(No Model.) 2 Sheets—Sheet 1.

J. W. REYNOLDS.

GATE.

No. 567,772. Patented Sept. 15, 1896.

Fig. 1.

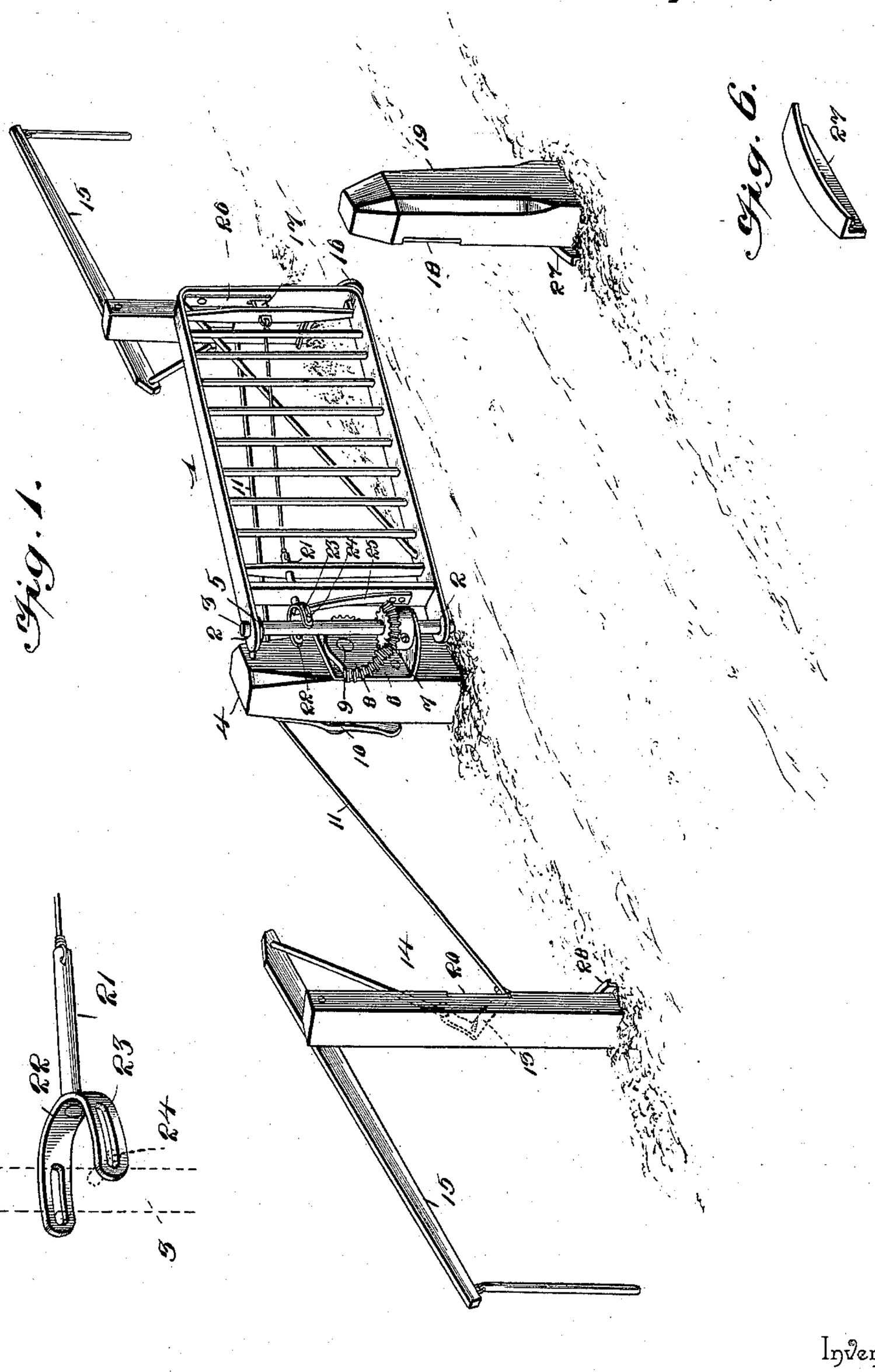


Fig. 2.

Fig. 4.

Witnesses
C. J. Koerth.
J. F. J. Riley

Inventor
John W. Reynolds

By his Attorneys,
C. A. Snow & Co.

