

(No Model.)

G. FORD.

GATE.

No. 398,718.

Patented Feb. 26, 1889.

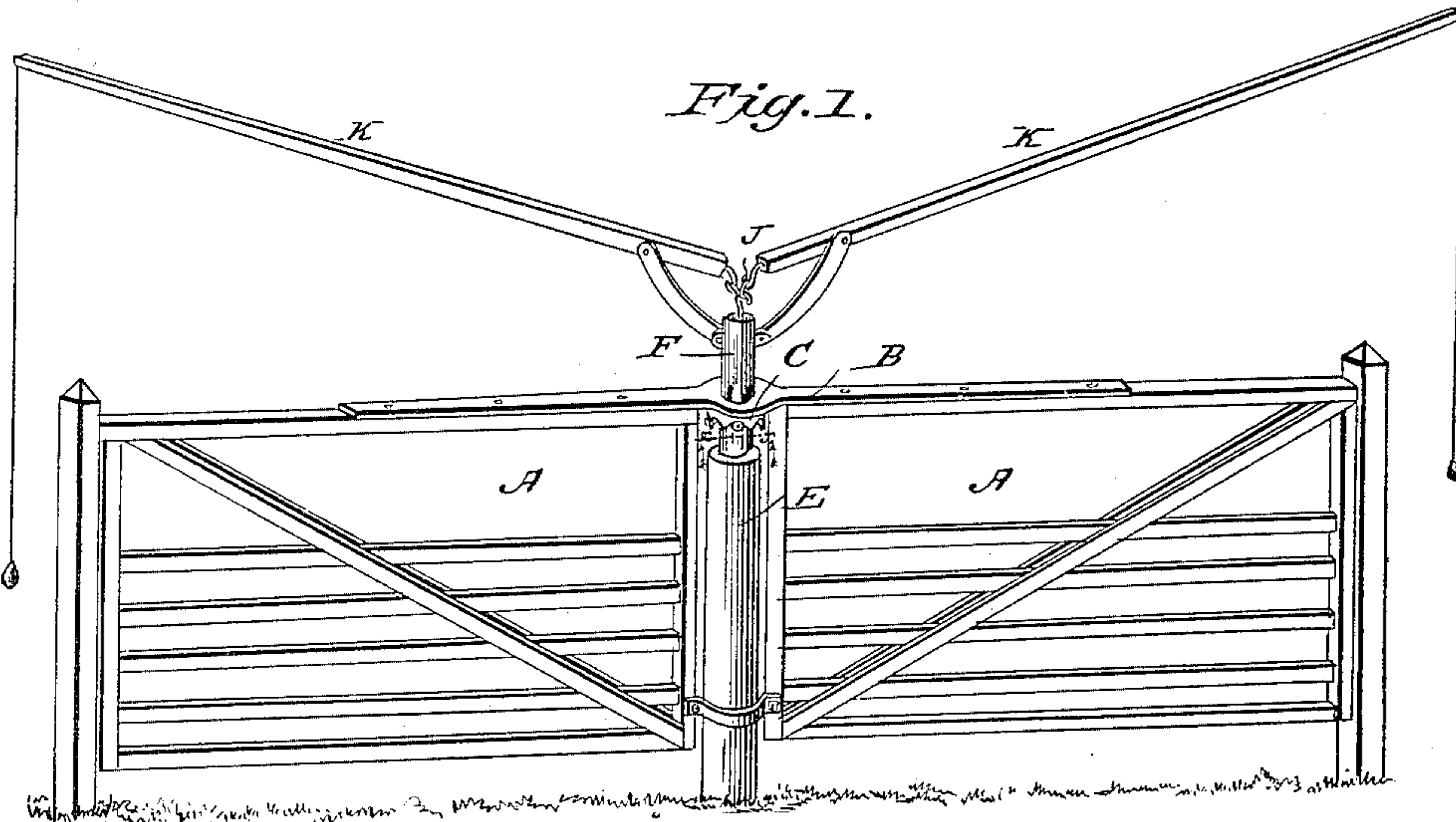


Fig. 6.

