

R. L. DAWSON.
Tilting-Gate.

No. 216,315.

Patented June 10, 1879.

Fig. 1.

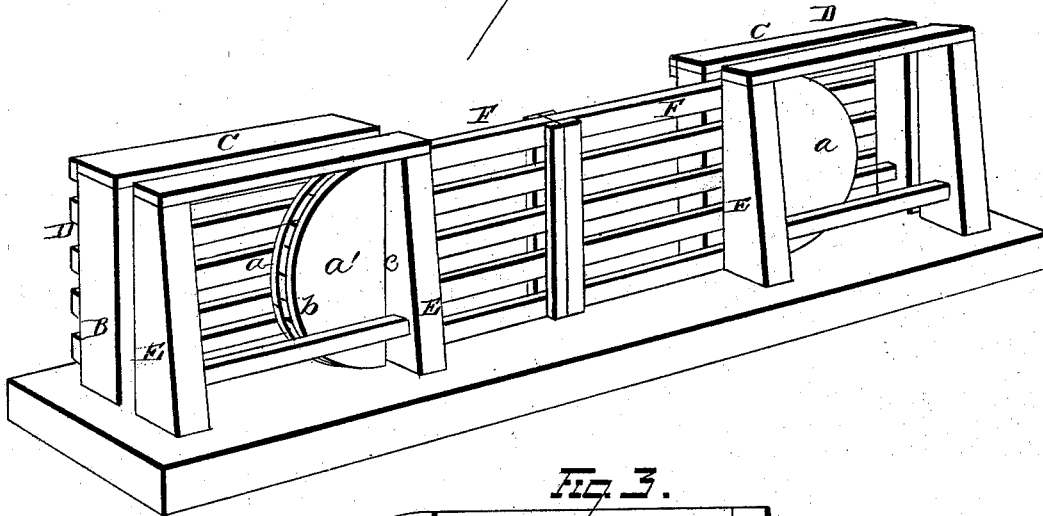


Fig. 3.

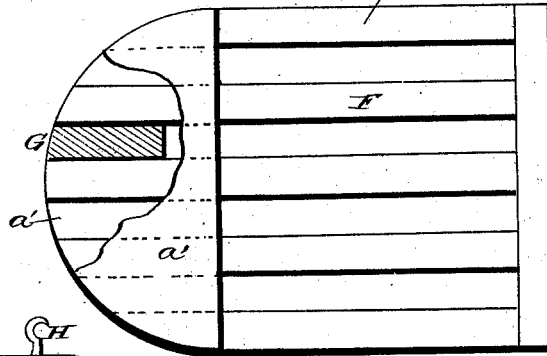
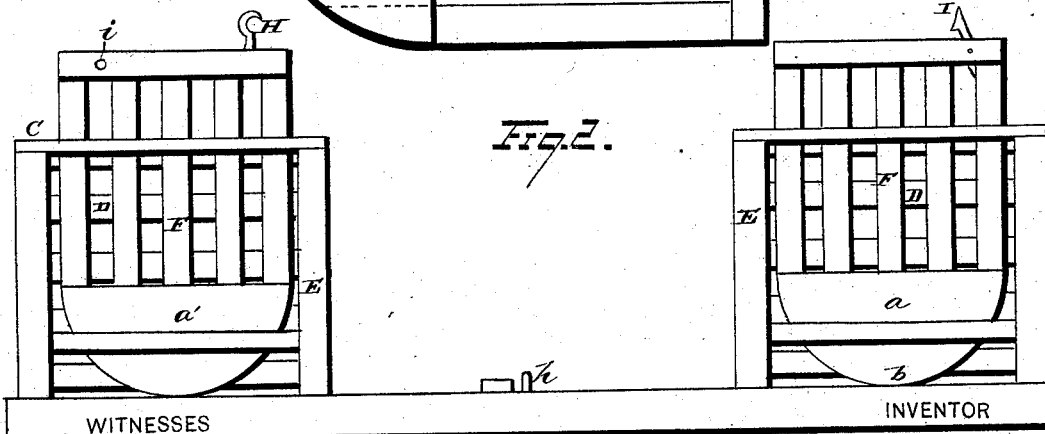


Fig. 2.



WITNESSES
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RICHARD L. DAWSON, OF LOWELL, MICHIGAN.

IMPROVEMENT IN TILTING GATES.

Specification forming part of Letters Patent No. **216,315**, dated June 10, 1879; application filed April 21, 1879.

