A. H. BETTS.

Improvement in Gates.

No. 120,932. Patented Nov. 14, 1871.

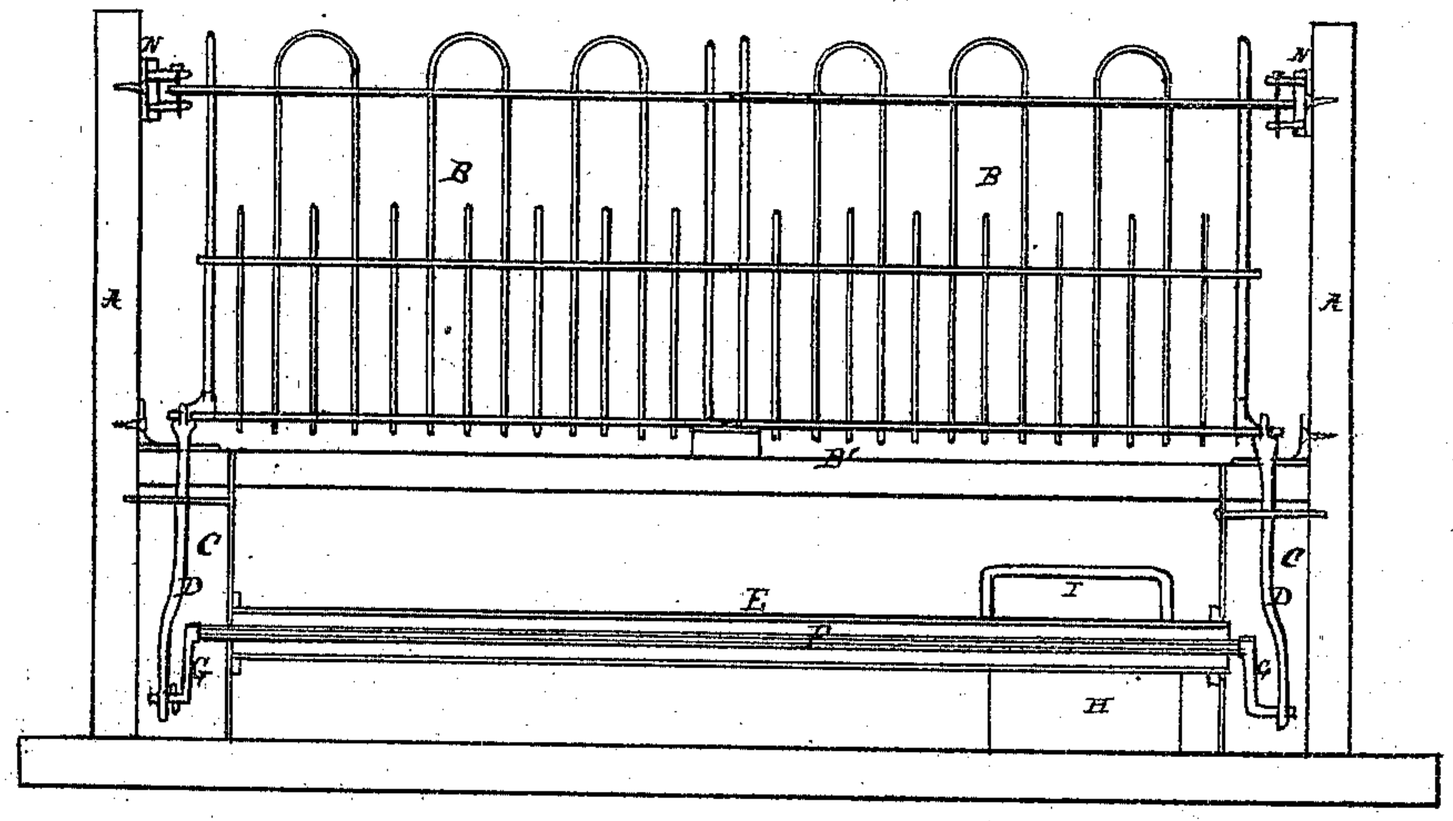


Fig: 1.