(No Model.) 2 Sheets—Sheet 2.

J. W. REYNOLDS.

GATE.

No. 567,772. Patented Sept. 15, 1896.

Fig. 2.

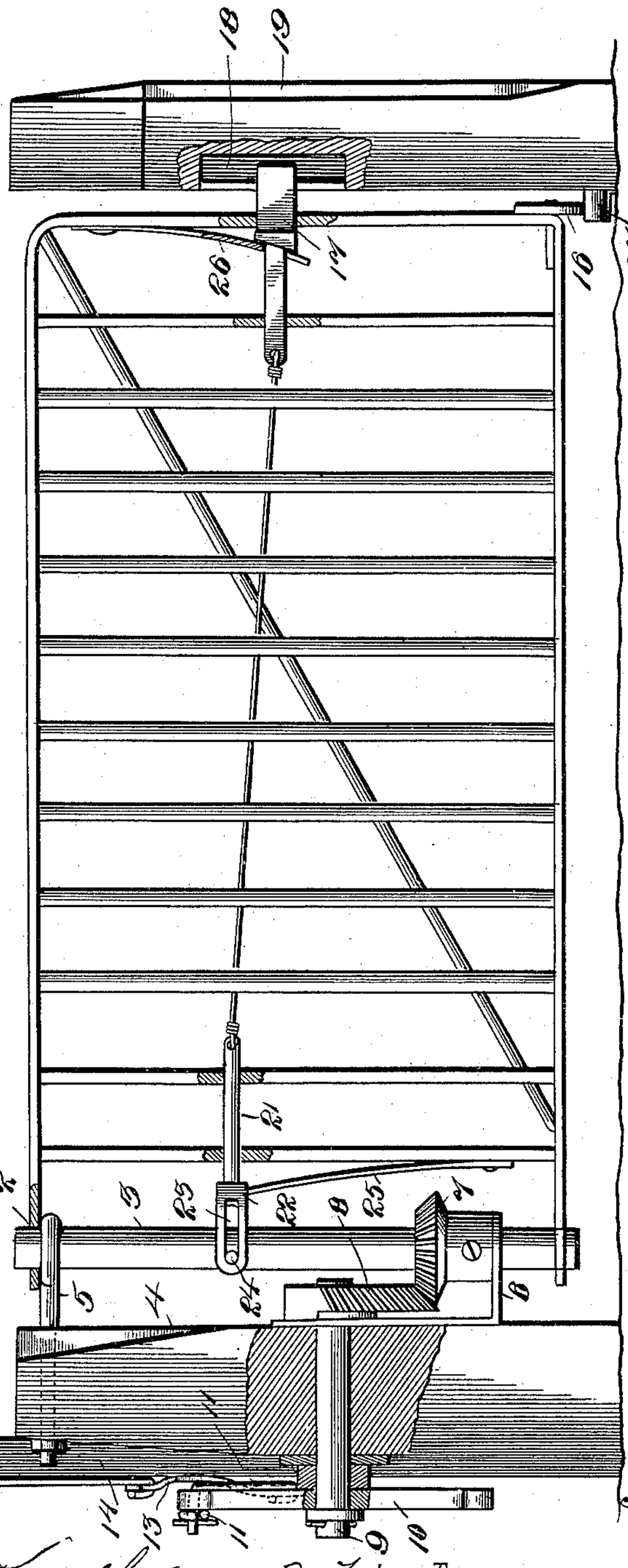


Fig. 3.