To all whom it may concern:

Be it known that I, RICHARD L. DAWSON, of Lowell, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Tilting Gates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in tilting gates, the object being to provide a gate which may be readily opened and closed with but slight expenditure of power, and so constructed and arranged that no pivots or journals are required for retaining the gate in position; and to these ends my invention consists, first, in a tilting gate, in the combination, with suitable guiding supports or frames, of a gate having its rear end curved and weighted, and so arranged as to be entirely disconnected from its side frames or guides, and adapted to be supported by its weighted curved end when turned from a horizontal to a vertical position.

My invention further consists in the several details of construction and combinations of parts, as will hereinafter be described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective illustrating the gate in a closed position, and Fig. 2 a side view, showing the gate when in an open position; and Fig. 3 is a detached view of one of the gates, the rear end thereof being partially cut away to show the weights.

A represents the gate-sill, to which the uprights B are firmly secured. C are stringers connecting the uprights B, and forming the two fence-panels D on opposite sides of the gate-opening. Uprights E are secured to the sill A in close proximity to uprights B, sufficient space being provided between the same to allow of the vertical movement of the gates F, which latter are constructed as follows:

The inner ends of the gates may be formed like any ordinary panel of a gate, while to the rear end of the gate is secured the side pieces *a a'*, each being formed with curved ends *b*. The side pieces project outwardly from the gate-panel, thus forming side bearings *c*, to

prevent the withdrawal of the gate from between the vertical guides, between which they are arranged to operate, and also said side pieces constitute a wide curved bearing for supporting the gate as it is turned from a horizontal to a vertical position. Counterbalance-weights G are inserted between the side pieces *a a'* above the longitudinal center of the gate. These weights should be made sufficiently heavy and located in such a position that when the inner end of the gate is raised the weights will nearly carry the gates over into a vertical position.

It will be observed that the gates do not require any pivotal supports, and that sliding friction is obviated in their operation, as the entire weight of the gate is supported on its curved rear end, and but rolling friction is to be overcome in the opening or closing of the same.

When the gate is supported upon a pivotal bearing much trouble and inconvenience are experienced in operating, for the following reasons: The pivots or journals are constantly exposed to the weather and soon rust, and the gates are rendered difficult of operation; also, it is often the case that the pivots become bent, or the gate sags so that the opening and closing of the gate are made impossible; further, the entire weight of the gate being supported on a single pivot, the parts become worn in a comparatively short time, so that the gate will not operate without the expenditure of considerable force, and in many cases is rendered totally inoperative from such cause.

In my improved gate all these objections are obviated, as pivotal supports are dispensed with, and the gate supported on the curved tread formed or applied to the rear end thereof.

My improvement is equally well adapted to a single or double gate.

In the drawings I have represented my invention as being embodied in a double gate, and in such form of construction one section may be provided with a hook, H, adapted to engage in an eye, *h*, secured to the sill, and thus prevent the gate from being accidentally opened or displaced. The opposite section of the gate may be provided with a hook, I, arranged to engage with a pin, *i*, on the other

section, to lock both gates in a closed position; or any other suitable locking device may be used for such purpose.

In the construction of gate illustrated in the drawings the weights are shown as being inserted in the rear curved ends of the gate; but I would have it understood that I do not limit myself to this particular construction, as the sides may be provided with doors opening into boxes, which latter may be filled with stone or otherwise weighted to counterbalance the gate.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A tilting gate provided with a curved rear end and side frames or supports for retaining the gate in vertical position, the curved end of the gate resting on the gate-sill and supporting the gate when in a vertical position, substantially as set forth.

2. The combination, with suitable side frames or supporting guides, of a tilting gate constructed with a weighted and curved rear end, which latter rests upon the gate-sill or other suitable foundation and supports the gate as it is being opened or closed, substantially as set forth.

3. A double tilting gate, each section of which consists of a gate provided with weighted curved ends, which rest upon a suitable foundation and support the gate when opened or closed, substantially as set forth.

4. The combination, with suitable upright guides secured to a gate-sill, of a gate furnished with side pieces formed with curved ends, said side pieces projecting laterally outward to form shoulders to prevent the displacement of the gate, and the curved ends forming a curved tread for supporting the gate as it is opened or closed, substantially as set forth.

5. The combination, with a gate-sill having suitable uprights attached thereto, of a gate having a curved rear end, and arranged to be opened and closed by rolling the gate on its curved end, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 12th day of April, 1879.

RICHARD L. DAWSON. [L. S.]

Witnesses:

OLNEY B. FULLER,
JAMES H. WEEKS.