(No Model.) 2 Sheets—Sheet 1.

J. T. LOWETH.

SAFETY GATE FOR CAR PLATFORMS.

No. 321,373. Patented June 30, 1885.

Fig. 1.

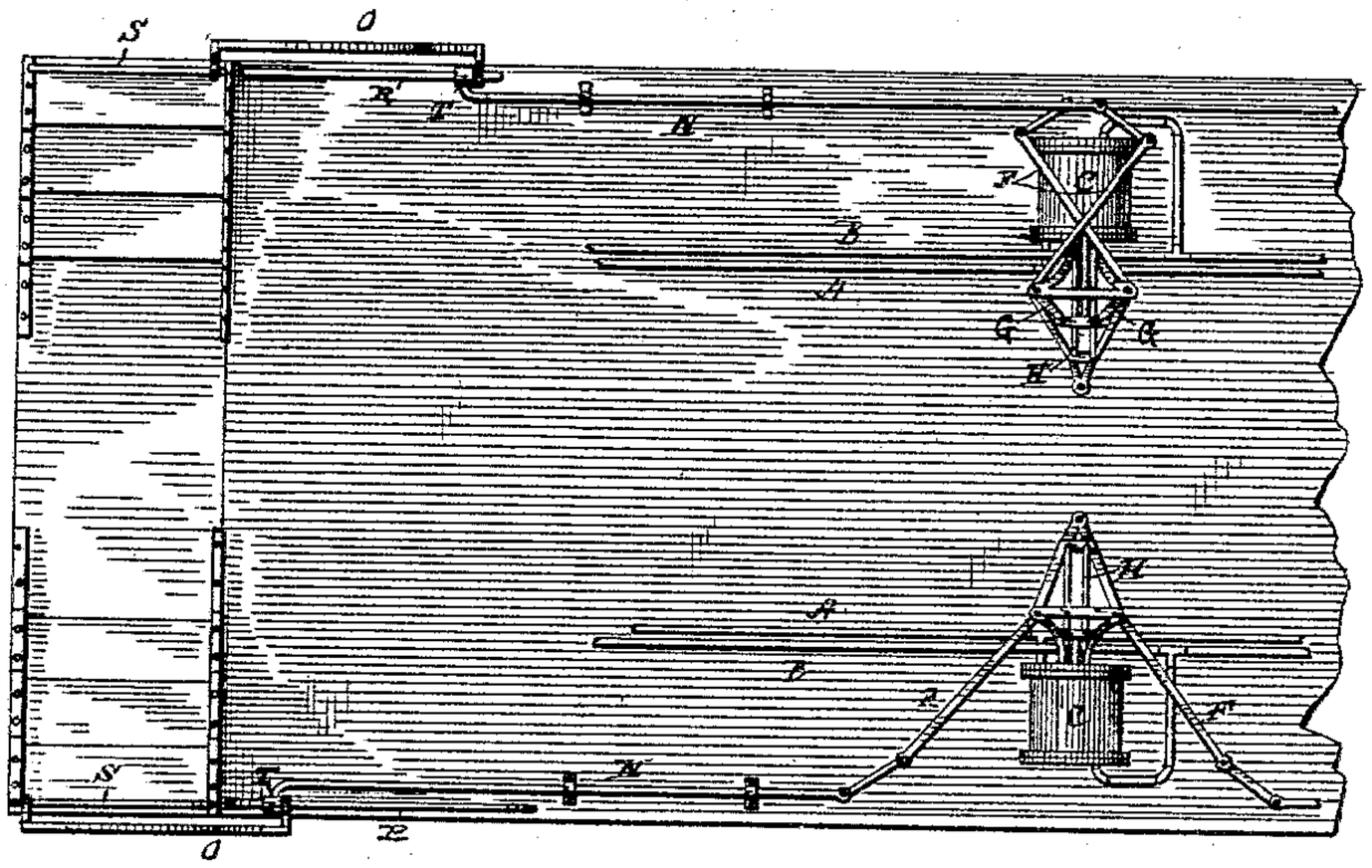


Fig. 2.

