

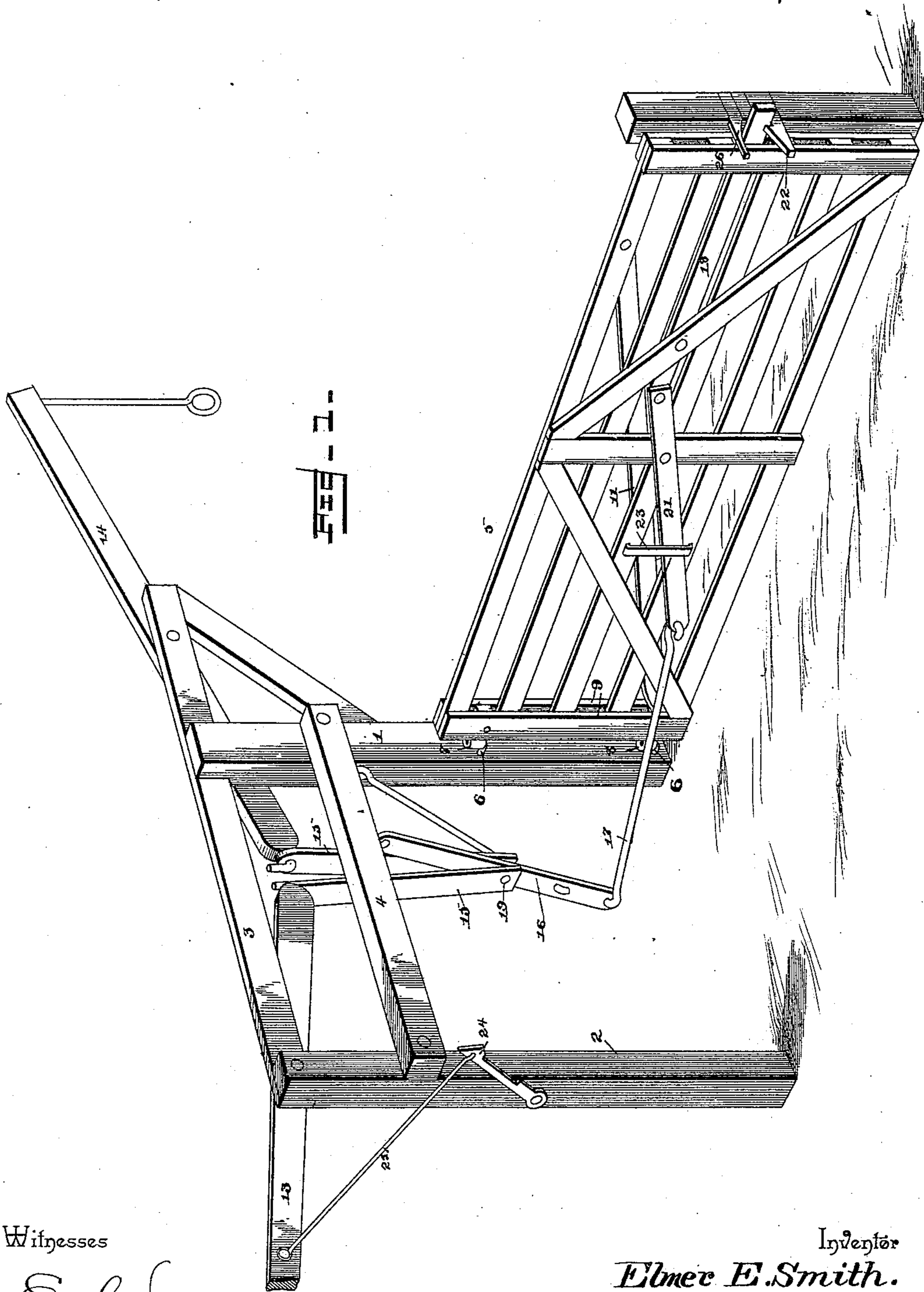
(No Model.)

2 Sheets—Sheet 1.

E. E. SMITH.
GATE.

No. 470,264.

Patented Mar. 8, 1892.



Witnesses

E. S. Surall Jr.
H. F. Wiley

By *his* Attorneys,

Inventor
Elmer E. Smith.

Chas. Snow & Co.

(No Model.)