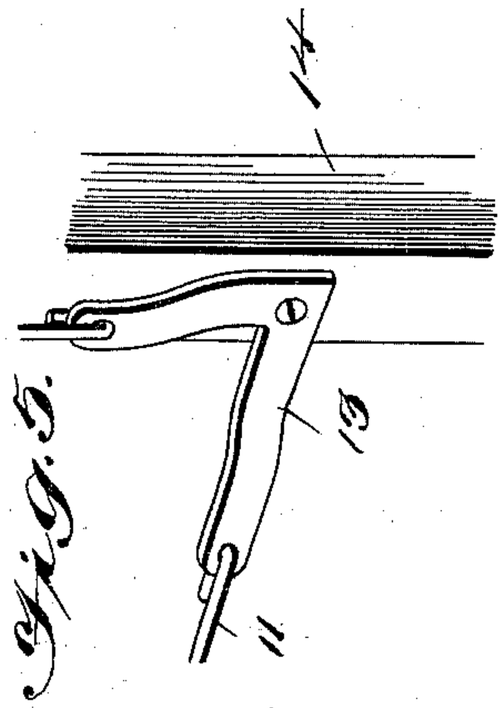
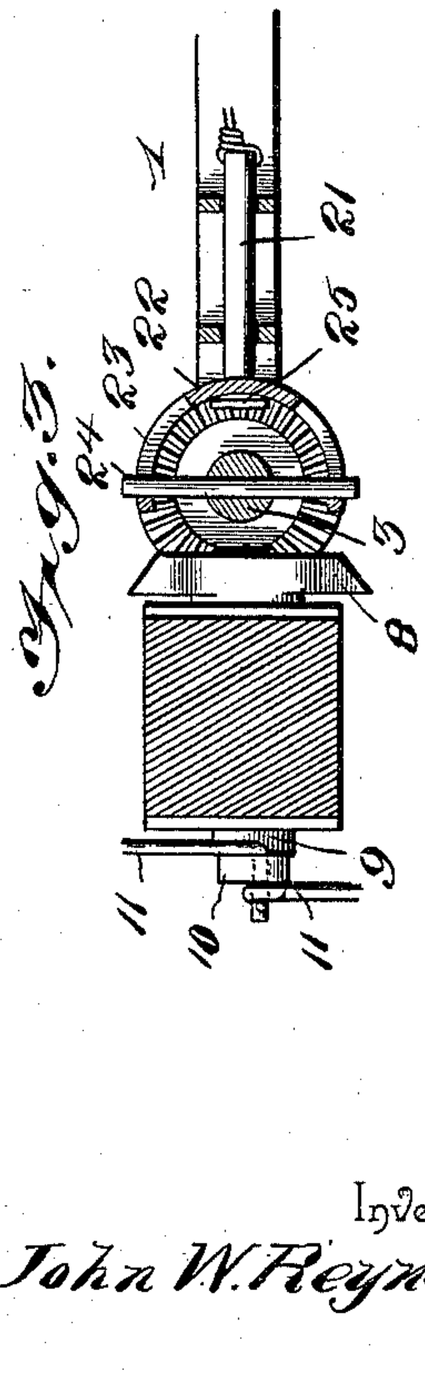


Fig. 4.



Witnesses
L. J. Koerth.
T. J. Riley

By his Attorneys,
C. A. Snow & Co.

Inventor
John W. Reynolds,

UNITED STATES PATENT OFFICE.

JOHN W. REYNOLDS, OF FRANKFORT, INDIANA.

GATE.

SPECIFICATION forming part of Letters Patent No. 567,772, dated September 15, 1896.

Application filed July 14, 1896. Serial No. 599,120. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. REYNOLDS, a citizen of the United States, residing at Frankfort, in the county of Clinton and State of Indiana, have invented a new and useful Gate, of which the following is a specification.

The invention relates to improvements in gates.

The object of the present invention is to improve the construction of swinging gates, and to provide a simple, inexpensive, and efficient one, capable of being readily opened and closed at a distance from each side of it, to enable it to be operated by persons in vehicles or on horseback without dismounting.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a gate constructed in accordance with this invention, the gate being partly open. Fig. 2 is a longitudinal sectional view of the same, the gate being closed. Fig. 3 is a detail sectional view illustrating the construction of the latch-operating device. Fig. 4 is a detail perspective view of the yoke and the shank. Fig. 5 is a detail perspective view illustrating the construction and arrangement of the bell-crank lever of the auxiliary latch-post. Fig. 6 is a detail perspective view of the support of the main latch-post.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a swinging gate constructed in any suitable manner and provided at its inner or rear end with eyes 2, in which is arranged a vertical pintle-rod or shaft 3, arranged in suitable bearings of a hinge-post 4, the bearings consisting, preferably, of an upper eye 5 and a bracket or casing 6. The vertical shaft or pintle has fixed to it a horizontal beveled pinion 7, which meshes with a vertical gear 8, and the latter is preferably segmental and is mounted on a horizontal shaft 9, which passes through the hinge-post. An arm 10 extends upward from the horizontal shaft, and is connected with rods 11, which extend from the gate in opposite directions, and which have their outer terminals connected with bell-crank levers 13. The bell-crank levers are fulcrumed at their angles on supplemental latch-posts 14, and are connected by rods with operating-levers 15, and the latter are provided at their outer ends with depending handles. The operating-levers 15 are fulcrumed at points intermediate of their ends on the supplemental latch-posts at the upper ends thereof, and the supplemental latch-posts constitute the supports for the levers. By operating the levers 15 the horizontal shaft is partially rotated and communicates motion to the shaft or pintle, whereby the gate is opened or closed. The gearing is designed to be housed or inclosed in a complete casing to protect it from dust, as will be readily understood, but only a partial casing is shown in the drawings in order to illustrate the gearing more clearly.

