

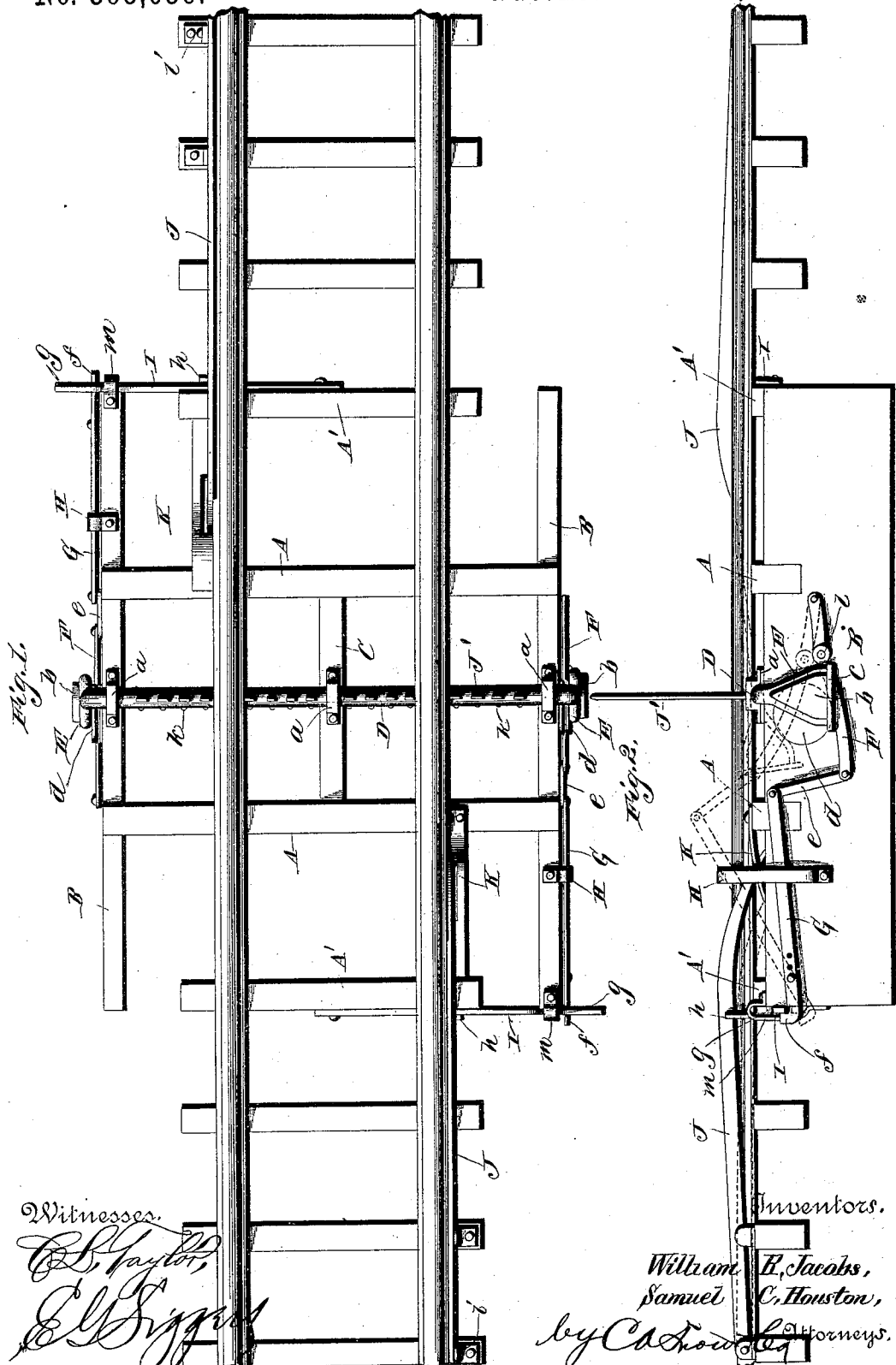
(No Model.)

W. R. JACOBS & S. C. HOUSTON.

GATE FOR RAILWAY TRACKS.

No. 395,056.

Patented Dec. 25, 1888.



Witnesses.

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# UNITED STATES PATENT OFFICE.

WILLIAM RAMSEY JACOBS AND SAMUEL CALLAHAN HOUSTON, OF SULPHUR SPRINGS, TEXAS.

## GATE FOR RAILWAY-TRACKS.

SPECIFICATION forming part of Letters Patent No. 395,056, dated December 25, 1888.

Application filed March 9, 1888. Serial No. 266,695. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM RAMSEY JACOBS and SAMUEL CALLAHAN HOUSTON, citizens of the United States, residing at Sulphur Springs, in the county of Hopkins and State of Texas, have invented a new and useful Improvement in Gates for Railway-Tracks, of which the following is a specification.

Our invention has reference to gates for railway-tracks; and it consists in the improvements hereinafter described on the construction wherein a gate spanning the track is automatically operated by the train moving in either direction to swing the gate out of position.

In the drawings, Figure 1 is a plan view of a section of track having our improvements applied thereto. Fig. 2 is a side view of the construction shown in Fig. 1, the gate closing the track, the closed and open position of the parts being represented in full and dotted lines.