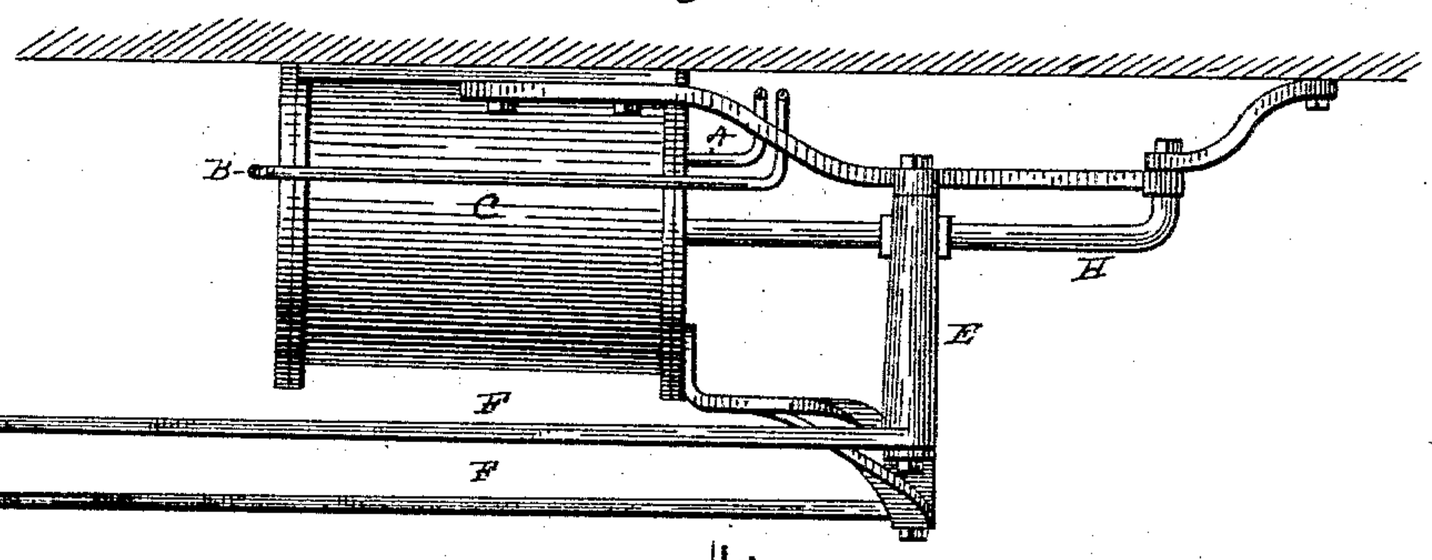
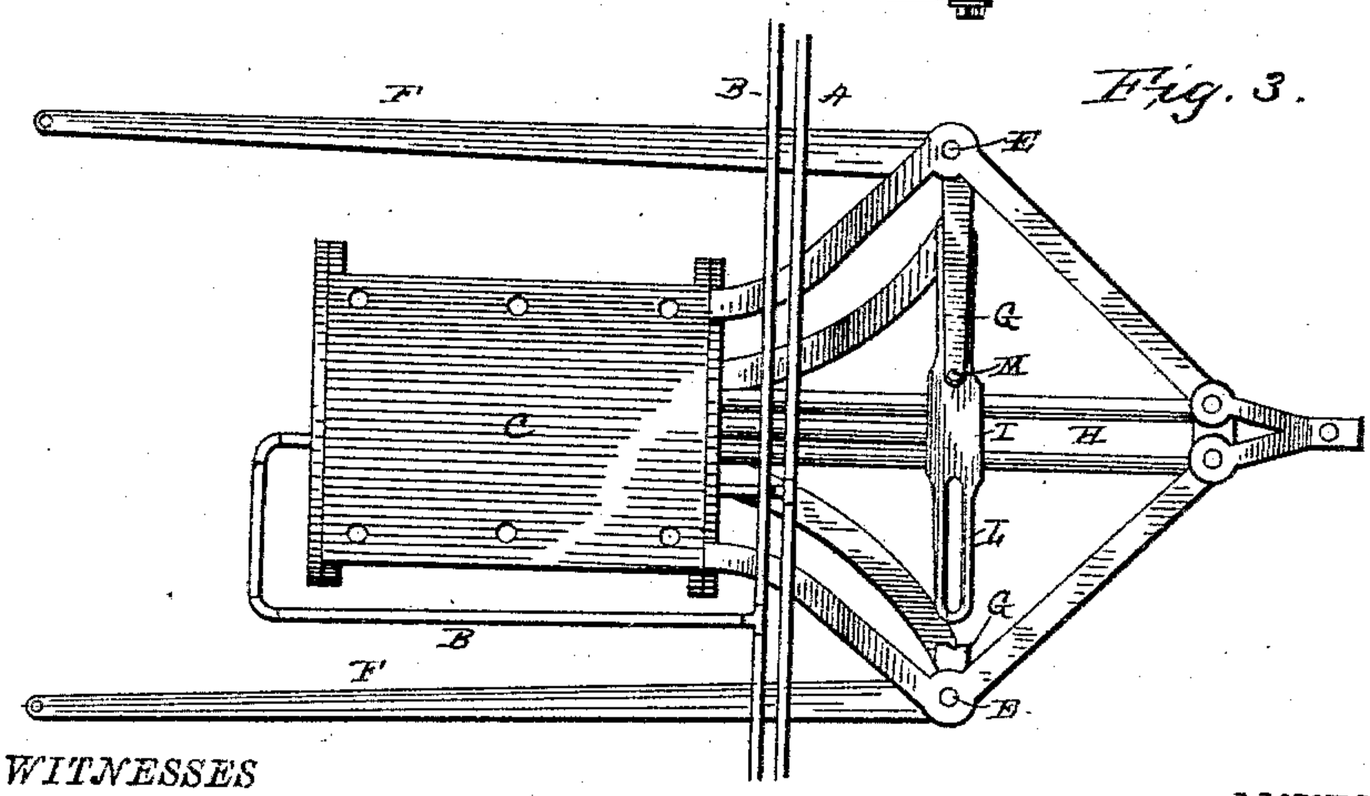


