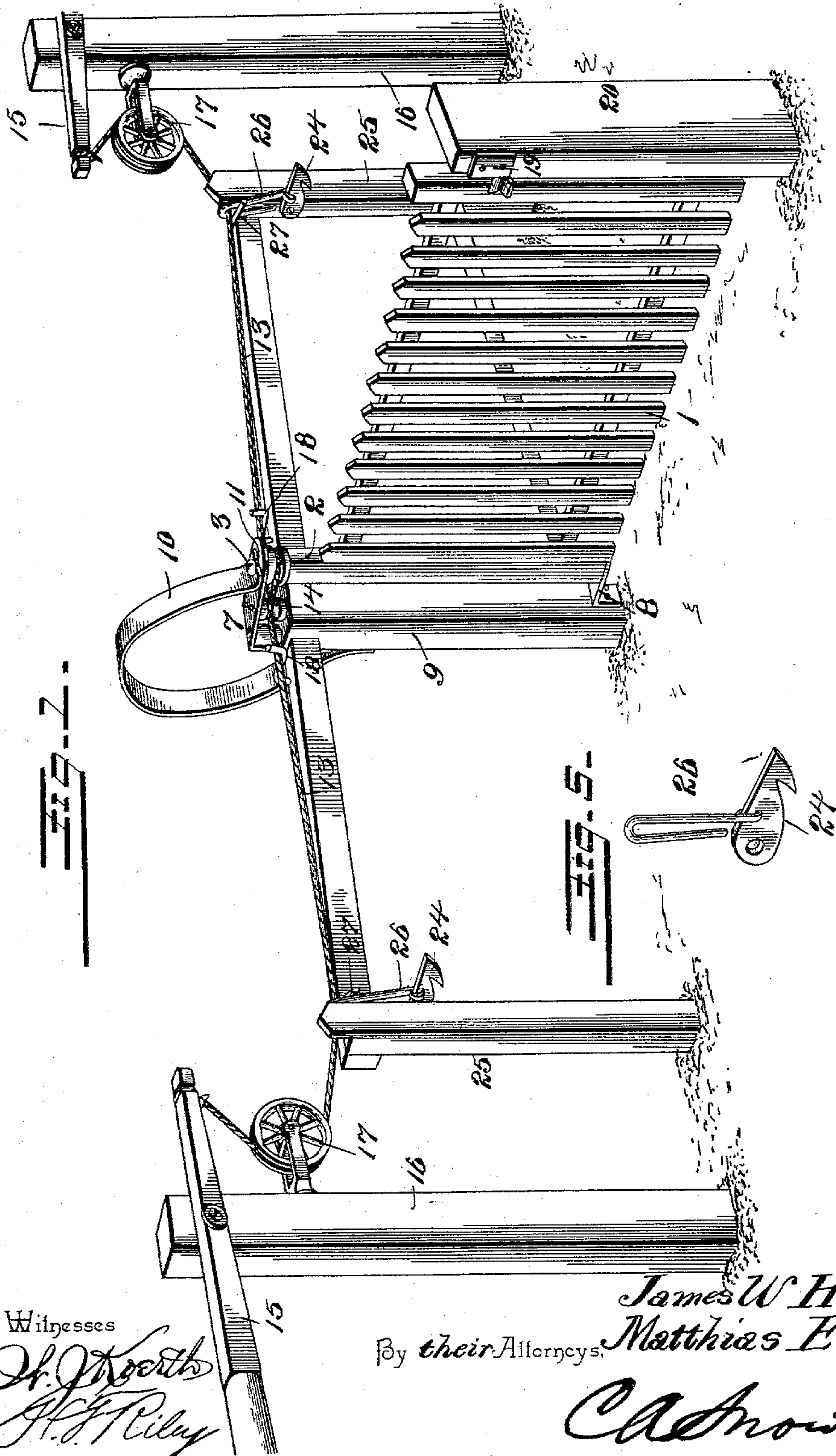


2 Sheets—Sheet 1.

GATE.

Patented June 30, 1896.



Witnesses

W. Koerts
J. F. Riley

Inventors

*James W Horn and
Matthias Early,*

Chas. Snow Geo.

