

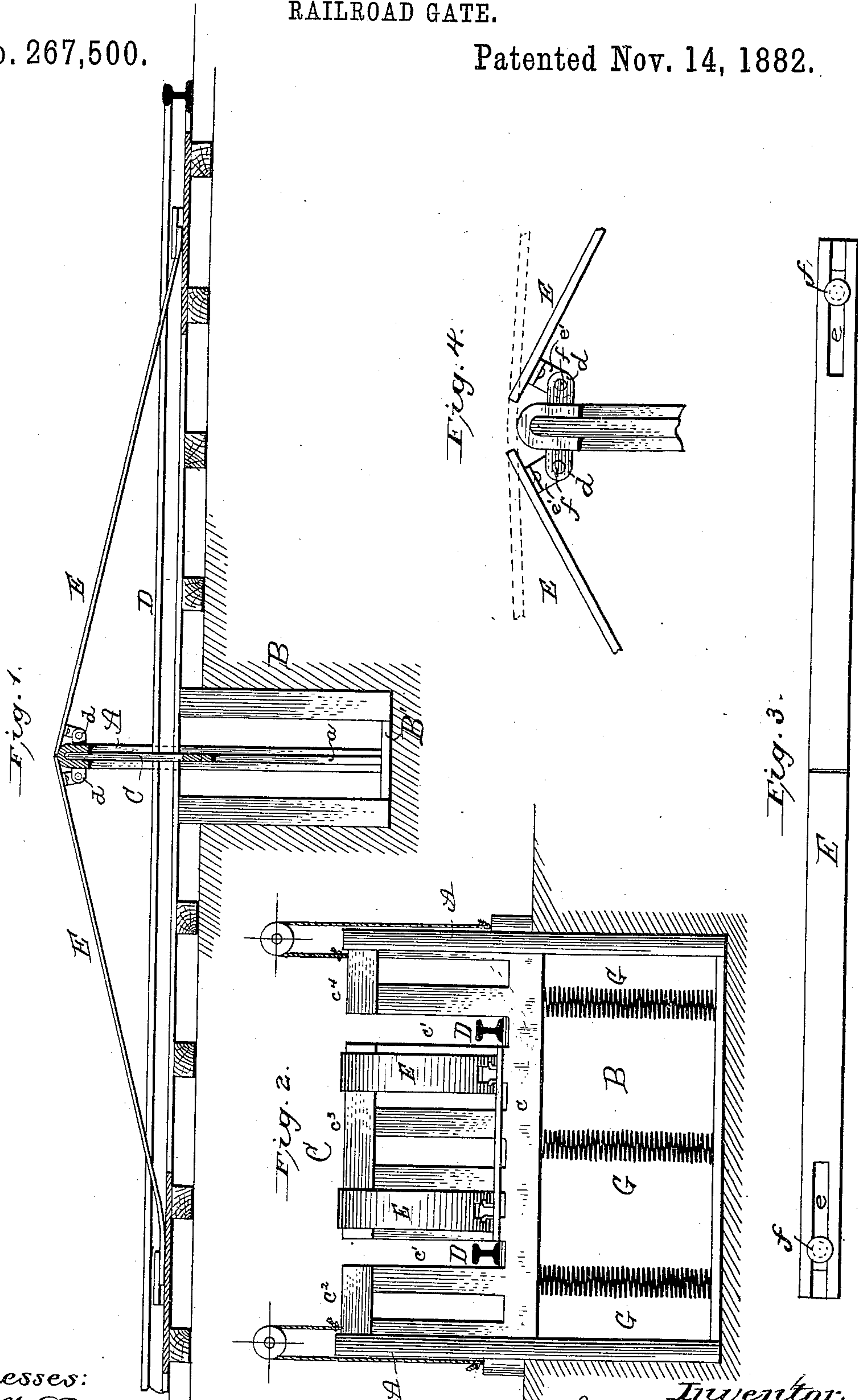
(No Model.)

J. H. DANNER & R. P. KYLE.

RAILROAD GATE.

No. 267,500.

Patented Nov. 14, 1882.



witnesses:
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UNITED STATES PATENT OFFICE.

JACOB H. DANNER, OF GISH'S MILLS, AND RUFUS P. KYLE, OF FINCASTLE,
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RAILROAD-GATE.

SPECIFICATION forming part of Letters Patent No. 267,500, dated November 14, 1882.

Application filed August 18, 1882. (No model.)

To all whom it may concern:

Be it known that we, JACOB HOWELL DANNER and RUFUS PITZER KYLE, citizens of the United States, residing at Gish's Mills and Fincastle, in the counties of Roanoke and Botetourt and State of Virginia, have invented certain new and useful Improvements in Railroad-Gates, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in railroad cattle-gates.