Fig. 3.



WITNESSES

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(No Model.)

2 Sheets—Sheet 2.

J. T. LOWETH.

SAFETY GATE FOR CAR PLATFORMS.

No. 321,373. Patented June 30, 1885.

Fig. 4.

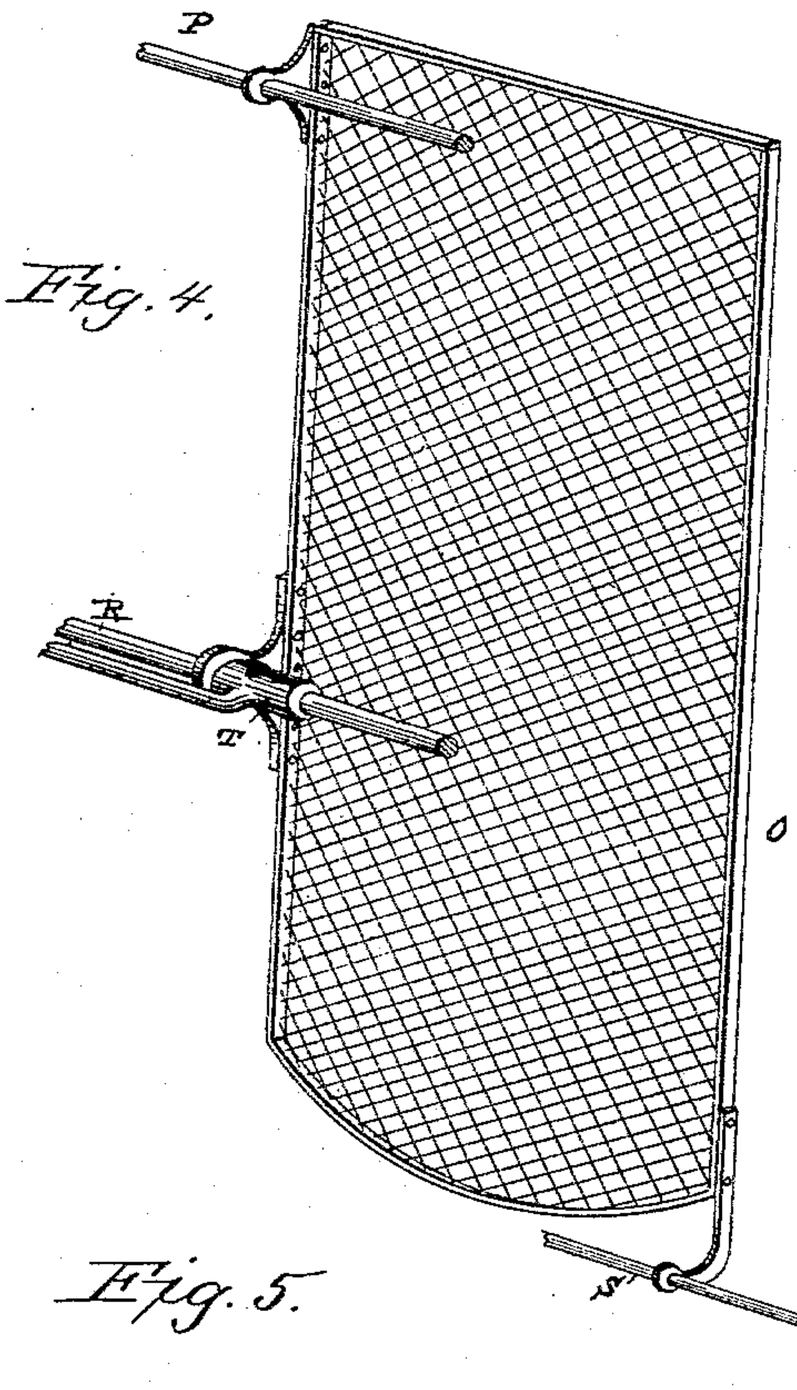
