

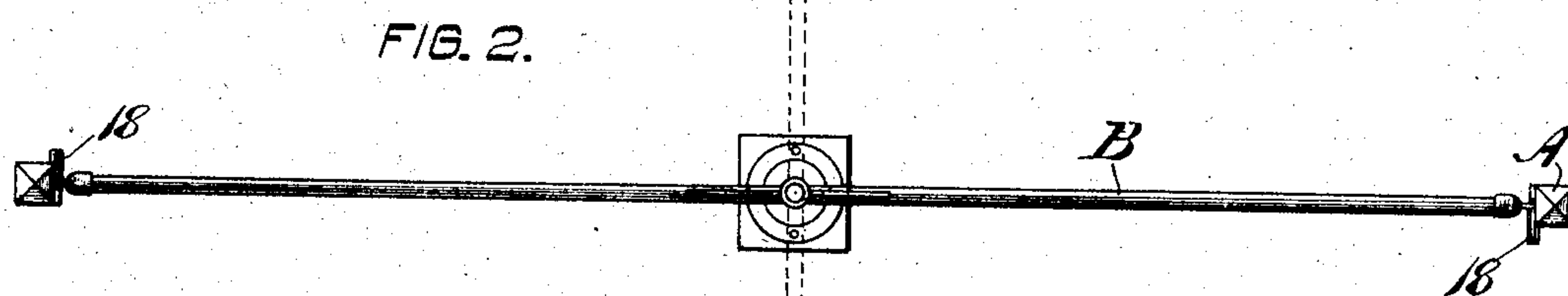
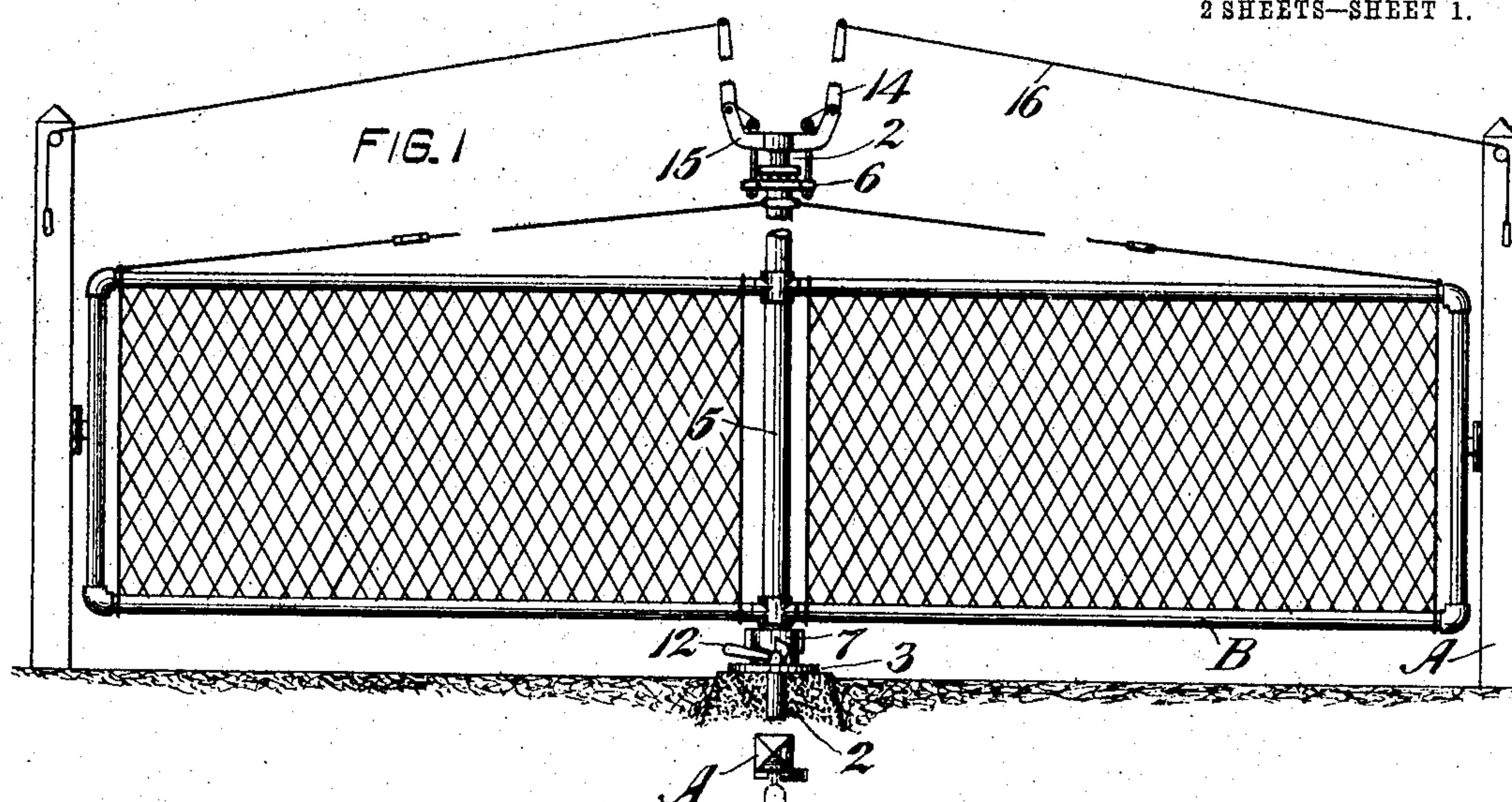
No. 780,623.