The gate, which is provided at its bottom with a roller 16, has a spring-actuated latch 17, adapted to engage a double keeper 18 of a main latch-post 19 when the gate is closed, and to engage keepers 20 of the supplemental latch-posts 14 when the gate is opened.

The latch-posts are provided with supports 27 and 28, arranged to receive the roller of the gate to prevent the latter from sagging. The support 27, which is secured to the main latch-post at the bottom thereof, is oppositely inclined, so that the roller will readily ride up on it from either side of the latch-post, and each support consist of a vertical plate secured to the adjacent post and a laterally-projecting flange. The supports 28, which are secured to the supplemental latch-posts, have their laterally-extending flanges inclined at one end only, and are adapted to receive the roller and support the gate when the latter is open.

The spring-actuated latch, which preferably consists of a sliding bar and a spring for extending the same, is connected by a wire, or other suitable connection, with a horizontal shank 21 of a curved yoke 22. The shank 21 is arranged to reciprocate in suitable bearings of the gate, and the yoke, which is arranged at the rear end of the shank, is curved and extends rearward at opposite sides of the pintle or shaft with which it is connected. The arms of the yoke are provided with slots 23, receiving projections 24,

which preferably are the ends of a pin, extending horizontally from opposite sides of the pintle-rod or shaft. By this construction the shaft or pintle-rod has a limited rotation independently of the gate, whereby it is adapted to operate the latch before swinging the gate. The first portion of the movement of rotation of the pintle-rod withdraws the latch, and a continuation of the movement of the pintle-rod or shaft swings the gate.

The yoke is engaged by a spring 25, which assists the spring 26 of the latch, and although flat springs are shown in the accompanying drawings for engaging the yoke and the latch, yet it will be readily understood that spiral springs may be employed, if desired.

It will be seen that the gate is exceedingly simple and inexpensive in construction, that it is positive and reliable in operation, and that it is adapted to be readily opened and closed at a distance from either side of it from a vehicle or on horseback without dismounting.

What I claim is—

1. The combination of a swinging gate, a hinge having a vertical pintle-rod or shaft, gearing connected with the vertical pintle-rod or shaft for rotating the same, and a reciprocating spring-actuated yoke located at the rear or inner end of the gate and extending on opposite sides of the shaft or pintle, said yoke being connected with the latch and with the pintle-rod or shaft, whereby it is reciprocated to operate the latch, substantially as described.

2. The combination of a swinging gate, a hinge having a vertical pintle or shaft, gearing connected with the vertical pintle or shaft for rotating the same, a latch mounted on the gate, a horizontally-disposed reciprocating yoke extending at opposite sides of the pintle or shaft and provided with opposite slots, and projections extending from opposite sides of the shaft and arranged in the slots, substantially as and for the purpose described.

3. The combination of a hinge-post, a swinging gate, a hinge connecting the gate with the hinge-post and provided with a vertical pintle-rod or shaft, a horizontal shaft mounted on the hinge-post, gearing connecting the horizontal shaft and the vertical shaft or pintle, a latch mounted on the gate, a yoke disposed horizontally at the rear end of the gate, provided with a shank slidingly mounted on the same, said yoke extending at opposite sides of the pintle-rod or shaft and provided with slots, projections extending from the pintle-rod or shaft and arranged in the slots, an arm mounted on the horizontal shaft, supplemental latch-posts located at opposite sides of the gate, bell-crank levers mounted on the supplemental latch-posts and connected with the arm of the horizontal shaft, and operating-levers connected with the bell-crank levers, substantially as described.

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

JOHN W. REYNOLDS.

Witnesses:

JOEL W. HARLAND,

HENRY MAISH.