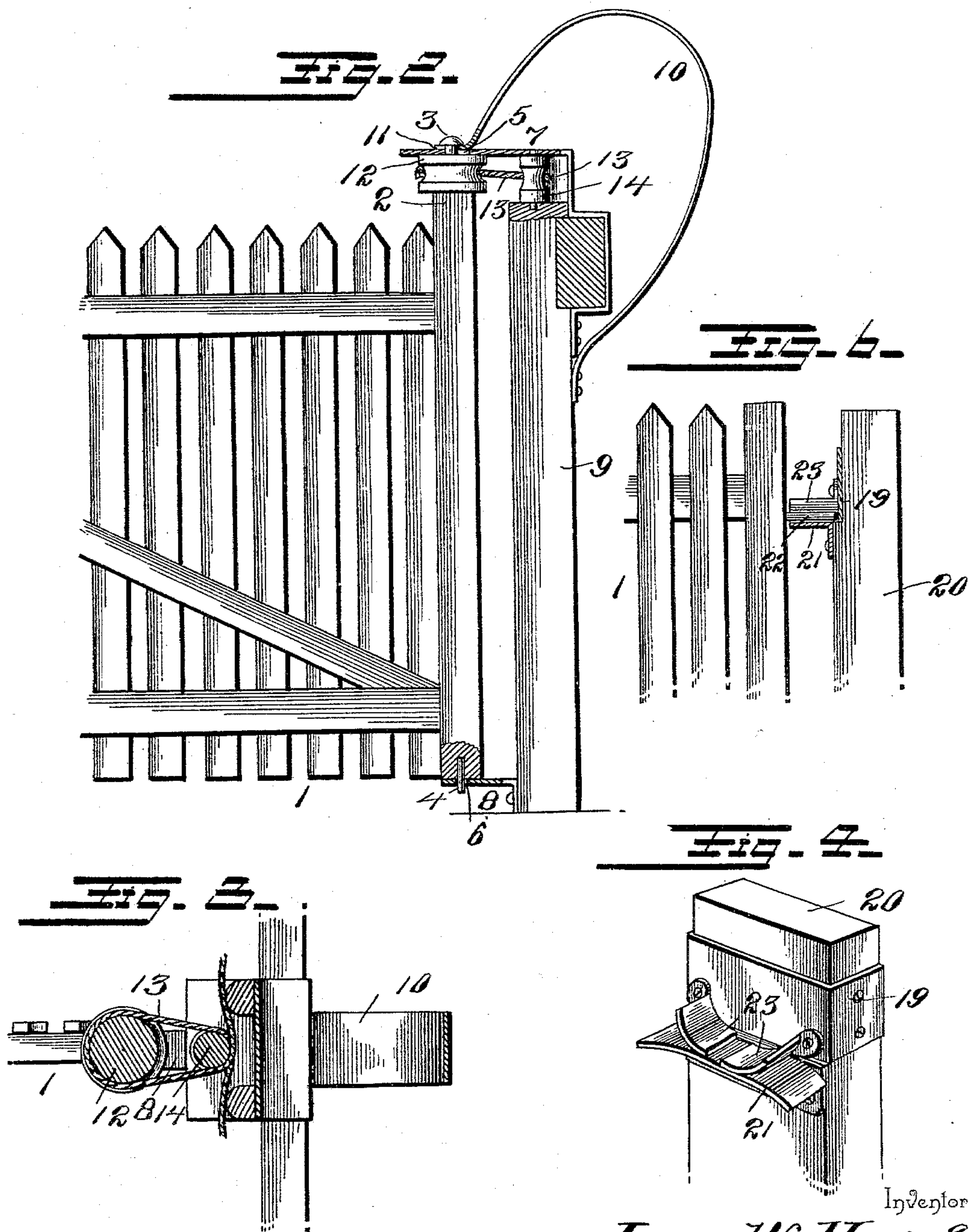
(No Model.)

2 Sheets—Sheet 2.

J. W. HORN & M. EARLY.
GATE.

No. 562,826.

Patented June 30, 1896.



Witnesses

J. J. North
J. P. Piler

By their Attorneys,

Inventors.
James W. Horn & Matthias Early

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JAMES W. HORN AND MATTHIAS EARLY, OF NEW MADISON, OHIO.

GATE.

SPECIFICATION forming part of Letters Patent No. 562,826, dated June 30, 1896.

Application filed August 3, 1895. Serial No. 558,135. (No model.)

To all whom it may concern:

Be it known that we, JAMES W. HORN and MATTHIAS EARLY, citizens of the United States, residing at New Madison, in the county of Darke and State of Ohio, have invented a new and useful Gate, of which the following is a specification.

The invention relates to improvements in gates.

10 The object of the present invention is to improve the construction of swinging gates and to enable them to be readily opened and closed at a distance from them to avoid dismounting or leaving a vehicle.

15 Another object of the invention is to provide simple, inexpensive, and efficient operating mechanism for opening and closing gates, adapted to be readily applied to any ordinary swinging gate, in which there will be no dead-center, and which will possess great durability.

20 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.

25 Figure 1 is a perspective view of a gate constructed in accordance with this invention, the gate being closed. Fig. 2 is a vertical sectional view of the hinge-post, illustrating the manner of mounting the gate. Fig. 3 is a detail horizontal sectional view illustrating the arrangement of the operating-cables adjacent to the hinge-post. Fig. 4 is a detail perspective view of the main latch. Fig. 5 is a similar view of one of the supplemental latches. Fig. 6 is a vertical sectional view of the main latch.

