(No Model.)

A. D. MACK.

GATE.

No. 298,103. Patented May 6, 1884.

Fig. 1.

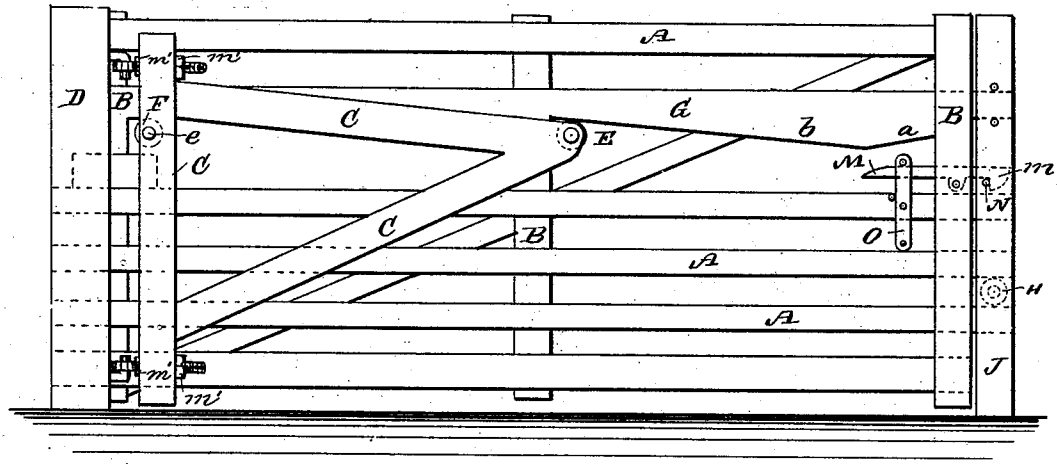


Fig. 3.

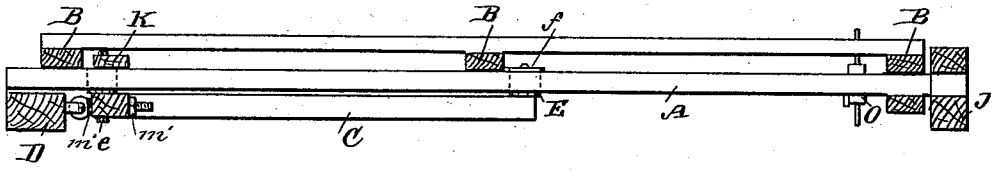
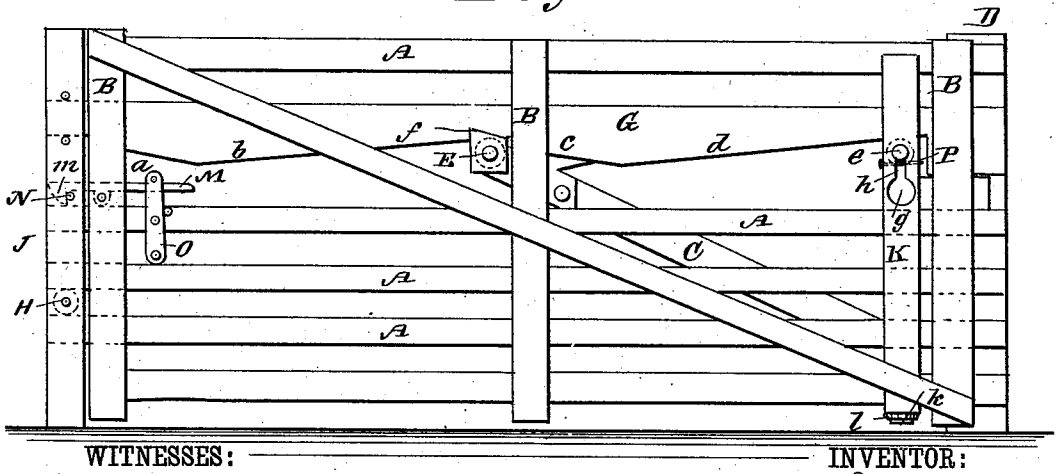


Fig. 2.



WITNESSES:

Theo. G. Hoster

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UNITED STATES PATENT OFFICE.

ADELBERT D. MACK, OF FRANKLIN, OHIO.

GATE.

SPECIFICATION forming part of Letters Patent No. 298,103, dated May 6, 1884.

Application filed July 30, 1883. (No model.)

To all whom it may concern:

Be it known that I, ADELBERT D. MACK, of Franklin, in the county of Fulton and State of Ohio, have invented a new and Improved Gate, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved sliding and swinging gate, in which the weight of the gate can be taken from the swinging crane when the gate is open or closed.

