

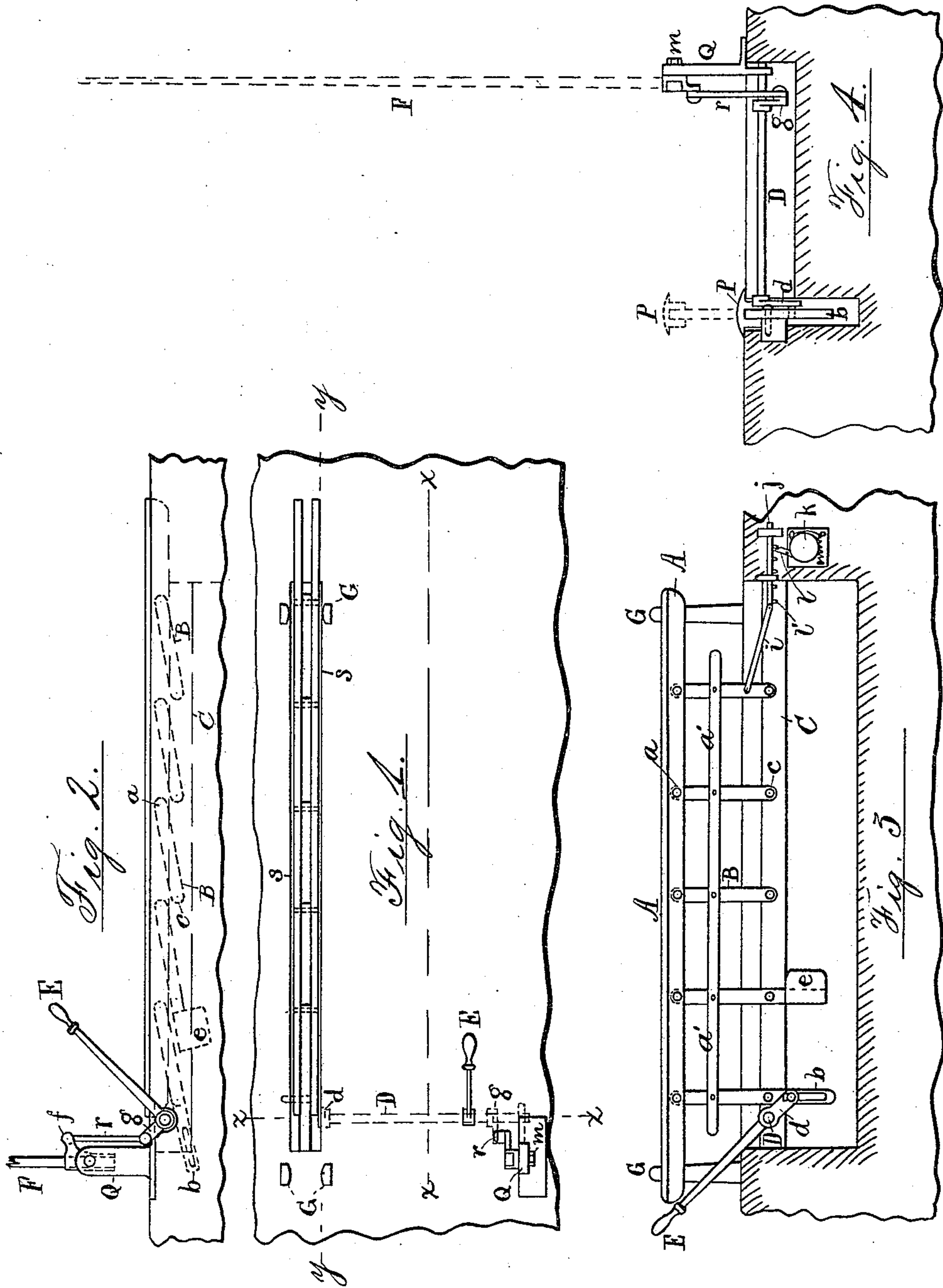
(No Model.)

C. S. & W. H. RIGGIN.

RAILROAD SAFETY GATE.

No. 248,953.

Patented Nov. 1, 1881.



Attest:

A. C. Gummerson
Wm. Dietz

Inventors.

C. S. Riggins, W. H. Riggins
per Thos. S. Crane.

UNITED STATES PATENT OFFICE.

CORNELIUS S. RIGGIN AND WILLIAM H. RIGGIN, OF NEWARK, NEW JERSEY.

RAILROAD SAFETY-GATE.

SPECIFICATION forming part of Letters Patent No. 248,953, dated November 1, 1881.

Application filed March 14, 1881. (No model.)

To all whom it may concern:

Be it known that we, CORNELIUS S. RIGGIN and WM. H. RIGGIN, residing in the city of Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Railroad Safety-Gates, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

Our invention relates to an improvement in safety-gates for railroad-crossings and similar places where an obstruction to the ingress or egress of passengers requires to be quickly placed in the way of travelers and as readily removed when the passage is clear.

