

(No Model.)

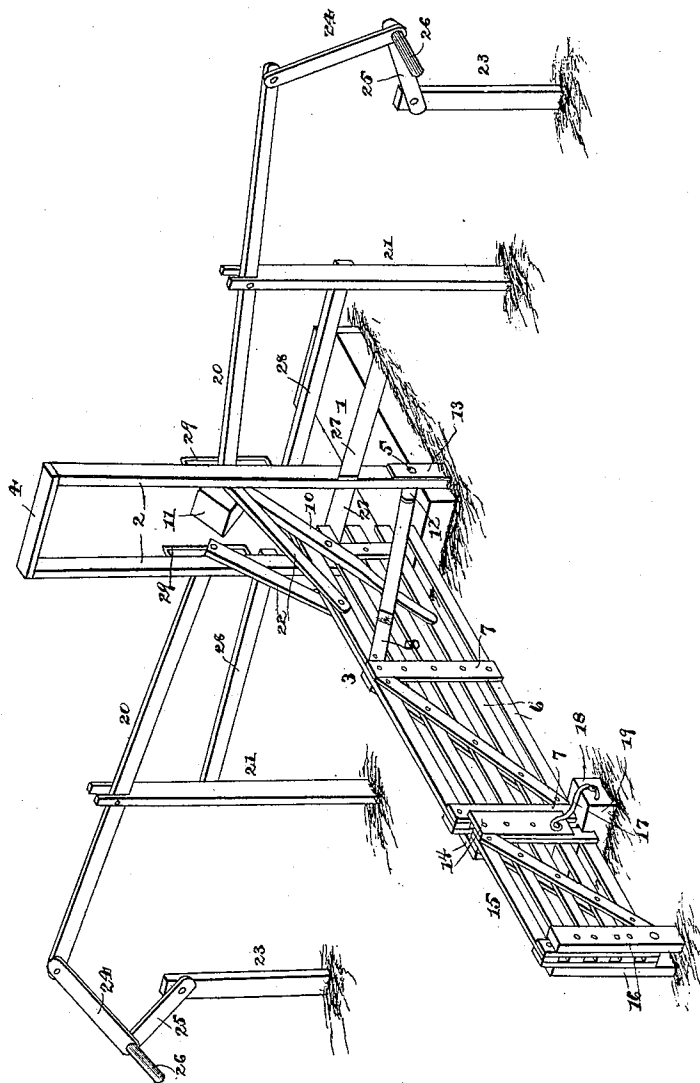
2 Sheets—Sheet 1.

J. E. VAN HORN.
GATE.

No. 463,798.

Patented Nov. 24, 1891.

Fig. 1.



Witnesses

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Inventor

Joseph E. Van Horn,

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2 Sheets—Sheet 2.

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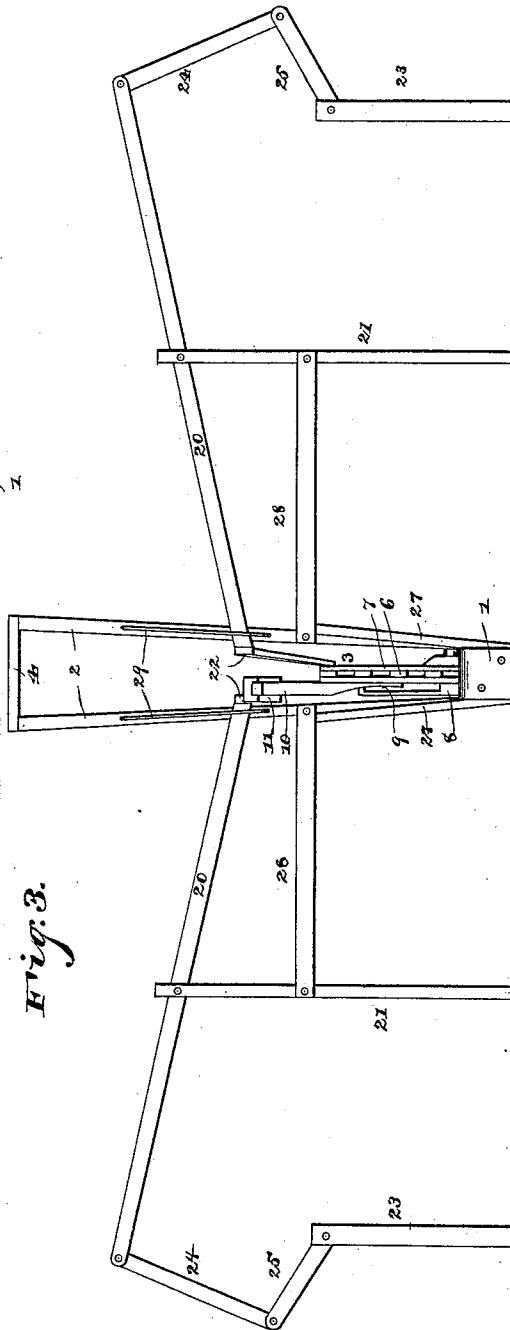


Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

JOSEPH E. VAN HORN, OF ELLIOTT, ASSIGNOR OF ONE-HALF TO LEWIS HOLLIS, OF HENDERSON STATION, ILLINOIS.