PATENTED JAN. 24, 1905.

T. C. SISK.
FARM GATE.

APPLICATION FILED NOV. 8, 1904.

2 SHEETS—SHEET 1.



WITNESSES,

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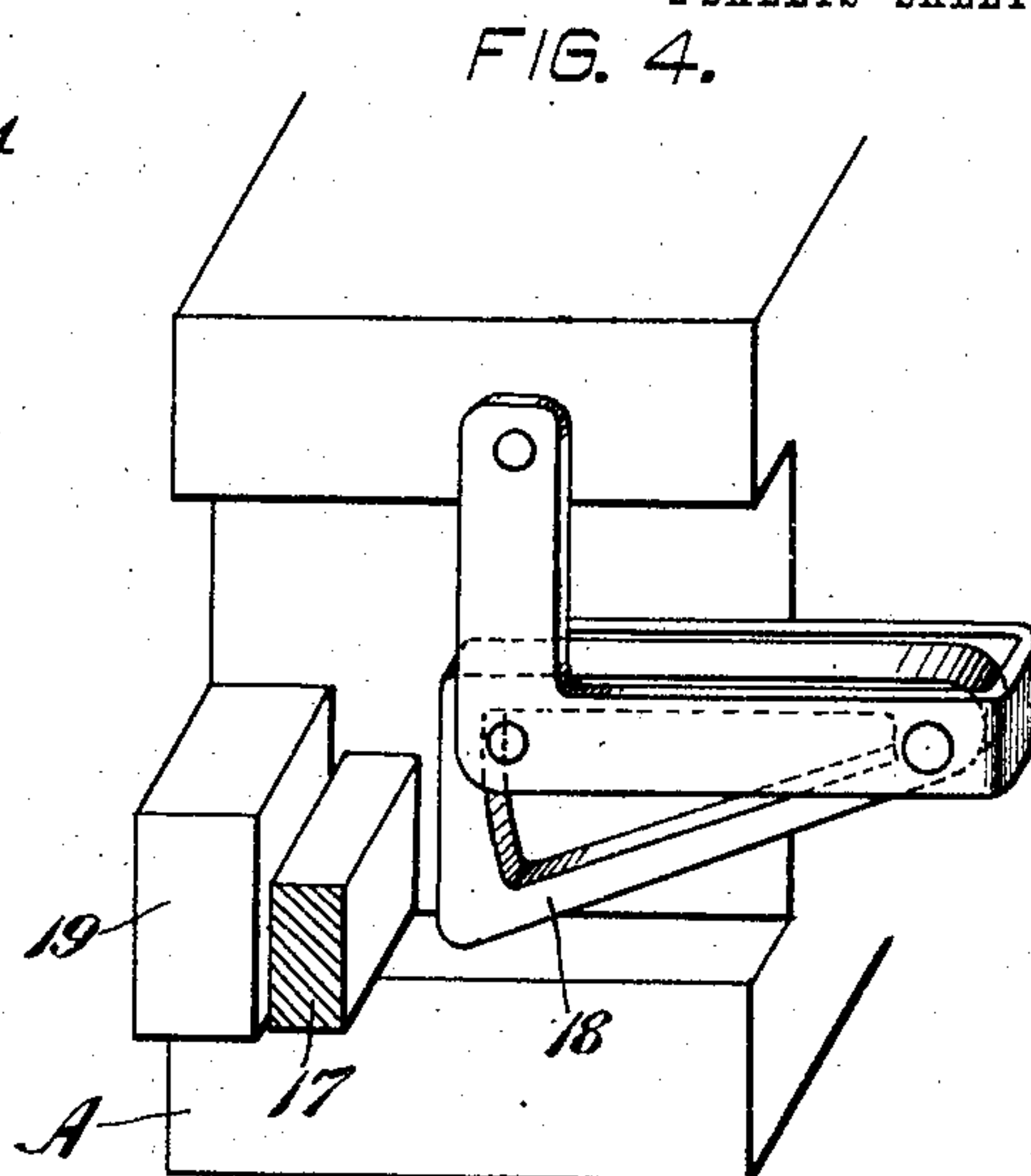
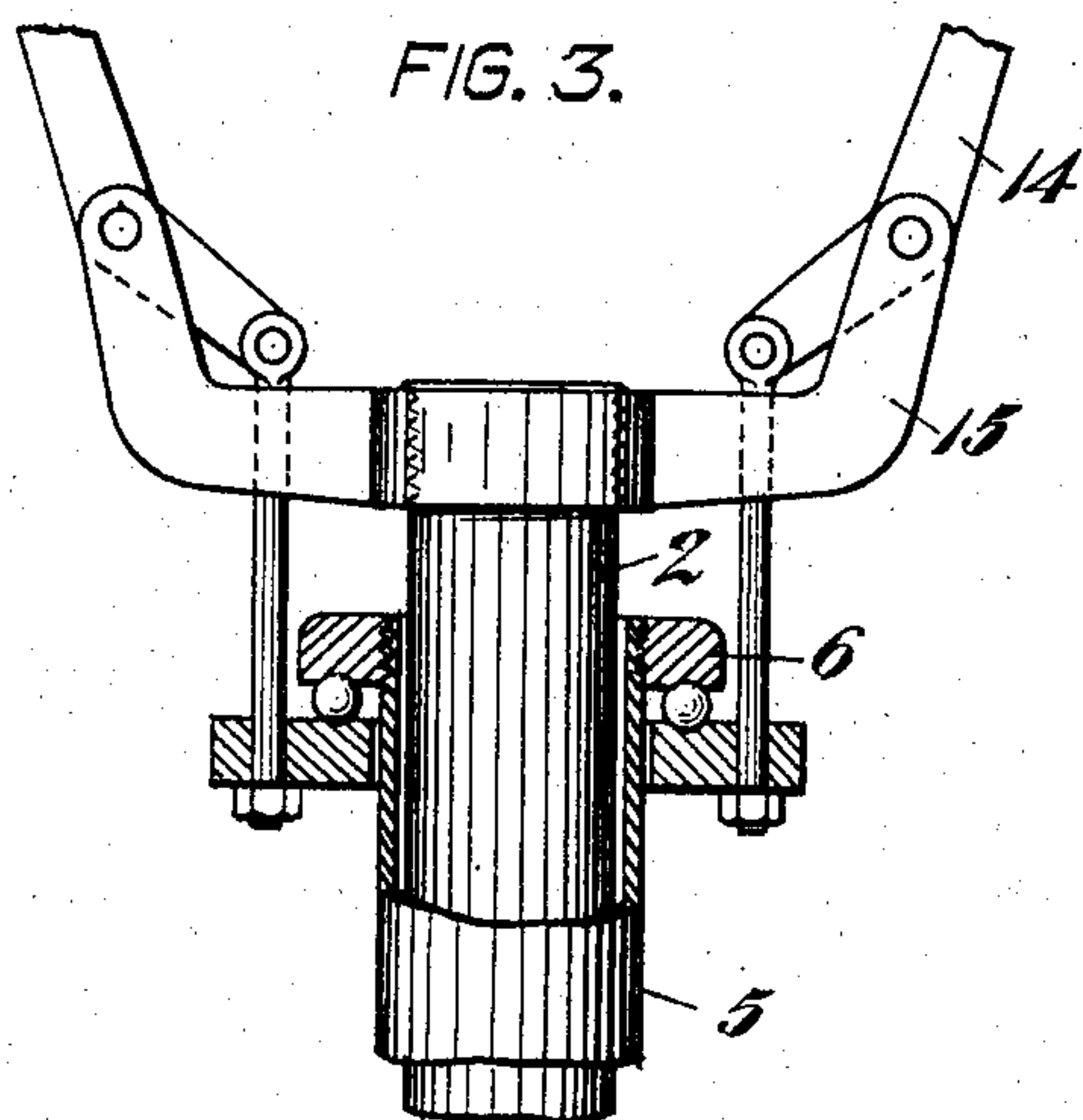


