

H. CONRAD.

Improvement in Automatic-Gates for Railways.

No. 128,121.

Patented June 18, 1872.

Fig. 1.

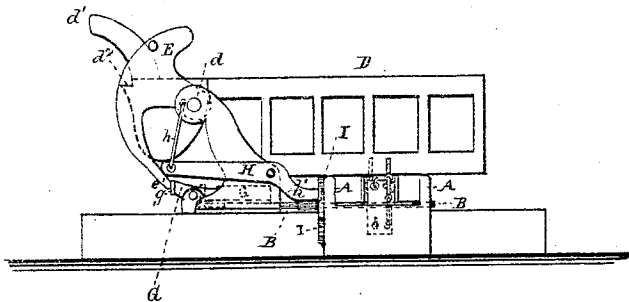


Fig. 2.

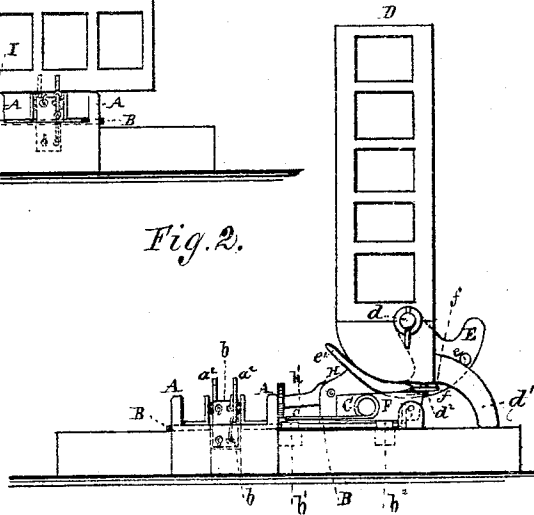


Fig. 4.

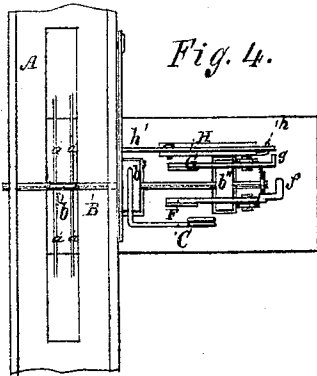
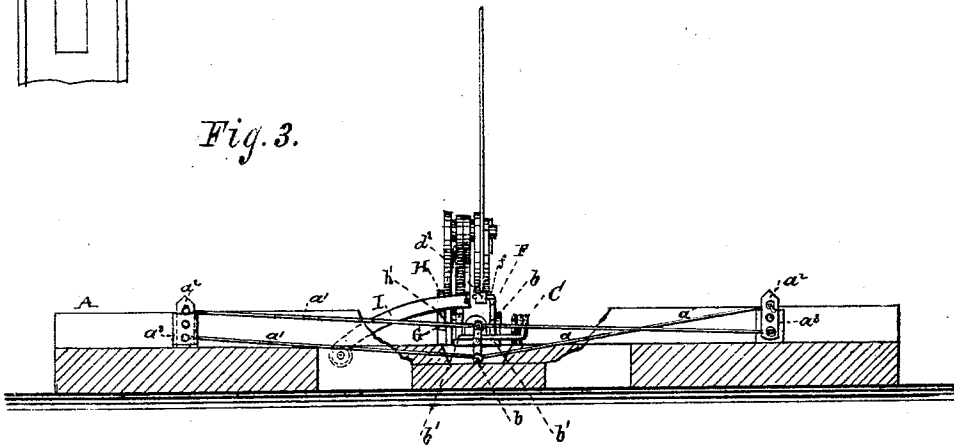


Fig. 3.



Witnesses:

G. M. Atkins.
Thos. D. D. Curran

Inventor:

Hiram Conrad

PER

Attorneys.

UNITED STATES PATENT OFFICE.

HIRAM CONRAD, OF NEW COLUMBIA, PENNSYLVANIA.

IMPROVEMENT IN AUTOMATIC GATES FOR RAILWAYS.

Specification forming part of Letters Patent No. 128,121, dated June 18, 1872.

Specification describing Mechanism for Operating Automatic Gates, invented by HIRAM CONRAD, of New Columbia, in the county of Union and State of Pennsylvania.

The invention will first be fully described in connection with all that is necessary to a full understanding thereof, and then clearly pointed out in the claim.

Figure 1 is a front elevation. Fig. 2 is a similar view from the opposite side. Fig. 3 is a vertical section.

A A represents a railroad-track, at the bottom of which a rock-shaft, B, is journaled, which is provided with two diametrical arms, *b b*. To each of these arms are fastened two connections, *a a* and *a' a'*, which are attached on different sides of the plates or bars *a² a²*, that are themselves pivoted to supports *a³ a³* on opposite sides of the rock-shaft. It will be perceived that the connections *a a* are crossed, so that the movement of the pivoted bars *a² a²* when carried in opposite directions by projections from a truck or other vehicle, will turn the rock-shaft B in the same direction. This enables me to dispense with another set of bars and connections that would be otherwise necessary. The rock-shaft B is provided with two other pairs of diametrical arms, *b¹ b¹* and *b² b²*, which are at right angles to the first pair *b b*. C is a detent spring, which tends to hold the arms *b¹ b¹* in a horizontal position. D is a gate of any suitable construction, pivoted on a pin, *d*, provided with a rear projection, *d¹*, and with a lip, *d²*. E is a weight pivoted on pin *d*, provided with lateral pin *e* and with projection *e'*. F is a weighted lever-catch, having side-latch *f*, which catches against lip *d²* of gate; and G is a weighted lever-detent, which has lateral stud *g* which holds up weight E. These levers rest, respectively, upon the arms *b² b²* of rock-shaft B. H is a lever, connected by strap *h* to weight E to raise the same. The other end *h'* extends under a pivoted bar, I, which is held up by said lever until the wheel presses upon it.

The mode of operation is as follows: As the car approaches from either direction, a projection from car or truck strikes a bar, *a²*,

which causes the rock-shaft B to turn, and the lever G to release the weight E. Hence, the weight falls, carrying with it rear projection *d¹*, which raises the gate. The wheel now passes over pivoted bar I and forces it down, which has the effect to raise the weight E, and allow it to be again supported by end of lever G. A projection of truck or car next passes against and turns the opposite bar *a²*, whereby the catch F releases the gate and allows it to fall by its own gravity. Of course, this is equally applicable to a carriage or wagon road without any material change.

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

1. The pivoted weight E having lateral pin *e*, combined, as described, with a pivoted gate having projection *d¹*, to operate as and for the purpose described.

2. The weight E having projection *e'*, combined with lever G *g* and rock-shaft B *b¹ b²*, operated by projection on under side of truck, as and for the purpose described.

3. The gate D having lip *d*, combined with the lever F *f* and rock-shaft B *b¹ b²*, operated by car, as and for the purpose set forth.

4. The weight E, combined with the lever H *h'*, strap *h*, and pivoted bar I, operated by wheel, as and for the purpose set forth.

5. The gate D *d d¹*, combined with lever F, and the weight E *e e'* having the lifting mechanism H *h h'*, and holding mechanism G *g*, when all are automatically operated through a shaft, B, turned by the passing vehicle, as and for the purpose set forth.

6. The rock-shaft B combined with parallel connections *a¹ a¹*, and crossed connections *a a*, all attached to pivoted bars *a² a²*, as and for the purpose described.

To the above specification of my invention I have signed my hand this 13th day of March, A. D. 1872.

H. CONRAD.

Witnesses:

SOLON C. KEMON,
THOS. D. D. OURAND.