No. 650,257. Patented May 22, 1900.

A. B. LONG.

FARM GATE.

(Application filed Nov. 17, 1899.)

(No Model.) 2 Sheets—Sheet 1.

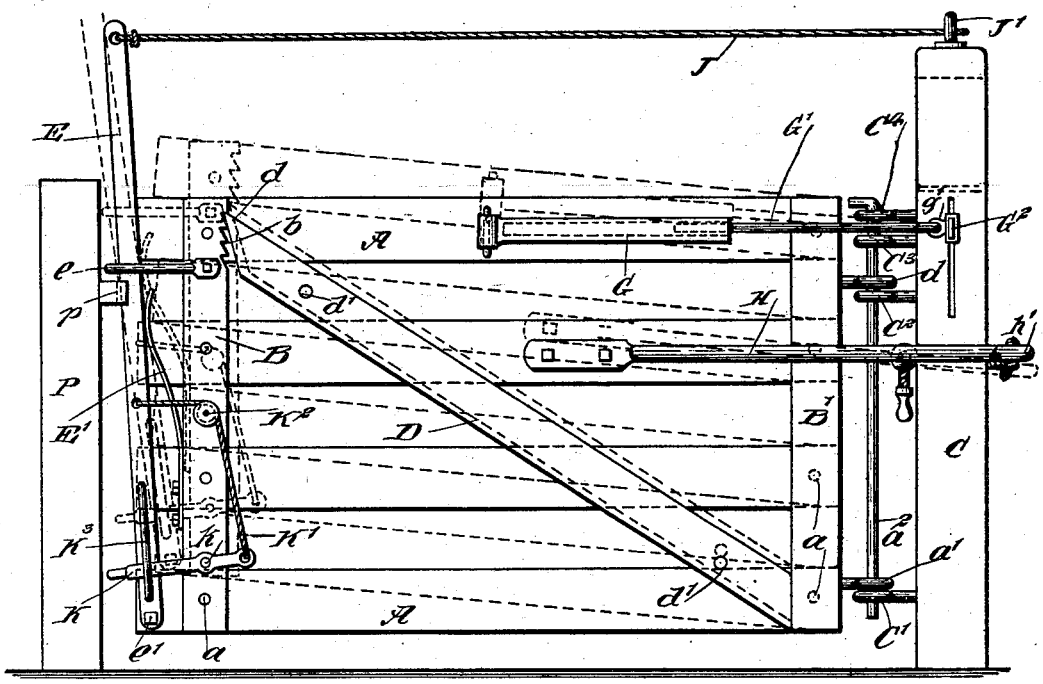

Fig. 1

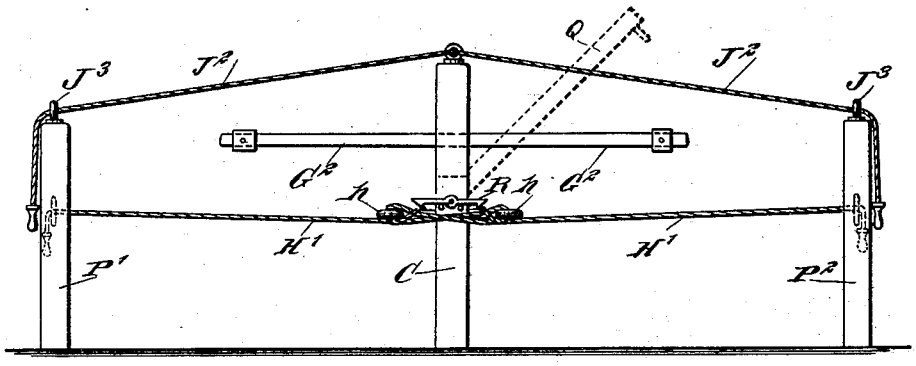

Fig. 2

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Fig. 3

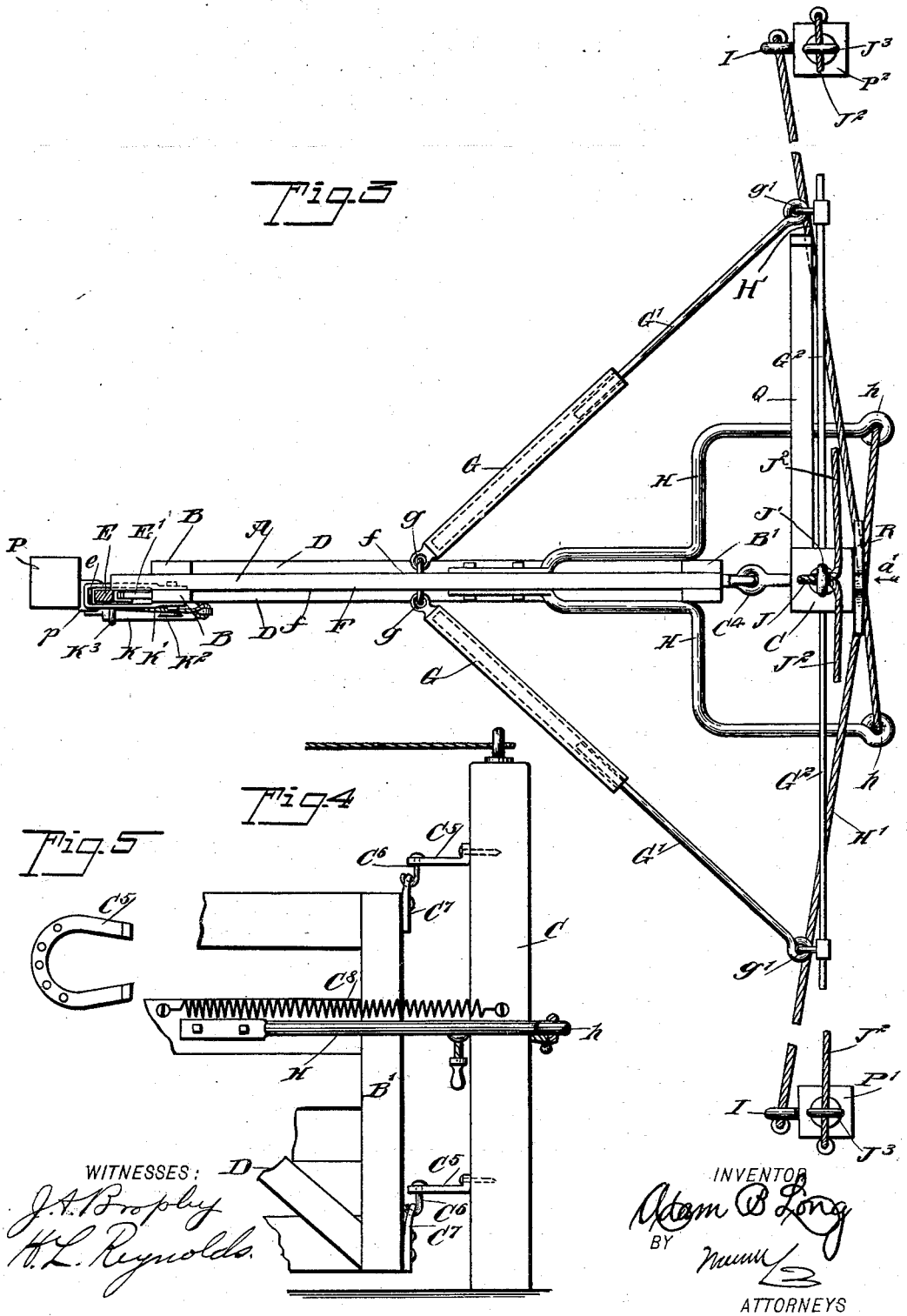

Fig. 4

Fig. 5

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UNITED STATES PATENT OFFICE.

ADAM BIONS LONG, OF AMISH, IOWA.

FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 650,257, dated May 22, 1900.

Application filed November 17, 1899. Serial No. 737,321. (No model.)

To all whom it may concern:

Be it known that I, ADAM BIONS LONG, of Amish, in the county of Johnson and State of Iowa, have invented a new and Improved Farm-Gate, of which the following is a full, clear, and exact description.

