

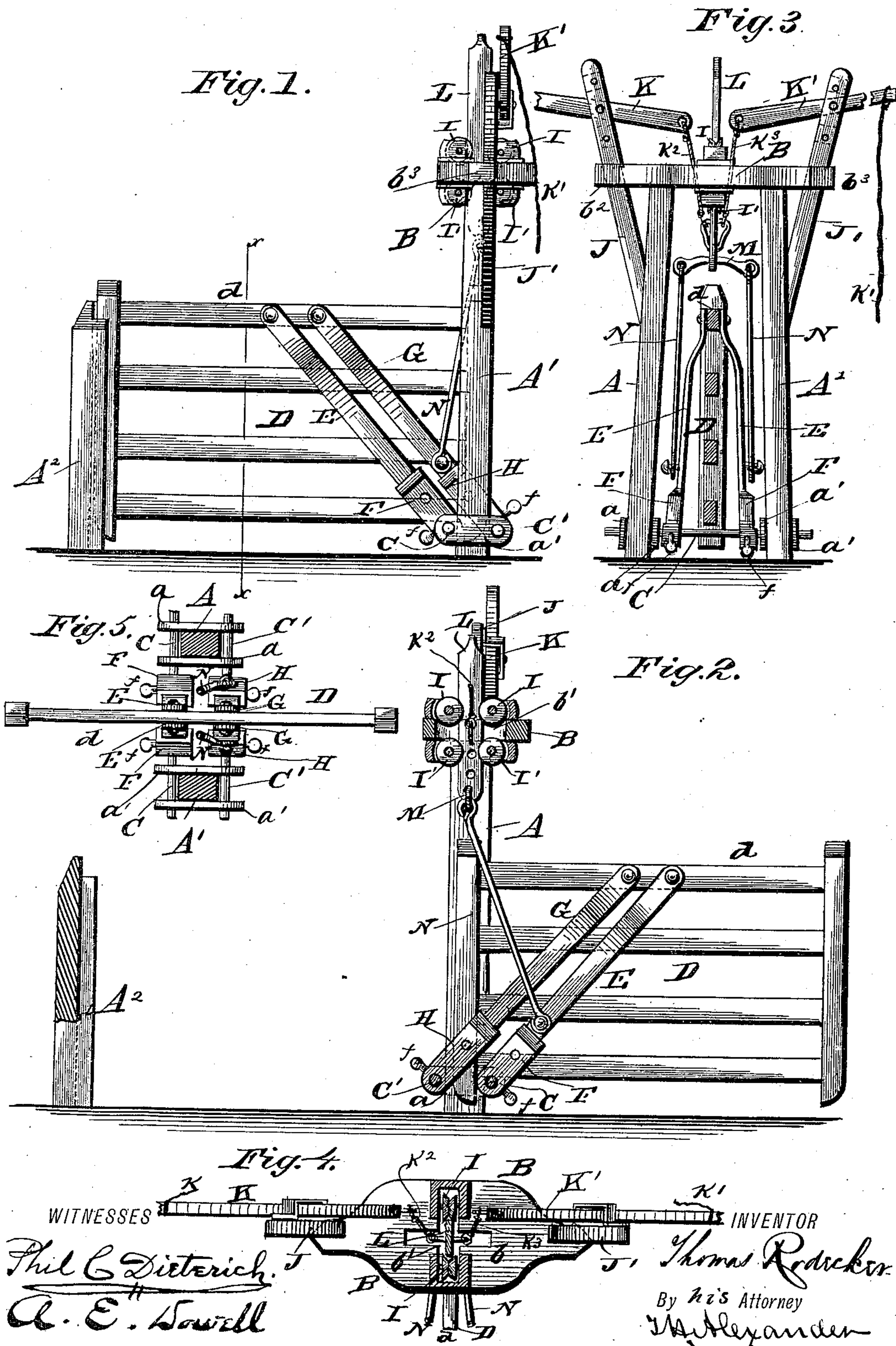
(No Model.)

T. RODECKER.

GATE.

No. 334,287.

Patented Jan. 12, 1886.



UNITED STATES PATENT OFFICE.

THOMAS RODECKER, OF MENDON, OHIO.

GATE.

SPECIFICATION forming part of Letters Patent No. 334,287, dated January 12, 1886.

Application filed September 19, 1885. Serial No. 177,519. (No model.)

To all whom it may concern:

Be it known that I, THOMAS RODECKER, of Mendon, in the county of Mercer and State of Ohio, have invented certain new and useful
5 Improvements in Gates; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form
10 part of this specification, in which—

Figure 1 is a side elevation of the gate closed. Fig. 2 is a similar view, partly in section, of the gate opened. Fig. 3 is a section on line
15 *xx*, Fig. 1. Figs. 4 and 5 are details.

This invention relates to improved lifting gates for use on farms or in places where it is desirable to have a gate that can be easily operated by a person on horseback, or in a vehicle; and it consists in the novel construction
20 and arrangement of parts hereinafter described, and pointed out in the claims.

In the drawings, *A A'* represent two opposite similar posts, inclining slightly toward each other at top, and connected at their upper ends by a beam, *B*, hereinafter described. These posts are planted firmly in the ground at the desired place for a gate opposite a single post or stop, *A²*, that is distant from them the required width of the gateway. At or
30 near the bottom of post *A* are bolted or otherwise secured to its outer and inner sides metal straps *a*, which extend in a direction parallel with the gate, and have their projecting ends on each side of the post perforated for the reception of rods *C C'*, hereinafter referred to.
35 The post *A'* has similar straps, *a'*, secured to its lower portion in same relative position as straps *a* of post *A*.

D is the gate, made in the usual manner, and of such size as to close the way between
40 posts *A A'* and stop *A²*.

