A. M. STORK.

FARM GATE.

APPLICATION FILED JUNE 25, 1914.

1,166,944.

Patented Jan. 4, 1916.

2 SHEETS—SHEET 1.

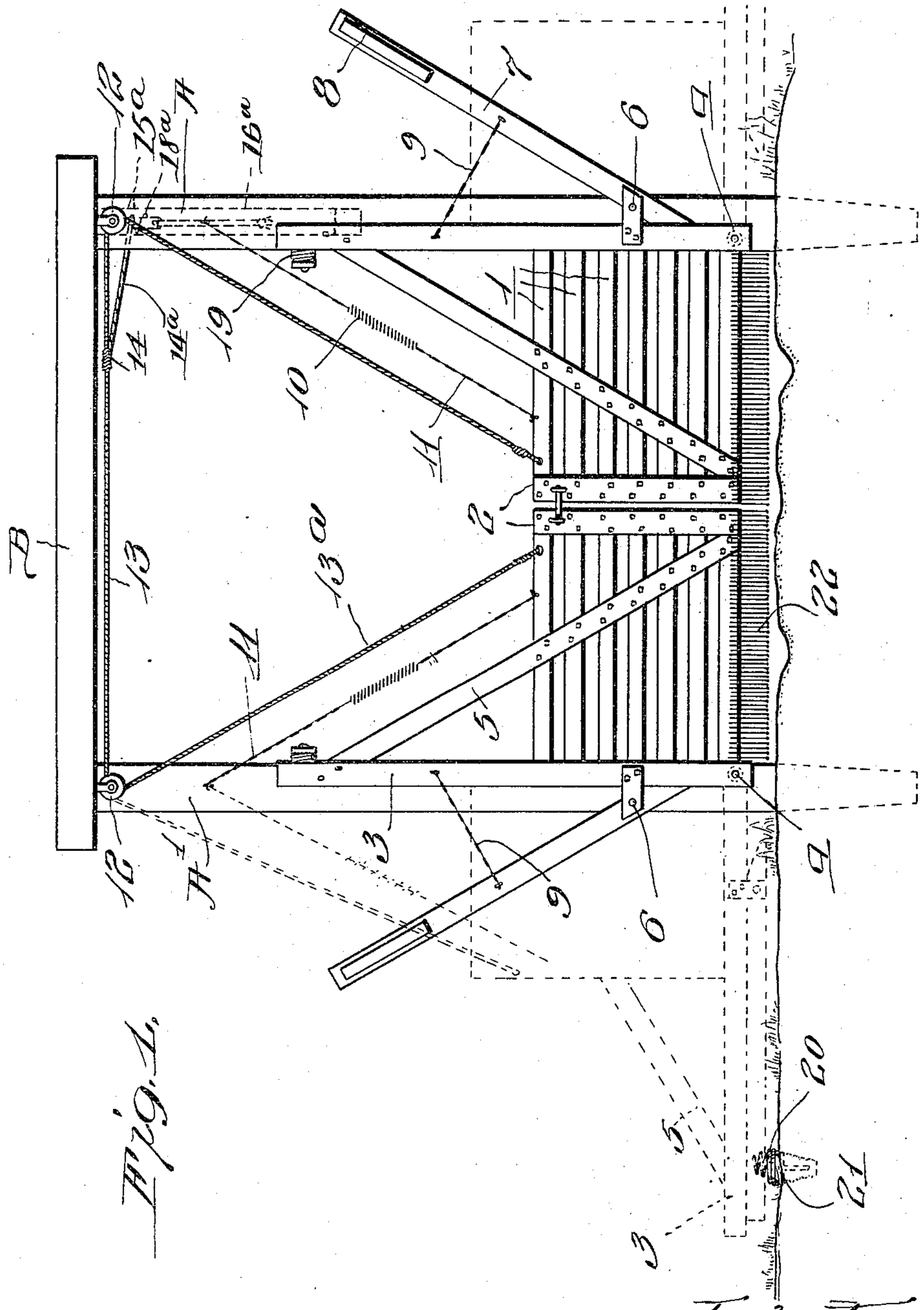

Fig. 1.