My invention relates to an improvement in farm-gates, and comprises the novel features hereinafter described and claimed.

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

Figure 1 is a side elevation of the gate in its closed position. Fig. 2 is a view of the gate looking in the direction of the arrow a' in Fig. 3. Fig. 3 is a top plan view of the gate, showing its operating mechanism. Fig. 4 is an elevation showing a modification, and Fig. 5 is a plan of a hinge-section employed in Fig. 4.

The object of my invention is to provide a simple and cheaply-manufactured gate, which may be operated from a wagon both to open and to close it.

The gate proper is composed of a panel which contains horizontal members A and vertical members B and B′, located, as herein shown, at the ends of the panel, although these vertical members might be introduced at other places, if desired. The vertical and horizontal members are secured to each other by means of bolts or equivalent securing devices a', which pass through both members and which permit a swinging action between the vertical and horizontal members in a vertical plane.

The outer vertical members B, which are located at the swinging end of the gate, are provided with teeth b, which are engaged by the pointed upper end d of the diagonal brace D. This brace, as herein shown, has pins d' passing through the same and securing the two boards which form the brace and which are located one upon each side of the horizontal members A, and the pins rest upon the horizontal members and support the brace in place. The upper end of the brace engaging the teeth upon the vertical member B prevents the outer end of the gate from sagging and enables the outer end of the gate to be adjusted in elevation by adjusting the end d in different teeth. In this manner it is possible to raise the outer end of the gate, so that it may swing over snow-drifts in the winter time, and to lower it when the snow-drifts have disappeared.

The inner or pivot end of the gate is provided with eyes a', through which passes a vertical pivot-rod a^2. This rod passes through eyes C′, C^2, C^3, and C^4, mounted upon the pivot-post C. The eyes C^2, C^3, and C^4 are placed at different elevations near the upper portion of the gate, and are adapted to engage the upper one of the eyes a', which are secured to the gate, and thus to support the gate at different elevations. In this manner the gate may be raised or lowered bodily, and by reason of the adjustable brace D the outer end of the gate may be raised and lowered independently of the pivot end of the gate. It is thus possible to adjust the height of the gate above the ground in accordance with the conditions at any particular time.

Pivoted on the swinging end of the gate by means of a bolt e' is the latch-bar E, which is restrained in its outward movements by means of a clevis or yoke e and is held outward by means of a spring E′. The latch-bar is adapted to engage a catch p upon a gate-post P and may be drawn back to free the gate by means of a cord or rope J, which is secured to the upper end of the bar and which passes through an eye J′, mounted on top of the pivot or supporting-post C. From thence the cord or rope may be led to any convenient point at which it is desired to free the gate. Posts P′ and P^2 will be mounted upon one or both sides of the gate and ranging in line with the pivot-post C. The rope J, after passing through the eye J′, will be divided and one portion J^2 thereof will extend to each of these posts when two posts are used, and through eyes J^3 on said posts. The posts P′ and P^2 may, one or both, be provided with a catch similar to the catch p and adapted to engage the latch-bar E, so as to hold the gate when it is swung open. In lieu of the posts P′ and P^2 a bar or bars may be supported from the pivot-post C and extend

upwardly at an angle, as shown in dotted lines by the single bar Q, Figs. 2 and 3. The trip-cord and opening-cord may be led through guides on these bars.

Mounted upon the pivot or supporting post C are one or more spring-arms, which are connected with the gate in such a manner as to promptly close the gate when it is released from engagement with one of the posts P′ or P². The springs consist of flat bars G², which extend laterally or substantially at right angles to the closed position of the gate. These bars are herein shown as extending toward both sides of the gate, and at their outer ends they are connected by means of eyes *g′* with one end of rods G′, the ends of which project within tubular guides G, which at their opposite ends are connected by eyes *g* with the gate intermediate its ends. When the gate is swung open, the spring-arm F is bent and acts upon the gate, so as to promptly close it as soon as it is released. The bars G² in the construction shown do not act upon the gate until the rods G′ have entered the tubular guides G a sufficient distance to bear upon the inner end of the guide.

