

J. B. Cotton,

Gate.

No. 113,020.

Patented Mar. 28. 1871.

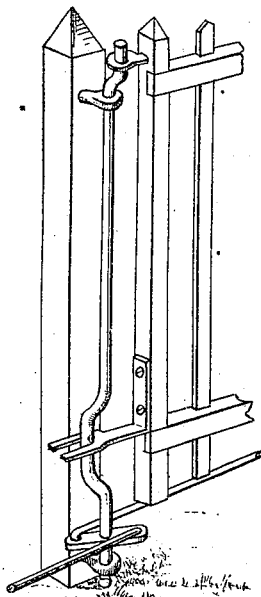


Fig. 2.

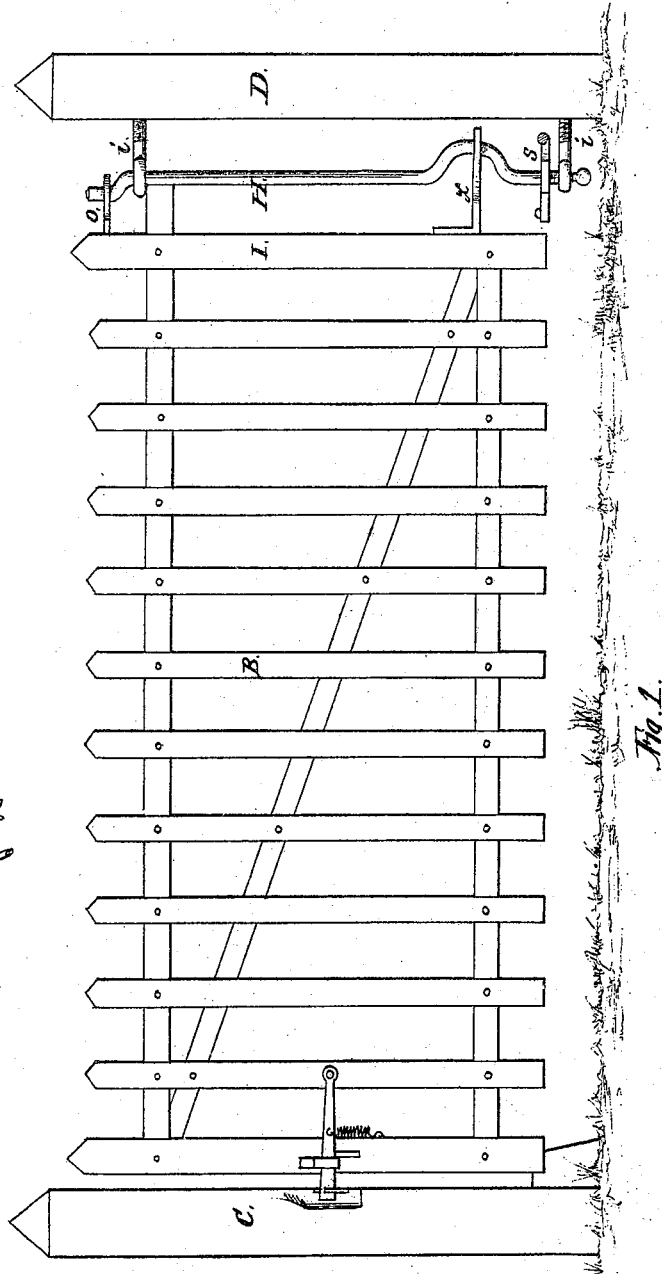


Fig. 1.