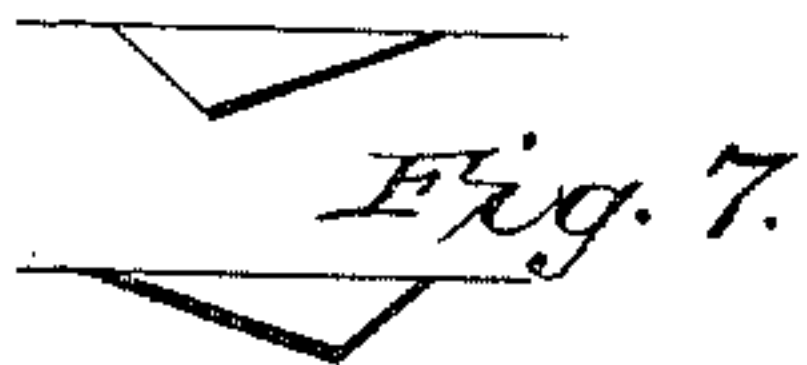


Fig. 2.

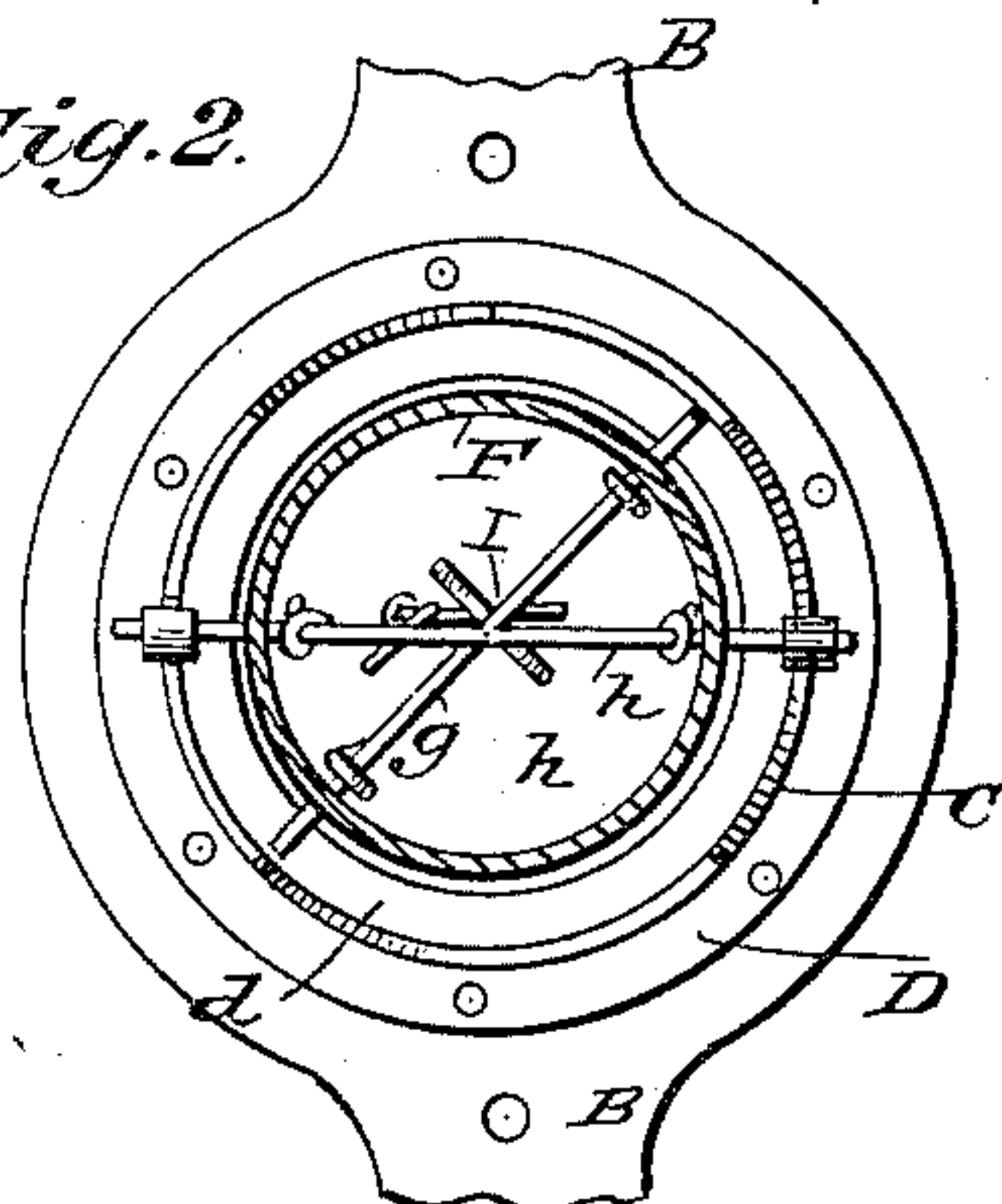


Fig. 5.