Near the center of upper rail, *d*, of gate *D*, on each side, is pivotally attached the upper ends of opposite similar levers or bars, *E*, which run thence rearward and downward toward the posts *A A'*. The lower ends of the bars *E* are bolted to opposite hinges or hangers *F*, the eyes of which are strung on the inner rod, *C*, which is journaled in the straps *a*
45 *a'* of posts *A A'*, respectively. The hangers are secured or bound on the rod *C* by screws *f*, or other suitable means, in such manner

that the levers *E* are held farther apart at the bottom than at the top, so as to allow free movement of the gate between them.

A short distance in rear of the upper ends of bars *E*, on rail *d* of the gate, is pivoted, on each side thereof, the ends of levers *G*, which run thence rearward and downward in a direction nearly parallel to levers *E*, and have
55 their lower ends secured to hangers *H*, similar to hangers *F*. The hangers *H* are applied on the rod *C'*, which has its bearings in straps *a a'* of posts *A A'* opposite rod *C*, similar to the hangers *F* on rod *C*, so that the lower ends of
60 the levers *G* are separated to allow free play of the gate between them.

The beam *B*, which unites the upper ends of the posts *A A'*, is widened at the center between the posts, and has a vertical slot, *b*,
65 running lengthwise through it nearly to the inner sides of the posts, and has another slot, *b'*, shorter than and crossing slot *b* at right angles. The slot *b'* is situated directly in the center of beam *B* over gate *D*.

I I are the pulley-sheaves, secured to the upper side of beam *B*, at the opposite ends of slot *b*, the pulleys slightly projecting over the ends of the same, and *I' I'* are like pulley-sheaves, similarly secured to the under sur-
70 face of beam *B* at the ends of slot *b*.

J J' are short beams or standards having their lower ends secured to the outer sides of posts *A A'*, respectively, and extending upward in an inclined direction away from the
75 posts and each other, being secured at or near their centers to extensions *b² b³* of beam *B*.

K K' are lever-bars pivotally secured near their inner ends by bolts, or any suitable means, to the upper ends of standards *J J'*,
80 so that they may be moved or oscillated vertically. From the outer ends of these levers depend rods or ropes *k k'*, for operating the same by hand. The inner ends of levers *K K'*, when in a horizontal position, are directly
85 over the sides of slot *b'*, and have secured to them by suitable devices rods or ropes *k² k³*, which play through slot *b* in beam *B*, and are secured at their lower ends to a guide-bar, *L*, a short distance above the lower perforated
90 end of the same. The guide-bar *L* plays through slot *b'*, and is of such size that its edges bear against the pulleys *I I'*, secured to beam *B*, which prevent displacement of the
100

bar and allow it free vertical movement. When the gate is closed, the upper end of guide-bar L is above the pulleys I. The lower end of bar L is perforated, and through it passes a yoke, M, to the ends of which, on each side of the bar, are attached the ends of rods N, which have their lower ends attached to the lower ends of bars G a short distance above their hangers H.

The operation of the gate is as follows: When the gate is closed, as shown in Fig. 1, the outer ends of levers K K' are slightly elevated. To open the gate, the outer ends of the levers are depressed by a pull on one of the hand-ropes. This causes the inner ends of the levers to rise, and with them, through the described devices, the guide-bar L and rods N, which exert a leverage on the bars G, and cause them to raise the gate D. The bars E will prevent the outer end of the gate from falling, and the gate will thus be lifted to a central position directly between the posts A A', with its center directly below the slot b'. The lifting-power of the levers then cease, and the gate will, by its acquired momentum, pass the dead-center and fall open in the position shown in Fig. 2. To close the gate, another pull on the outer end of one of the levers K K' is required, when the gate will close in the same manner as it opened.

It will be observed that the lifting-bars G, when the gate is closed, have their pivoted ends on bar d, nearer the posts A A' than bars E, and that when the gate is opened the upper ends of bars G are farther from the posts than the bars E. It is obvious that more force will be required to open the gate than to close it. Consequently stock pushing against the same will not be so liable to open it. It will also be observed that the lateral thrust on guide-bar L, when opening and closing the gate, is almost obviated by the pulleys, and that the levers and gate are carried sufficiently rearward when the gate is opened to be free of all

danger from the hubs of vehicles; also that the gate is lifted and lowered bodily and without any strain on its parts.

Having described my invention, I claim—

1. The combination, with the posts A A', carrying the levers K and united by a slotted beam, B, of a guide-bar playing through a slot in said beam B, and prevented from binding therein by pulleys I I', secured to the upper and under surfaces of the beam at the ends of the slot, and operated by the said levers, substantially as described.

2. In a gate, the combination, with two supporting-posts, A A', united at top by a slotted beam and a guide-bar playing through the slot in the beam connected at its lower end to hinged bars to lift the gate from one side to the other, of levers pivotally secured to the upper ends of posts A A', connected at their inner ends to the guide-bar to move it vertically, and thereby operate the gate, substantially as specified.

3. The combination of the gate D, provided with bars G and E, having their lower ends secured to hangers F F', strung on rods C C', having suitable bearings on the lower portions of posts A A', and a beam, B, uniting the upper ends of posts A A', provided with longitudinal slot b and cross-slot b', and pivotal levers N, suitably secured on the posts, having hand-holds on their outer ends, with a guide-bar, L, playing through slot b', and connected near its lower end by cords or rods to the inner ends of levers K K' and by a yoke and rods N with the lifting-bars G of the gate, all constructed and adapted to operate substantially as and for the purposes described.

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

THOMAS RODECKER.

Witnesses:

JOHN A. MURLIN,
GEO. W. DONART.