Witnesses:

Wm. Harold Eichelman.

M. A. Milord

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2 SHEETS—SHEET 2.

Fig. 2.

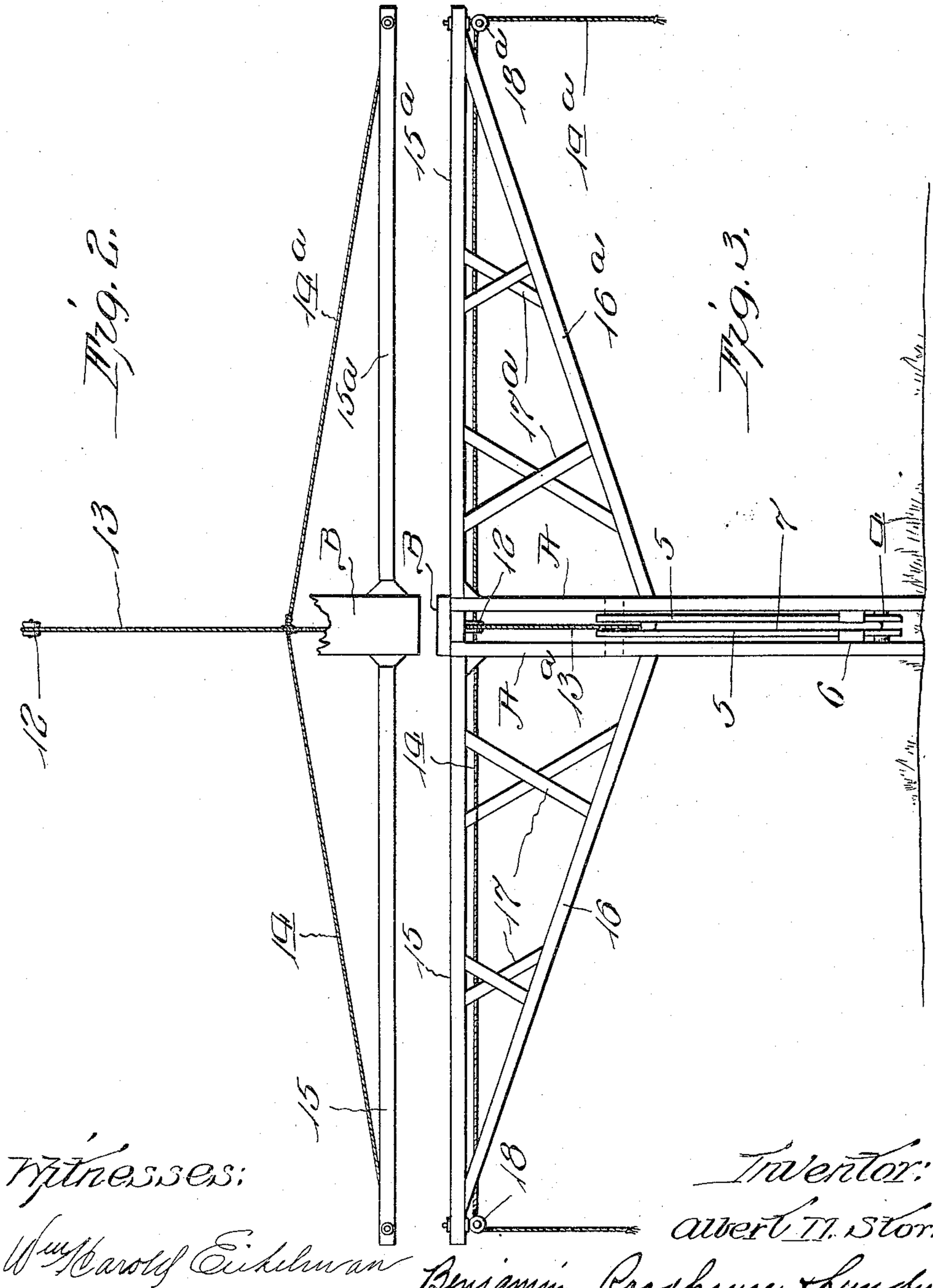

Fig. 3.