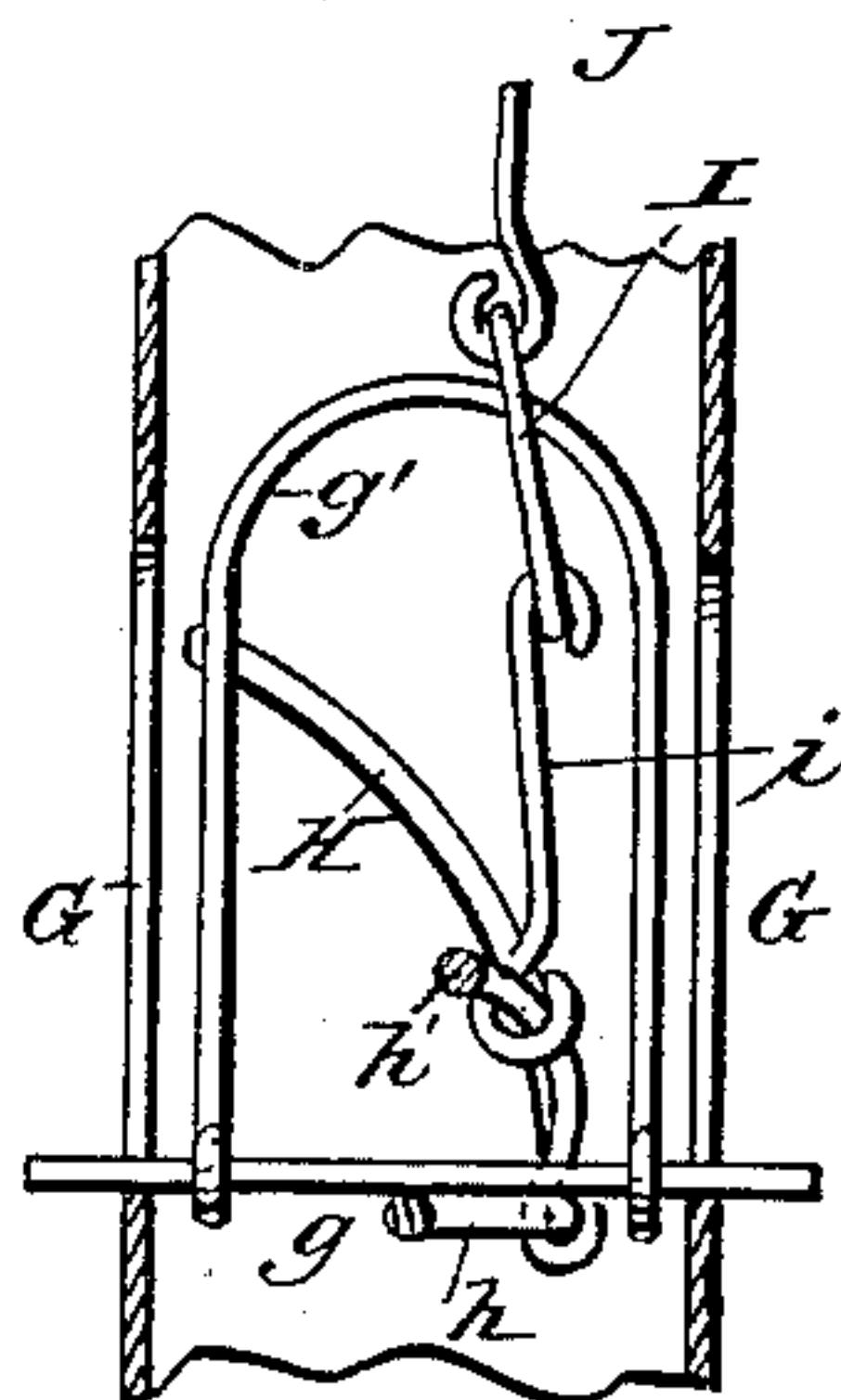


Fig. 3.

