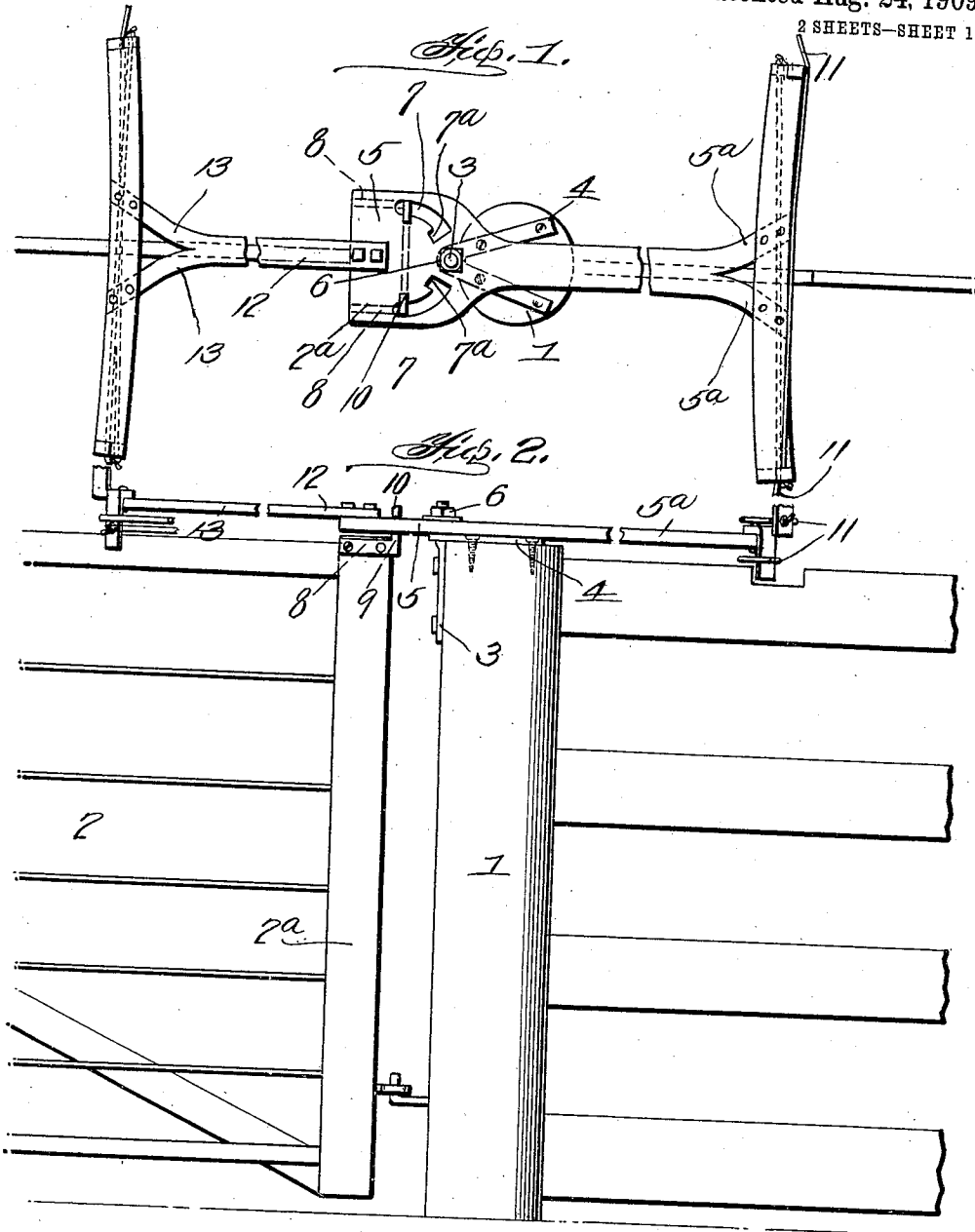


M. A. STICKLEY.
GATE HINGE.
APPLICATION FILED MAR. 19, 1909.

932,347.

Patented Aug. 24, 1909.
2 SHEETS—SHEET 1.



Witnesses
Oliver H. Holmes
H. M. Brooks.

By



Inventor

M. A. Stickley,
Beiler & Cobb

Attorney

M. A. STICKLEY.

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2 SHEETS—SHEET 2.

Fig. 5.