It consists in the peculiar construction of the gates and the operating-bars, and in other improvements, as will be hereinafter fully described, and specifically pointed out in the claims.

In the drawings, Figure 1 is a vertical longitudinal section; Fig. 2, a vertical cross-section; Fig. 3, a view of one of the operating-bars, and Fig. 4 is a detail of the coupling between the bars and gate.

A A represent the end posts of the fence on the opposite sides of the track. In carrying out our invention we cut a well or trench, B, at right angles to and under the track, as shown. This well is made deep enough to receive the gate hereinafter described so the top of the latter will be entirely below the track. Its walls are properly protected by rock, bricks, or boards, and it is provided in its bottom with the base-beam B', as shown. The posts A extend from the bottom of the well B up above the track, on either side thereof, as shown, and they are provided on their inner faces with grooves *a*, extended their entire length, and adapted to serve as guides or ways for the vertically-sliding gate, hereinafter described.

C represents the gate, made of a width equal the distance between the posts A. Its sides rest and slide in the groove *a* formed in the said posts, as shown. The base or sill *c* of this gate extends across between the posts A under the rails D, and the gate is formed with openings or slots *c'*, extended from its top, to receive the rails D when the gate is held above the rails in its normal position, as shown. These slots divide the upper part of the gate into sections, *c*² *c*³ *c*⁴.

d d represent lugs fixed to the opposite sides of the section *c*³ slightly below the top thereof, and close to the slots or openings *c'*, as shown. These lugs are provided with bolt-holes to receive the bolt *f*, which couples them and the upper ends of the operating-bars, hereinafter described.

E represents the operating-bars—four in number, arranged two on each side of the gate, as will be described. These bars are preferably made inflexible and of some suitable metal. They are provided in what, for convenience of reference, we call their "lower ends" with elongated openings *e*, through which the pin *f* is driven to secure the bars to the bed of the railway, and yet permit the bar to slide back when depressed, as shown. These pins are provided with heads to prevent the bars E from becoming detached, and they are arranged a suitable distance from the gate to permit the motion of the bars hereinafter described, and close to the rail, so that the flange of the car-wheel will bear on the bar E and depress it in the operation of the device, as will be described.

e' represents lugs projected from the under side of the upper end of the bars E at a distance from the ends of the said bar equal to one-half the thickness of the top of the gate, so that when the gate is forced down into the well and the bars E are brought into a horizontal line their upper ends will abut one against the other, forming a close joint, and pressing the gate well down below the level of the rails, so that it will not be struck and injured by the wheels of the train. I provide these lugs *e'* with bolt-holes corresponding to the holes through the lugs *d*, and the gate and operating-bars are coupled by bolts *f*, passed through these holes, as shown.

G represent spiral springs, placed between the base-board B and the sill *c* on the bottom of gate, and adapted to hold the gate ordinarily in position above the track shown in Figs. 1 and 2 when a train is not passing. It will be understood that instead of arranging the springs under the gate they may be arranged under the ends of the bars E near their point of jointure with the gate, and in some cases it may be useful to form the bars E elastic, so

they will raise the gate and hold it in the position above the track.

The operation of our invention will be readily understood on reference to the drawings. When no train is passing the gate is held by the springs up above the track, and forms a section of the continuous fence. As the train approaches from either side the flanges of the front wheels strike the lower ends of the bars E, forcing the said bars and lowering the gate, in which position it remains while the train is passing. When the train has passed the springs raise the gate, preventing the animals from escaping. Where it is inconvenient to use springs to aid in operating the gate, weights could be employed by placing pulleys on standards arranged on opposite sides of the track, and having a rope carried over said pulley and one of its ends connected with the lower side of the gate and its opposite end provided with a weight.

This invention may be readily adapted to a double-track road by providing a post between the tracks, having the grooves or guides in its opposite sides.

What we claim is—

1. In a railway-gate, the combination, substantially as set forth, of the vertically-sliding

gate C, the operating-bars E, having their upper ends hinged to the gate C near the upper side of the latter and their lower ends arranged alongside the track in position to be engaged by the flange of the car-wheel, and provided with the elongated opening *e*, the pin *f*, passed through the opening *e*, and adapted to secure the bars E to the railway-bed, and means for holding the gate C normally in position above the tracks D, as specified.

2. The combination of the gate C, constructed with lugs *d d*, and the bars E, provided with lugs *e'*, the said lugs being pivoted to the lugs *d d* on opposite sides of the gate, and arranged below the upper ends of the bars E a distance equal to one-half the thickness of the upper side of the gate, whereby the ends of the bars are abutted against each other above the gate C when depressed to a horizontal line, substantially as and for the purposes set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JACOB H. DANNER.

RUFUS P. KYLE.

Witnesses:

JOHN W. JONES,

MATSON R. JAMES.