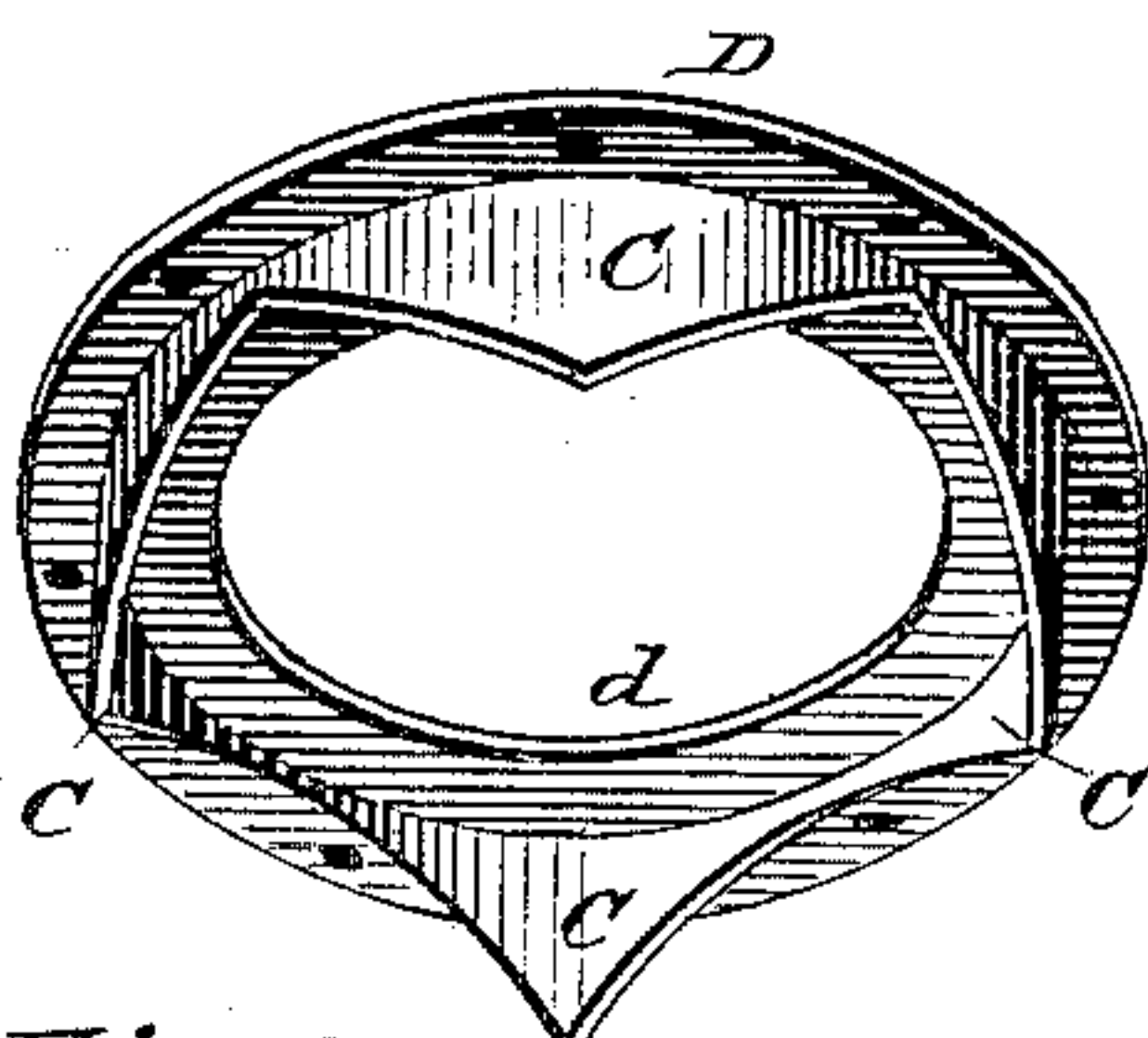


Fig. 4.

