H. A. STEARNS.
RAILROAD-GATES.

No. 194,383. Patented Aug. 21, 1877.

Fig. 1.

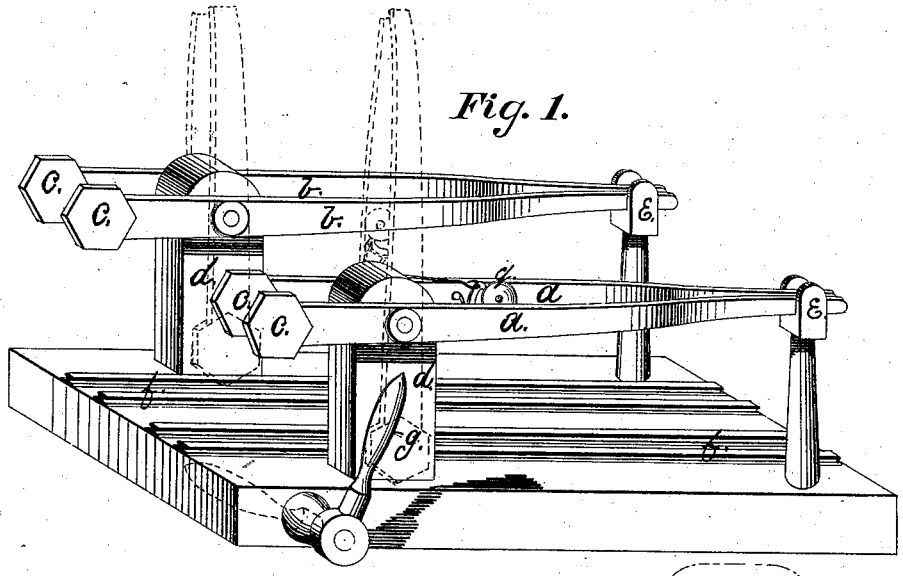


Fig. 2.

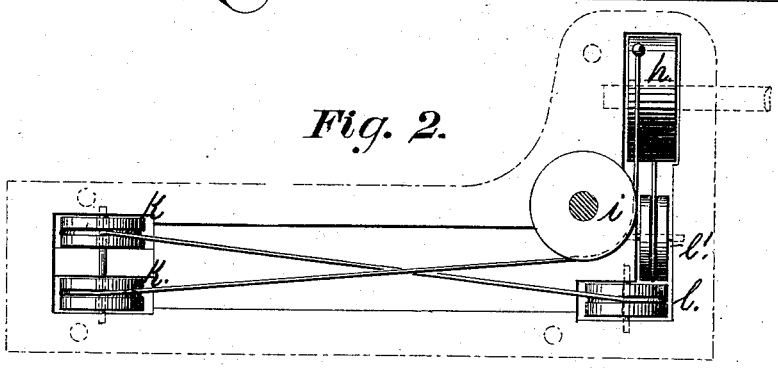


Fig. 3.

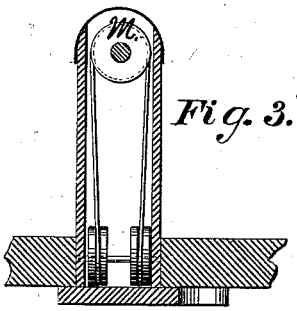
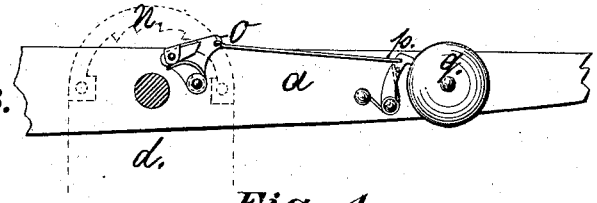


Fig. 4.



WITNESSES.

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UNITED STATES PATENT OFFICE.

HENRY A. STEARNS, OF PAWTUCKET, RHODE ISLAND.

IMPROVEMENT IN RAILROAD-GATES.

Specification forming part of Letters Patent No. **194,383**, dated August 21, 1877; application filed October 28, 1876.

To all whom it may concern:

Be it known that I, HENRY A. STEARNS, of Pawtucket, in the county of Providence, State of Rhode Island, have invented certain new and useful Improvements in Railroad-Gates; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a perspective view of my improved railroad-gate. Fig. 2 is a ground plan, showing the manner of connecting and operating the two gates. Fig. 3 is a section of one of the gate-posts. Fig. 4 is an enlarged view of the alarm and operating mechanism.

Similar letters of reference indicate corresponding parts.

In the drawings, *a a* and *b b* are the gate-arms extending across the roadway, and placed on each side of the railroad. The long end is counterbalanced by weights *c c*, and they are supported on the posts or standards *d d*, on each side of the standard, their longer ends being brought together, or nearly together, and firmly secured, so that they will brace each other and form a strong barrier.

E E are posts placed on the opposite sides of the roadway from where the posts or standards *d d* are placed, and are arranged to receive and support the free ends of the gate-bars *a a* and *b b*, as shown.

F F are the railroad-tracks, on each side of which the gates are erected, so as to control the crossing and prevent accidents.

The two gates are connected by means of chains, cords, or wire rope, so that both gates may be opened and closed simultaneously; and to operate the gates from any given point, such as a gate-house, the hand-lever *g* is secured to a shaft, on which the drum *h* revolves. To the drum *h* both ends of the wire rope are secured, one end passing over the sheave *i* to one of the standards, and the other over the sheave *l'* to the other standard, where they pass over the sheave *m*, secured to the shaft to which the gate-arms are secured; and to insure certainty of action simultaneously, the rope, chain, or cord is secured to the sheave M to prevent slipping.

In railroad-gates it is desirable that some alarm shall be sounded when the gate is closed, so as to give notice to the ear as well as to the eye that it is dangerous to cross the railroad-track; and in situations where many trains pass at frequent intervals, and the crossing is also used by numerous teams or persons, the gate-keeper's time is so well occupied that he cannot give the desired alarm. To obviate this difficulty, I connect the alarm directly with the gate, so that the closing of the gate will operate the alarm.

Different means may be employed to ring the gong, and it is obvious that the gong may be placed on the gate or on the posts. I therefore show one of the means that may be employed to sound the alarm.

In Fig. 4 a ratchet-segment, *n*, is shown attached to the gate-post or standard, and the spring-pressed pawl *o* to the gate-arm. A rod extends from the pawl *o* to the hammer or striker *p*, and the motion of the pawl *o* over the ratchet *n* communicates a striking action to the hammer *p*, and causes the gong *q* to vibrate, and thus give an alarm as the gate closes.

The alarm may be attached to other gates not arranged and operated as the gates shown, and may be operated by simple mechanism when the gate is being closed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a gate-standard, of a bifurcated and counterbalanced gate-bar, the two arms of which are rigidly secured to the opposite ends of the actuating-shaft, substantially as described.

2. The combination, with a railway-gate, of a ratchet bar or plate, *n*, pawl *o*, hammer *p*, and alarm-bell *q*, the several parts arranged substantially as set forth to sound an alarm when the gate is being closed.

HENRY A. STEARNS.

Witnesses:

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