

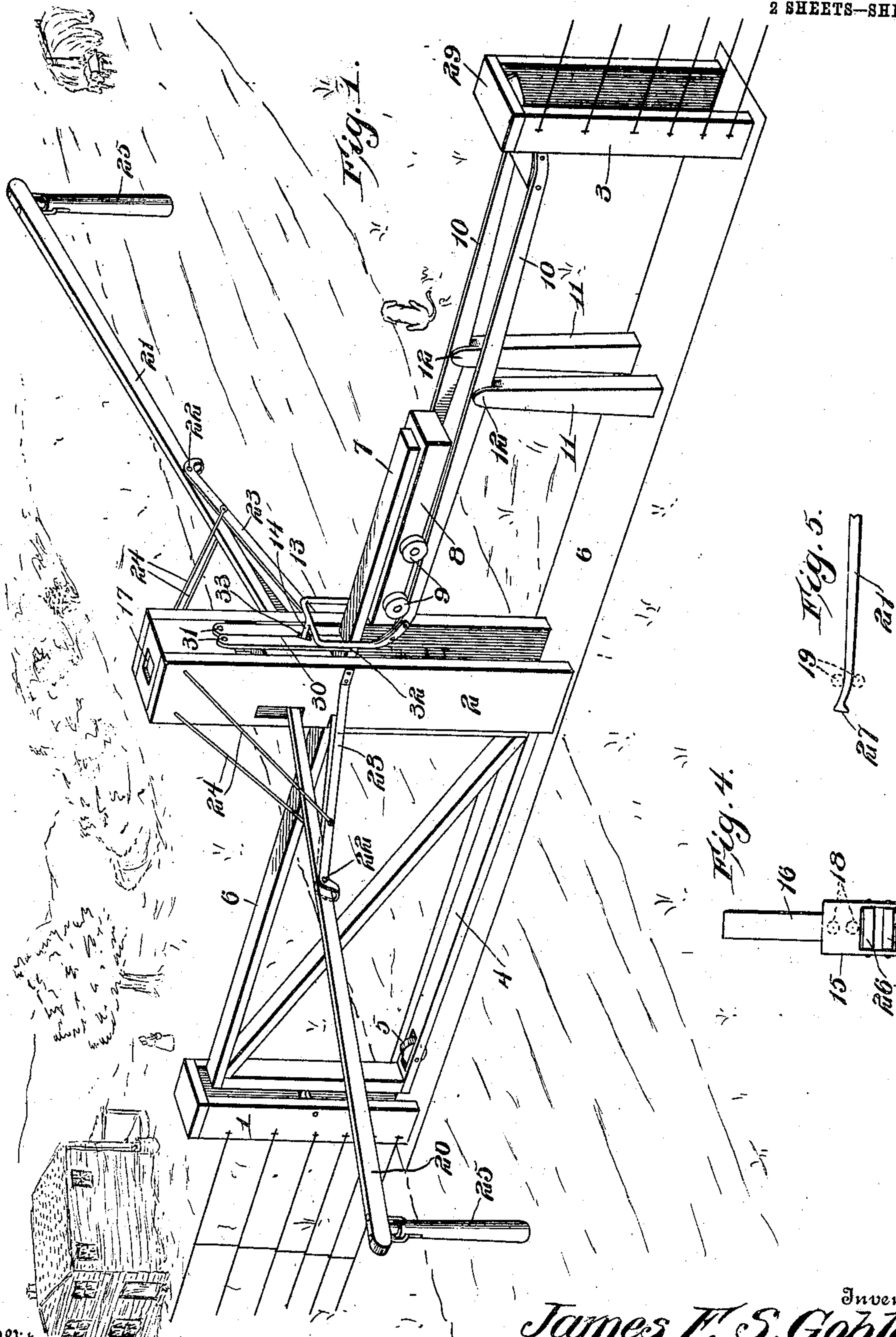
No. 844,930.

PATENTED FEB. 19, 1907.

J. F. S. GOBLE.
GATE.

APPLICATION FILED APR. 4, 1906.

2 SHEETS—SHEET 1.



Witnesses

Sous R. Heinrichs.
P. M. Smith

Inventor
James F. S. Goble

By Victor J. Evans.