FIG. 5.

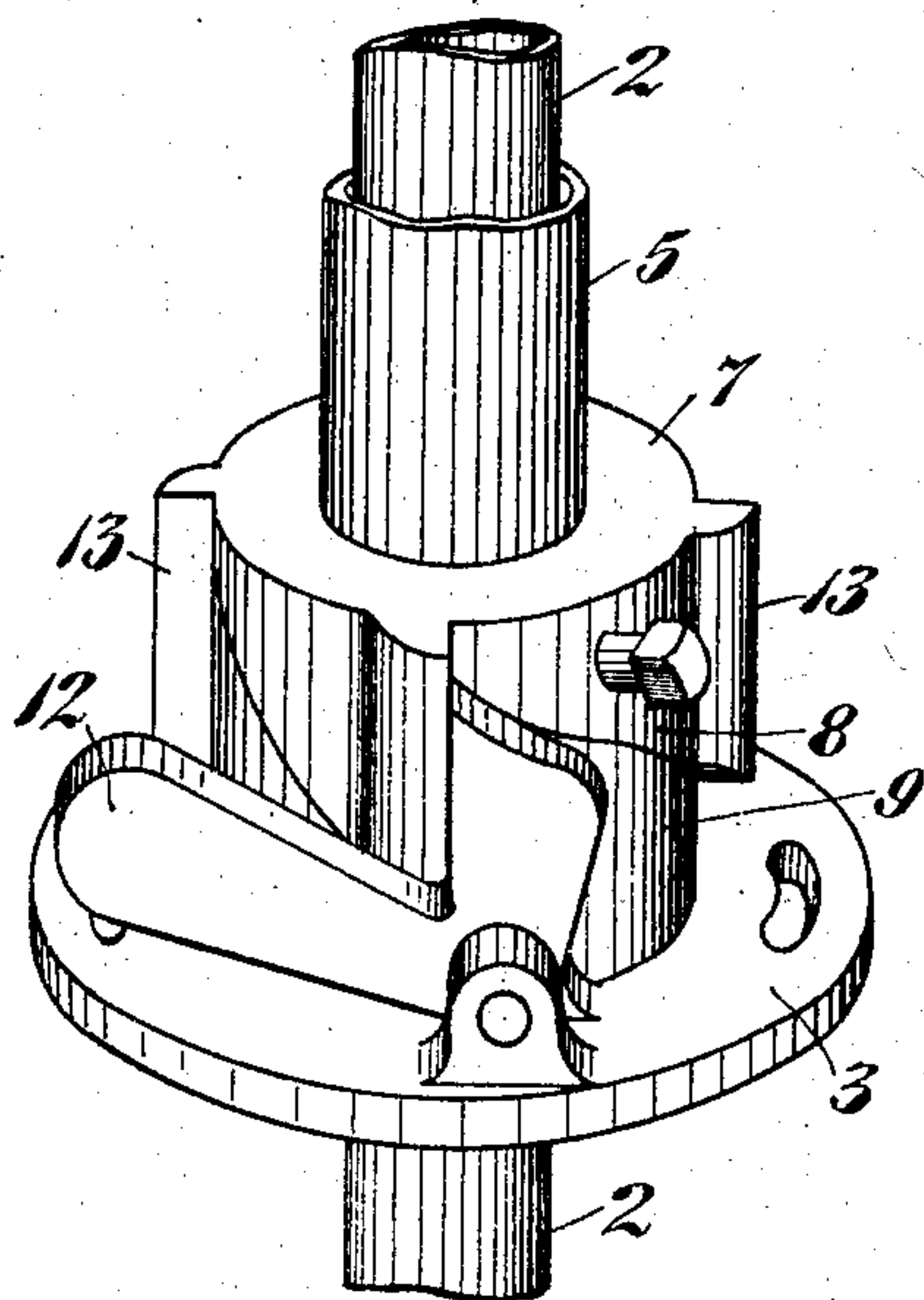