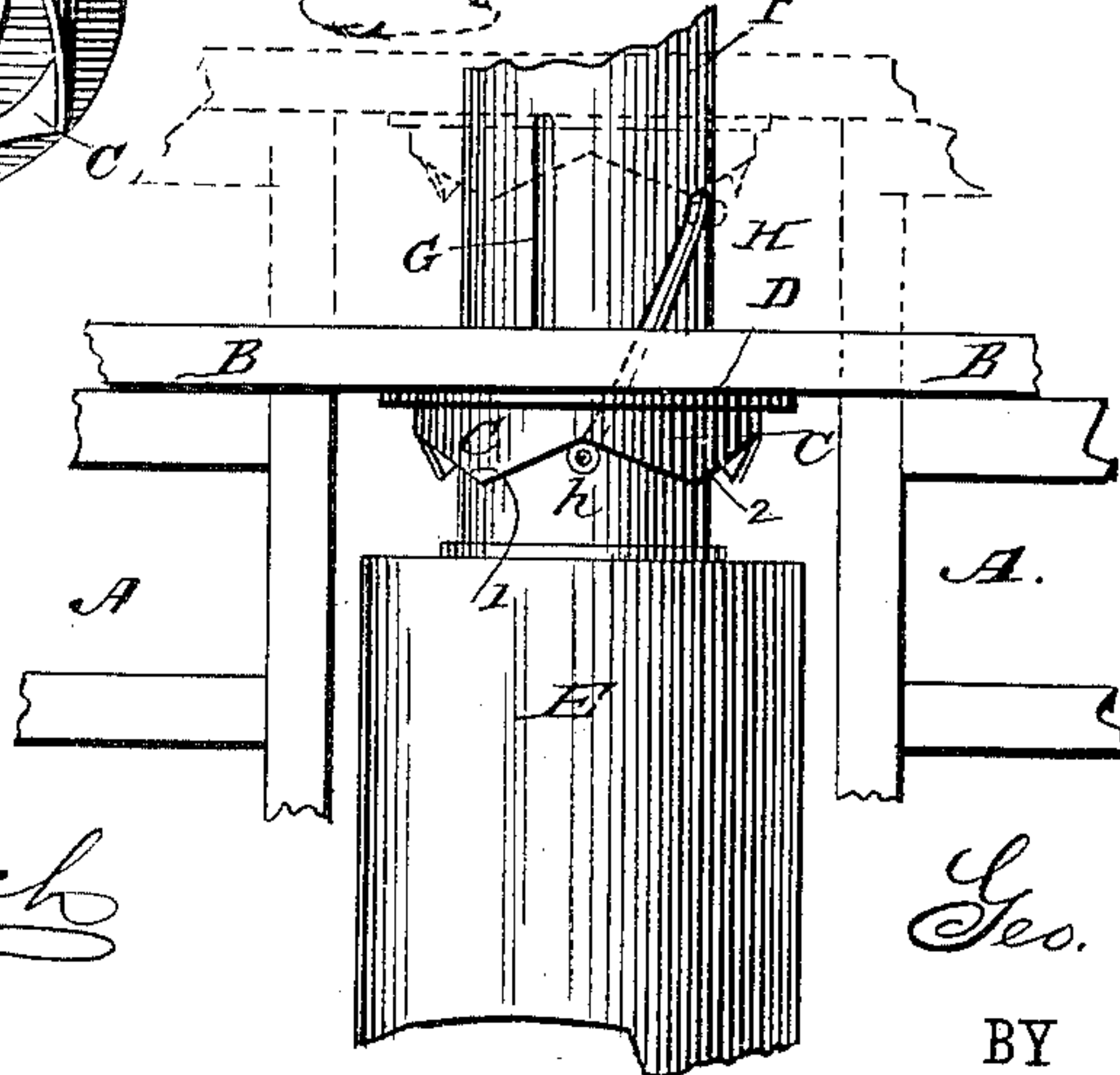


Fig. 8.

