(No Model.)

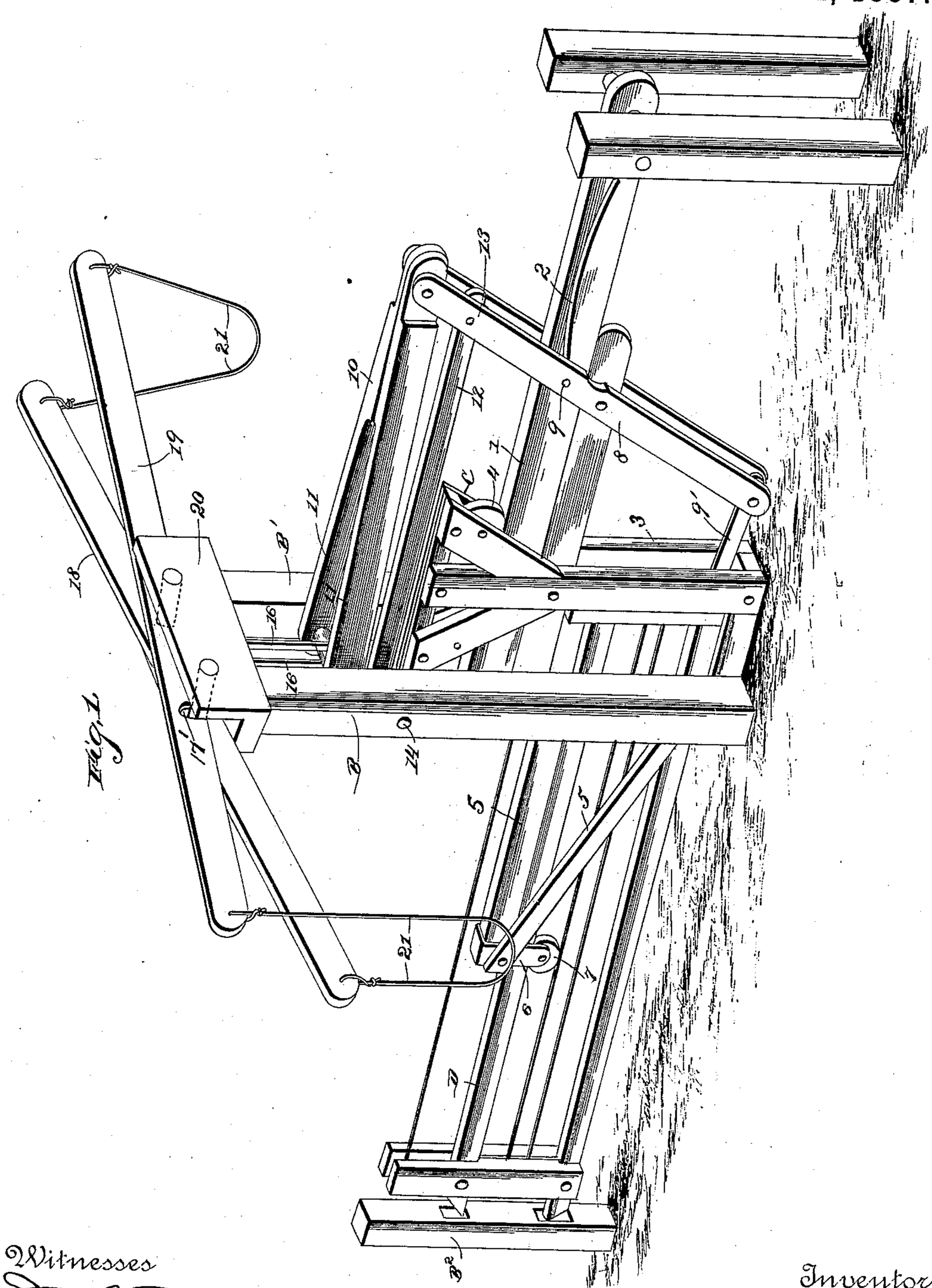
2 Sheets—Sheet 1.

A. J. SLONECKER.

GATE.

No. 370,900.

Patented Oct. 4, 1887.