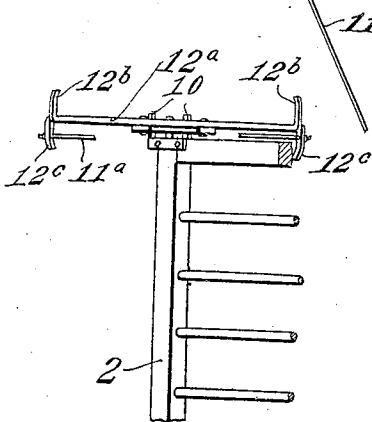
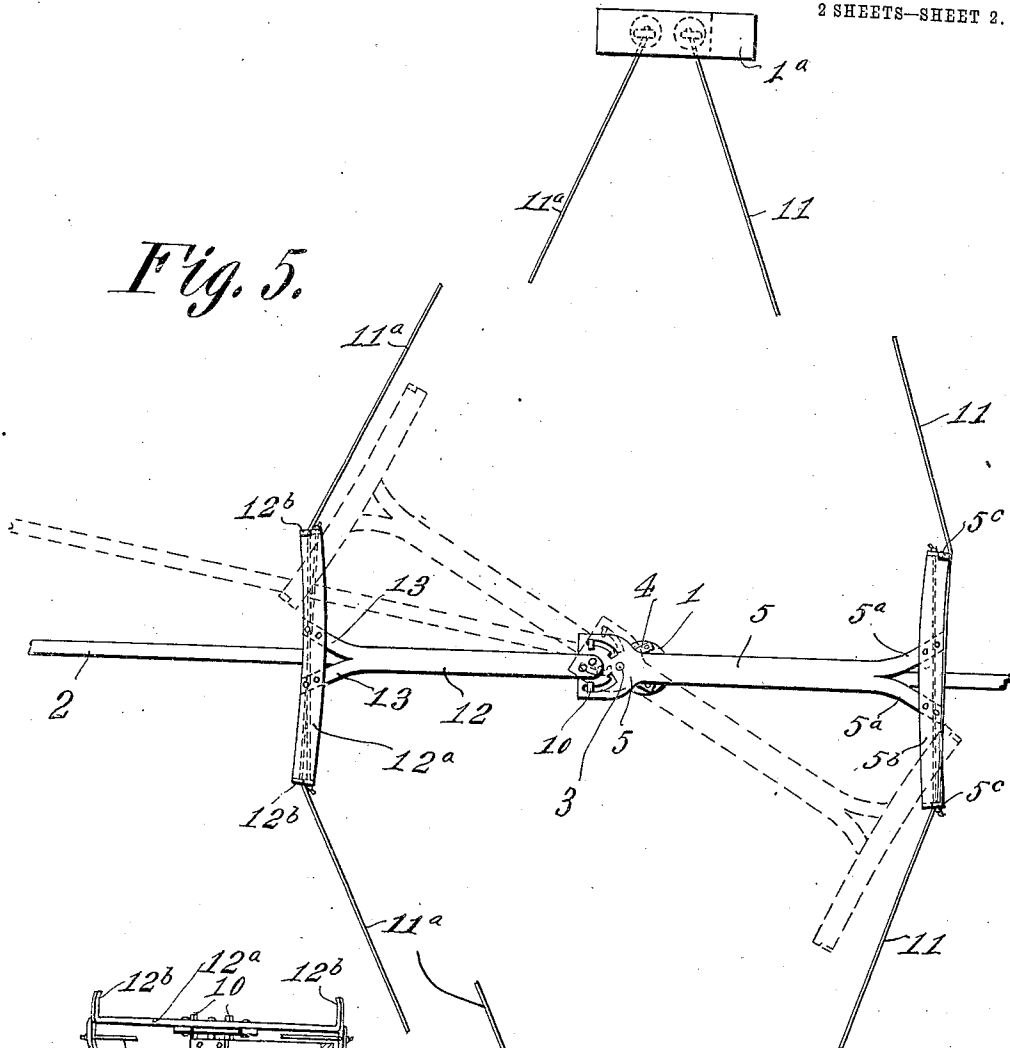


Fig. 6.

Witnesses

E. Larson
N. G. Keim.

Inventor

M. A. Stickley

By

Charles F. Robb

Attorney

UNITED STATES PATENT OFFICE.

MARCUS ALLEN STICKLEY, OF PINE FLATS, PENNSYLVANIA.

GATE-HINGE.

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Specification of Letters Patent.

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Application filed March 19, 1909. Serial No. 484,554.

To all whom it may concern:

Be it known that I, MARCUS ALLEN STICKLEY, a citizen of the United States, residing at Pine Flats, in the county of Indiana and State of Pennsylvania, have invented certain new and useful Improvements in Gate-Hinges, of which the following is a specification.

The object of this invention is to provide improved means for hinging and operating farm gates.

The invention consists especially in the specific structure of the parts by which the gate is hinged to the ordinary post of a fence.

The invention is of that type in which the upper end of the gate, at the hinged portion thereof, is adapted to be tilted laterally with respect to the lower pivotal or hinge supporting member, whereby to open or close the gate by shifting the center of gravity.

For a full understanding of the invention, reference is to be had to the following detail description and to the accompanying drawings, in which—

Figure 1 is a top plan view showing the several parts of the invention arranged in proper relation to the gate and gate post; Fig. 2 is a side elevation of the invention; Fig. 3 is a detail perspective view of the bracket member having the pins which interlock with the shifting plate, Fig. 4 is a detail view bringing out more clearly the parts of the pivotal support which is attached to the upper end of the gate post; Fig. 5 is a top plan view bringing out more clearly the arrangement of the shifting plate, the auxiliary shifting plate, the manner of connecting the operating ropes or devices, and showing in dotted lines the coöperation of the auxiliary shifting plate with the gate, and Fig. 6 is a fragmentary view looking toward the auxiliary shifting plate from an end thereof and showing clearly the formation of the lugs on the transverse member applied to said plate.

