

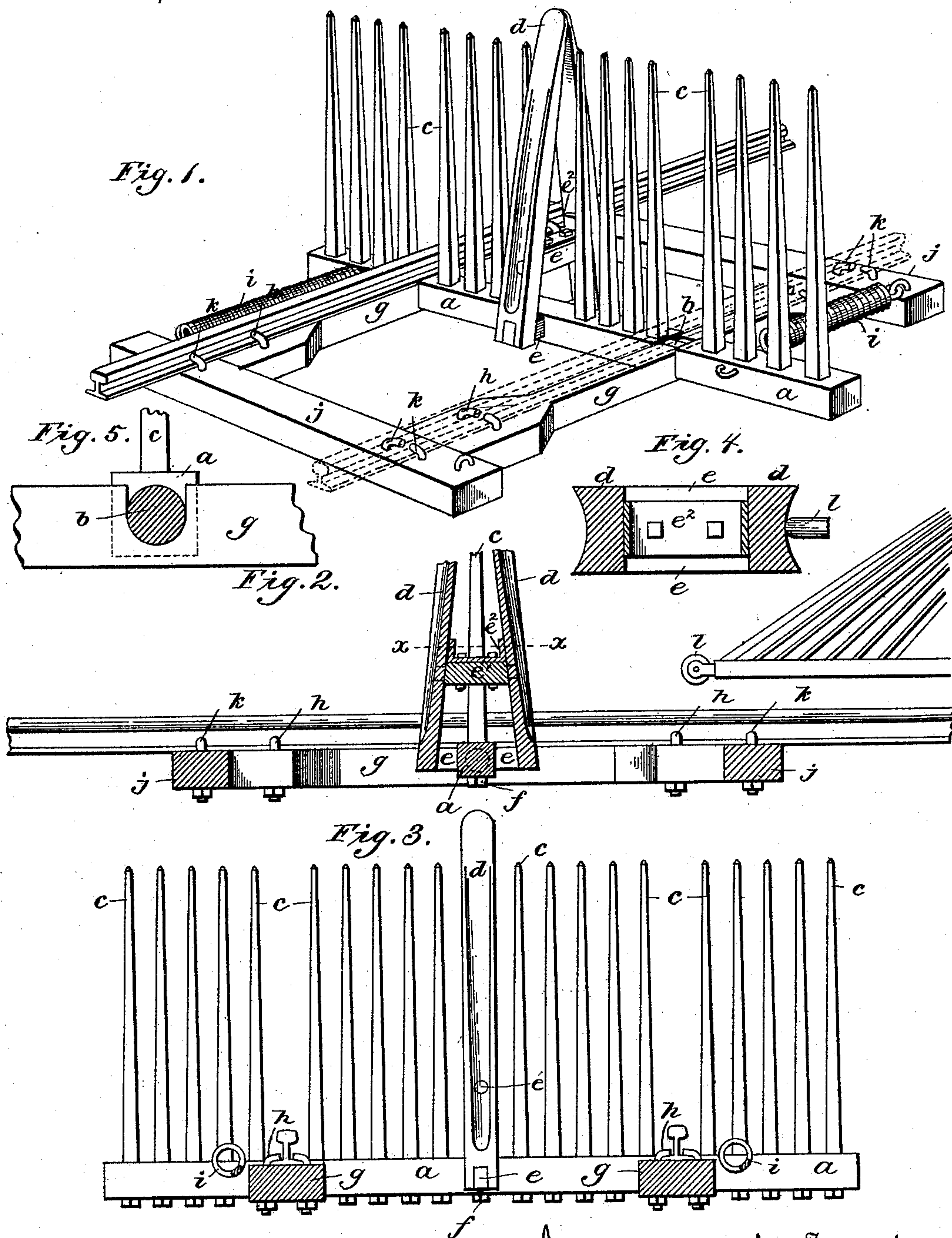
(No Model.)

2 Sheets—Sheet 1.

J. M. GRISHAM.
RAILWAY GATE.

No. 441,952.

Patented Dec. 2, 1890.