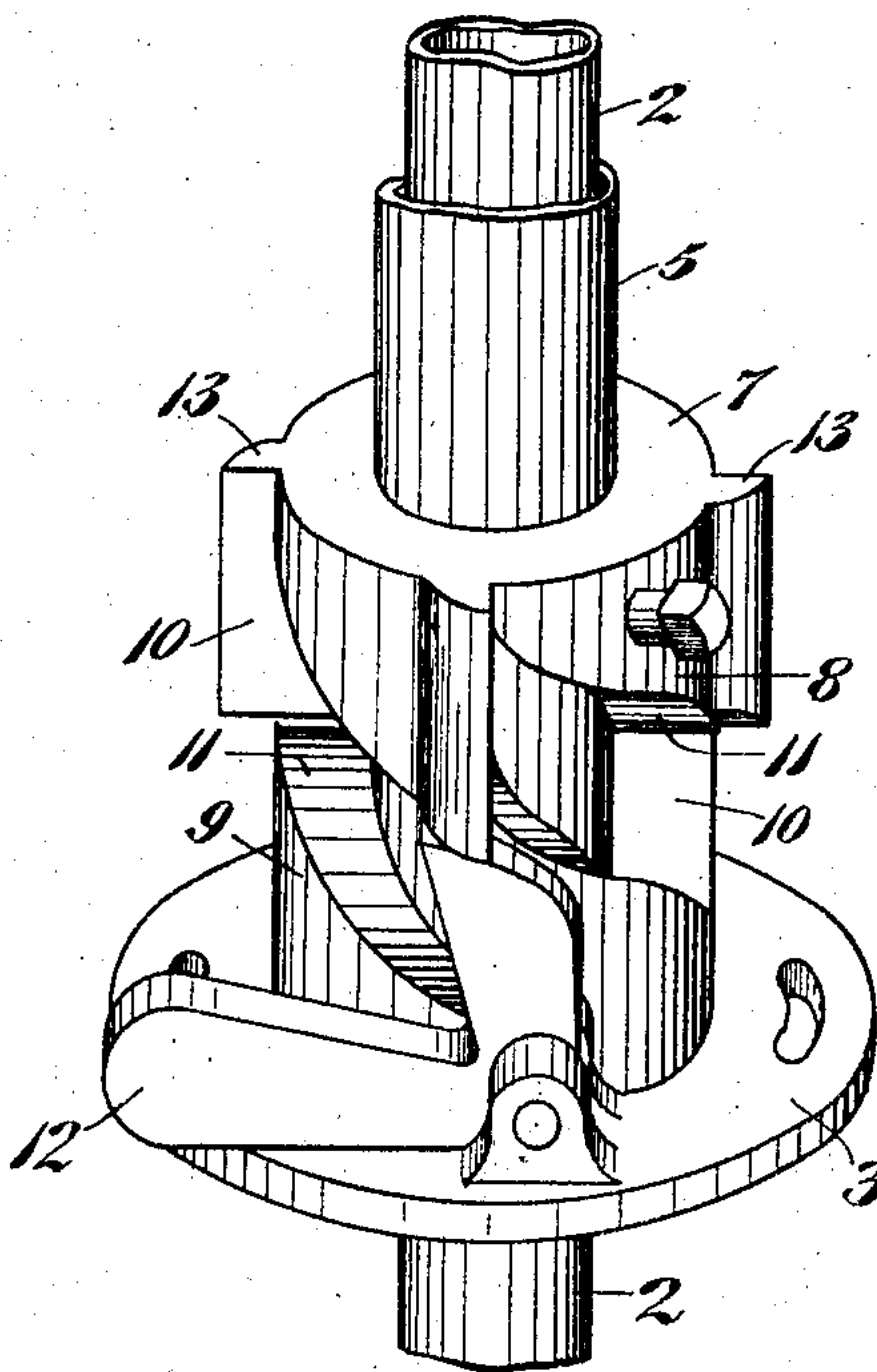