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UNITED STATES PATENT OFFICE.

ALBERT M. STORK, OF RIVERTON, WYOMING.

FARM-GATE.

1,166,944. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed June 25, 1914. Serial No. 847,183.

To all whom it may concern:

Be it known that I, ALBERT M. STORK, a citizen of the United States, residing at Riverton, in the county of Fremont and State of Wyoming, have invented certain new and useful Improvements in Farm-Gates, of which the following is a specification.

My invention relates to gates and more particularly to the means for operating farm gates for the purpose of opening and closing the same.

The particular object of my invention is to provide simple and efficient mechanism for operating a pivoted gate whereby the occupant of a vehicle may readily and easily open or close said gate without dismounting, and to so construct and arrange the operating mechanism that the gate may be opened and closed from either side.

Another object is to provide suitable means whereby the jar incident to the opening or closing of the gate will be reduced to a minimum and thus increase the longevity of the gate.

Still further objects are to provide a counterbalance for the gate whereby the opening and closing thereof are materially assisted.

The above and other objects I accomplish by the means and in the manner hereinafter fully described and as more particularly pointed out in the claims, reference being had to the accompanying drawings forming a part hereof, wherein like reference characters indicate similar parts in the various figures.

Figure 1 is a vertical front elevation of my improved farm gate showing the same in closed position in full lines and in open position in dotted lines, the near side members of the pairs of gate posts being omitted together with the near truss arm and pull rope; Fig. 2 is a top plan view thereof illustrating more particularly the rigging of the operating ropes; Fig. 3 is a vertical end elevation of my improved farm gate.

Referring to the drawings A and A′ indicate the vertically arranged gate posts that are preferably arranged in pairs, as shown in Fig. 3, upon each side of the roadway, and which at their upper ends are connected by a horizontally disposed cross-timber B that bridges the roadway at a height sufficient to permit of the passage of traffic thereunder. While I have shown double posts A and A′ it will be obvious after a full understanding of my invention that a single post on either side of the roadway is equally applicable in carrying out the construction that will be hereinafter described. I prefer to employ two gates each extending half way across the roadway and meeting at the center thereof, and said gates are of ordinary construction comprising horizontal bars 1 spaced apart a suitable distance which are secured at their ends to vertically disposed uprights 2 and 3. Uprights 3 are substantially twice the length of uprights 2 and extend upwardly between the posts A and A′ while their lower ends are preferably pivotally mounted upon transverse bolts or pintles 4 connecting the lower ends of each pair of posts. These pintles act as the pivots for the gates upon which they are adapted to be rotated between and through the posts until the roadway is opened whereupon the upright 3 will lie substantially parallel with the surface of the ground. Suitable diagonal braces 5 are secured to the gates and extend from the upper portions of uprights 3 to the lower bars adjacent uprights 2. Pivotally mounted at their lower ends upon brackets 6 adjacent the lower ends of uprights 3 are counterbalance beams 7 that incline upwardly away from uprights 3 on the side of said posts opposite the gates. These beams are weighted at their free upper ends by slugs or weights 8 adjacent which they are connected to uprights 3 by flexible members 9 such as chains, cables or the like, so that when the gates are fully opened these beams will fold flat against and parallel with the uprights 3 as illustrated in dotted lines in Fig. 1 of the drawings. In order to further counterbalance the gates I prefer to connect the outer ends of the latter with posts A and A′ by means of a spring member consisting of a coiled contraction spring 10 having its ends secured to short lengths of cable 11 connected respectively to said gates and posts.

