

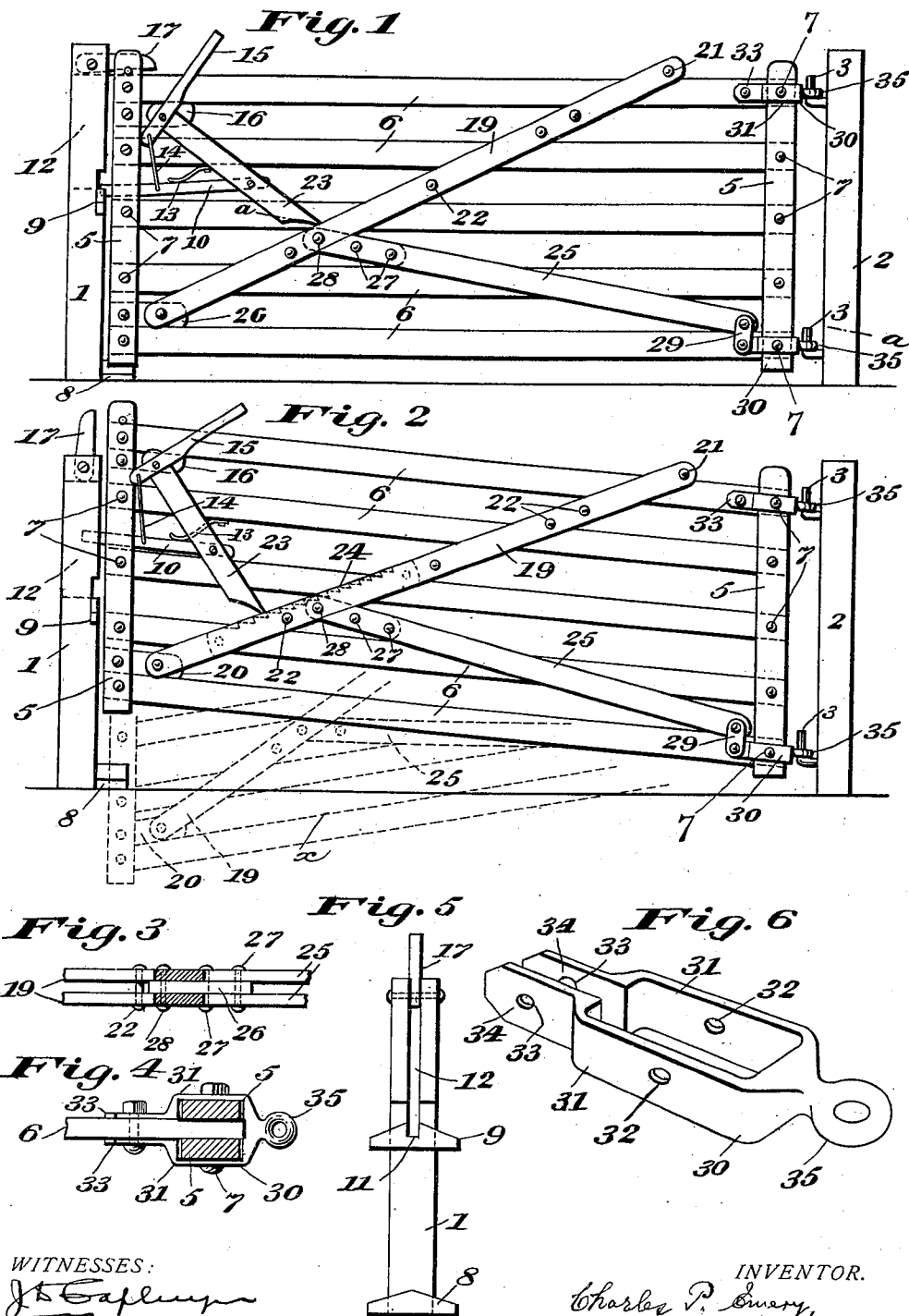
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C. P. EMERY.
FARM GATE.

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NO MODEL.



WITNESSES:

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FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 754,758, dated March 15, 1904.

Application filed February 13, 1903. Serial No. 143,182. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. EMERY, a citizen of the United States of America, and a resident of Madisonville, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Farm-Gates, of which the following is a specification.

This invention relates to certain improvements in gates, and especially in that class of farm-gates which are adapted to be adjusted in such a way that the rails thereof shall stand obliquely or at angles more or less acute with relation to the stiles of the gate, so as to permit of elevating the free side of the gate to permit the passage of small stock thereunder or of lowering or dropping said free side of the gate so that the same shall engage upon the ground in such a way as to anchor the gate in opened position; and the object of the invention is in part to provide a gate of this general character having improved means for bracing and holding the gate in adjusted position and in part to provide an improved hinge device of a simple and inexpensive nature and of a strong and durable structure which shall permit of more conveniently assembling the parts of the gate.