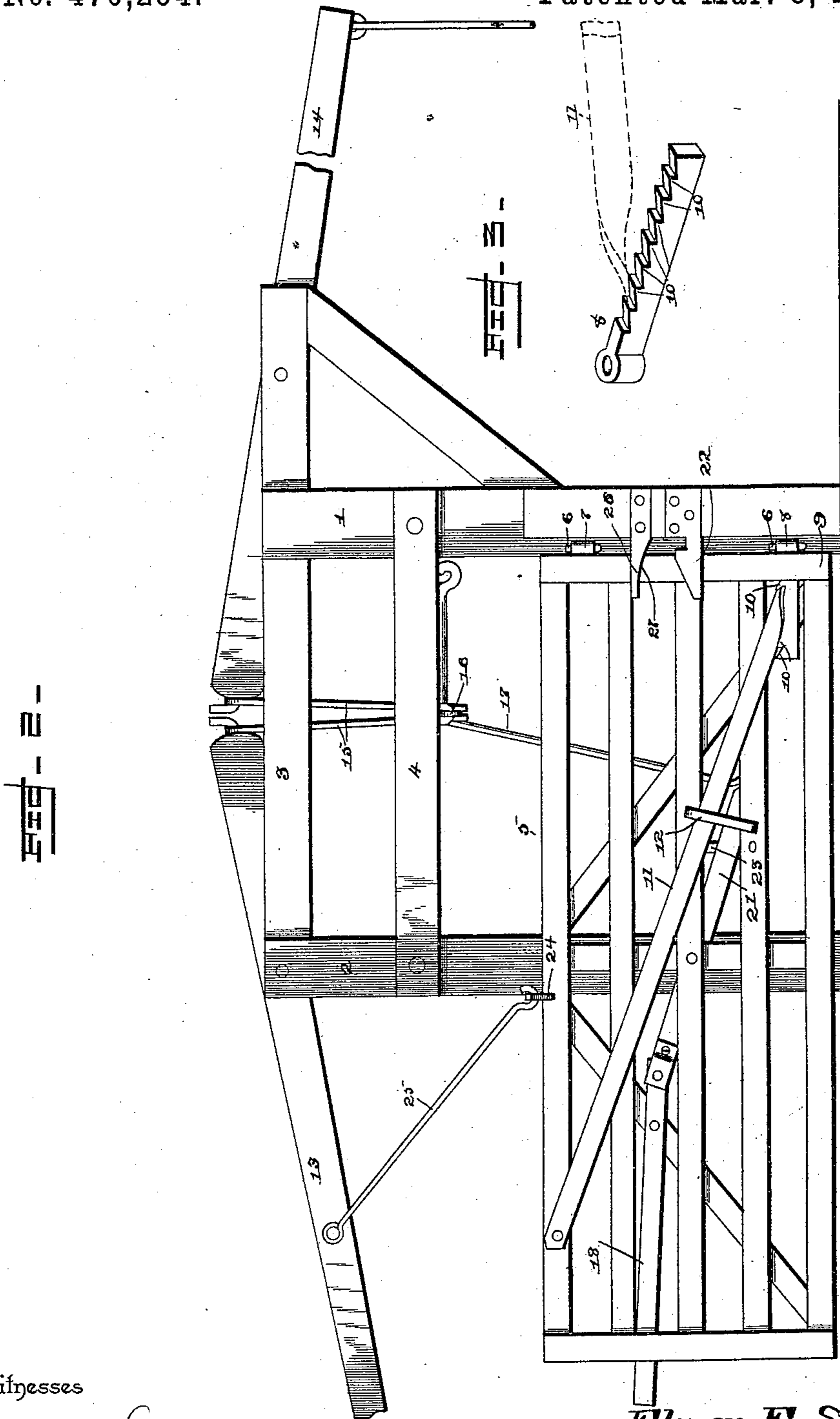
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E. S. Duvall Jr.
N. F. Wiley

By *his* Attorneys,

Inventör

Elmer E. Smith.

Cañonito.

UNITED STATES PATENT OFFICE.

ELMER E. SMITH, OF BLOOMINGTON, ILLINOIS.

GATE.

SPECIFICATION forming part of Letters Patent No. 470,264, dated March 8, 1892.

Application filed June 3, 1891. Serial No. 394,946. (No model.)

To all whom it may concern:

Be it known that I, ELMER E. SMITH, a citizen of the United States, residing at Bloomington, in the county of McLean and State of Illinois, have invented a new and useful Gate, of which the following is a specification.

The invention relates to improvements in swinging gates.

The object of the present invention is to simplify and improve the construction and to enable the same to be readily opened and closed and to be adjusted to take up any sag.

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 swinging gate constructed in accordance with this invention. Fig. 2 is an elevation, the gate being open. Fig. 3 is a detail perspective view of the lower leaf-plate.