Our invention consists in the special means employed for moving the gate itself, in its simultaneous movement with a signal bar or pole, and in the arrangement of the latter to serve as a counter-balance to the weight of the gate.

In the drawings annexed, Figure 1 is a plan of our improvements applied to a railroad-crossing. Fig. 2 is a sectional elevation on line $x x$ in Fig. 1; Fig. 3, a similar view on line $y y$ in Fig. 1, and Fig. 4 a similar view on line $z z$ in Fig. 1.

Our gate consists of a combination of jointed parallel bars arranged to fold together, and has been heretofore operated in various ways. It is shown in the drawings as constructed with a horizontal bar, A, mounted upon hinged posts in such a manner that it may be raised and lowered bodily, the bar being sunk when lowered below the level of the ground or floor where it is placed, so that vehicles and foot-passengers may readily pass over it.

B B are the posts, pivoted to the lower side of the bar, as at $a a$, by their upper ends, and to a sill or sills, C, by their lower ends, as at c . Each post thus acts as a radius-bar when the main bar A is lifted, and the whole construction operates like the sides and links of a parallel ruler.

The means we employ for raising and lowering the bar is to provide one of the posts with a slotted arm, b , projecting below the fulcrum c , and to arrange a crank upon a shaft below such fulcrum-pivots c , so that the crank-pin may press upon the side of the slot when the crank-shaft is turned and move the post, as required, to lift the bar A. The crank-shaft is

shown at D, the crank and its pin at d , and a hand-lever at E, for turning the shaft in the desired manner.

The bar A may be made to fit the space in the floor or between the sills C very loosely, so as to prevent any accumulation of dirt or the jamming or freezing of the bar A when lowered, and when it is required that there should be no such opening in the floor about the bar a cap-plate, P, may be applied to the top of the bar, as shown in Fig. 4, and extend over each side of the bar to cover the necessary space, $s s$.

To steady the bar A when elevated, and to resist lateral pressure, we provide stationary posts or guards G, or utilize adjacent walls or fences for the purpose.

As other safety-gates have fixtures commonly arranged above the heads of the passengers, it is easy for them to perceive, even in a crowd, when the gate is closed and check their progress; but in our construction there is no part of the mechanism elevated above the height of a man's head, and we therefore connect the gate-moving shaft with a signal-pole, F, adapted to move upward into plain sight when the gate is lowered, and thus indicate that the passage is clear. Such pole may be arranged in close proximity to the gate, or at some other more distance point, as shown in Fig. 1, and is readily moved by a rigid connecting-rod, r , and bell-crank f , the former being joined to a crank, g , upon the moving shaft D, and the latter to the pole F, by a socket applied to the pivot m , by which the pole is hinged to a post, Q. Such poles have been used as a substitute for a gate, but do not prevent people from passing by creeping under, while our gate is readily provided with a sufficient number of light posts and with a transverse bar or bars, as at a' in Fig 3, to entirely close up the passage it obstructs. Such a pole, if made heavy enough to resist pressure, is too unwieldy to be moved quickly, while our gate can be raised and lowered instantly, and thus permit passengers to cross a track when a locomotive is drawing freight-cars back and forth, and when the passage would otherwise remain closed. Our signal-pole is no obstacle to a quick movement, and indicates plainly that the passage is open.

We have shown in Fig. 3 a means of ringing a signal-bell, k , when the gate is raised, the

same consisting of a connecting-rod, *i*, operating a toothed rack, *j*, the latter being provided with pins *l'* at intervals, to pull the spring-catch *l* upon the bell as the rack is drawn longitudinally by the rod *i*.

To balance the weight of the gate and make it lift easily, counter-balances *e* may be secured to the lower ends of the posts B, as in Figs. 2 and 3; but when the signal-pole is used in connection with the gate its weight may be proportioned to balance the gate to any desired degree, for the reason that their respective movements are in opposite directions at the same time, the one rising as the other falls, and vice versa.

We claim—

1. The device for moving a safety-gate, constructed and operated as herein described, consisting of the slotted arm *b*, projecting from one of the posts below the pivot *c*, the crank-

shaft D, crank *d*, and hand-lever E, arranged substantially as herein shown and described.

2. The combination, with a safety-gate composed of parallel jointed bars and opened by sinking it level with the ground, of a pivoted signal-pole arranged and operated, as herein shown and described, to indicate by its falling the closing of the safety-gate and the opening of the passage-way by its projection upward into sight when the gate falls, in the manner herein set forth.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

CORNELIUS S. RIGGIN.
WILLIAM H. RIGGIN.

Witnesses:

THOS. S. CRANE,
JOHN C. DURNING.