

C. EDGAR.
Improvement in Gates.

No. 131,257.

Patented Sep. 10, 1872.

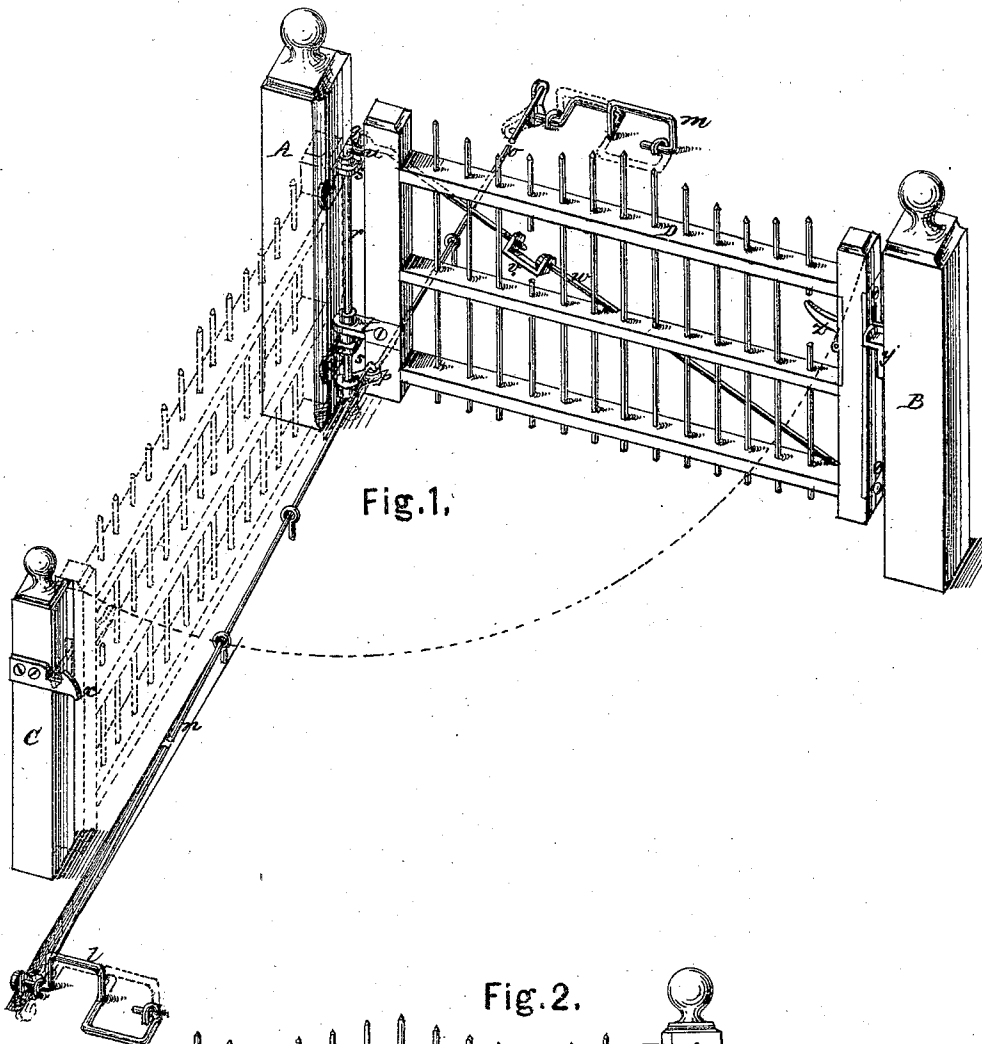


Fig. 1.

