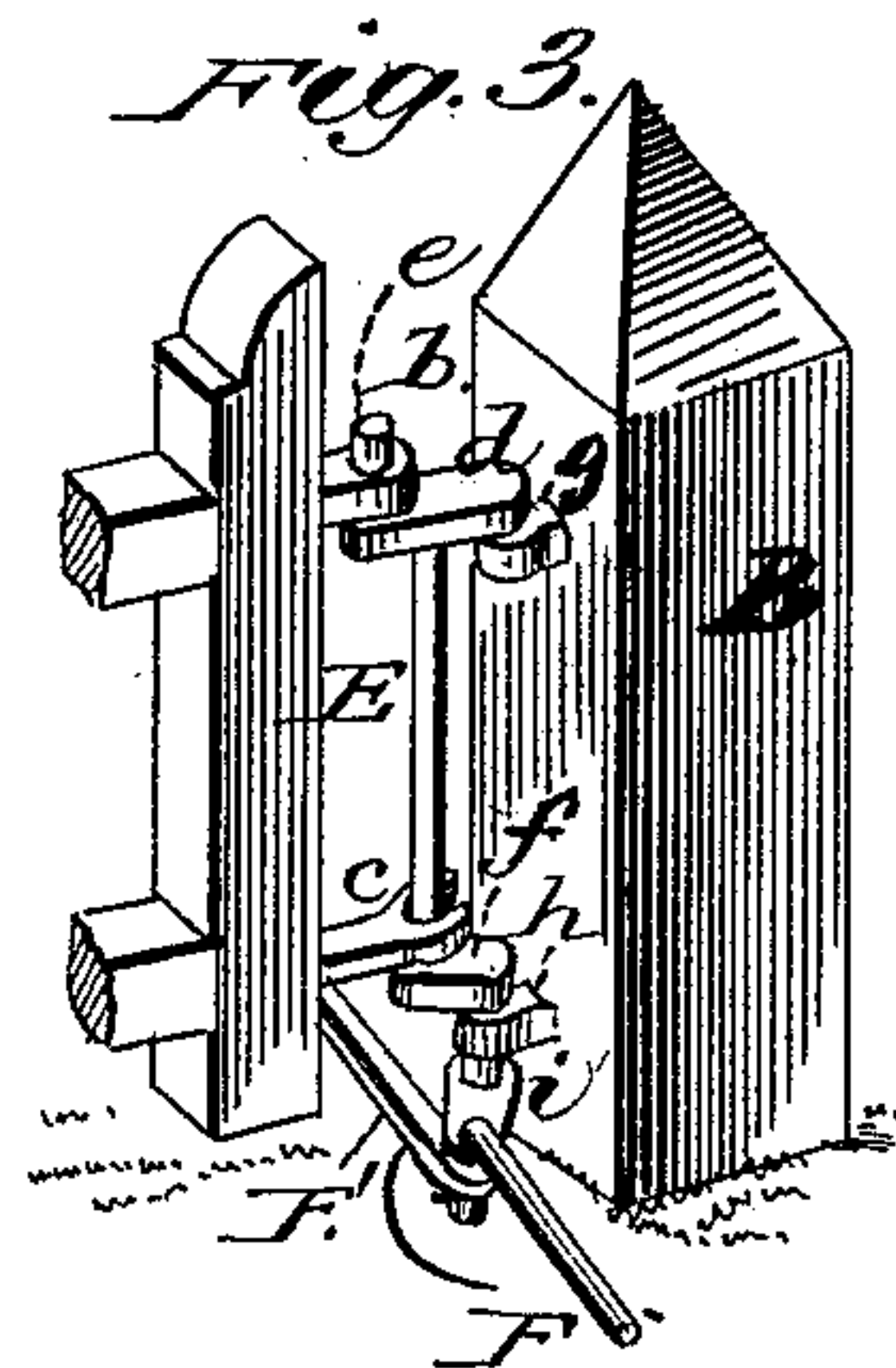
