denote a pair of posts, which are erected at the sides of a railroad-track. They are mortised or slotted, so as to receive the ends of a series of horizontal bars, which are connected with said posts by means of pivot-pins *a*. The horizontal bars are connected in a similar manner with vertical connecting-bars B. The parts thus described constitute the gate proper, comprising, in other words, two independent sections capable of rising and falling.

The mechanism for raising these gate-sections by the action or weight of an approaching train consists, primarily, of a pair of inclined longitudinal levers, C D, located in juxtaposition to one of the track-rails, and arranged, respectively, in front and rear of the gate-sections, so as to be acted upon by trains approaching from opposite directions. The adjacent ends of the levers, which may be termed the "track-levers," are pivoted to the rail, or to any other suitable support, and they are so shaped and arranged as to project above the level of the rail when the gate is in a closed position.

The lever C is connected with a transverse rock-shaft, E, which has its bearings in suitable supports arranged beneath the track-rails. The connection of the lever with the rock-shaft is effected by a link or strap, F, which is hung on a gudgeon or stud, *b*, on the outside of the track-lever, and has the cranked portion *f* of the rock-shaft passing through the lower end thereof. The rock-shaft projects a suitable distance beyond the rails—say, the width of the gate—and at its outer ends it carries rigid upwardly-projecting arms F′, which are connected with the gate-sections by means of ropes or chains G, made of any suitable material. These ropes or chains are attached to the arms of the rock-shafts, and, passing forward, are first passed around a bottom sheave, *d*, and from thence they are conducted in an upward direction along the posts, over a sheave, *e*, fitted in each of the latter, and then the ropes are attached to the gate-sections.

The mechanism thus described would be sufficient to operate the gate by a train approaching from the left.

The rock-shaft E is provided with a second cranked portion, *g*, located on the side of the track opposite from the track-lever. This cranked portion is connected with one end of a longitudinal rod, H, of wood or iron, or a wire rope may be resorted to for the same purpose. The opposite end of this long connecting-rod is connected with a crank-arm, *h*, of a short transverse rock-shaft, I. This rock-shaft extends only a short distance beyond the track-rails, and it has a second crank-arm, *i*, which is connected, by means of a link or strap, J, with the track-lever D.

The operation may be described as follows: As soon as the flange of the locomotive-wheel depresses either one of the track-levers the rock-shafts mentioned will oscillate, and in so doing will draw upon the gate-connections and cause the raising of the pivoted bars comprising the gate, as is clearly shown in Fig. 1. The gate-sections will be maintained in a raised position until the last car-wheel has

left the track-lever opposite from the side of approach. The weight of the gate will then effect the closing thereof, and for aiding this operation a plate or other spring, K, may be interposed between one or both of the track-levers and the rail-base.

As a modification of the end pivoted and inclined track-levers above described, we propose to make each of said levers of two parts, pivoted at their ends to the rail, and connected centrally by a hinge or pivot joint. Other slight modifications may also be resorted to without departing from the spirit of our invention.

Having thus described our invention, we claim as new—

The combination of the pair of pivoted track-levers, the transverse rock-shaft having fixed end arms and two cranks, the longitudinal connecting rod or rope, the short rock-shaft having crank-arms, and the links for connecting the levers to the crank-shafts with the pivoted gate-sections and suitable devices for connecting the same with the crank-shafts, substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

MICHAEL McANENY.
PETER SCHOBERT.

Witnesses:
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JAS. McANENY.