

(No Model.)

2 Sheets—Sheet 1.

A. J. MERCER.
FARM GATE.

No. 420,460.

Patented Feb. 4, 1890.

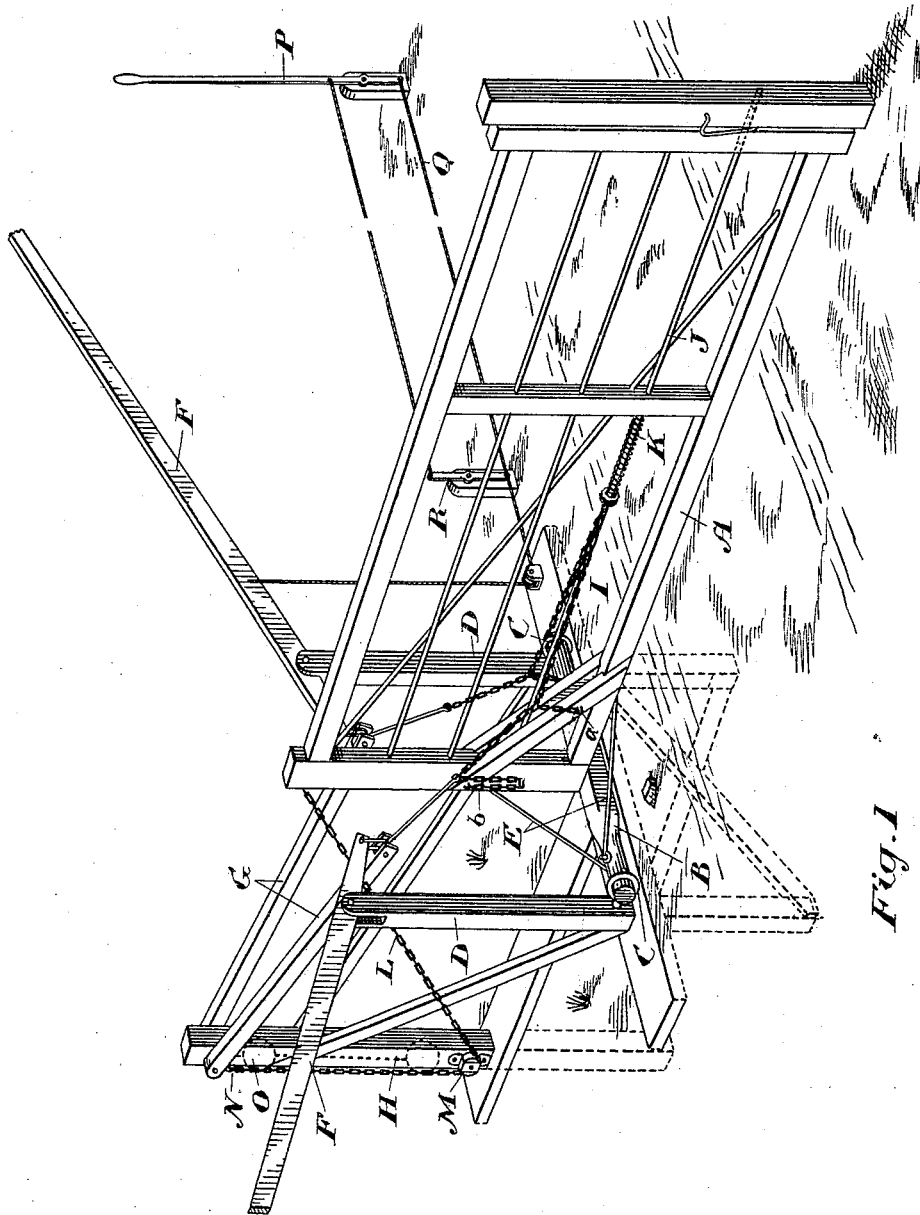


Fig. 1

Witnesses

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J. R. Lathrop

Inventor

Arthur J. Mercer

J. Small & Co.
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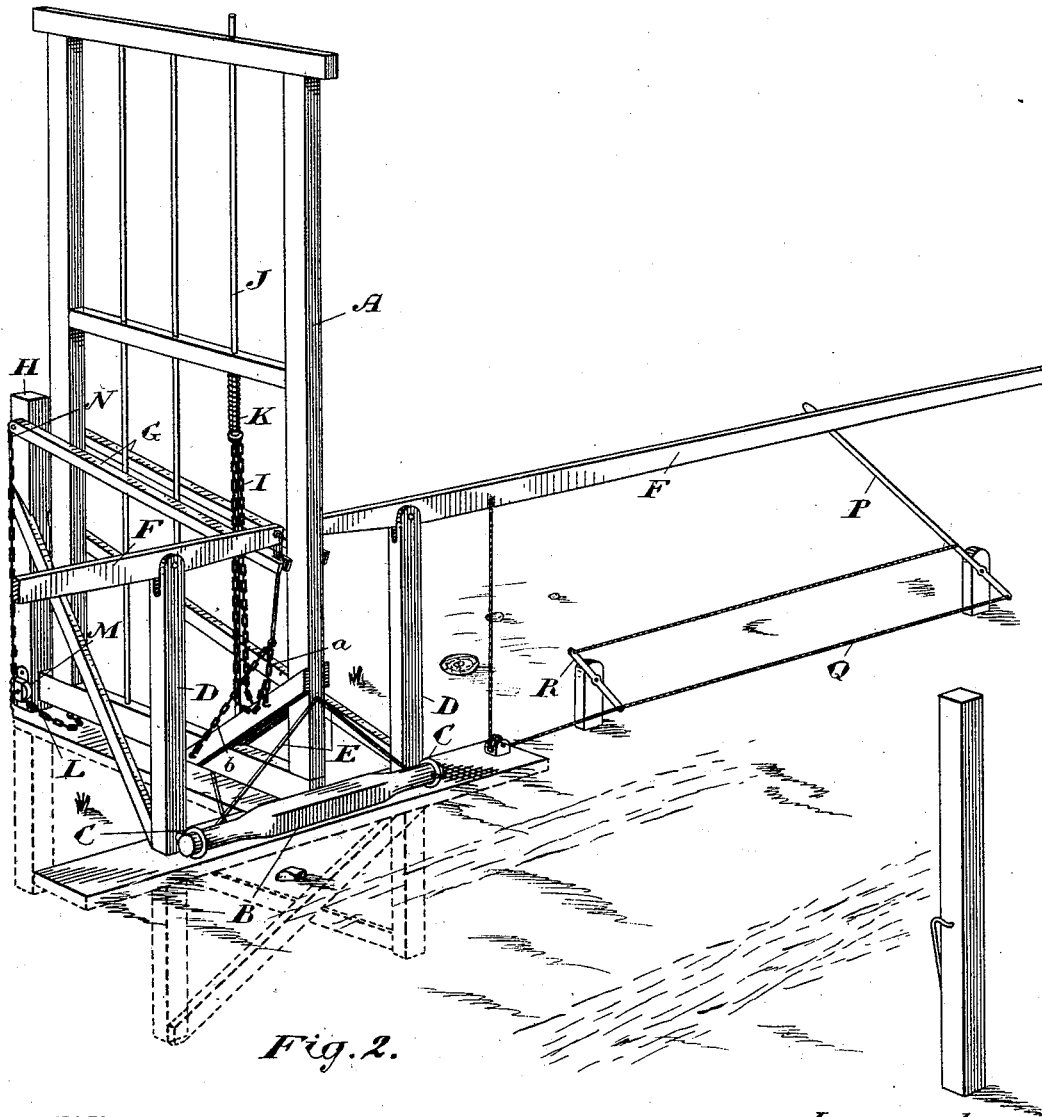


Fig. 2.

Witnesses

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S. B. Hutchinsonburg.

Inventor

Arthur J. Mercer
By
Donald C. Ridout of
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UNITED STATES PATENT OFFICE.

ARTHUR J. MERCER, OF ETOBICOKE, ONTARIO, CANADA.

FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 420,460, dated February 4, 1890.

Application filed July 8, 1889. Serial No. 316,761. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR JAMES MERCER, farmer, of the township of Etobicoke, in the county of York, in the Province of Ontario, Canada, have invented a certain new and useful Improvement in Farm-Gates, of which the following is a specification.