The invention consists of the several combinations and arrangements of parts, substantially as hereinafter fully set forth and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal elevation of the inside of the gate. Fig. 2 is a like view of the outside of the gate. Fig. 3 is a plan view of the same.

The gate is constructed with a series of horizontal rails, A, held to and between uprights B at the ends and middle. A swinging crane, C, is hinged to a post, D, which crane has a roller, E, pivoted to the side toward the gate at its free end, and also has a roller, F, pivoted to its standard. A guide-plate, *f*, is fastened to the crane, and is at the end of the roller E. A horizontal track-plank, G, is secured in the upper part of the gate and provided with two corresponding short bevels, *a c*—one at or near its forward end, and the other at about its middle—and with two corresponding long bevels, *b d*—one between the short bevels *a c*, and the other extending from the lower end of the bevel *c* to near the rear end of said plank or track. The beveled edge of the track-plank rests upon the rollers E F, the guard *f* preventing the track-plank from sliding off the roller E. A roller, H, is pivoted between the posts J, and the rails A project beyond the end uprights of the gate, so that they can pass between the posts, and one of them can rest on the roller H. The pintle *e*, on which the roller F is mounted, is passed through an enlargement, *g*, formed in the lower end of a longitudinal slot, *h*, in an upright plank, K, held on the outside of the crane. Then the said plank or slat K is moved downward, so that the pintle *e* will pass into the slot *h*, and a tenon, *k*, on the lower end of the plank or slat will pass into a loop, *l*, on the lower end of the pivot-post of the crane, thereby holding the gate between the crane and the plank or slat K, and thus securing the gate to the crane.

The latch-lever M is pivoted between the outer end uprights, B, of the gate and projects from them. It has a downwardly-projecting hook-head, *m*, on its outer weighted end, so that the said hook-head will automatically pass over and catch on a cross-pin, N, between the posts J, and thus lock the gate. A U-shaped frame, O, is pivoted on one of the rails A, and has the ends of the shanks united by a cross-pin above the latch-lever. By swinging the lower end of the frame O toward the inner end of the gate, the upper end will be swung down on the latch-lever and will depress the inner end of the same, thereby raising the hook and releasing the gate.

If desired, a pin, P, can be passed through the plank K and through its slot *h* under the pintle *e*, to prevent raising the said slat or plank.

The operation is as follows: If the gate is opened, the track-plank G slides on the rollers E F and gradually rises until the lowest points of the plank rest on the rollers E F. Then the beveled parts *a c* slide over the rollers, the gate descends, and is thus held open. The gate will be opened half the distance between the gate-posts. If the gate is to be closed and is moved toward the posts J, it first rises rapidly and then descends gradually, and finally the ends of the rails pass between the posts J, the end of one of the rails resting on the roller H.

If desired, the gate can be swung open entirely after having been half opened by sliding it, or it can be swung open entirely at the outset. When swung open, the track-plank G can be lifted from the roller E, and the outer end of the gate rested on the ground to relieve the crane from the weight of the gate and to prevent undue straining of the crane-pivots. The vertical post of the crane is hung at its upper end by a screw-eye and a downwardly-projecting hook, and at its lower end it is hung by a screw-eye and an upwardly-projecting hook, the bottom screw-eye being provided with locking-nuts *m' m'* on op-

posite edges of the standard of the crane, whereby by turning the said nuts the bottom eye can be adjusted to project a greater or less distance from the upright of the crane, and thereby the inclination of the crane-post can be adjusted as may be desired, so that the gate will always swing horizontally.

I am aware that, broadly, it is not new to provide the gate with a track-plank having a lower beveled surface, said track being adapted to travel upon the rollers of a hinged crane.

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

1. The combination, with the swinging crane provided with end rolls, and a guide plank or slat having a tenon on its lower end, of the gate provided with a track-plank having two short corresponding bevels and two long corresponding bevels, substantially as and for the purpose set forth.

2. The combination, with a gate and swinging crane on which the gate can slide, of the plank or slat K, having a slot, *h*, provided with an enlargement, *g*, of the loop *k*, on the lower end post of the crane, and of the pintle *e*, on which the roller F is mounted, substantially as herein shown and described.

3. The combination, with a gate having a track-plank provided with two corresponding short bevels and two corresponding long bevels, of the crane provided with end rollers, and a guide plank or slat having a slot provided with an enlargement, and a loop on the hinge-post which receives a tenon on the lower end of said plank, substantially as and for the purpose set forth.

ADELBERT D. MACK.

Witnesses:

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DARWIN BICKFORD.