Witnesses

C. L. Taylor

Robert Ryan

Inventor

A. J. Slonecker

By his Attorneys,

C. A. Snow & Co.

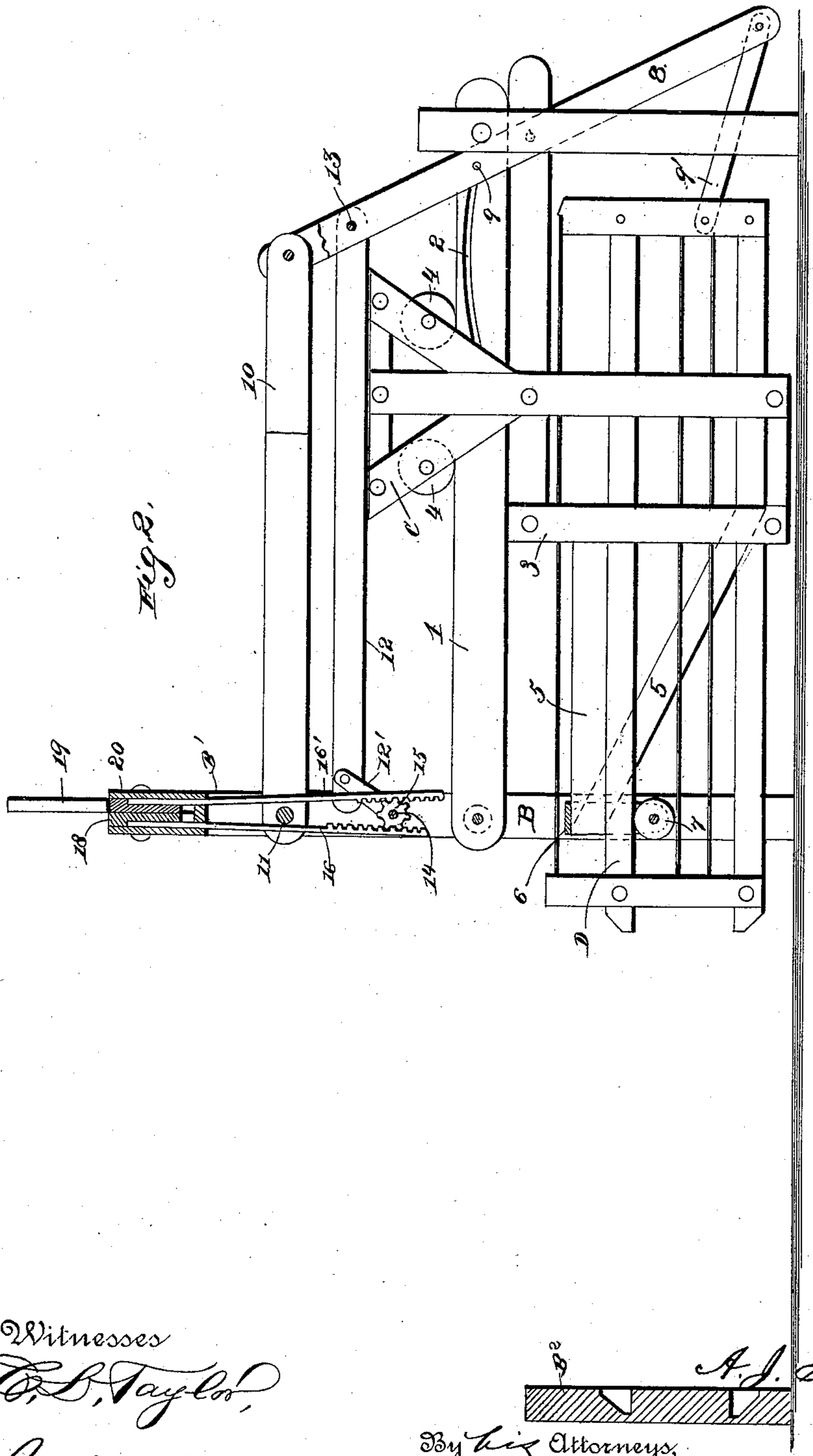
(No Model.) 2 Sheets—Sheet 2.

A. J. SLONECKER.

GATE.

No. 370,900. Patented Oct. 4, 1887.

Fig. 2.



Witnesses
C. B. Taylor
C. Sedgwick

Inventor
A. J. Slonecker
By his Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ABIRAM J. SLONECKER, OF FARMERSVILLE, MISSOURI.

GATE.

SPECIFICATION forming part of Letters Patent No. 370,900, dated October 4, 1887.

Application filed April 28, 1887. Serial No. 236,492. (No model.)

To all whom it may concern:

Be it known that I, ABIRAM J. SLONECKER, a citizen of the United States, residing at Farmersville, in the county of Livingston and State of Missouri, have invented a new and useful Improvement in Gates, of which the following is a specification.

My invention relates to an improvement in gates; and it consists in the novel construction and arrangement of the parts of the same, which will be more fully hereinafter described, and pointed out in the claims.

One object of my invention is to provide a gate for use on farms or for other purposes and places which is automatically operated to open and close, and which, when opened, is entirely drawn backward in a horizontal line into the supporting frame-work, and thereby removed for free open passage without the use of hinges and forming no projection.

A further object of my invention is to provide a gate which is simple and effective in its construction and operation, strong and durable, easily handled, readily understood, positive in its action, convenient and novel, comparatively inexpensive, quickly arranged in operative position, and cheaply manufactured.

I attain these objects by the mechanism illustrated in the accompanying drawings, wherein like figures and letters of reference indicate similar parts in the several views, and in which—

Figure 1 is a perspective view of my improved gate, shown in a closed position. Fig. 2 is a side elevation of the same with the gate shown open.

The two supporting-posts B and B′ are mounted in the ground, and a locking-post, B^2, is also set in the ground near said posts B and B′, and mounted in such a position as to engage with the end of the gate.