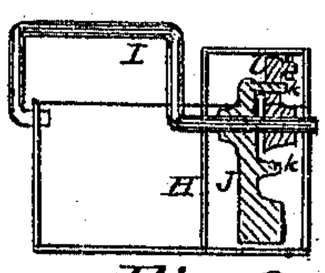
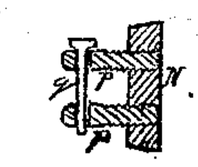


Fig. 3.



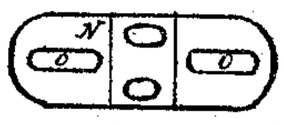


Fig: 4.

Fig: 2.

Witness.
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120,932

UNITED STATES PATENT OFFICE.

ALFRED H. BETTS, OF CLEVELAND, OHIO.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. 120,932, dated November 14, 1871.

To all whom it may concern:

Be it known that I, ALFRED H. BETTS, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and Improved Automatic Gate, of which the following is a specification:

The nature of this invention relates to the construction and arrangement of the wheel-irons, and the method of hanging and operating the swinging levers which actuate the gate.

In the accompanying drawing, Figure 1 is a front elevation. Fig. 2 is sectional view, showing the connection of the wheel-irons with the swing-levers and a rock-shaft. Fig. 3 is a vertical section of one of the wheel-irons. Fig. 4 is a detached view of the upper hinge.

A in the drawing represents posts, to which the gates B B are hung. Below the surface of the ground, which is at B′, and placed against the posts, are iron boxes C C, in which are suspended swing-levers D D. The top end of levers D D terminate with a pin, upon which the gate sits. In a suitable tube, E, under the ground, and connecting the two boxes C C, is placed a rod, F, upon each end of which is attached a crank, G, said cranks playing in a slot in the lower end of the levers D. H H are boxes set in the ground, in which the wheel-irons are placed. I I are the wheel-irons, playing in suitable boxes in the sides of the boxes H H. Attached to the wheel-irons I I is a weighted lever, J, which, when the wheel-iron is free, causes them to stand upright, as seen in the several figures. Upon the lever J are lugs *k k*. Upon the wheel-irons is placed a quadrant, *l*, which turns on the irons. The quadrants are actuated by the lugs on the levers J J playing in the arcs of the quadrants. The quadrants are connected to one of the cranks G by rods M M. N, seen also on enlarged scale in Fig. 4, is the hinge at the top of the gate, and consists of a plate, N, to be attached to the post by screws, the plate being provided with slots *o o*, by which the plate may be shifted sidewise in case it is required to adjust the perpendicular of the gate should the posts become dislocated by frost or otherwise. In the said plate N are two eye-bolts, *p p*, which screw into it, so that they be adjusted in or out, as may be required to regulate the perpendicular of the gates in their relation to the posts. A pin, *q*, passed through the eye-bolts and the upper rail of the gate, forms the upper hinge.

The operation of the above-described gate and devices for operating it are as follows: When a carriage approaches the gate the wheel, striking the wheel-iron I, throws it over, carrying the quadrant with it in the direction indicated by the dotted lines. Then, when the wheel releases the iron, it again assumes the upright position by the action of the weighted lever J. The quadrant pushing the rod M forward moves the crank G, and with it the lever D, which throws the bottom of the gate over and out of a perpendicular line, causing the gate to swing open, the quadrants, rods, cranks, and lever remaining in the position indicated by the dotted line, when the opposite wheel-iron being pushed over in the same direction as the first causes the quadrants, crank, and levers to be moved back again into the first position, the quadrant on the second wheel-iron working under, the first one working over. A spring, *s*, is placed in the bottom of the box C, over which the end of the lever D rides. This is for the purpose of holding the gate steady in position and prevent it from being easily jarred out of place.

Having thus described my invention, I claim—

The wheel-irons I, weighted levers J, quadrants *l*, and rods M, in combination with the cranks G, rod F, and swing-levers D, arranged and operating substantially as and for the purpose set forth.

A. H. BETTS.

Witnesses:
H. W. ADAMS,
GEO. W. TIBBITTS.

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