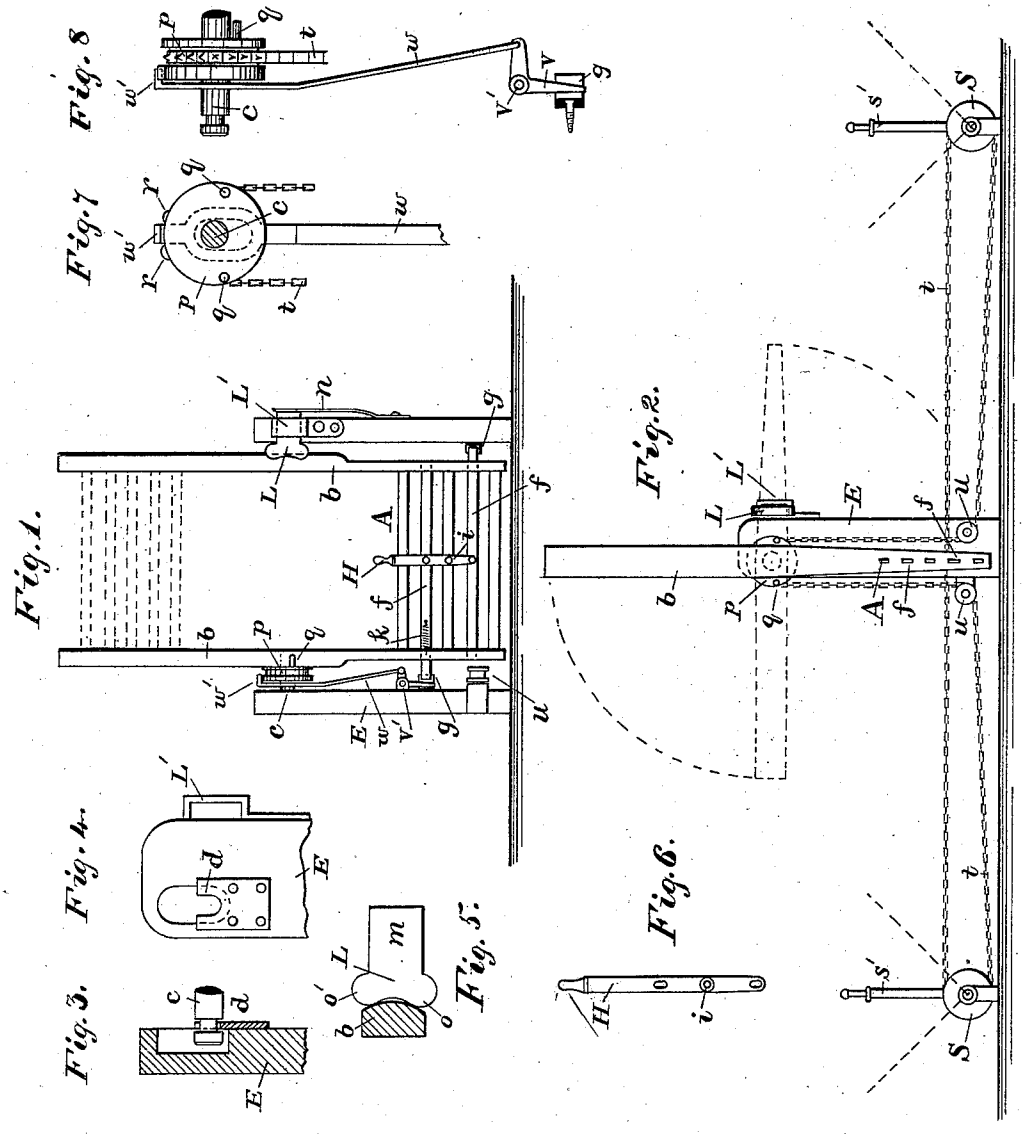
(No Model.)

D. A. DICKINSON.

FARM GATE.

No. 312,442. Patented Feb. 17, 1885.



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UNITED STATES PATENT OFFICE.

DAVID A. DICKINSON, OF BALTIMORE, MARYLAND.

FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 312,442, dated February 17, 1885.

Application filed June 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, DAVID A. DICKINSON, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Farm-Gates, of which the following is a specification.

My invention relates to an improved farm-gate; and it consists in certain features of construction and combinations of parts, which will be described and then claimed.

The invention is illustrated in the accompanying drawings, in which Figure 1 is a front view of the gate in the closed position. Fig. 2 is a vertical section giving a side view. Figs. 3 and 4 are views of the gate-bearings in the upper part of post. Fig. 5 shows the retainer against the upright gate-bar. Fig. 6 is a view of the latch-lever. Figs. 7 and 8 are views of the latch-retractor.