GATE.

SPECIFICATION forming part of Letters Patent No. 463,798, dated November 24, 1891.

Application filed August 5, 1891. Serial No. 401,785. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH E. VAN HORN, a citizen of the United States, residing at Elliott, in the county of Ford and State of Illinois, 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 simplify and improve the construction of tilting gates and enable the same to be readily opened and closed with but little force.

The invention consists of 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 tilting gate constructed in accordance with this invention. Fig. 2 is a side elevation, partly in section, the tilting gate being open. Fig. 3 is an end elevation, the parts being in the position shown in Fig. 1.

Referring to the accompanying drawings, 1 designates a sill, and rising from one end thereof are vertical posts 2, arranged on opposite sides of the sills and having pivoted between them one end of a gate 3. The vertical posts 2 have their upper ends connected by a cross-piece 4, and the gate 3 is pivoted to the posts 2 by a bolt 5, which is arranged a short distance above the sill 1 and passes through the lower corner of the gate at the inner end thereof. The gate is constructed of horizontal rails 6 and vertical bars 7, and it is strengthened by inclined braces 8, extending from the top of the gate to the lower corner thereof, and the gate is arranged to swing on its pivot 5 and assume a vertical position, as illustrated in Figs. 2 and 3 of the accompanying drawings. One of the inclined braces 8 is provided with a longitudinal opening 9, which forms a way adapted for the reception of the inner end of a weighted lever 10. The weighted lever 10 acts as a counterbalance to enable the gate to be easily operated, and is pivoted intermediate its ends to the upper corner of the inner end of the gate, and has its outer end provided with a box 11. The box 11 is designed to contain sand, stone, or some heavy

substance, and the weight is regulated according to the weight of the gate to be raised, and the inner end of the weighted lever is free and has limited movement in the longitudinal opening of the inclined brace. This arrangement makes the gate much easier to operate than would be the case were the lever rigidly secured to the gate, and in closing the latter the weight exerts no force until after the gate has passed beyond the pivotal point and is beginning to fall. The weight is then lifted and the gate is counterbalanced and is prevented falling or closing with great force. The lower ends of the inclined braces 9, which are arranged at the inner half of the gate, are perforated to receive the pivot-bolt 5, and the said braces and the posts 2 are provided with plates 12 and 13 to strengthen the parts.

The outer end of the gate when closed is arranged between cleats 14 of a supplemental gate 15, which tilts and is adapted to be opened when more space is desired than the gate 3 will afford, as is sometimes the case when it is necessary for harvesting and thrashing machines and the like to pass through. The supplemental gate 15 is pivoted at one of its lower corners between posts 16, and it is secured, when closed, by hooks 17, which are arranged at the free end of the gate and are adapted to engage projections 18 of a block 19.

The supplemental gate 15 is operated by hand, and the main gate 3 is operated by levers 20, extending from the gate in opposite directions and pivoted intermediate their ends in bifurcations of uprights 21. The inner ends of the levers are connected by link-bars 22 with the gate 3, and the latter is raised as the outer ends of the levers 20 are depressed, and the outer ends of the levers are connected with short outer posts 23 by bars 24 and 25, which are pivoted together and to the levers and the posts. The lower ends of the bars 24 are provided with handles 26, which are arranged within easy reach. The vertical posts 2 are supported by inclined braces 27, which have their lower ends secured to the sides of the sill 1, and the posts 2 are connected with the uprights 21 by horizontal bars 28. The inner end of the levers 20 are arranged in keepers 29, which are constructed

of wire and form guides. It will be seen that the gate and means for operating the same are simple and inexpensive in construction, and that the gate is counterbalanced and its operation is not interfered with by drifts of snow.

What I claim is—

1. The combination of the tilting gate pivoted at its inner end and provided with a way, the weighted lever fulcrumed on the gate at a point intermediate its ends and having one end arranged in the way and its other end weighted, and means for operating the gate, substantially as described.

2. The combination of the tilting gate pivoted at its lower end and having an inclined brace 9, provided with a longitudinal opening, the lever fulcrumed intermediate its ends to the gate and having its outer end weighted and its inner end arranged in the longitudinal opening of the brace and having a limited

swing, and means for operating the gate, substantially as described.

3. The combination of the vertical posts 2, the gate pivoted between the posts and having an inclined brace provided with a longitudinal opening, the weighted lever fulcrumed on the gate and having its inner end arranged in the said longitudinal opening, the uprights 21, the levers 20, having their inner ends connected with the gate and fulcrumed intermediate their ends on the uprights, the outer posts, and the bars 24 and 25, pivoted together and connected with the outer posts and the levers 20, substantially as described.

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

JOSEPH E. VAN HORN.

Witnesses:

P. S. PETERSON,
GEO. W. ROBBINS.