Attorney

No. 844,930.

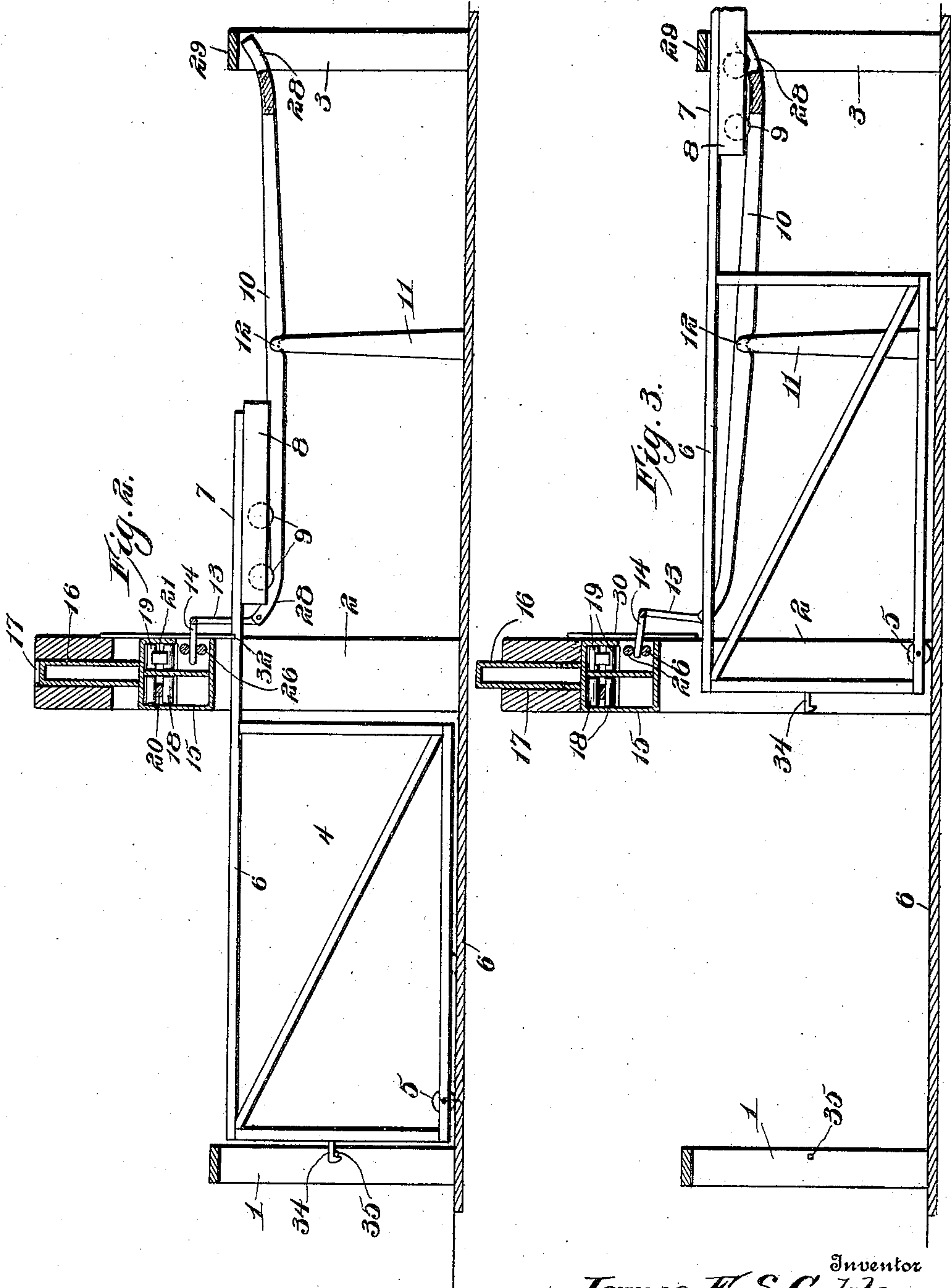
PATENTED FEB. 19, 1907.

J. F. S. GOBLE.

GATE.

APPLICATION FILED APR. 4, 1906.

2 SHEETS—SHEET 2.



Witnesses

Louis R. Hennrichs.
P. W. Smith.