A pair of the central ties, A, are extended to bear upon and be secured to the upper edge of the vertical plates B, located below the plane of and at one side of the track. A central longitudinal brace, C, is interposed between the said extended ties, and has located upon its upper face a sectional bearing, *a*, the opening in which is transverse and in line with openings formed in like bearings *a*, located upon the upper edges of the plates B. A transverse shaft, D, turns in said bearings *a*, and has its extended ends bent downward in the form of stirrups E, in each of which is a weight, *b*. The lower cross-bar, *c*, of said stirrup is removable, in order to provide for the convenient removal and application of the weight. Upon the inner side of one branch of each stirrup is located a horizontal pin, upon which is mounted a grooved wheel, *d*.

An inclined curved arm, F, is secured at its upper end to the side of the adjacent plate B and extends along in contact with the grooved face of the roller, in order that said roller may move upon said bar, and the lower end of said bar is connected by a link, *e*, with the longer end of a lever, G, which is fulcrumed near one end to form a long and

short lever portion. The longer portion of said lever plays in a vertical guide-strap, H, secured on the side of the adjacent plate B, and serving to limit the vibrations of said lever, while the short end is provided with a shoulder, *f*, upon which bears the outer bent end, *g*, of an extended arm, I, located at right angles to the track and secured at its inner end to the side face of one of the ties A'. Said arm I is provided adjacent to one of the track-rails with a vertical lug, *h*, which has a shouldered notch formed in its upper end, and in which shoulder bears the free portion of a longitudinal bar, J, one end of which is pivotally secured to a metallic chair, *i*, located at some distance from the arm I in order that said bar may exert a proper leverage. A tie adjacent to that carrying the chair *i* is provided with a vertical guide-bracket. The free end of the bar J, beyond the lug *h*, is curved downward between the ties, where its end is guided by playing in a cut-away portion in the side of a spring-plate, K, secured in an inclined position to two of said ties.

The arrangement of levers, weights, &c., on the opposite side of the track is the same as that described.

The pickets J' are secured vertically in the shaft D, each picket being tapered toward the top, and the base of each picket is inserted in the shaft D, and secured in position by means of bolts *k*. As a train approaches from either direction, its wheels depress the bar J to effect the descent of the arm I, thereby throwing the longer end of the lever G upward, and effecting the lifting of the arm F, thereby causing the roller to move along said arm, carrying with it the stirrup and weight to the position shown in dotted lines. This movement of the weight and roller effects the turning of the shaft D in its bearings, so as to throw the pickets downward to a position substantially parallel with the rails and road-bed.

By reference to Fig. 1 it will be noticed that the rails are located between two of the pickets. The movement of the train over and past the gate brings the wheels onto the other bar J to depress the same and raise the other

arm F, so that the gate will be maintained in a lowered position until the rear wheels have passed entirely from both bars J.

Each arm F has a slight double incline, at the highest point of which is placed a friction-roller, *l*. When either arm F is raised, the existence of the incline aids in determining the direction of the movement given to the gate. When the arm F on the opposite side is in its turn raised by the train, this second arm is brought into such a position that when the gate is finally allowed to rise the grooved wheel *d* must pass over the summit of the double incline, and if the descent of the arm should not be prompt, so that the parts are retained in contact, the presence of the friction-roller will aid in this passage.

Each lever G may be provided with several perforations, in order to vary its fulcrum and adjust its throw.

From the foregoing it will be seen that the construction described is not only simple and efficient, but will operate with certainty by the movement of the train from either direction.

A guide-strap, *m*, is located on the end of each plate B, to limit the movement of the arm I.

The position of the roller prevents the parts from occupying a dead-center relative to the lever devices.

We claim—

1. The combination, with a shaft crossing a railway-track and provided with weighted depending ends carrying rollers, of an arm serving as a track to slide under said roller and turn the arms, lever apparatus connecting said track-arm with a vertically-moving bar located adjacent to the rails, and a gate connected to said shaft, as set forth.

2. The combination, with a shaft crossing a

railway-track and provided with weighted depending ends, of rollers connected eccentrically to said ends, a gate connected to said shaft, and lever and bar apparatus for operating said weighted ends from the vicinity of the rails, as set forth.

3. The combination, with the transverse gate and its shaft, the latter having its ends bent and weighted, of rollers connected to said ends, a pivoted track-arm having a friction-roller, and lever apparatus and connections for vibrating said pivoted arm, as set forth.

4. The combination, with the transverse gate and its shaft, the latter having its ends bent and weighted, of rollers connected to said ends, a pivoted arm having a friction-roller and serving as a track for said weighted roller, lever apparatus for vibrating said arm, and a vertical limiting-stop, H, as set forth.

5. The combination, with the gate, its shaft, and the weighted roller ends of the latter, of lever devices for connecting said ends with a wheel-bar located parallel with one of the rails and provided with a free depending portion, and a guide-plate for the same, as set forth.

6. The combination of the gate-shaft having bent ends, weights secured to the latter, lever apparatus for moving said weighted ends, and an arm, I, provided with a shouldered lug connecting said apparatus with a wheel-bar bearing on said lug, as set forth.

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

WILLIAM RAMSEY JACOBS.  
SAM CALLAHAN HOUSTON.

Witnesses:

B. W. FOSTER,  
O. O. WHITTLE.