Referring to the accompanying drawings, 1 and 2 designate uprights connected at their tops by a cross-bar 3 and near their tops with a supporting-bar 4, which parts constitute a supporting-frame, and the upright 1 has hinged to it a gate 5, which is composed of horizontal rails, vertical bars, and inclined braces. The gate is hung on pintles 6, which are engaged by upper and lower hinged leaves 7 and 8, the former of which is rigidly secured to the gate, and the latter is extended and is arranged between the adjacent vertical bars 9 and is provided in its upper edge with teeth 10, adapted to be engaged by an inclined bar 11, which is pivoted at the top of the gate, near the front thereof, and is adapted to be adjusted to engage the different teeth 10, whereby the gate is raised to take up any sag. The lower end of the bar 11 is twisted and spread, and is held in engagement with the teeth of the lower hinge-leaf 8 by a keeper 12.

The gate is operated by levers 13 and 14, which are pivoted to the ends of the top cross-bar 3 and which have their inner ends connected by bars 15 with a swinging lever 16, and the latter is connected by a rod 17 with the gate, which is provided with a pivoted latch-bar 18. The swinging lever 16 is provided at its ends with perforations, the upper

one of which engages an eyebolt of the supporting-bar 4, from which the swinging lever is suspended and on which it is fulcrumed, and the lower end of the lever receives the rod 17, and it is connected intermediate its ends to the lower ends of the connecting-bars 15, which are arranged on opposite sides of the swinging lever and are provided with an adjusting perforation 19, which is adapted to register with the perforation 20 of the swinging lever and receive a securing-bolt. One end of the rod 17 is attached to the lower end of the swinging lever, and the other end of the rod is connected to the inner lower end of a latch-lever 21, which is pivoted to the gate and is connected to the inner end of the latch and is adapted to lift the latter out of engagement with the keeper 22. The latch-lever has a limited movement just sufficient to disengage the latch, and this movement is limited by a keeper 23, in which the lower end of the lever is arranged, and the ends of the keeper are secured to adjacent horizontal rails of the gate. The operating-levers are provided at their other ends with handles depending therefrom, and by pulling down the operating-lever the latch is disengaged and a continued pulling opens the gate. The gate is held open by a latch 24, which is pivoted to the upright 2 and is arranged to engage the gate when the latter is open, and the outer end of the latch is connected by a wire 25 with the adjacent operating-lever, and when the operating-lever is raised to close the gate the latch is lifted and releases the same.

It will be seen that the gate is simple and inexpensive and easily operated and is adapted to be adjusted to counteract sagging.

The swinging lever is supported and guided in its movement by a brace-rod, which has its lower end attached to the swinging lever, near the lower end of the latter, and it has its upper end provided with an eye, which engages an eyebolt of the supporting-bar.

The mechanism for opening and closing a gate is adapted to be readily applied to any ordinary swinging gate, and the upper ends of the latch-lever and the adjusting-bar are provided with perforations, whereby those parts can be readily adjusted to suit gates of different sizes.

In case of slamming or suddenly closing, locking of the gate is insured by a guide 26, which is secured to the latch-post, and is arranged above the keeper, and projects from the latch-post, and is provided with a beveled or curved lower face 27, adapted to direct the latch-bar into the recess formed by the shoulder of the keeper and the latch-post.

What I claim is—

10 1. The combination of a supporting-frame, a swinging gate, a latch-bar pivotally mounted on the gate, a swinging lever depending from the supporting-frame and arranged in rear of the gate, an approximately horizontal rod connecting the swinging lever and the latch-bar, 15 and the operating-lever connected with the swinging lever at a point intermediate of the ends of the latter, substantially as described.

20 2. The combination of a swinging gate, a latch-bar pivoted to the gate, a lever fulcrumed on the gate and having one end attached to the latch-bar and having a limited movement to engage and disengage the latch-bar, the swinging lever having its lower end 25 connected with the other end of the lever, and

the operating-levers connected with the swinging lever at a point intermediate of the ends of the latter, substantially as described.

3. The combination of a swinging gate, a latch-bar pivoted intermediate its ends to the gate, the lever fulcrumed on the gate and having its outer end attached to the inner end of the latch-bar, the keeper arranged on the gate and receiving the inner end of the lever and limiting the movement thereof, the swinging 35 lever fulcrumed at its upper end, the rod connecting the inner end of the latch-lever and the lower end of the swinging lever, the operating-levers, the bars secured to the inner ends of the operating-levers and attached to 40 the swinging lever at the point intermediate of the ends of the latter, and the brace, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 45 presence of two witnesses.

ELMER E. SMITH.

Witnesses:

RICHARD HOUGHTON,
IRA F. GILMORE.