

J. W. CLARK.  
Automatic-Gates.

No. 151,756.

Patented June 9, 1874.

Fig. 1.

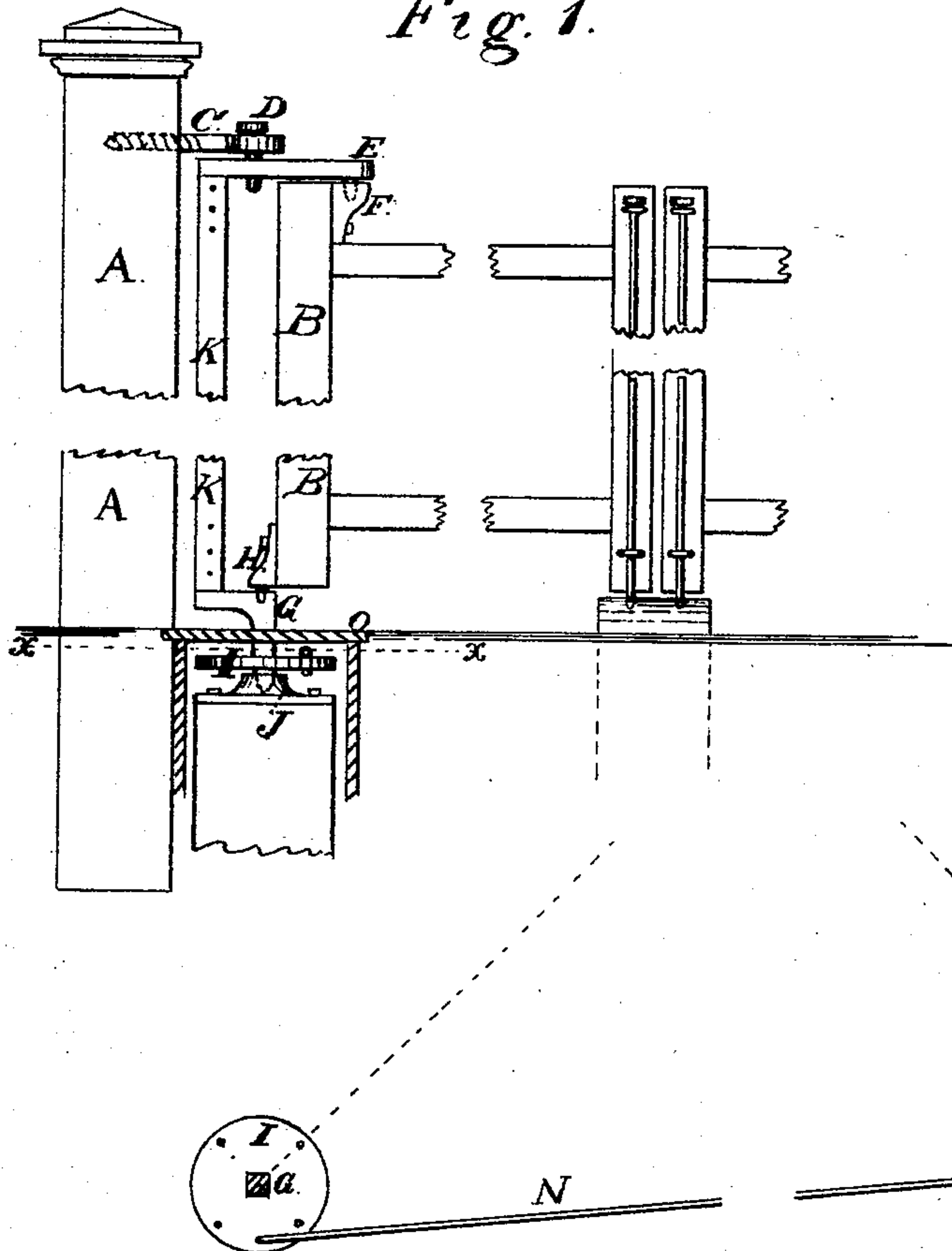
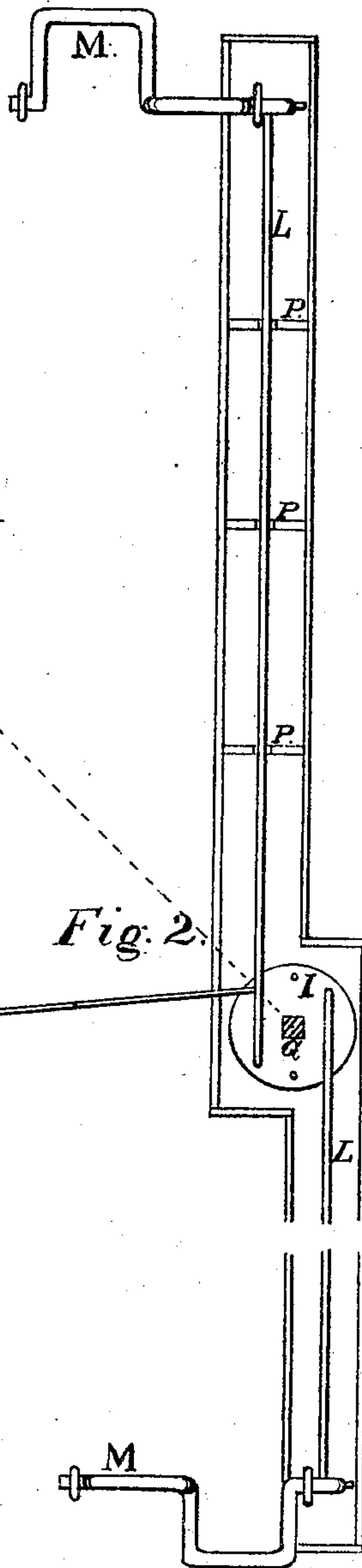