To the pivot end of the gate are secured two arms H, which are bent laterally and then extend around or to one side of the post C until they extend beyond the gate-pivot, forming arms by which power may be applied to the gate to swing it. The outer ends of these arms terminate in eyes *h*, which are adapted to receive the ropes H′, by which the gate is opened. These ropes extend in opposite directions to the posts P′ and P² and pass through eyes I upon said posts at a convenient elevation, where they may be engaged by a person sitting in a wagon or carriage. By first pulling upon the rope J² the latch may be freed, and then by pulling upon the rope H′ the gate may be swung open, the gate swinging in a direction away from the person operating it. As the gate swings open to the post P′ or P², as the case may be, the latch E engages a catch upon said post and the gate is held open. After a person has passed or driven through the gate the rope J² may be given a pull sufficient to release the latch E and permit the springs to act upon the gate to close it. The catch for holding the gate open may be placed upon the pivot-post and be made to engage the arms H, if desired, as is shown in Figs. 2 and 3. Upon the back side of the post is pivoted a latch or hooked bar R, which is adapted to engage the bar or arm H when the gate is swung open, and thus to retain the gate until released. When this catch is used, the rope will run to this catch for the purpose of releasing it from a distance.

It is evident that the posts P′ and P², which support the ropes by which the gate is operated, may be located at any convenient point other than that illustrated in the drawings.

Upon the outer end of the gate is pivoted a lever K, by means of a bolt *k*, one end of this lever being restrained by a staple K³, which is mounted upon the latch-bar E. A rope K′ is attached to the other end of the lever and passes upward and over a pulley K², the other end of the rope being secured to the latch-bar E. By pressing upward upon the outer end of the lever K the latch E may be released, thus making it possible to open the gate with the foot if a person's arms are filled with bundles.

For economy one section of the gate-hinges may be made of a horseshoe C⁵, as indicated in Figs. 4 and 5. The horseshoe-sections are secured to the gate-post C, and hook-hangers C⁶ have swivel connection with the shoes and at their lower ends engage with staples C⁷, connected to the gate. When this form of hinge is used, the gate is designed to open in one direction only, and as a means for closing the gate I employ a coiled spring C⁸, attached at one end to the post C and at the other end to the gate on the side opposite to the direction in which it opens.

In lieu of the flat spring arms or bars F and G², which in cold climates are liable to break at a low temperature, I may substitute spring-steel wire, which will operate to the same end as the flat bars.

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

1. A gate provided with an arm extending laterally and rearwardly from its hinged end beyond its pivot-post, a pull-rope attached to the rear end of said arm, and a catch upon the pivot-post adapted to engage said arm to hold the gate when opened.

2. The combination with a gate and its pivot-post, of an arm extending laterally and rearwardly from its hinged end beyond the pivot-post, a catch on the pivot-post adapted to engage said arm to hold the gate open, and a pull-rope attached to the rear end of said arm and extending across to the opposite side of the gate, said rope running to the catch for the purpose of releasing said arm.

3. The combination with a gate, of a spring-arm supported adjacent to the gate-pivot and extending substantially at right angles to the closed position of the gate, a bar pivoted to the gate intermediate its ends, and a bar having a limited sliding connection therewith and pivoted to the outer end of the spring-arm, substantially as shown and described.

4. The combination with a gate, of a spring-arm supported adjacent to the gate-pivot and extending substantially at right angles to the closed position of the gate, a bar pivoted to the gate intermediate of its ends, a bar having a limited sliding connection therewith and pivoted to the outer end of the spring-arm, a catch adapted to hold the gate in its open position, and a rope for tripping said

catch from a distance, substantially as described.

5. The combination with a gate, of a spring-arm supported adjacent to the gate-pivot and extending substantially at right angles to the closed position of the gate, a tubular guide pivoted by one end to the gate intermediate its ends, a bar slidable in said guide and pivoted by its outer end to the spring-arm, a catch adapted to hold the gate in its open position, and a rope for tripping said catch from a distance, substantially as described.

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Witnesses:
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JOHN BELL.