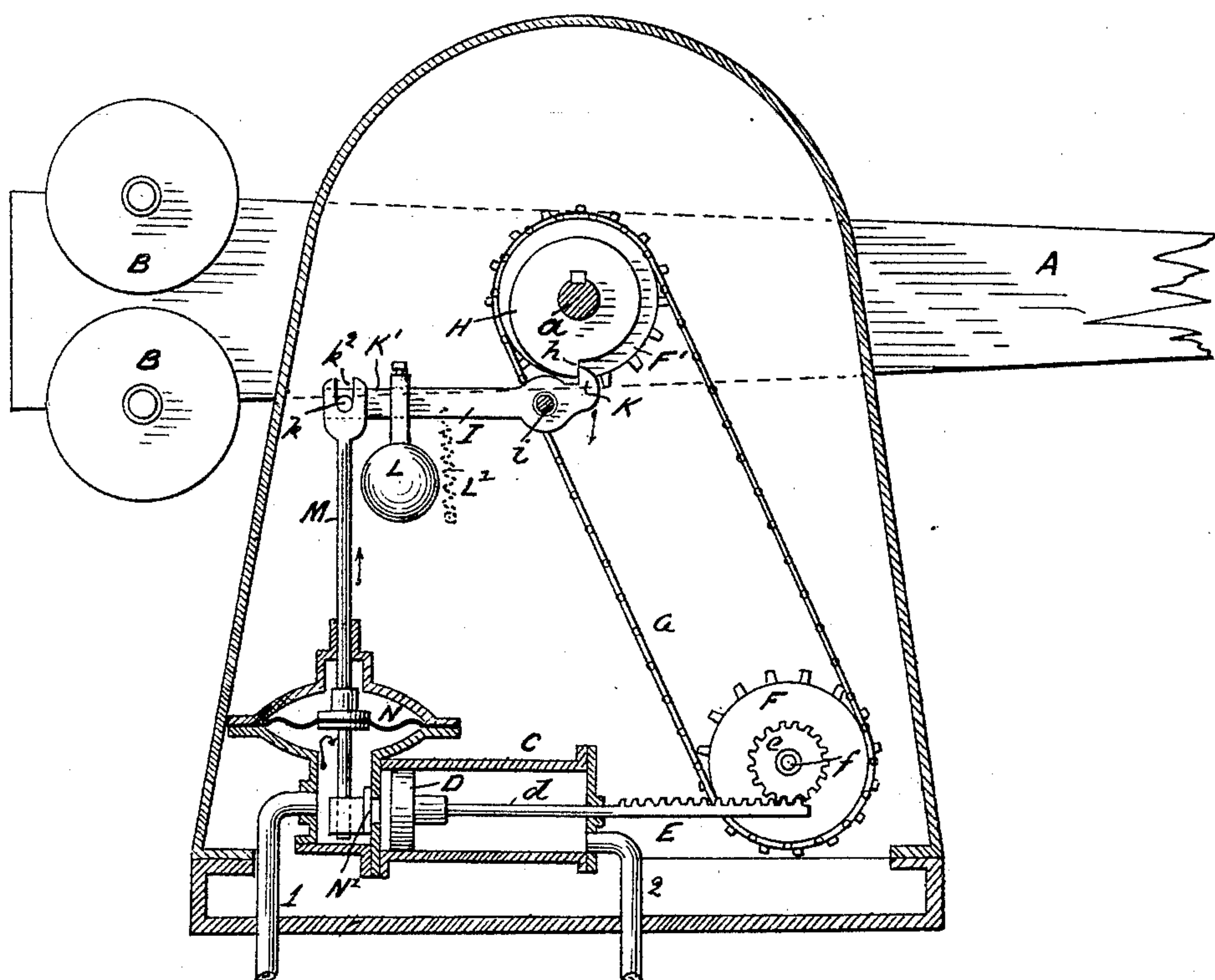


(No Model.)

O. W. BROCKWAY.
RAILWAY GATE.

No. 459,212.

Patented Sept. 8, 1891.



Witnesses
Ernest Abbe
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UNITED STATES PATENT OFFICE.

ORVIL W. BROCKWAY, OF CHICAGO, ILLINOIS.

RAILWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 459,212, dated September 8, 1891.

Application filed November 1, 1890. Serial No. 370,037. (No model.)

To all whom it may concern:

Be it known that I, ORVIL WATSON BROCKWAY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Railway-Gate for Street-Crossings, of which the following is a specification.

My invention relates to improvements in railway-gates such as are usually placed at street-crossings, and which are operated pneumatically, singly or in numbers, from a central station; and the object of my invention is to provide the mechanism used for opening and closing the same with an automatic locking device which will prevent persons other than the operator from opening the gate.

The gates now in use can easily be opened by passengers by partly raising the cross-beam, and in order to prevent any accidents which might be caused by the unlawful opening of such gates I have introduced an interlocking device which is operated by means of compressed air or steam acting against a diaphragm or piston, and a valve working in conjunction therewith, which latter will admit compressed air or steam to the piston of the moving mechanism after the lock has been opened. I attain this object by the mechanism illustrated in the accompanying drawing, which is a vertical partly sectional view illustrating my device.

A is the ordinary gate-beam, pivoted at *a* and provided with counter-weights B B.

Any device suitable for raising and lowering the cross-beam A may be employed.

I have shown an ordinary air-cylinder C, with piston D, piston-rod *d*, and rack E engaging with the pinion *e*. Fastened to the shaft *f* of this pinion is the sprocket-wheel F, which communicates rotary motion to the sprocket-wheel F' on shaft *a* by means of sprocket-chain G.

Keyed to shaft *a* is the cam-wheel H, with shoulder *h*. A lever I, pivoted at *i*, engages through its shorter end K with the shoulder

h whenever the cross-beam is down, and will thereby prevent the raising of the same. The longer arm K' of lever I is provided with a movable weight L, thereby keeping arm K always in closed contact with the cam-wheel H.

A pin *k* on the outer end of lever-arm K engages with the slot *k*² of vertical rod M. This rod M is moved upward by the propelling-force of compressed air or steam acting against the diaphragm N as soon as air or steam enters the inlet-pipe 1. The lower extension of vertical rod M operates a valve N', which will permit the entrance of air or steam into the cylinder C as soon as the lock K is disengaged from shoulder *h* of cam-wheel H, and then set the piston D and the other parts of the working mechanism in operation and open the gate. Pipe 2 will admit air or steam for the return of the piston D, and the weight L will force the lock K into position again against the shoulder *h* as soon as the gate is closed.

It is obvious that instead of a weight L a spring L' (shown in dotted lines in the drawing) may be employed for the purpose of forcing the lock K into position.

What I claim as new is--

The combination, in a railway-gate, of a pivoted gate-bar, a cam-wheel H, keyed to the main pivot of the gate, a power-cylinder located near the bottom of the gate-post for raising and lowering the gate, a diaphragm or piston having a reciprocating piston-rod, a weighted pivoted lever which forms, together with a shoulder *h* of cam-wheel H, an interlocking device whenever the gate is closed, suitable connecting devices between the piston-rod and the weighted lever for operating the latter, and a steam or air supply valve for the power-cylinder and governed by the interlocking device, as herein set forth.

ORVIL W. BROCKWAY.

Witnesses:

ERNEST ABSHAGEN,

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