The invention consists in certain novel features of the construction, combination, and arrangement of the several parts of the improved gate whereby certain important advantages are attained and the device is made simpler, cheaper, and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate the invention, Figure 1 is an elevation showing the improved gate with its rails adjusted to extend horizontally and at right angles to its stiles; and Fig. 2 is a view similar to Fig. 1, but showing the swinging or latch end of the gate adjusted in raised position, the said swinging end of the gate being also shown in dotted lines as adjusted to a lowered position for anchoring the gate to hold it in opened position. Fig. 3 is a detached partial section taken through the bracing

means of the improved gate in the plane indicated by the line *a a* in Fig. 1. Fig. 4 is an enlarged sectional detail view showing the arrangement of one of the hinges applied to the improved gate. Fig. 5 is a view showing the latch-post for the improved gate and illustrating certain features to be hereinafter referred to, and Fig. 6 is an enlarged perspective view showing one of the hinge members for the improved gate detached.

As shown in the views, 1 indicates the gate-post bearing the latching devices, and 2 indicates the post to which the gate is hinged, said post 2 being provided with hinge members of a well-known kind, as shown at 3, having upturned hinge-pintles adapted to be engaged by hinge members carried on the gate itself, which latter is constructed with vertical bars or stiles 5 5 at opposite ends and with horizontal bars or rails 6 6 extended between said stiles. There are two stiles 5 5 at each end of the gate, and said stiles are spaced apart to receive between them the ends of the several rails 6, as shown in Fig. 4, bolts 7 being passed through the stiles and rails in such a way as to hold the ends of the rails for pivotal movement with relation to the stiles to permit the free or swinging end of the gate to be elevated or dropped with respect to the hinged end of the gate.

At its lower part or base the latch-post 1 for the gate is provided with an inclined shoe or cam 8, engages under the lower edge of the gate when the same is swung into closed position in such a way as to slightly raise the swinging or free end of the gate, and said post 1 is also provided with a latch-plate 9, the opposite inclined surfaces of which engage the free end of a latch-bar 10, pivotally held upon the gate. The latch-plate 9 has a central locking-recess 11, in which said latch-bar engages when the gate is closed, and alined with the said recess 11 and above the same is a slotted opening 12, produced in the post 1, as shown in Fig. 5, in which opening 12 the end of the latch-bar plays when the swinging or free end of the gate stands in elevated position, as shown in Fig. 2.

13 is a spring carried by the gate and adapted

for holding the free end of the latch-bar 10 in depressed position, and 14 indicates a link arranged for connecting the latch-bar with one end of a handle 15, pivoted upon a block 16, secured by a bolt between the stiles 5 at the free or swinging end of the gate and arranged immediately beneath the upper rail 6 of the gate, as shown in Figs. 1 and 2. This arrangement prevents splitting of the upper rail, which would be liable to occur were the pivot-pin for the handle 15 set in said upper rail in alignment with the pivotal bolt 7 at the end of said rail.

In the upper end of the slotted opening 12 in the post 1 is pivoted a locking-piece 17, which is adapted when the gate is in horizontal closed position to be thrown over, as shown in Fig. 1, so that its extremity shall engage between the upper ends of the stiles at that side or end of the gate, said stiles being extended sufficiently above the upper rail 6 of the gate to permit the piece 17 to be engaged between them, so as to hold the gate against being opened until after the piece 17 shall have been lifted to the position shown in Figs. 2 and 5.

19 indicates the main diagonal brace or tie-bar for the gate, this brace or tie-bar being formed of two strips or pieces extended diagonally across opposite sides of the rails 6 6, as shown in Figs. 1 and 2, and held together by bolts 22, passed through them and through the spaces intervening between the rails 6, and also by a bolt 21, passed through the upper ends of the strips above the upper rail 6 of the gate. The brace 19 has the lower ends of its strips pivotally held upon opposite sides of a block 20, arranged above the lower rail 6 at the free or swinging side of the gate, being pivotally secured thereto by means of a bolt or pin, as shown in the drawings. The arrangement of the block 20 is similar to that of the block 16 above referred to.

23 indicates a locking-brace formed of strips, the upper ends of which are pivotally held upon opposite sides of the upper block 16, preferably by means of the same bolt or pin by means of which the handle 15 is held to said block 16. The latch-bar 10 is also pivoted upon the brace 23, and the lower end of said brace is made pointed and is adapted for engagement upon the upper inclined surface of the main brace or tie-bar 19, which may be serrated, as shown at 24, or provided with a serrated casting or shoe to be engaged by the pointed end of the locking-brace, as indicated in dotted lines in Fig. 2.

25 indicates an auxiliary brace or tie-bar, also formed of strips extended along opposite sides of the rails 6 of the gate, said strips being spaced apart at one end by means of a block 26, held by bolts 27 between the strips, as shown in Figs. 1, 2, and 3, said strip being arranged to project between the strips of which the main brace or tie-bar 19 is formed

and being held thereto by means of a bolt 28. The opposite ends of the strips of the auxiliary brace or tie-bar are held pivotally by a bolt or pin to the upper ends of links 29, the lower ends of which are extended across opposite sides of the lower rail 6 at the hinged side or end of the gate and are pivotally held thereto, preferably by means of one of the bolts by which the lower hinge member 30 is held to said lower rail.