30 1 designates a swinging gate, which may be of any desired construction, and which is provided at its inner end with a vertical bar 2, forming the end bar of the gate and extended above the same, and provided at its upper and lower ends with pintles 3 and 4. The pintles 3 and 4 are arranged in upper and lower eyes or openings 5 and 6 of brackets 7 and 8 of a hinge post or upright 9. The lower bracket 7 is L-shaped, but may be of any desired construction, and the upper bracket has its eye 50 5 elongated to permit the gate to be tilted backward to facilitate swinging. This upper bracket has an L-shaped upper portion ex-

tending upward above the post or upright 9 and projecting forward horizontally over the inner end of the gate, and the upper pintle is held normally at the front end of the elongated eye or opening 5 by a curved spring 10, secured to the back of the post or upright 9, and extending upward over the top of the post or upright and downward in front of the same and terminating above the post or upright at the upper face of the upper bracket. The front end of the spring is provided with a flange or horizontally-bent portion and has a notch or recess 11, which engages the upper pintle under a head thereof.

The inner end bar of the gate is provided at its top with a fixed sheave 12, on which are arranged operating-cables 13, which are preferably constructed of wire and which may, if desired, consist of a single continuous piece centrally secured to the front of the sheave and extending around the same at opposite sides thereof and rearwardly therefrom to a guide-pulley 14. The guide-pulley 14 is mounted upon the top of the post or upright and is arranged within the upper bracket, and the operating-cables pass around the rear of the pulley 14 and extend from it in opposite directions, and have their outer terminals attached to operating-levers 15. The operating-levers 15 are substantially horizontal and are fulcrumed on uprights 16. The outer ends of the operating-levers are shaped into handles, and their inner ends have the cables attached to them. The outer portions of the cables pass around guide-pulleys 17 of the uprights 16 and extend upward to the operating-levers. By depressing the outer end of either operating-lever the adjacent cable is drawn in the direction of the operator and the gate is swung away from him in opening. The gate is closed, after the operation of opening, by depressing the other operating-lever.

95 The hinge-post 9 is provided at its top with a horizontal bar or the like, forming a supporting-frame, and mounted on the projecting portions of such bar is a pair of cable-supports 18, consisting of a vertical shank or stem and a substantially L-shaped arm projecting forward from the top of the shank or stem and receiving the adjacent operating-cable. The supports 18 are adapted to hold

the cables at the center of the pulley 14 and are disposed at opposite sides of the hinge-post.

The gate is held in its closed position by a main latch 19, mounted on a latch-post 20, adjacent to the free end of the gate and provided at the bottom with a substantially horizontal flange 21, which has its ends inclined slightly to form guides for a projection 22 of the gate to direct the projection 22 to a pair of pivotally-mounted catches 23. The catches 23 consist of curved plates oppositely inclined and presenting outer convex faces and inner concave faces, and provided at their tops with perforated ears receiving the pivots. When the gate closes, the projection 22 rides up the inclined portion of the flange 21 and engages the outer convex face of the adjacent catch and lifts and passes beneath the latter. The projection is received between the pivoted catches and is retained by them when the gate is in its closed position. When the gate is opened, it is tilted rearwardly, and this lifts the projection 22 and permits the same to ride up the curved inclined surface of the adjacent catch.

The gate is locked in its open position by supplemental latches 24, one of which is mounted at each side of the gate on a supplemental latch-post 25. Each supplemental latch is pivoted at its inner end, has its outer end beveled and provided in the rear of the beveled portion with a shoulder for engaging the projection 22 of the gate, and is connected by a link-rod 26 with the adjacent operating-cable. The link-rod is provided at its ends with eyes. The lower eye is linked into an opening of the supplemental latch, and the upper eye receives the operating-cable, whereby when the latter is drawn taut the supplemental latch is lifted and the projection 22 released. The weight of the supplemental latch is sufficient to swing it down in position to be engaged by the projection 22 of the gate, and a horizontal arm 27 is located adjacent to the upper end of the link-rod, and is arranged to support the operating-cable to limit the downward swing of the supplemental latch.

It will be seen that the gate is simple and

inexpensive in construction, and is capable of being readily operated to open and close it at a distance from each side to avoid dismounting or leaving the vehicle, and that it always opens away from the operator to prevent a horse from being frightened by it. It will also be apparent that the operating mechanism is positive and reliable, that it has no dead-center, and that it is adapted to be readily applied to any ordinary swinging gate.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What we claim is—

1. The combination of a support having upper and lower eyes, the upper eye being elongated, a swinging gate capable of tilting rearward and provided with pintles arranged in said eyes, a curved spring extending over the top of the support, secured at one end to the back of the same and having its front end engaging the upper pintle, a pulley mounted on the support in rear of the gate, and operating-cables extending rearward from the gate and passing around the pulley, substantially as and for the purpose described.

2. The combination of a support having upper and lower eyes, the upper eye being elongated, a swinging gate provided with pintles arranged in said eyes and capable of tilting rearwardly, a curved spring mounted on the support and having one end engaging the upper pintle, a pulley mounted on the support in the rear of the gate, operating-cables extending rearward from the gate at opposite sides thereof and passing around the pulley, and the cable-supports located at opposite sides of the pulley and provided with substantially L-shaped arms, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JAMES W. HORN.
MATTHIAS EARLY.

Witnesses:

H. C. RAY,
G. W. WILEY.