Witnesses,
L. D. Doty
O. E. Peck

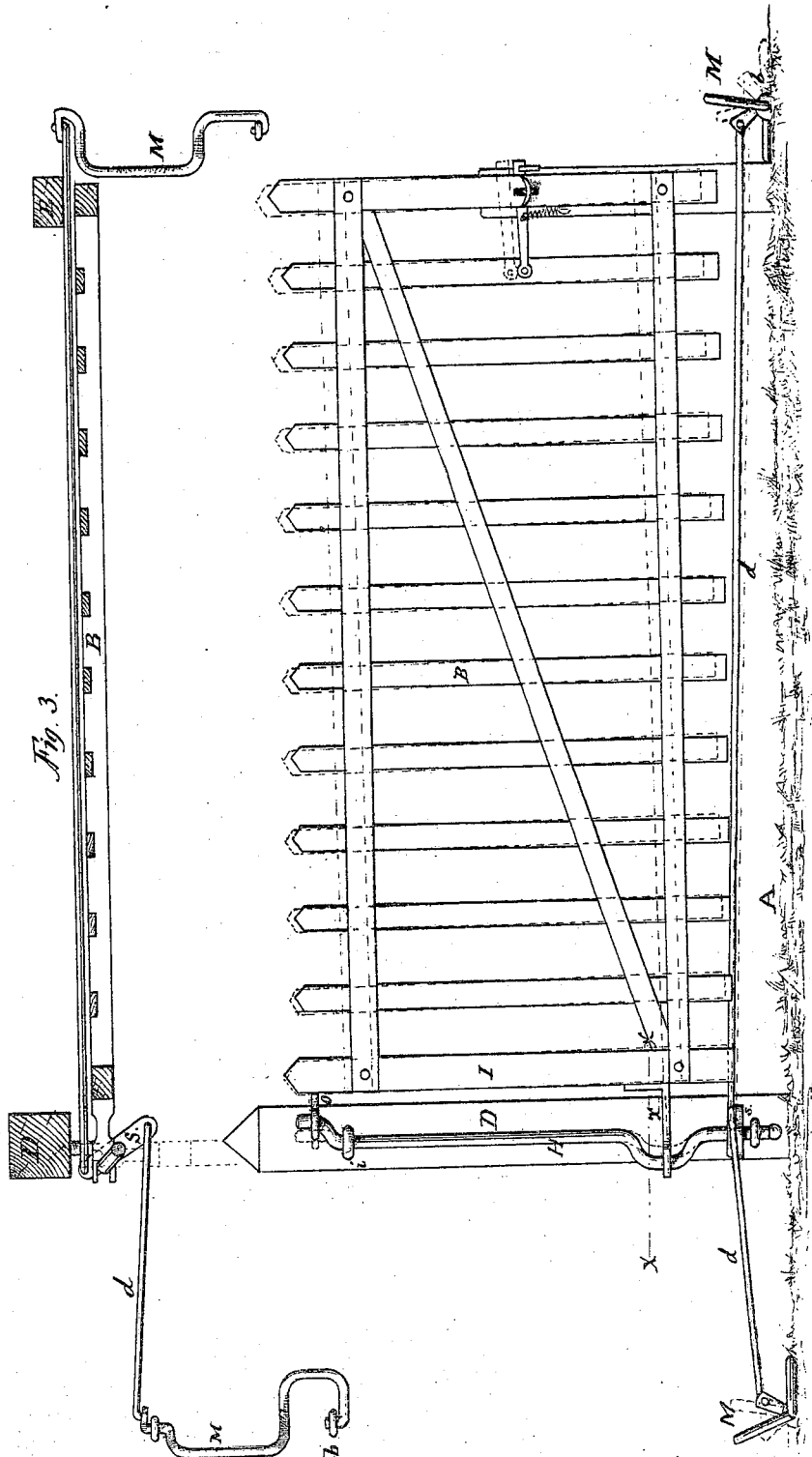
J. B. Cotton
Inventor,
by his atty. H. P. Peck

J. B. Cotton,

Gate.

No. 113,020.

Patented Mar. 26, 1871.



United States Patent Office.

JAMES B. COTTOM, OF DAYTON, OHIO.

Letters Patent No. 113,020, dated March 28, 1871.

IMPROVEMENT IN GATES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES B. COTTOM, of Dayton, in Montgomery county, Ohio, have invented certain new and useful Improvements in Automatic Gates; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The accompanying drawing represents my improved gate with its operating mechanism complete.