FIG. 6.



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UNITED STATES PATENT OFFICE.

THOMAS C. SISK, OF STOCKTON, CALIFORNIA.

FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 780,623, dated January 24, 1905.

Application filed November 8, 1904. Serial No. 231,888.

To all whom it may concern:

Be it known that I, THOMAS C. SISK, a citizen of the United States, residing at Stockton, in the county of San Joaquin and State of California, have invented new and useful Improvements in Farm-Gates, of which the following is a specification.

My invention relates to an improved gate of the type known as "farm-gates," which are opened and closed by the pulling of a cord or chain arranged within easy reach of the person wishing to drive through the gate without having to dismount.

The invention consists of the parts and the construction and combination of parts, as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my gate in open position. Fig. 2 is a plan view of the same. Fig. 3 is a detail, partly in section, showing the means for raising the gate. Fig. 4 is a perspective of the latch and stop. Fig. 5 is a perspective of the lower casting in locked position. Fig. 6 is a perspective of the same in position to allow the gate to revolve.

In carrying out my invention I arrange four posts A all approximately equidistant from each other and from a common center. Two of the posts are on opposite sides of the roadway and two are in a line centrally between the two and at right angles to a line connecting the first two posts, the distance between the two posts in the center of the roadway and the posts on either side being sufficient to allow a team readily to pass.

B represents a gate hung in the middle and at a point equidistant from all the posts A and adapted by suitable mechanism, hereinafter described, to be rotated always in the same direction and to move a quarter-turn first to open the gate and then a quarter-turn to close it. Its length is equal approximately to the distance between opposed posts. Teams going in opposite directions would pass through the gate, one on one side and one on the other, as indicated by the arrows, Fig. 2. The gate is of any suitable construction. Preferably it is made of pipe-sections properly joined together, with interconnecting wires and braces

to form a light, durable, rigid structure, and may be plain or variously ornamented, as desired. It turns about a central vertical post 2, set into a bed-plate 3, supported on a proper foundation of brick, stone, concrete, or wood. The gate is provided with a central vertical sleeve 5, which surrounds the post and carries a swivel 6, preferably having a ball-bearing at its upper end. A collar 7, having underneath the inclined cams 8, is secured to the lower end of the sleeve and coöperates with the corresponding segmental cam members 9 on or fixed to the bed-plate 3 and arranged concentric with the post 2. With the gate arranged as this is to turn a quarter-revolution each time, to open or close alternately, there are four cams 8 and the same number of cams 9. The cams have each a vertical surface 10 and corresponding inclined surfaces 11, so that when the gate is in normal lowered position the upper cams 8 will fit into the interspaces of cams 9 and rest on and be supported by the latter.