Mounted between and bolted to the posts B and B′ is a longitudinally-arranged beam, 1, which is provided with a curved slot, 2, for a purpose which will be more fully hereinafter described. On this beam 1, which is placed at a suitable elevation above the ground, is mounted a traversing frame, C, which depends downward from the beam 1, and whose lower depending portion is constructed in the form of a rectangular frame, 3, formed of strips which are so arranged as to provide for an unobstructed passage of the gate D therethrough when it is opened or closed. The upper portion of the frame C is provided with obliquely-arranged arms, between which rollers 4 4 are mounted and travel on the top portion of the beam 1.

To the forward portion of the rectangular frame 3 a forwardly-projecting brace-frame, 5, is secured, which also partially incloses the gate D, and in the lower portion of a metallic sheathing, 6, secured to the front part of the frame 5, a roller, 7, is mounted, which bears against the under side of one of the rails of the gate. By means of the frame C the gate is provided with a supporting-guide, which always acts to keep the said gate in proper alignment with relation to other parts and steadies it in its movements.

To the top portion of the forward part of the rectangular frame 3 a beam or rail is secured, which extends to the rear and is pivotally mounted between two strips forming one section, 8, of a double lever. This section 8 of the double lever is also provided with a pin, 9, which passes through the slot 2 in the beam 1 and acts to steady the movement of the said section 8, which has a metallic link-plate, 9′, secured in the lower end and attached to the rear end of the gate. The section 8 is secured at its upper end to another section, 10, of the said double lever, which is constructed in a manner somewhat similar to the section 8, with the exception that at the point where the section 8 is pivotally secured to the section 10 the two parts forming the latter section are drawn closely together, and from thence are spread apart and extend forward in between the posts or standards B′, where they are pivotally mounted, and are held in this open position by a cylindrical block, 11. A lever, 12, pivoted at one end in the section 8 at the point 13 and passing forward in between the two posts B′, is in connection with an arm, 12′, fixed on a shaft, 14, mounted in the two posts B and B′. In the central portion of said shaft 14 a spur or pinion, 15, is mounted, which is in mesh with rack-bars 16 and 16′, attached to the levers 18 and 19, pivotally mounted in the recess of the cross-piece 20 on the top of the posts B and B′, having slots 17′, which pass over the pivots of the said levers, as shown. The outer ends of the levers 18 and 19 are provided with operating-cords 21, which extend

down within easy reach. When the levers are drawn down, the gate D will slide back into the frame, and after passing through the gate the same may be closed by drawing down on the cord on the other side, which arranges the levers in their normal position, and the gate is closed.

The gate D is constructed as may be desired, and the forward ends thereof, when closed, engage with recesses in the post B^2, and the gate is thereby held in removable engagement with the said post.

When the cord 21 on the outside of the gate is drawn downward, the rack-bar 16, in connection therewith, rises, and the spur-pinion 15 is revolved thereby, which turns the shaft 14, and by the connection with the rod 12, as heretofore described, the said rod is thrown slightly upward and backward, thereby forcing the section 8 backward also and drawing on the rear portion of the gate D through the medium of the link-plate 9′. In closing the gate 6 the operation is just the reverse and will be readily understood. When the gate D is moving backward and forward, the frame C acts as a guide and support therefor and greatly facilitates the operation thereof.

The utility and practicability of my improved device is evident and need not be enlarged upon herein.

It is obvious that many minor changes in the construction and arrangement of the parts might be made and substituted for those shown and described without in the least departing from the nature and principle of my invention.

Having thus described my invention, I claim—

1. The combination of the gate D, sliding horizontally when opening and closing between the posts B, the double lever composed of the sections 8 and 10, the section 8 being connected to said gate, the lever 12, connected to the double lever, the frame C, the slotted beam 1, and the levers 18 and 19, and intermediate connections for operating the several parts, substantially as described.

2. The combination of a gate sliding horizontally, a traversing frame, C, a double lever composed of sections 8 and 10, connected to said gate by a link-plate, 9′, a lever, 12, actuating the said double lever, an arm, 12′, to which the lever 12 is connected, a shaft, 14, passing through the recess of the posts B′ and upon which said arm 12′ is mounted, a spur-pinion, 15, rack-bars 16 and 16′, engaging with said spur-pinion, and the levers 18 and 19, for operating the said gate through the intermediate mechanism, substantially as described.

3. The combination of the gate D, the posts B, the head-block 20 at the tops of the posts, the slotted beam 1, the frame C, traveling on said beam and guiding the gate, the double lever composed of the sections 8 and 10, connected to the gate, the lever 12, connected to the double lever, the levers 18 and 19, provided with means for actuating the lever 12, and the cords 21, substantially as described.

4. The combination, with the posts B, the gate D, the traversing frame C, and the slotted beam 1, of the double lever composed of the sections 8 and 10, the levers 18 and 19, and the intermediate mechanism, as set forth, for operating the several parts, substantially as described.

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

ABIRAM J. SLONECKER.

Witnesses:
JAMES L. CLARK,
J. W. CLARK.