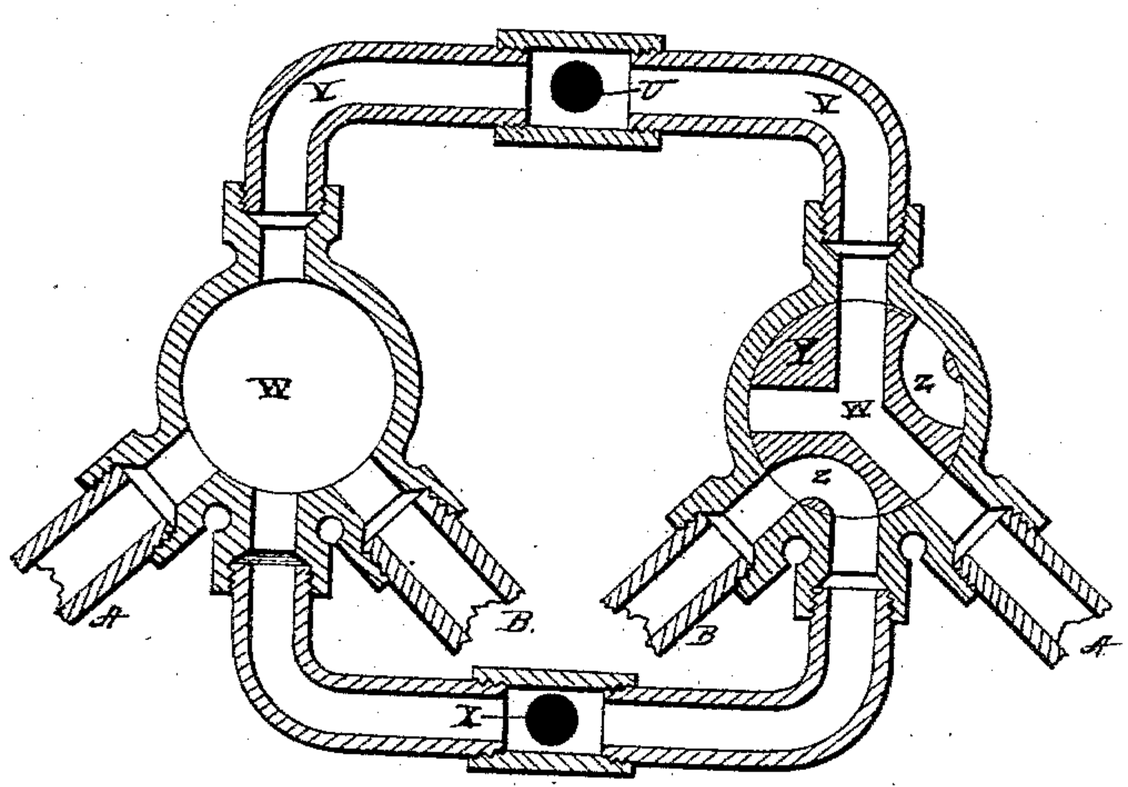


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

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SAFETY-GATE FOR CAR-PLATFORMS.

SPECIFICATION forming part of Letters Patent No. 321,373, dated June 30, 1885.