To open or close the gate, the latter is lifted and by suitable mechanism given a slight turn to bring the lowest points of cams 8 onto the highest parts of the inclines 11 of cams 9, whereupon on the release of the gate to let its weight rest on cams 9 it will close or open, as the case may be, by gravity.

To give the gate the slight impetus necessary to carry the cams 8 forward one step onto the cams 9 in advance, I employ the following simple means: One or more dogs 12, shaped like bell-crank levers, are fulcrumed at the angles to the bed-plate alongside of the stationary cam members 9. The upper or movable cams 8 have vertical peripheral projections 13 or are otherwise thickened in their lower and vertical portions, so as to project radially beyond the outer perimeter of cams 9. The horizontal arms of the dogs 12 are weighted, so as to throw the vertical arms across the path of the projecting portions 13 of cams 8 when the gate is lifted, and the dogs have their upper surfaces in substantial continuation with or a little above the inclines 11 of the stationary cams. When the gate is in its lowered and normal position, the vertical arms of the dogs are supported against the

parts 13, with the horizontal arms of the dogs slightly lifted. On lifting the gate to clear the dogs the latter drop by gravity under the points of the cams 8. On releasing the gate
 5 it rides by gravity first over the dogs and then over the stationary cams 9 until the gate comes to its lowest point again or in line with one or the other of the pairs of opposed posts A, causing the cams 8 once more to contact
 10 with the vertical arms of the dogs to turn them slightly in readiness for the next lift of the gate.

Any suitable means requiring a minimum amount of power may be employed to lift the
 15 gate. In the present instance I have shown two bell-crank levers 14, pivoted in a plane parallel with the roadway to the ends of a cross-head 15, fast to post 2. The shorter arms of these levers connect to the swivel 6,
 20 while a cord 16 runs from each longer arm to a corresponding post A in the roadway, so that a person driving up from either side may without alighting reach out, seize a rope, and by a pull on the same open the gate. Pass-
 25 ing through the gate is closed by a similar pull on the other rope.

It remains to describe a suitable means for checking the rotary movement of the gate when it has gone a quarter-turn and so obviate strain on the cams 8 9 and prevent possible breakage. As here shown, each end of the gate is provided with a projection or pin 17, adapted to engage a pivoted triangular tongue 18 on each post, arranged to let the
 35 projection or pin 17 pass under, but to prevent the gate from returning. A stop 19 on the post proximate to the tongue prevents the further turning of the gate in the same direction temporarily, but will let the pin pass
 40 over it when the gate is lifted. Thus it is observed that a simple pull on a cord 16 lifts the gate and allows the dogs to drop under the end of the uplifted cams 8. Releasing the tension on the cord brings the weight of the
 45 gate first onto the inclined surfaces of the dogs and then onto the stationary cams, causing the gate to turn automatically a quarter-turn. The operation is the same always whether it is to open or close the gate, and the gate al-
 50 ways turns in the same direction.

It is possible that various modifications in my invention may be made without departing from the principle thereof, and I do not wish to be understood as limiting myself to the
 55 specific construction as herein shown and described.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

60 1. A farm-gate pivoted centrally to turn about a vertical stationary axis, opposed posts arranged in pairs and equidistant from each other and from the pivotal center of the gate, projections on the ends of the gate and latch
 65 mechanisms carried by the posts and disposed

in the path of said projections, means operating to rotate the gate always in the same direction alternately to open and close the gate, and means independent of the gate-rotating means for giving the gate a vertical and a
 70 slight rotative movement to enable the gate-rotating means to operate.

2. A gate pivoted intermediate of its ends and arranged to turn about a vertical axis, cam-surfaces on the under side of the gate
 75 and arranged concentrically with the axis of rotation of the gate, complementary stationary cams concentric with said axis of rotation and coacting with the cams on the gate to rotate the latter step by step in the same di-
 80 rection, and means independent of the cams for giving the gate a vertical and a slight rotative movement to enable the cams to operate.