Witnesses
Philip F. Lamer.
Howell Zartle

Inventor
James M. Grisham
By his Attorneys
Johnson & Johnson

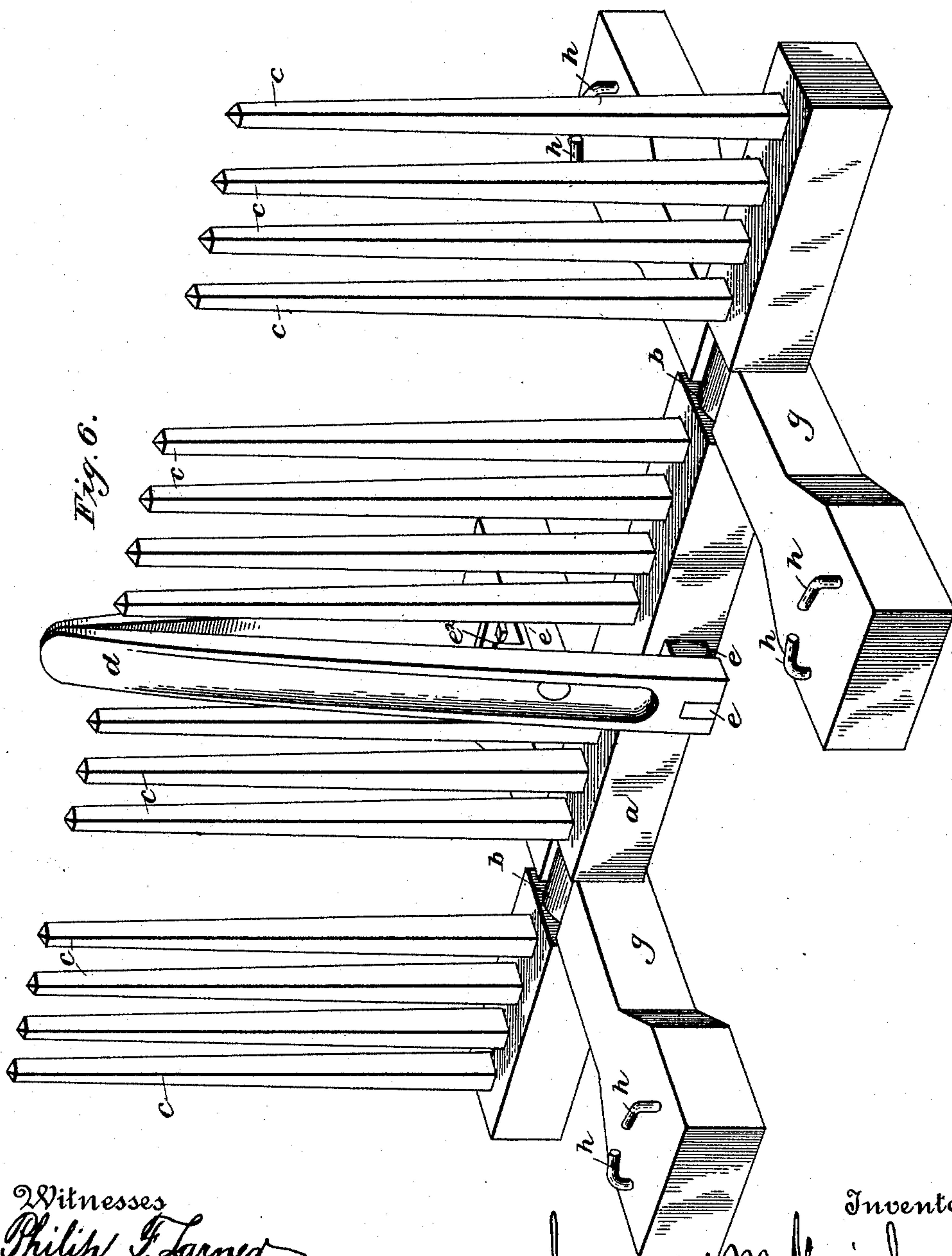
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UNITED STATES PATENT OFFICE.

JAMES M. GRISHAM, OF WHITNEY, TEXAS.

RAILWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 441,952, dated December 2, 1890.

Application filed October 3, 1890. Serial No. 366,959. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. GRISHAM, a citizen of the United States, residing at Whitney, in the county of Hill and State of Texas, have invented new and useful Improvements in Railway-Gates, of which the following is a specification.

I have improved the rocking cattle-guard gate for railroads in particulars of construction, whereby it is adapted to be clamped to the base-flanges of the rails at the streets or roads which cross a railroad-track, so as to close the track against the passing of cattle across or down the road, while the gate is free to be turned down by being struck by the locomotive pilot or "catcher" to allow the train to pass and to be returned to a vertical position after the passing of the train.

The provision for applying the cattle-guard gate directly to the track-rails by clip-bolts renders such application convenient and durable, and permits of a cheap and strong construction of the gate parts, whereby they can be put together, set in place, and secured by clip-bolts to the rail-flanges, as I will now particularly describe in connection with the accompanying drawings, and point out the precise improvement in the concluding claims.