The object of my invention is to provide a gate with mechanism by which it will be opened and closed by the wheels of a vehicle in driving the same over angle-irons arranged in the track or road; and

My invention consists in the combination of a double crank-shaft with the hinges and operating mechanism, the crank-shaft serving as the hinge-pivot of the gate.

A denotes a carriage-way, in which the gate B is located.

C D E designate three posts.

The two posts C and E are provided with catches to receive the latch *a*, by which the gate may be held in a closed or open position.

The post D, to which the gate B is hung, is provided with two eye-bolts, *i i*, through which the double-crank pivot-rod H is inserted.

The frame-piece I of gate B is provided with an eye-bolt or plate, *o*, through the eye of which the pivot-rod H passes to form a hinge; and at the lower part of frame-piece I the plate *x* is fastened.

The plate *x* is an angle-iron, the projecting end of which is forked, and embraces the pivot-rod H at its lower crank to serve as a hinge, as represented in the drawing.

Near the lower end of rod H, and rigidly connected therewith, is a cross-arm, *s*, having at each end a suitable hole to receive the ends of the connecting-rods *d*.

The connecting-rods *d* extend some distance from the gate, on each side thereof, and connect with the double angle-irons M secured in the carriage-way A, by means of eye-bolts *b*, so as to be actuated by the wheels of a vehicle in passing over them.

The dotted lines denote the position of the gate and its mechanism when the gate is raised at the latch end thereof, so as to cause it to swing open by gravitation.

The cranks of pivot-rod H being at opposite sides of the pivot-rod, will, when actuated by the angle-irons M and connecting-rods *d*, cause the gate to be raised at the latch end and to be thrown out of its perpendicular position, which causes it to open or close, as hereinafter explained.

In passing through the gate-way with a carriage or vehicle the driver will guide to the right in approaching the gate from either direction, which will cause

two of the wheels of the vehicle to pass over the right-hand projection of the angle-irons M, which will force the angle-iron to make a quarter of a revolution in its bearings *b b*; and as the end of the angle-irons at *c*, which projects, is connected with rod *d*, the latter will act upon arm *s*, and thereby the gate will be caused to move in the manner described and swing against post E, to which it will be latched and fastened, whereupon the carriage may pass through the gate-way, and as the carriage leaves the gate-way, the wheels thereof will pass over the right-hand projection of the angle-iron at that side of the gate, which will, by means of the connecting-rod attached to the other end of arm *s*, cause the opened gate to rise with its latch, disconnecting it with post E, when it will swing upon its hinges and assume its former closed position. The action upon the gate will be the same when passing through the gate-way in either direction by always guiding so as to pass the wheels of the vehicle nearest to the hinged gate-post over the right-hand loop or projection of the angle-irons M.

This gate is found to operate well, even when the hinged post is not in a vertical position.

Bevel-gearing may be attached to the lower part of the pivot-rod H, with an arm connected therewith, to which connecting-rods may be attached.

The gate is so hung that in the event that a body of snow interferes with its free action it may be carried open by hand in the opposite direction from that which it takes in its automatic operation, and this manner of opening the gate necessarily elevates it as it opens.

It will be observed that the gate is fastened both when opened and when closed. It will also be noticed that the movement of either of the angle-irons M will cause the other to take a corresponding position, because of the connections *d s d*; that is to say, the elevation of the right-hand loop or projection of one of the angle-irons is always caused by the depression of the other, and thus they are always in proper position when a carriage approaches them in either direction to open and to close the gate.

Having fully described my improvement in automatic gates,

I claim—

The double-crank pivot-rod H, in combination with the gate and its supporting and operating mechanism, constructed, arranged, and operated in the manner and for the purposes described.

In testimony whereof I have hereunto set my hand, this 14th day of December, A. D. 1869.

JAMES B. COTTOM.

Witnesses:

H. P. K. PECK,
A. L. PECK.