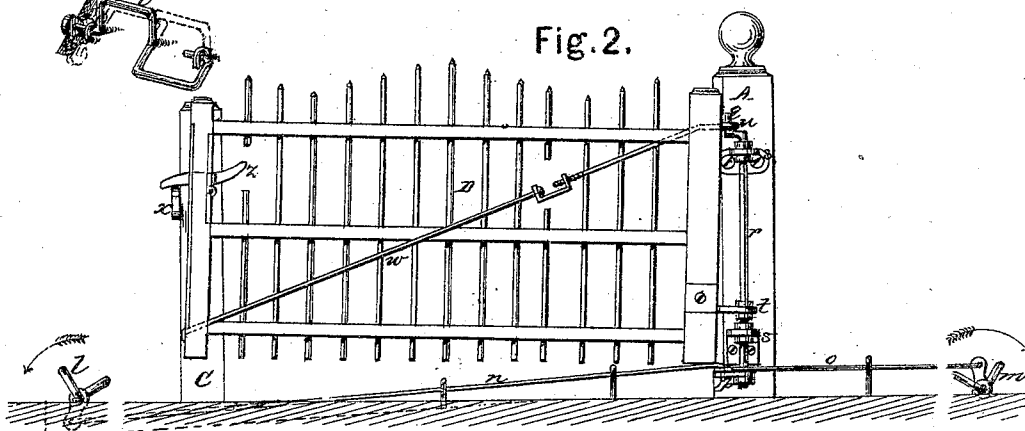


Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES EDGAR, OF DAYTON, OHIO.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. 131,257, dated September 10, 1872.

Specification describing an Improved Automatic Gate, invented by CHARLES EDGAR, of Dayton, in the county of Montgomery and State of Ohio.

Nature and Objects of the Invention.

This invention relates to means for hinging and operating the gate, and also to means for taking up sag or for elevating the latch end of the gate, as may be required. The gate is provided with a diagonal tension-rod furnished with a turn-buckle by which to adjust the same, and the upper hinge is composed, in part, of an eye on the upper end of this brace-rod. The gate is opened and closed by vehicles approaching and leaving the same in either direction by the impact of the wheels with cranks communicating their motion to a vertical crank-rod, by which the gate is thrown out of plumb, and thus unlatched and caused to swing open or shut; but it may be readily opened by hand in either direction, and will close by gravity when released. The crank by which the gate is thrown out of plumb forms a part of one hinge, and is in line with the gate while shut and when open, and the other hinge is correspondingly extended by an arm projecting from the gate. The gate is thus supported in horizontal position when open or closed, and remains out of plumb only during the opening and closing operations.

Description of the Drawing.

Figure 1 is a perspective view of a gate illustrating the invention, the dotted lines representing the same as opened. Fig. 2 is an elevation representing the gate in the act of closing.

General Description.

In carrying out the invention I employ a hinge-post, A, latch-posts B C, and a gate proper, D, of any approved structure; also, a spring or gravitating latch, z, and catches y x, of any suitable form. The main catch y is applied to the face of the post to admit of opening the gate by hand in either direction, and its rear shoulder is extended so as to arrest the gate when swung shut by the operating mechanism. To strengthen the gate, and especially to sustain the same against sagging, and to take up sag or to elevate the latch end

of the gate, as may be required, a diagonal tension brace-rod, w, is employed, the same being adjustable by means of turn-buckle v, and terminating at its upper rear end in an eye, u, to form a part of the upper hinge, which thus supports the gate through said rod. The corresponding part of the lower hinge is an arm, t, and the two hinges are completed by socket-brackets s on the hinge-post, and a vertical pintle-rod, r. This rod r has a crank-arm, q, to engage with the hinge-eye u, and is connected by crank-arm p and rods o w to wheel-cranks m l, properly arranged in the road on the respective sides of the gate, in usual manner. The crank-arm p of the upper hinge and the rigid hinge-arm t are made of corresponding length, and are both in line with the gate in the open and closed positions of the same, so as to support it in horizontal position.

Operation.

The gate being either shut or opened, as represented in Fig. 1, the first action of the crank-rod r, as actuated through either of the wheel-cranks m l and connecting-rods o n, is to lift the latch end of the gate so as to clear the latch z from the catch x or y, as illustrated in Fig. 2. The gate then swings shut or open, following the crank-arm q, by which it is actuated, until it rests in line with said arm and restored to horizontal position attached to the other latch-post B or C. The gate may be opened by hand in either direction, and when released will swing shut.

Should the gate become sagged, or require elevation for any other reason, this may be readily accomplished by means of the turn-buckle v of the tension-rod w.

I am aware that a vertical double-crank pivot-rod has heretofore been employed in combination with a gate, and I therefore lay no claim to such combination; but

What I do claim as new, and desire to secure by Letters Patent, is--

Claims.

1. The tension brace-rod w, made in two parts, and provided with the turn-buckle v and socket u, in combination with the gate D and vertical rod r, as and for the purposes set forth.

2. The vertical rod *r* turning in sockets in the gate-post, and provided with a hinge-arm, *q*, engaging with an eye, *u*, in the gate, in combination with the arm *t* and crank-arm *p*, both made of the same length, and both in line with the gate in the open and closed position of the latter, for the purpose of restoring

ing the gate to a horizontal position when open or closed, and operating substantially as described.

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Witnesses:

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