Inventor
James F. S. Goble

By *Victor J. Evans.*
Attorney

UNITED STATES PATENT OFFICE.

JAMES F. S. GOBLE, OF NEW ALBIN, IOWA, ASSIGNOR OF ONE-FOURTH TO WILLIAM O. BOCK AND ONE-FOURTH TO OSCAR C. TARTT, OF NEW ALBIN, IOWA.

GATE.

No. 844,930.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed April 4, 1906. Serial No. 309,791.

To all whom it may concern:

Be it known that I, JAMES F. S. GOBLE, a citizen of the United States, residing at New Albin, in the county of Allamakee and State of Iowa, have invented certain new and useful Improvements in Gates, of which the following is a specification.

This invention relates to gates, the object of the invention being to provide an automatic gate adapted to be opened and closed by the driver of an approaching team or by a person on horseback without the necessity of dismounting.

With the above general object in view the invention consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a gate embodying the present invention. Fig. 2 is a sectional elevation of the same, showing the gate closed. Fig. 3 is a similar view showing the gate open. Fig. 4 is a detail elevation of the sliding yoke. Fig. 5 is an enlarged detail view of the extremity of one of the operating-levers.

Referring to the drawings, 1, 2, and 3 designate fence-posts, the posts 1 and 2 constituting the gate-posts, between which is mounted a sliding gate 4, which may be of any usual or preferred general construction.

In carrying out the present invention the gate is provided with a supporting-roller 5, the periphery of which projects below the bottom of the gate, so as to ride in contact with an underlying track 6, which may consist of a strip of wood or metal arranged flush with the surface of the ground and anchored therein in any desired manner. The roller 5 is located near the outer lower corner of the gate, as shown in Figs. 1, 2, and 3, so as to support the said outer end of the gate.

One of the longitudinal rails 6 of the gate is extended beyond the rear end of the gate proper, and the projecting end 7 thereof is connected to a carriage 8, which may consist of a weight or a box adapted to contain sand or other weighty material, said carriage embodying wheels or rollers 9, located in oppositely-arranged pairs and having their peripheries grooved to rest upon and roll in contact with parallel rails 10, connected together at their opposite ends and pivotally supported about centrally of their

length on a pair of fulcrum-posts 11, said fulcrum-posts being shown as each provided with a pair of upstanding ears or lugs 12, between which the rails 10 are received. The track thus formed by the parallel rails 10 is adapted to oscillate or tilt on the fulcrum-posts 11, so as to vary the inclination thereof and enable said track to dip toward one end or the other for the purpose hereinafter described. At their inner ends the rails 10 terminate in a forked lever-arm comprising a fork 13 and a horizontally-extending lever-arm 14, the fork 13 embracing the projecting end 7 of the rail 6 of the gate, as clearly shown in Fig. 1, while the lever-arm 14 extends into the post 2, which is of double or slotted construction, as shown in Fig. 1.

Mounted within the post 2 is a vertically-sliding yoke comprising a hollow casing 15 and a stem or shank 16, extending upward therefrom and working in a guideway 7 in the top of the post, as shown in Figs. 2 and 3. Within the sliding yoke 15 are mounted two pairs of rollers 18 and 19, between which are received the inner ends of a pair of oppositely-extending gate-operating levers 20 and 21, the same being fulcrumed intermediate their ends at 22 on brackets 23, extending in opposite directions from the gate-post, as shown in Fig. 1, 24 designating braces for said brackets, which braces are interposed between the brackets and the upper end portion of the gate-post. Each gate-operating lever is provided at its outer end with an operating-handle 25, and these handles are located at such a distance from the gate that a driver may grasp the same and operate the gate either to open or close the same without the necessity of dismounting. The sliding yoke 15 is further provided with rollers 26, which extend at right angles to the axes of the rollers 18 and 19 and between which is received the lever-arm 14, whereby the lever-arm is adapted to move lengthwise inward and outward between the rollers 26 when the gate-operating levers 20 and 21 are manipulated for sliding the yoke up and down. Each lever 20 and 21 is provided, as shown in Fig. 5, with a terminal enlargement or shoulder 27, which prevents the same escaping from between the rollers 18 and 19.