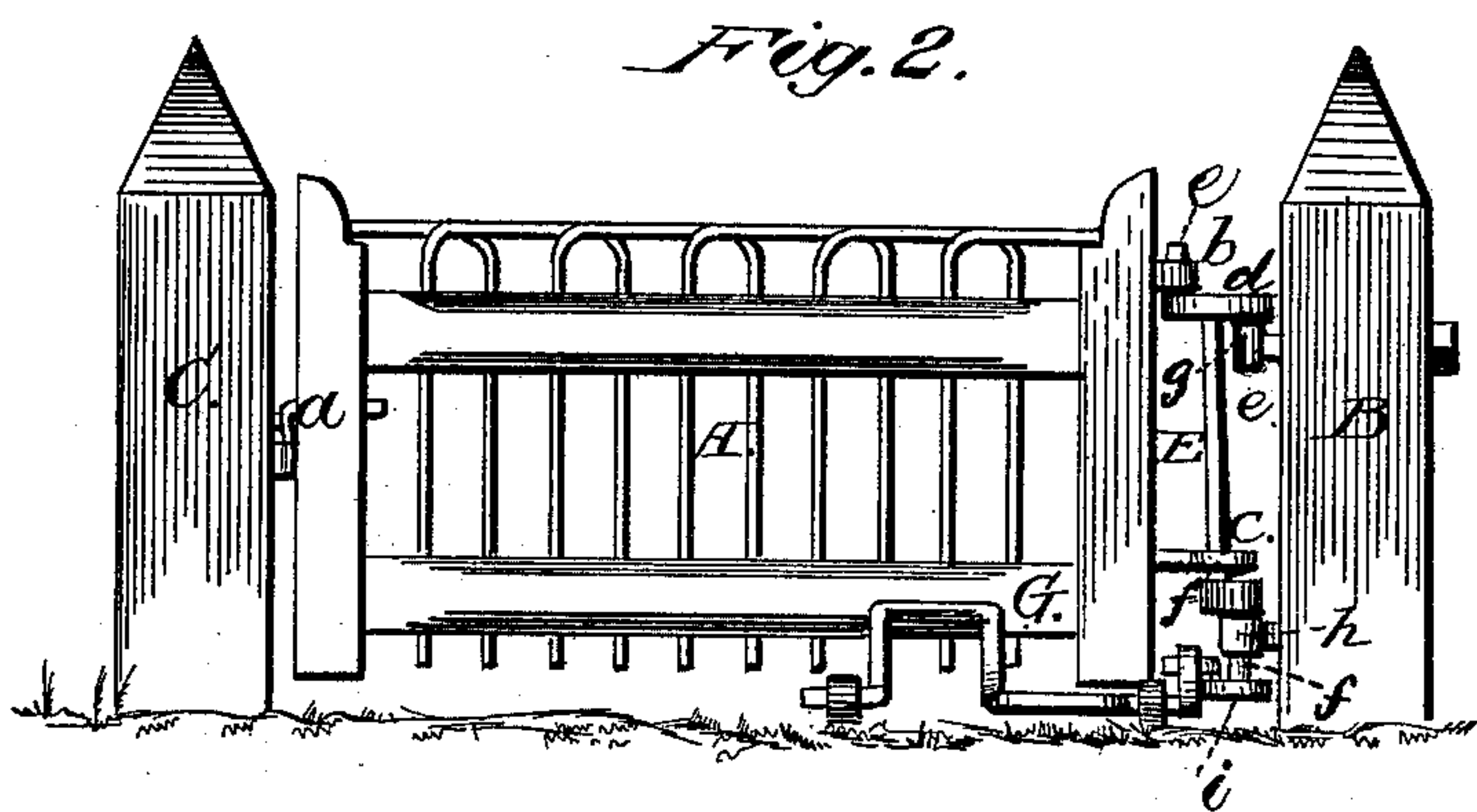