I prefer to open and close the gates simultaneously and to accomplish this I mount suitable pulleys 12, 12, either between the upper ends of posts A, A, and A′ A′, or upon the adjacent ends of the cross timber B as shown and I pass a cable 13 over these pulleys so that it extends from one to the other parallel with said timber B and then secure the lower pendent ends 13ª thereof to

the outer upper corners of each gate. At a suitable point between the pulleys pull ropes 14, 14ª, are secured to the cable 13 and extend in opposite directions upon each side of the cross timber as shown in Figs. 2 and 3 of the drawings. Upon each side of the posts and extending in vertical planes at substantially right angles to the line of the gates are suitable truss arms or frames that are securely fastened to said posts and comprise horizontal beams 15, 15ª, that are supported by braces 16, 16ª, respectively, and reinforced by crossed planks 17, 17ª. In the outer ends of these trusses I mount pulleys 18, 18ª, over which the free ends of pull ropes 14, 14ª, pass, to the lower ends of which are attached any suitable hand-grasp of sufficient heft to prevent the weight of the slack between pulleys 18, 18ª, and cable 13 raising the ends out of reach.

From the above it will be obvious that when a pull is exerted upon the pendent ends of either of ropes 14 or 14ª the cable 13 will be drawn over pulleys 12 causing, together with the pull of spring 10 and counterbalance weight 8, the elevation of the abutting ends of the gates, and a continued pull will raise the gates until they are overbalanced on the opposite side of posts A, A′, whereupon they will continue to rise until uprights 3 rest parallel with the surface of the ground with the counterbalance arms folded against the same. When the gates are in opened position it will be found that the cables and pull ropes will have resumed substantially the same relative positions as when the gates are closed, and by again exerting a pull upon the ropes 14, 14ª, the gates may be swung back into closed positions.

In order to prevent jarring of the gates and their supporting elements when the former reach a closed or opened position, I mount a coiled expansion spring 19 upon the posts in a position so that when the gates are being closed the upper portions of uprights 3 will come in contact therewith and compress the same. Similar springs 20 are mounted upon blocks, or short posts, 21, disposed back of the posts A, A′, in positions so that when the gates are opened the uprights 3 or the arms 7 will rest upon and compress them. Suitable wire netting may be secured to the gate planks if desired to prevent poultry and small stock from having egress between said planks and upon the lower plank I prefer to mount a flexible curtain comprising a plurality of pendents 22 weighted at their lower ends so as to accommodate the lower edge of the gates to any unevenness in the road-bed.

While I have illustrated and described my improvements in connection with double gates it, of course, is obvious to others skilled in the art that the construction is well applicable to a single gate, in which event the double posts A′, the cross beam B and cable 13 may be omitted. It will also be obvious that numerous other refinements may be made without materially departing from the spirit of my invention and all such changes or modifications are contemplated within the scope of the appended claims.

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

1. A device of the kind specified comprising a post, a gate pivoted at its lower corner thereto and having one of its uprights elongated, a counterbalance beam pivoted to said elongated upright, a pulley on said post, an operating cable engaging said pulley having one end secured to the end of said gate opposite said beam and adapted to elevate said gate upon its pivot, and a cushion on said post against which said elongated upright rests when said gate is closed.

2. A device of the kind specified comprising supporting posts each consisting of two spaced vertical members, a pintle for each post extending through the lower portions of said members, gates pivotally mounted on said pintles and adapted to be moved between said members, counterbalanced beams carried by said gates and inclined therefrom on the side of said posts opposite said gates, yielding means connecting the outer ends of said gates to the upper portions of their respective posts, a pull cable mounted on said posts and having free ends that are connected to said gates adjacent their abutting edges that is adapted to raise the free ends of said gates through their respective post members, and cushions on said posts against which portions of said gates rest in closed positions.

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

ALBERT M. STORK.

Witnesses:
C. C. TRADER,
C. O. LONG.