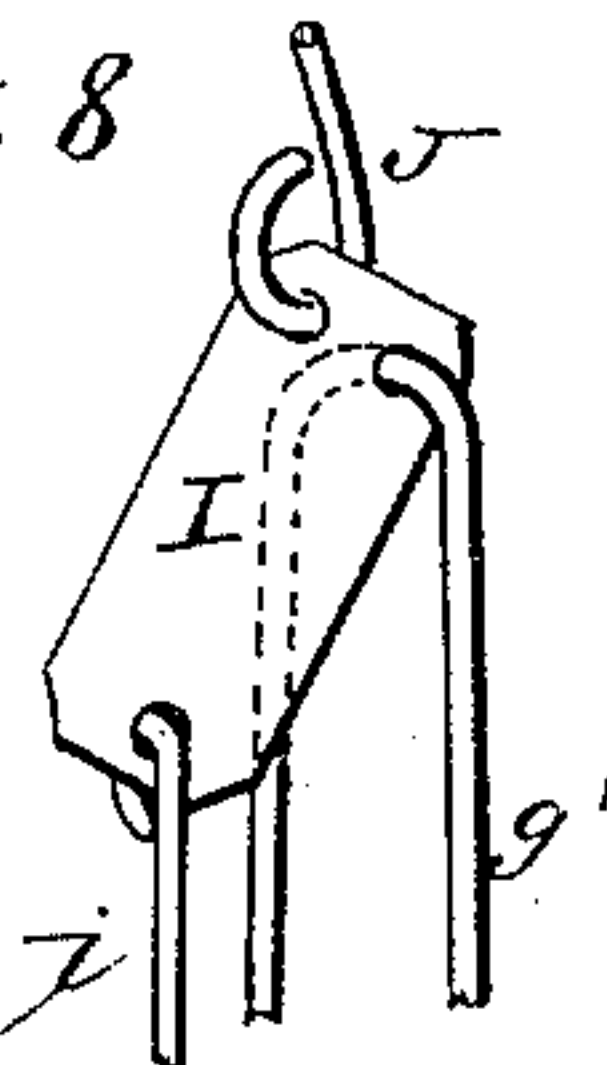
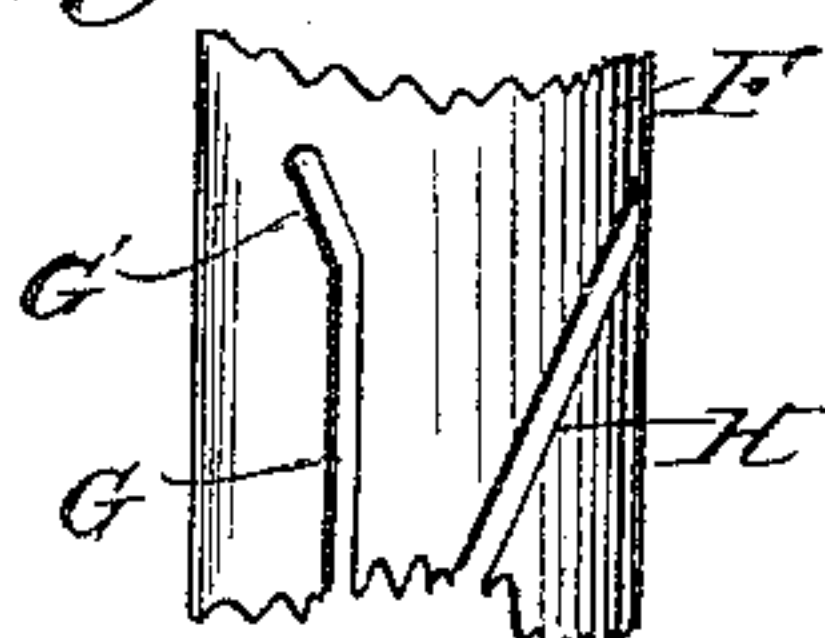