In the drawings, Figure 1 represents in perspective my improved rocking cattle-guard gate as clipped to the flanges of the rails of a portion of the railroad-track, one of the rails being shown in dotted lines. Fig. 2 is a vertical longitudinal central section taken through the gate abutment; and Fig. 3 is a vertical transverse section. Fig. 4 is a horizontal section of the grooved abutment of the gate, taken on the line *xx* of Fig. 2. Fig. 5 is a detail section taken at the bearing of the gate rock-shaft; and Fig. 6 shows the gate in perspective with its sill-timbers and their clip-bolts, by which the gate is clipped and bound to the rail-flanges.

A gate is placed at each side of the crossing of the track and between the ties, and for such placing it is only necessary to make a suitable excavation beneath the rails and between the ties. The gate itself is constructed of a horizontal rock-shaft *a*, formed with journal-bearings *b*, a distance apart just equal to the distance between the rails, and the pickets *c* doveled into said shaft and secured by

nuts at the under side of the latter, so as to stand between the rails and beyond each side thereof the width of the way. Centrally between the rails the gate-abutment is secured to the shaft in position to be struck by the locomotive pilot or catcher to turn the gate down during the passing of the train. I construct this abutment of two tapering pieces *d*, connected and braced together in the form of the letter **A**, by means of two cross-bars *e*, the lower one of which is secured in a mortise in the shaft by means of a screw *f* on the under side of said shaft, whereby the base of the abutment may be set centrally with the shaft and stand in center line with the track. The upper cross-bar *e'* is on a level to receive the striking part of the locomotive and the bars are tenoned and pinned into the tapering pieces, and may or may not rest against each other at their tapering ends, so that in case of being broken it can be easily removed from the gate-shaft and quickly replaced by a new one. The shaft is set in two sill-timbers *g g*, which are recessed on their upper sides, as seen in Fig. 5, to allow the shaft-journal bearings to be set therein, so that the base of the rails form the cap for the shaft-journals, and these sill-timbers are then secured at each end to the inner and to the outer flanges of the rails by clip-bolts *h*, nutted on the under sides of said sill-timbers, and thus firmly bind and secure the gate and its bearing-sills to the track-rails only.

To hold the gate in its vertical position spiral springs *i* are connected to each end of the shaft, and preferably on each side thereof, and to the ends of the cross-bars *j j*, placed in abutting relation to the sill-timbers, and like them secured to the rail-flanges by the clip-bolts *k*, nutted on the under sides of said bars. The outer faces of the tapering abutment-pieces are grooved or hollowed out, so as to make the abutment as light as possible and to receive the roll *l*, which is provided at the pilot or catcher for striking the abutment. This grooved formation of the striking sides of the abutment gives the advantage of receiving the striking point of the locomotive, so as to avoid a sudden lateral thrust upon the gate which would be liable from the side movements of the locomotive at the moment it struck the abutment, and

for this purpose I prefer to make the groove concave and the striking point or roll convex with the concave groove much wider than the convex surface of the abutting point, as seen in Fig. 4. I make the grooved abutment-pieces tapering and thin at their upper ends, so as to have a certain degree of elasticity, and thereby prevent them from being shattered by the sudden blows of the striking point upon the lower portion of the abutment, which would tend to slam the upper ends of the bars together and to crush them. I make the abutment of two tapering bars pinned together by cross-pieces, because such construction facilitates the removal and replacement of the abutment in the event of its being broken. I prefer to re-enforce the abutment cross-bar e' with an angle iron e^2 , bolted to said cross-bar between the grooved abutment-pieces for the purpose of affording a stronger abutting resistance to the shock from the locomotive, the angle ends of the iron standing against the inner sides of the grooved pieces.

Referring to Fig. 6, it will be seen that the gate parts therein shown are complete for attachment to the rail-flanges by the clip-bolts h , which by their angle-heads can be turned over upon the flanges of the rails and bound thereon by nuts, so that the gate-shaft being set in its open bearings in the sill-timbers g the latter are bound to the rail-flanges and

the gate-shaft held in said open sill-bearings by the rails themselves, which close said open bearings at the top.

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I claim as my improvement—

1. In a rocking cattle-guard gate for railroads, the shaft provided with pickets and having a central mortise, and an abutment constructed of two tapering pieces united by cross-bars, one of which is secured in the shaft-mortise and the other placed on a level with the striking part of the locomotive, in combination with the track-rails and sill-bearing timbers for said gate secured directly to the flanges of the rails, and the springs, as shown and described.

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2. In a rocking cattle-guard gate for railroads, the shaft having the pickets and an abutment constructed of two tapering arms $d d$, grooved on their striking-faces and united together and to the gate-shaft by the cross-bars $e e$, and the re-enforcing angle-iron e^2 , whereby the tapering ends are prevented from being crushed and lateral thrusts of the gate prevented, as shown and described.

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

JAMES M. GRISHAM.

Witnesses:

T. S. BOMAR,

W. G. MCMICHAEL.