3. A gate having a central fixed sleeve, a vertical post about which said sleeve and gate
 85 are adapted to turn, means for lifting the gate, means for giving the lifted gate a slight rotative movement, and means independent of and coacting with the last-named means to continue the movement of the gate and to
 90 turn said gate a quarter of a revolution.

4. A gate having a central fixed sleeve, a vertical post about which said sleeve and gate are adapted to turn, means for lifting the gate, means for giving the gate a slight rotative
 95 movement, means independent of and coacting with the last-named means to continue the movement of the gate and to turn said gate a quarter-revolution, stop means in the path of the gate to limit the rotative move-
 100 ment of the latter, said stop means permitting the gate to continue its rotative movement after each lifting of the gate.

5. A gate having a central vertical sleeve portion, a fixed pivot about which said sleeve
 105 portion is turnable, opposed complementary coaxially-arranged cams adapted to support a gate, means for lifting a gate, and a pivoted cam independent of the coaxial cams for giving the gate an initial rotative movement.
 110

6. A gate having a central vertical sleeve portion, a fixed pivot about which said sleeve
 115 portion is turnable, opposed complementary coaxially-arranged cams adapted to support a gate, means for lifting a gate, means independent of the cams for giving the gate an initial rotative movement, projections on the ends of the gate, pivoted stops and fixed stops in the path of said projections to limit the ro-
 120 tative movement of the gate.

7. A gate pivoted centrally, circumferentially-arranged cams on the under side of the gate, disposed radially of the gate-axis, fixed
 125 cams with which said cams on the gate coact to turn the gate when the gate is lifted, and then released, means for lifting the gate, and a pivoted cam member independent of the cams to give the gate an initial rotative movement.

8. A gate pivoted centrally, circumferen- 130

tially-arranged cams on the under side of the gate, disposed radially of the gate-axis, fixed cams with which said cams on the gate coact to turn the gate when the gate is lifted and then released, means for lifting the gate, and means independent of the cams to give the gate an initial rotative movement, said last-named means comprising pivoted cam-surfaced members interposable in the path of the cams on the gate when the latter is lifted.

9. A gate pivoted centrally, circumferentially-arranged cams on the under side of the gate disposed radially of the gate-axis, fixed cams with which said cams on the gate coact to turn the gate when the gate is lifted and then released, means for lifting the gate, and means independent of the cams to give the gate an initial rotative movement, said last-named means comprising bell-crank levers fulcrumed adjacent to the fixed cams and interposable in the path of the cams on the gate.

10. A gate pivoted centrally to turn on a stationary pivot, circumferentially-arranged cams on the gate concentric with said pivot, complementary circumferentially - arranged fixed cams, means for lifting the gate and pivoted dogs interposable beneath the cams on the gate.

11. A gate having a central vertical sleeve portion, a fixed post about which said sleeve and the gate are turnable, cams on the under side of the sleeve, complementary fixed cams coöperating with said cams on the sleeve to

turn the gate, a cross-head on said post, bell-crank levers fulcrumed on said cross-head, swivel connections between the upper end of the sleeve and said bell-crank levers, means for operating said levers from a distance, and means independent of the cams to give the gate an initial rotative movement when lifted by said bell-crank levers, said last-named means comprising a pivoted dog of bell-crank form fulcrumed proximate to the fixed cams.

12. A gate having a central vertical sleeve portion, a fixed post about which said sleeve and the gate are turnable, cams on the under side of the sleeve, complementary fixed cams coöperating with said cams on the sleeve to turn the gate, a cross-head on said post, bell-crank levers fulcrumed on said cross-head, swivel connections between the upper end of the sleeve and said bell-crank levers, means for operating said levers from a distance, means independent of the cams to give the gate an initial rotative movement when lifted by said bell-crank levers, and movable and fixed stops in the path of the gate to limit the rotative movement of the latter.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

THOMAS C. SISK.

Witnesses:

G. W. HARRIS,

F. B. McELWEE.