Fig. 9.



WITNESSES:

Fred G. Dietrich
P.B. Turpin.

INVENTOR:

Geo. Ford
BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE FORD, OF NEW HARMONY, INDIANA.

GATE.

SPECIFICATION forming part of Letters Patent No. 398,718, dated February 26, 1889.

Application filed January 16, 1888. Serial No. 260,812. (No model.)

To all whom it may concern:

Be it known that I, GEORGE FORD, of New Harmony, in the county of Posey and State of Indiana, have invented a new and useful
5 Improvement in Gates, of which the following is a specification.

My invention is an improvement in gates, seeking to provide a simple construction whereby to open the gate; and the invention
10 comprises inclines on the gate, means for lifting the gate, and a bearing or bearings for the inclines of the gate, which bearings are movable, whereby they may be set back in the operation of the invention, as will be described.
15

The invention comprises also certain other improvements; and it consists in certain features of construction and combinations of parts, as will be hereinafter described and
20 claimed.

In the drawings, Figure 1 is a perspective view of a gate constructed according to my invention. Fig. 2 is a detached section on about line $x x$, Fig. 1. Fig. 3 is a detail view
25 showing the inclines and the plate on which they are formed. Fig. 4 is a partial side view on an enlarged scale. Fig. 5 is a detail sectional view. Figs. 6 and 7 show different inclines. Fig. 8 is a detail view of some of the connections, all of which will be described.
30 Fig. 9 shows a slightly-different construction embodying my invention.

In carrying out my invention I provide on the gate inclines, and supports independently
35 of such inclines, bearings therefor, which bearings are movable from their normal position rearwardly with reference to the direction of movement of the gate, and a lifter for such gate. The gate comprises two sections, A A, and a
40 connecting-bar, B, between such sections, on which connection I provide the inclines C, which inclines are preferably cast with and depend from a plate, D, secured to the under side of the connecting-bar and having a flange or
45 portion, d , to receive the bearing of the lifting-shaft, presently described. The gate turns on a central post, E, which forms a support for a tube, F, which is provided with vertical slots G and inclined slots H. A lifting
50 shaft or bar, g , extends at its ends through the vertical slots and engages the gate, preferably