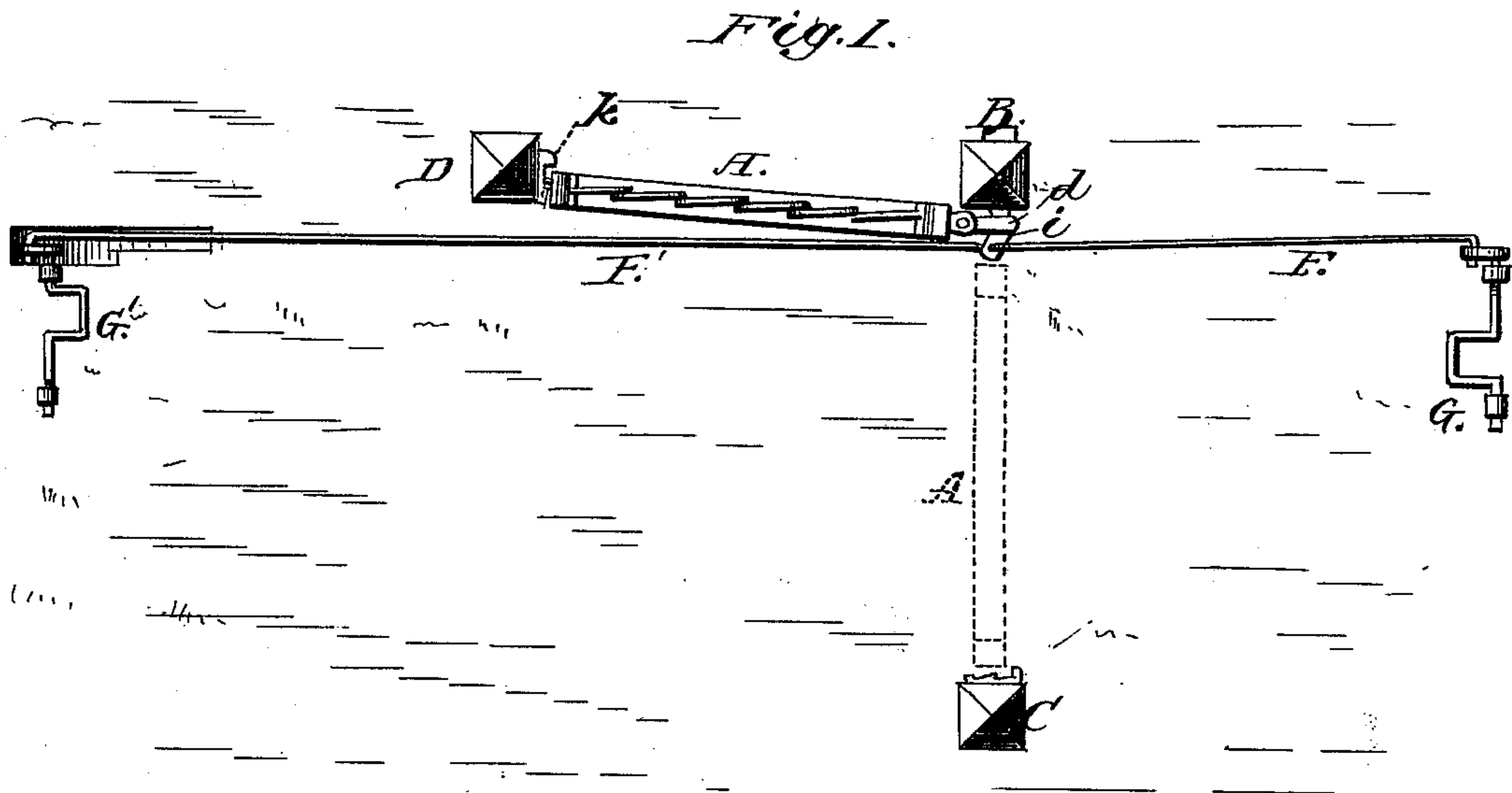