The gate A has two long upright side bars, *b*, each having about midway of its ends a trunnion, *c*, which sets in a suitable bearing, *d*, on the post E. The trunnions and their bearings should be as high as the top of an ordinary vehicle. By this construction the gate and side bars are adapted to revolve in a vertical plane, and may take a horizontal position, (indicated by broken lines in Fig. 2,) or be turned to bring the gate-part A to an upside-down position. (Indicated by broken lines, Fig. 1.) Two latch-bars, *f*, are employed. These are parallel and slide freely through slots made in the side bars. One projects at one side of the gate and the other projects at the other side, and the projected ends engage with notched irons *g*, fixed on the gate-posts E. These latch-bars retain the gate in a closed position. The two latch-bars are connected by an upright lever, H, pivoted at *i* to one of the cross-bars between them. By grasping the upper end of this lever both latch-bars may be projected or retracted. A spring, *k*, applied between one latch-bar and one upright side bar serves to keep both latches projected. A spring-actuated retainer, L, for the gate has a hollowed or inward-curved face, considered in the vertical direction, which bears against the outer side of one of the upright bars *b*. The straight shank *m* of the retainer occupies a keeper, L′, fixed on one of the posts, and is adapted to slide back and forth therein. A spring, *n*, fixed on the gate-post, bears on the shank end of the retainer and keeps it normally toward the upright bar. The bottom *o* and top *o′* of the retainer are rounded, as shown, and thereby, when the gate revolves, the upright bar *b*, which is slightly rounded on the outer side, readily passes onto the face of the retainer, and in doing so forces it back against its spring. When it is desired that the elevated gate shall remain in a horizontal position for the passage, for instance, of a horse and wagon, the retainer L will hold it.

The means for opening and closing the gate consist of a sprocket-pulley, *p*, loose on one of the trunnions, and provided on one face with one or two pins, *q*, which, when the pulley has partly turned on the trunnion, will bear against the upright bar *b*. On the upper part of its rim the pulley has two knobs, *r*, separated by a space which is occupied by the bent end *w′* of the latch-retractor rod. Two pulleys, S, are mounted in suitable bearings set at one side of the roadway—one at each side of the gate—and each has a hand-lever, *s′*, by which it is partly turned. An endless chain, *t*, has one part passed over the sprocket-pulley, *p*, thence from each side down; thence each downward portion passes under a roller, *u*, to change its direction from the vertical to the horizontal, whence each part passes round one of the pulleys S. The other part of the chain does not pass over the trunnion-pulley, but passes direct between the said two roadway-pulleys. By this arrangement the two hand-levers *s′* will always stand in a similar position—that is, if one lever be turned to one side from a vertical position the other will assume the same position. The gate may be opened in either direction.

The latch-retractor is connected with the means for revolving the gate, and consists of a bell-crank lever, *v*, pivoted at *v′* to the post, with one arm depending into the notched iron *g*, as seen in Fig. 8. A rod, *w*, has its lower end connected with the upper arm of the bell-crank lever, and extends up alongside the post. Its upper end has a right-angled bend, *w′*, which rests on the rim of the sprocket-pulley *p*, between the two knobs *r*. The rod *w* has a link-shaped slot. (Indicated in Fig. 7 by broken lines.) This slot is occupied by the trunnion *c*. While the rod is thus prevented

from lateral movement it may move vertically. When the sprocket-pulley *p* is moved either way, one of the knobs *r* is brought under the bent end *w'* of the rod, which is thereby raised or moved up and causes the depending arm of the bell-crank lever *v* to press against the projected end of one of the latch-bars and retract it. By this means the latch-bars *f* may be disengaged from the notched irons *g* upon moving the same lever *s'* that revolves the gate. When an extra high vehicle, or one with a high load—like a load of hay—is to pass the gate, the latter can be turned upside down.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of the gate-posts E, a gate having upright side bars, *b*, each provided with a trunnion, *c*, sitting in bearings on the post, two parallel latch-bars, *f*, each projecting through an opposite side bar and the two connected by a lever pivoted to a cross-bar between them, a lever, *v*, on the gate-post to retract the latch-bars, a lever, *s'*, mounted in a bearing set in the roadway, and means, substantially as described, connecting the retracting-lever on the gate-post with the lever in the roadway, as set forth.

2. The combination of the gate-posts, each having a bearing, *d*, a gate having two trunnions one sitting in each bearing, whereby it may revolve in a vertical plane, and a spring-actuated retainer, L, having a hollowed or inward-curved face to press against the gate and hold it in a horizontal position, as set forth.

3. The combination of the gate-posts E, a gate having upright side bars, *b*, each provided with a trunnion, *c*, sitting in bearings on the posts, and means to hold the gate horizontal, consisting of a keeper, L', on the post, a retainer having a shank, *m*, adapted to slide in the keeper, and a spring, *n*, to keep the retainer normally toward the gate, as set forth.

4. The combination of the gate-posts E, a gate having upright side bars, *b*, each provided with a trunnion, *c*, sitting in bearings on the posts, a pulley, *p*, on one of the trunnions, two pulleys, S, mounted in suitable bearings set in the roadway at opposite sides of the gate, and an endless chain, *t*, having one part passed over the said trunnion-pulley and from thence over each of the two pulleys in the roadway, and the other part passed direct between the roadway-pulleys, as set forth.

5. The combination of the gate-posts E, a gate having upright side bars, *b*, each provided with a trunnion, *c*, sitting in bearings on the posts, a notched iron on the gate-post, a latch-bar, a bell-crank lever having one arm depending into the notched iron and adapted to bear on the latch-bar, and means, substantially as described, to press the depending arm against the latch-bar, as set forth.

6. The combination of the gate-posts E, a gate having upright side bars, *b*, each provided with a trunnion, *c*, sitting in bearings on the posts, a pulley loose on one of the trunnions and provided with a pin, *q*, to bear against the upright bar, a latch-bar, and means, substantially as described, to retract the latch-bar and turn the gate, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID A. DICKINSON.

Witnesses:

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