Application filed May 12, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. LOWETH, of Jefferson, in the county of Ashtabula, and in the State of Ohio, have invented certain new and useful Improvements in Safety-Gates for Railway Passenger-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to improvements in safety gates or guards for railway passenger-cars, and is designed to provide a device under the control of the engineer, whereby the gates on either or both sides of the platforms of the cars may be opened or closed.

In describing the device reference is had to the annexed drawings, in which Figure 1 represents a plan view of a portion of the bottom of a car with the device attached; Fig. 2, a side elevation of one of the operating-cylinders and connections; Fig. 3, a plan view of the same; Fig. 4, a perspective view of one of the gates, showing the manner of hanging the same; and Fig. 5 a sectional plan of the operating mechanism in the engineer's cab.

On each side of the bottom of each car are pipes A and B, connected from one car to the other by flexible couplings, such as are usually used for the purpose. One of the pipes, A, is connected to one of the heads of a cylinder, C, and the other pipe, B, to the other head. The cylinder C is secured to the bottom of the car, one cylinder on each side, and supports a frame, D. Between the two parts of this frame are journaled the rock-shafts E, which form the fulcrums of levers, having each a long arm, F, and a short arm, G, which is at or about right angles to the said long arm. The short arm is on one end of the shaft and the long arm on the other. The shafts E are of different lengths, so that the long arms F, which project under the cylinder, may cross one over the other. From the outer end of the upper portion of the frame D to the coincident cylinder-head are guide-rods H, which support and guide a cross-head, I, on the outer end of the piston-rod K. The said cross-head is slotted at each end, as shown at L, in which slots rest and travel pins M, on the outer ends of the short lever-arms G. From the outer ends of the lever-arms F (on each side of the car) are connecting-rods N, passing to the gates O on each side of the platforms. The gates are supported by guide-rods—one at the top, as shown at P, one at the bottom of the car, as shown at R, and one at the bottom of the steps, as shown at S. On the rod R is a sleeve, T, to which the rods N connect, said sleeve being connected to the gate by any suitable means, as a catch or pin, that may be disengaged and the gate operated by hand, when desirable.

When compressed air, which is the preferred means of operation, is let in the rear of the cylinder through the pipe B, the exhaust taking place through the pipe A, the piston will be driven forward and the arms F caused to cross by means of the short arms sliding in the head. The operation will carry the gates on the particular side away from the platforms, as is evident. The reverse of the above will close the gates.

In the engine-cab is the device shown in Fig. 5.

The pipe U, leading from the compressed-air reservoir, is connected by a T-joint to pipes V, which pass to valves W, one for each side of the cars. From the valves pass pipes similar to the ones V, connecting to an exhaust-pipe, X. The valves are supplied with three-way cocks Y, having also two further passages, Z, with two openings. To each of the valves are connected the pipes A and B.

When the cock is turned, so as to make a passage from the supply-pipe to the pipe A, the exhaust is connected to the pipe B, and vice versa. One or both stop-cocks may be used and the gates operated.

In lieu of compressed air, steam may be used to operate the gate.

I claim—

1. A safety gate or guard for railway-cars, in combination with an operating mechanism consisting of a cylinder and piston, and levers and connecting-rods, the cylinder receiving com-

pressed air or steam, substantially as and for the purpose specified.

2. The operating mechanism consisting of a cylinder, a piston with a slotted cross-head thereon, and levers with short arms having pins or other engagement in the slots, and long arms normally resting under the said cylinder, substantially as and for the purpose specified.

3. The operating mechanism in the engine-cab, consisting of a supply-pipe, an exhaust-pipe, pipes leading to the gate, operating mechanism, and three-way cocks, to which all the pipes have connection, said cocks also having two other passages in them, all arranged substantially as and for the purpose specified.

4. The combination, with sliding safety gates or guards on railway-cars, of cylinders having pistons carrying slotted cross-heads, levers operated thereby and having the long arms connected by rods to the gates, pipes leading from each head of the cylinders to the engine, and an operating mechanism at the engine, consisting of a supply and exhaust pipe, and three-way cocks with two other passages in them, said cocks being connected to both supply and exhaust pipes, and to the pipes leading to the cylinders, all arranged substantially as and for the purpose specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 11th day of April, 1885.

JOHN T. LOWETH.

Witnesses:

ALVIN C. WHITE,

E. JAY PINNEY.