engaging the portion d of plate D, as shown. The rod or bar h forms the bearings for the inclines of the gate, and is movable rearwardly from its normal resting point or position in the
55 operation of the improvement. I also provide, in connection with the bearings, guides therefor, which guides are inclined upward, so that the bearings will be retracted when elevated, as will be more fully described. In the construction shown the rod or bar h extends
60 through the slots H, which slots form inclined guides for the bearings provided at the ends of the rod or bar. The rods $g h$ are connected together within the tube by providing them
65 with bails $g' h'$, connected by links I i , which latter are connected by rod or hanger J with the levers K, by which the gate may be opened from either side. When the gate is at rest, as shown in full lines, Fig. 4, the bearings h
70 rest between two inclines—say, for instance, 1 and 2. Then if the gate be lifted vertically the bearings will be moved rearwardly with reference to the direction of movement of the gate and will pass to position to be engaged
75 by incline marked 2, when the gate is lowered, as will be understood from dotted lines, Fig. 4. Then the bearing will move down its inclined guide, and the incline of the gate will move down its bearing to give the gate a
80 quarter-turn.

The inclined guides, as shown, are preferred, as thereby I attain what may be termed a "compound movement" of the gate, part by the movement of the bearings in their
85 guides and part by the inclines of the gate moving down such bearings. If the inclines should be made as shown in Fig. 6, the bearings need be moved rearwardly but little, as most of the opening of the gate is done by the
90 weight of the gate, its inclines moving down the bearings. If, however, the inclines are made as shown in Fig. 7, the bearings will have to be moved considerably to the rear and upward, as the operation of opening will be
95 effected almost entirely by the bearings passing down their inclines and carrying the gate with them.

If the slot G be made with an inclined portion, G' , at its upper end, as shown in Fig. 9, it will serve to partially open the gate as
100 the gate is raised, and the bearing h will not

need to be moved so far rearwardly as in the construction shown in Fig. 4.

Having thus described my invention, what I claim as new is—

5 1. The combination of the gate having inclines, and bearings on which said inclines may rest and down which they may slide in the turning of the gate, said bearings being movable from their normal position in a direction reverse to that in which it is desired
10 to open the gate, whereby as the gate is lifted the bearings may be moved from position to engage one incline to position for engagement by an incline in rear thereof, substantially as
15 set forth.

2. In combination with a tube suitably supported and having an inclined or spiral slot inclined toward its upper end in a direction reverse to the direction of movement of the
20 gate, the gate having inclines, a rod or bar movable in said inclined slot and extended to provide a bearing for the inclines of the gate, and a lifter for elevating the gate and the rod, all substantially as set forth.

25 3. The combination of the tube suitably supported and having vertical slots and inclined slots, the gate having inclines, the lifting-shaft extended through the vertical slots and having its ends engaging the gate, the shaft extended
30 through the inclined slots and having its ends arranged to be engaged by the inclines of the gate, and a lifter for the said two shafts, substantially as set forth.

4. The combination, with a gate having inclines, of bearings for such inclines down
35 which the latter may slide, such bearings being movable, and inclined guides for said bearings, whereby when elevated such bearings will be also retracted and the gate when
40 lowered will be partially turned by the movement of said bearings to their normal positions, and also by the sliding of its inclines down said bearings, all substantially as and for the purposes specified.

5. The combination of a gate, a lifter for
45 said gate, bearings onto which said gate is lowered after being lifted by the elevator, such bearings being movable from their normal position rearwardly with reference to the direction of movement of the gate, and inclined
50 guides for said bearings, down which such bearings move in the operation of the invention, substantially as set forth.

6. The combination of the gate having inclines, the tube having vertical slots and inclined slots, the shaft having its ends extended
55 through the vertical slots and engaging the gate, the shaft extended at its ends through the inclined slot in position to be engaged by the inclines of the gate, connections between
60 such shafts, and means for elevating the same, substantially as set forth.

GEORGE FORD.

Witnesses:

CHARLES CHADWICK,
F. P. FRETAGEOT.