E. ROBINS.
Gate.

No. 220,662.

Patented Oct. 14, 1879.



Witnesses
Ad. G. Dieterich
Jos. T. Power

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UNITED STATES PATENT OFFICE.

ERASTUS ROBINS, OF TROY, OHIO.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. **220,662**, dated October 14, 1879; application filed July 21, 1879.

To all whom it may concern:

Be it known that I, ERASTUS ROBINS, of Troy, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Gates; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan or top view. Fig. 2 is a front elevation, and Fig. 3 is a perspective view, on an enlarged scale, of the vertical hinge-rod with its adjuncts.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to that class of automatic or self opening and closing gates which are operated by rods extending in both directions from and at right angles to the gate, and provided with cranks at their ends, which are operated by the wheels of a vehicle passing over them on approaching or leaving the gate; and my improvement consists in the detailed construction and combination of operating parts, as hereinafter more fully described, and particularly pointed out in the claim.

In the drawings, A is the gate, which may be of any preferred construction, and has a spring-latch, *a*, on its front post, a hinge-eye, *b*, on the upper part of the rear post, and a projecting forked hinge-staple, *c*, on the lower part of the same. B is the hinge-post, and C the latch-post, between which the gate is hung; and D is a supplemental post, the three posts B C D forming an equilateral triangle, as shown in Fig. 1 of the drawings.

E is the hinge-rod, upon the upper end of which is secured a cross-piece or head, *d*, having staples *e e'* at opposite ends, pointing in opposite directions.

The lower end of rod E forms a crank, *f*, which is inserted through the lower hinge-eye, *h*, of post B, while the staple *e'* of the upper cross-piece, *d*, is inserted into the upper eye, *g*, of said post, so that rod E may swing freely to both sides.

The lower end of the crank *f* of rod E is secured in a horizontal arm, *i*, in the other end

of which are pivoted two rods, (denoted by F F', respectively,) which extend along the ground in opposite directions, and at right angles to the gate when closed, their respective ends being pivoted to double cranks or treadles G G', at right angles to the rods and facing the gate, which said cranks or treadles are suitably journaled in bearings set in sills sunk into the roadway.

The two arms or treadles of each of the cranks G G' are set at right angles to each other, so that when one is down level with the roadway the other stands up perpendicularly, and vice versa.

The gate is hung with its upper eye, *b*, upon the staple *e* of cross-piece *d*, its lower forked hinge-staple, *c*, riding upon the lower part of rod E above crank *f*. It follows that if rod E is tilted to one side by one of the wheels of a carriage or wagon passing over the upright treadle of the crank G facing the gate, which pushes on rod F, and lever-arm *i*, the gate will be withdrawn endwise by the cross-piece *d* and its staple *e* from the latch-post C, thus releasing the spring-latch *a*, and enabling the gate to swing open until it reaches the stop-post D, the catch *k* of which will engage with the latch and keep the gate open while the vehicle passes through.

As the wheels pass over the upright treadle of the second crank, G', on the other side of the gate, this operation is reversed, and the gate is closed by releasing its latch from the catch of post D and swinging it back to the latch-post C.

I am aware that cranked pivot-shafts or pintles are not new, in combination with a swinging gate of this class and its operating-rods; nor do I claim this construction and combination, broadly; but by constructing the said pivot-shaft E with an upper cross-head, *d*, having the pintles *e e'* and lower crank, *f*, fixed rigidly in the arm *i*, as hereinbefore described, in such a manner that the bifurcated lower hinge-staple, *c*, straddles the hinge-rod E at its straight part above crank *f*, I avoid all jar or strain in opening the gate, which, by operating the treadle G or G', is not thrown suddenly and violently open with a jerk, but is gradually released from its lock-latch *a* on post C, and swung open with a slow and easy mo-

tion, which is not attainable in this class of gates as hereinbefore constructed.

Having thus described my improvement, I claim and desire to secure by Letters Patent of the United States—

The combination, with the operating-rods F F' and swinging gate A, having the upper hinge-eye, *c*, and lower bifurcated hinge-staple, *c*, of the hinge-rod or pivot-shaft E, provided with the cross-head *d*, having a pintle, *e*, inserted into the upper hinge-eye of the gate, and a pintle, *e'*, inserted in an opposite or downward direction into the upper staple or hinge-

eye, *g*, of the hinge-post, and provided with the crank *f* at its lower end, below the lower hinge-staple, *c*, of the gate, and with a rigid arm, *i*, connected with the operating-rods F F', substantially as and for the purpose herein shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ERASTUS ROBINS.

Witnesses:

J. D. BATTSON,

BENJ. F. ROBBINS.