By this construction substantially a rigid connection is afforded between the main brace or tie-bar and the auxiliary brace or tie-bar, so that these parts are connected to move in unison, the connected main and auxiliary braces or tie-bars being pivotally held to the block 20 at the free or swinging side or end of the gate and being movably connected by the links 29 with the opposite or hinged side or end of the gate, so as to permit of a certain extent of adjustment of the said connected braces or tie-bars. By this arrangement when the connected braces are moved in one direction from the horizontal, as to the position shown in full lines in Fig. 2, the free or swinging end of the gate will be elevated, so as to provide a space beneath the said free end through which small stock may pass, and when the connected braces are adjusted in an opposite direction, as indicated in dotted lines at *x* in Fig. 2, the free or swinging end of the gate will be depressed, so that it may be dropped upon the ground to permit the gate to be anchored in opened position.

When the connected braces 19 and 25 are moved to adjusted position, the locking-brace 23 will travel along the upper surface of the main brace or tie-bar 19, and by the engagement of its pointed end with said main brace, the connected braces will be held in their adjusted position until said locking-brace 23 be lifted to permit further adjustment of the connected main and auxiliary braces.

The auxiliary brace or tie-bar 25 affords an effective reinforcing or strengthening means for the main brace or tie-bar 19 and serves to maintain the same in adjusted position against the strains exerted thereon by the locking-brace. The auxiliary brace or tie-bar at the same time interferes in no way with the accurate adjustment of the gate to secure any desired degree of elevation or depression of its free or swinging end or side.

The hinge members 30, formed according to my invention, are especially well adapted for use upon farm-gates, being formed from cast metal in the contour indicated in Figs. 4 and 6, with side portions 31 31 sufficiently spaced apart to take outside of the stiles 5 5 at opposite sides of the hinged end of the gate, said side portions 31 being connected by an integral part which is extended across the hinged edge of the gate and has a horizontally-extended rounded eye or loop 35 perforated for the passage of the hinge-pintle of the

member 3 on the post 2. The extremities 34 of the side portions 31 of the member 30 are arranged more closely adjacent to each other than those parts of the side portions which take against the stiles 5 5, and said more closely adjacent extremities 34 34 are adapted to take against the opposite sides of the upper and lower rails 6 of the gate beyond the stiles 5, as shown in the drawings, in such a way as to permit of dispensing with the use of spacing-blocks between said extremities and the rails while permitting the side portions of the hinge members to take outside of the stiles to strengthen the same and prevent them from splitting. The hinge members 30 are held to the gate by the pivotal bolts 7 7 of the upper and lower rails 6, which are passed through openings 32 32 in the side portions 31, and the adjacent extremities 34 are also perforated, as shown at 33, for the passage of bolts for holding them to the rails 6 of the gate, the links 29 being held to the gate by the bolts which are passed through the openings 33 of the lower hinge member.

This construction of the hinge members 30 affords great strength and durability to the gate and permits of considerably lessening the cost of the gate and also the labor required in assembling the several parts thereof, and the eyes or loops 35 of said members being made rounded in cross-section permit the pivotal movement of the rails of the gate to be conveniently effected.

The improved gate constructed according to my invention is of an extremely simple and inexpensive nature and is especially well adapted for use both by reason of its great strength and durability and also by reason of the ease with which the pivotal adjustment of the rails may be effected, and it will also be obvious from the above description that the improved gate is capable of considerable modification without material departure from the principles and spirit of the invention, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the several parts of the device herein set forth.

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

1. The combination of a gate comprising stiles and rails pivoted at their ends to the

stiles, blocks held to the stiles at top and bottom of one end of the gate, connected braces extended diagonally across the rails of the gate, one brace being pivotally connected with one of said blocks and the other brace having pivotal connection with the other end of the gate and a locking-brace also having pivotal connection with the other of said blocks and having engagement with the connected braces for locking the same in adjusted position.

2. The combination of a gate comprising stiles and rails pivoted at their ends to said stiles, connected braces extended diagonally across the rails, one of said connected braces having pivotal connection with the gate and the other of said connected braces being swingingly connected with the gate, and a locking-brace pivotally connected with the gate and adapted for engagement with the connected braces to lock the same in adjusted position, substantially as set forth.

3. The combination of a gate comprising stiles and rails pivoted at their ends to said stiles, connected braces extended diagonally across the rails, one of said connected braces having pivotal connection with the gate, links for connecting the end of the other brace for pivotal and swinging movement with relation to the gate and a locking device carried on the gate and engaged with the connected braces for holding the same in adjusted position, substantially as set forth.

4. The combination of a gate comprising stiles and rails pivoted to said stiles, a main brace extended diagonally across the rails and held for sliding movement across the same, a locking-brace having an end adapted for engagement with the main brace for locking the same in adjusted position and blocks secured to the stiles at the free or swinging end of the gate and below and above the respective upper and lower rails of the gate, the lower end of the main brace having pivotal connection with the lower block and the upper end of the locking-brace having pivotal connection with the upper block, substantially as set forth.

Signed at Cincinnati, Ohio, this 2d day of February, 1903.

CHARLES P. EMERY.

Witnesses:

E. W. TOWNSLEY,
JOHN ELIAS JONES.