The inner and outer ends of the oscillating track are deflected or curved upwardly, as shown at 28, so as to form gradual checks for

the wheels of the carriage 8 as the latter approaches one end or the other of its movement, and it will be noted that the upturned end portion of the track adjacent to the post 3 works in the slot or open center of the post 3 and beneath the cap 29 thereof, so that as the carriage 8 reaches said end of the track it brings up under the cap 29, which prevents the carriage from sliding off the track.

30 designates a latch, which is shown in Fig. 1 as consisting of parallel bars pivotally connected at their upper ends at 31 to the inner face of the post 2, the lower free ends thereof being adapted to engage in a notch 32, extending transversely across the top of the projecting part 7 of the gate-rail 6 for holding the gate closed. In their meeting edges the latch-bars are provided with V-shaped notches 33, forming an opening through which the lever-arm 14 passes. It will be seen that as either of the gate-operating levers 20 and 21 is rocked on its fulcrum the first action is to elevate the sliding yoke 15, thereby carrying the lever-arm 14 upward and causing it to spread the latch-bars apart until they are disengaged from the notch 32 in the gate-rail 17. At the same time the adjacent end of the track 10 is elevated and the gate being unlocked the carriage 8 rolls by gravity lengthwise of the track 10, thereby sliding the gate open, the gate passing through the open center or slot in the post 2. After the driver has passed through the gate he pushes upward on the handle 25 of the adjacent gate-operating lever, thereby depressing the sliding yoke 15 and tilting the track 10 to the opposite inclination, whereupon the carriage 8 gravitates along the track and pushes the gate to a closed position, as shown in Fig. 1. The gate may be provided with the usual latch 34 at its outer end, adapted to engage a keeper 35 on the post 1; but this is not ordinarily necessary or desirable. The handles 25 may consist of weights for the purpose of counterbalancing the sliding yoke 15 and its connections, thereby rendering the operation of the gate mechanism easier and enabling a very slight downward pull or upward push on the end of either operating-lever to actuate the gate-operating connections.

I claim—

1. The combination with a sliding gate having a supporting-roller at one of its lower corners, and a roller connected with the opposite upper corner thereof, of a tilting track cooperating with the last-named roller to lift one end of the gate while permitting the first-named roller to run on a stationary surface, and manually-operated means for tilting said track, substantially as described.

2. The combination with a sliding gate having an extended rail, of a tilting track, a weighted carrier connected with the gate-rail and having rollers movable along the track, a bifurcated arm forming an open center extension of the track through which the extended rail moves, a sliding yoke to which said lever-arm is connected, and gate-operating means connected with said yoke and adapted to shift the yoke, causing said yoke to tilt the track, substantially as described.

3. The combination with a sliding gate, of a carriage connected to the gate, a tilting track upon which said carriage moves, a vertically-movable yoke having the tilting track connected therewith, gate-operating levers having their adjacent ends connected with the yoke, and rollers on said yoke between which the adjacent ends of the gate-operating levers work, substantially as described.

4. The combination with a sliding gate provided with a supporting-roller at one of its lower corners, of a wheeled and weighted carriage projecting from the opposite end of the gate, a tilting track on which said carriage moves having upwardly-deflected end portions forming checks for the carriage, a vertically-movable yoke to which the tilting track is connected, and operating-levers having their inner ends in sliding engagement with said yoke for shifting the latter, substantially as described.

5. The combination with a sliding gate, of a tilting track forming a reversely-inclinable support for the gate, a sliding yoke, a lever-arm on said tilting track connected with the yoke, gate-operating levers connected with the yoke for shifting the latter, and a latch pivoted on the gate-post and having an interlocking engagement with a portion of the gate and arranged to be shifted by the lever-arm of the tilting track.

6. The combination with a sliding gate having an extended rail, of a tilting track embodying parallel rails mounted on a common fulcrum-post intermediate the ends of the rails, a weighted carriage connected with the gate-rail and supported by rollers which move along the track-rails, a lever-arm connecting the track-rails at one end and straddling the extended rail of the gate, and gate-operating levers connected with said tilting track, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES F. S. GOBLE.

Witnesses:

W. O. BOCK,
OSCAR C. TARTT.