Fig. 2.



Witnesses:  
John H. Batty  
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# UNITED STATES PATENT OFFICE.

JAMES W. CLARK, OF INDIANAPOLIS, INDIANA.

## IMPROVEMENT IN AUTOMATIC GATES.

Specification forming part of Letters Patent No. **151,756**, dated June 9, 1874; application filed January 8, 1874.

*To all whom it may concern:*

Be it known that I, JAMES W. CLARK, of Indianapolis, Marion county, Indiana, have invented certain Improvements in Carriage-Gates, of which the following is a specification:

This invention relates to that class of gates that are automatically opened and closed by a vehicle in approaching to pass through them; and it consists in the construction and arrangement of the hinges or parts by which the gate is hung to the posts, and in the construction and arrangement of the device by which the gates are opened and closed.

In the drawing, Figure 1 is a front elevation; Fig. 2, a horizontal or plan view; Figs. 3 and 4, enlarged detail views of the top and bottom hinges, respectively.

A is the gate-post; B, the stile of the gate; C D E F, the top hinge; and G H I J, the bottom hinge. K is a vertical bar of wood, to which the parts E of the upper hinge, and G of the lower hinge, are attached, as shown. When the gate is closed, both it and the bar K is in a vertical position.

It will be seen that the upper pivot F is on the inside of the gate-stile, and the lower pivot H on the outside, the object of which is to throw the bottom of the gates more out of the perpendicular line than the devices heretofore in use, so that they will swing readily either way by their own weight.

The upper hinge is a double or compound one, the gate itself turning on the pivot F, while the opening and closing device turns on the pivot D, which is simply a short bolt that passes through the eye C.

The eye C, by which the upper part of the gate is hung to the post A, is screwed into the latter, so as to provide for adjusting the gate in the event that it should sag, the bolt D being readily removable for this purpose.

The lower hinge is also a double or compound hinge, but is different in construction from the upper hinge, the pivot on which the gate turns being in a vertical line over the pivot on which the opening and closing device turns.

The lower hinge, which is also a part of the opening and closing device, is composed of the angular pintle or piece G, the lower end

of which rests in the step J, the circular plate or disk I, which is rigidly fixed near the lower end of the angular pintle G, and the pivot H, the latter being pivoted in the upper part or angle of pintle G. The pivot H is fixed to the stile G of the gate on the outside. This, together with the arrangement of the pivot at F in the top hinge, allows the gate to swing independent of the opening and closing device, so that it may be opened by hand independent thereof.

The gate is opened and closed automatically by means of rods L, that are connected by one end to the circular plate or disk I, and by the other end to the double bent lever M, over which the carriage-wheels pass in going through it in the usual manner of such gates.

When the gates are double, they are both hung in the same manner, and both opened and closed by the same means, by connecting the disks I of both gates by a transverse rod, N, as shown in Figs. 1 and 2, and with this arrangement, when desired, the operating-levers M, over which the wheels pass, may be both connected by the rods L with the disks I of either gate; or one lever may be connected with one gate, and the other lever with the other gate, the disks I affording the means of connecting the rods L in such position that the operating-levers M and rods L may be adapted to any curve or angle of the approach from either side.

The connecting-rods L are placed in boxed and covered trenches to prevent their being affected by the frost; and, as an additional security, they and the other parts of the opening and closing device are arranged close to the covering O of the trenches, which are to be dug deep enough to insure dryness. The side boards of the trenches are kept in place by cross-pieces P, that are notched in the top edge to receive and support the rods L, which is a good preventive to their getting out of repair. The fastening device consists of the rods R, which slide vertically in eyes fixed to the inner stile of the gate, the upper ends being furnished with a head that rests upon the upper eye, and the lower ends projecting far enough below the lower ends of the gate-stiles to engage with the catch S.

In this arrangement, the fastenings are



raised with the gates as the latter are opened or closed by the vehicle; and they may also be operated by hand when the gates are opened in this manner.

I claim as my invention—

The lower gate-hinge composed of the angular pintle G, pivot H, circular plate or disk I, and step J, in combination with the ver-

tical bar K, and the upper hinge or hanging device C, D, E, and F, substantially as set forth.

JAMES W. CLARK.

Witnesses:

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