The object of the invention is to construct a farm-gate so that it may be readily opened by a person on the seat of a vehicle; and it consists, essentially, in the peculiar arrangement of levers and chains connected to a gate pivoted so as to swing vertically when tilted on its pivot, substantially as hereinafter more particularly described.

Figure 1 is a perspective view of my improved gate as it will appear when closed. Fig. 2 is a view of it when open.

In the drawings, A represents the gate, having a trunnion B fixed to its lower inner corner. This trunnion B is journaled in bearings C, fixed to the posts D. Braces E extend from the trunnion B to the gate A, so as to form vertical and horizontal stays. The levers F are pivoted on the top of the posts D, and each of them is connected to an arm G, which is pivoted to the post H. Each of the arms G is connected, as indicated, to a chain I, fastened at one end *a* to the gate A and at the other end to the rod J, which forms the latch, as indicated. A spring K is provided for the purpose of holding the latch closed when not acted upon by the chains I. Near the top of the inner upright of the gate A, I connect a chain L, which I carry downwardly to the pulley M, near the bottom of the post H, and thence upwardly to a pulley N, near its top, and at the end of this chain I fix a weight O.

In order to open the gate A, it is merely necessary to pull down the outer end of one of the levers F, which action draws upon the chain I, causing it first to pull out the latch formed by the rod J, and then, owing to the connection of chain I to the gate A at *a*, the said gate is caused to tilt up and assume the position indicated in Fig. 2, the weight O on the end of the chain L assisting in the said operation.

In order to close the gate, the operation described is repeated, the only difference being that the rod J is not drawn upon.

Owing to the counterbalance-weight O, the gate A, when thrown over to close, will fall gently down into the position desired.

In order to enable the gate to be opened at some distance from it, I provide a hand-lever P and place it at a suitable distance from the gate. The end of this hand-lever P is connected to a lever R by a cord Q, as indicated. The latter lever is suitably pivoted at a point convenient to the gate, and its opposite arm is likewise connected to the lever P, as shown. The lever R is also connected to one of the levers F, so that by the movement of the hand-lever P the lever F may be operated for the purpose of opening or closing the gate, as described.

With the view of facilitating the closing of the gate I provide a chain *b*, connected as indicated, so as to get a good purchase on the gate when it is in the position shown in Fig. 2. When the gate is as it appears in Fig. 1, this chain *b* is loose, as shown, and does not act until the gate is to be closed.

What I claim as my invention is—

1. In a gate, the combination of the gate proper, the trunnion on said gate, the posts having the bearings for said trunnion, the levers pivoted in said posts, the arms having their outer ends pivoted to a suitable support and their inner ends connected to the inner ends of the levers, the chains connected to the inner ends of the arms and to the gate, and the weighted chain having its inner end connected to the gate and its outer end traveling on the support for the arms, substantially as described.

2. In a gate, the combination of the gate proper, the trunnion on said gate, the posts having the bearings for said trunnion, the levers pivoted in the posts, the arms having their inner ends connected to the levers, the posts to which the outer ends of said arms are pivoted, the chains connected to the inner ends of said arms and the gate, the latch connected to and operated by said chains, the chain having its inner end connected to the gate and having a weight on the outer end, and guide-pulleys on the post for guiding said outer end of the weighted chain, substantially as described.

3. In a gate, the combination, with the gate having a horizontal pivot or bearing at the

rear lower corner thereof, the chains, and the arms, of the levers connected to said arms, the cord connected to one of said levers, and the hand-lever and intermediate lever connected to said cord, substantially as described.

4. In a gate, the combination of the gate having a horizontal pivot or bearing at its rear lower corner, the levers and arms connected together at their inner ends, the posts to which the outer ends of said arms are pivoted, the chains connected to the inner ends of the

arms and to the gate, the guide-pulleys on said post, and the chain guided by said pulleys, having its inner end connected to the gate and having a weight at the outer free end, substantially as described.

Toronto, May 13, 1889.

ARTHUR J. MERCER.

In presence of—

CHAS. H. RICHES,
J. EDW. MAYBEE.