Throughout the following detail description and on the several figures of the drawings similar parts are referred to by like reference characters.

Referring particularly to the drawings the numeral 1 denotes an ordinary fence post in this instance said post being the supporting post upon which the gate 2 is hung. Secured to the outer side of the gate post 1 at its upper end is a pivot plate 3 which is held rigidly in position by means of a V-shaped brace or connecting plate 4, the latter being secured

to the top of the post 1. To the pivot plate 3 is pivoted what is commonly called in this class of devices a shifting plate 5. The shifting plate 5 is provided with an opening forming a bearing receiving the upper end of the plate 3 and a nut 6 may be applied to the upper extremity of the part 3 to prevent displacement of the plate 5 in an evident manner. Adjacent to the pivot opening of the plate 5 are located a pair of arcuately shaped openings or slots 7. The slots 7 have lateral recessed portions 7^a communicating therewith at the inner ends thereof as shown most clearly in Fig. 1 of the drawings. Secured to the upper end of the hinged ends of the gate 2 is a bracket 8 and this bracket has projecting upwardly therefrom pins 9 as shown in Fig. 3. The pins 9 are adapted to project through the slot 7 of the shifting plate 5 and the said pins have lateral projections 10 to prevent the pins from being accidentally displaced from the slots 7 of said plate 5, in the operation of the mechanism. In other words the projections 10 of the pins 9 afford interlocking means positively connecting the hinged end of the gate with the shifting plate 5. The bracket 8 consists of side portions which embrace the opposite sides of the upper end of the gate post 2^a and suitable fastenings are employed to secure the bracket in proper position.

The outer end of the shifting plate 5 is bifurcated so as to form divergent arms 5^a and operating cords 11 are connected with the arm 5^a in a peculiar manner. In a similar way, a plate 12 is secured to the end of the shifting plate 5 adjacent to the gate 2 and this plate is formed with diverging extensions 13 with which are connected other cords 11^a.

It may be noted that the invention is operated by pulling upon the cords 11 according to which side of the gate the operator may be on. By pivotal movement of the plate 5 it will be seen that the pins 9 moving in the slots 7 may be caused to tilt the upper hinged end portions of the gate so as to change its center of gravity and thus cause the gate to open in the desired direction.

The present invention is possessed of many advantages especially from the standpoint of simplicity, and furthermore, having in view the fact that it is highly desirable to provide a mechanism of this type which may be sold separately to farmers or other persons having gates to be operated on the plan sug-

gested, and who can readily apply the hinged connection to the construction of gate and posts which are already in use.

Regarding the peculiar manner of connecting the operating ropes or devices 11 with the plate 5 it will be noted that secured to the divergent arms 5^a is a transverse member 5^b in the form of a plate, the opposite extremities of said member 5^b being bent or otherwise formed to provide upwardly and downwardly extending lugs 5^c. The operating ropes 11 are directly connected at the ends thereof with the lowermost lugs 5^c. In a somewhat similar manner the plate 12, which constitutes an auxiliary shifting plate is provided with a transverse member 12^a mounted in a manner similar to the mounting of the plate 5^b, and carried by the extensions 13 of the plate 12. The member 12^a has upwardly extending lugs 12^b and downwardly extending lugs 12^c. The operating ropes 11^a are connected with certain of the lugs on the member 12^a and the lugs 12^c of the plate or member 12^a perform a peculiar function. Said lugs 12^c are so arranged that in the operation of opening the gate, as for instance by pulling down one of the cords 11, as shown in dotted lines in Fig. 5 when the plate 5 has been shifted so as to open the gate, at a certain point in the movement of said plate, one of the lugs 12^c will engage the top panel of the gate and assist in positively swinging the gate into its open position. The coöperation of the lugs 12^c with the top panel of the gate is advantageous in that too much strain is not brought to bear on the hinged parts, which strain would tend to loosen them.

The purpose in providing the auxiliary operating ropes 11^a is to enable a person to open the gate toward the side thereof on which he stands. Under certain conditions the gate may be so mounted that it may swing only in one direction in which event it is desirable that the auxiliary ropes 11^a be provided for the reason that the main operating rope 11 on which the operator would ordinarily pull will necessarily open the gate in a direction away from the operator, for obvious reasons. It is contemplated to provide at opposite sides of the gate post 1 suitable latch posts 1^a with which the operating cords 11 and 11^a would be connected and provided with suitable operating handles. For an effective operation of the gate under certain conditions it will be apparent that the auxiliary shifting plate 12 may be dispensed

with. It would not be used for gates that would swing in either direction.

Having thus described the invention, what is claimed as new is:

1. In combination with a supporting post, a gate, a pivotal connection between the lower portion of the gate at one end thereof and the supporting post, a shifting plate pivoted between its ends to the upper end of the supporting post and having arms for connection of operating cords, a bracket secured to the upper end of the hinged end of the gate and provided with upwardly projecting spaced pins having lateral projections at their upper ends, the shifting plate having arcuately shaped slots receiving said pins and interlocking therewith by means of the projections, and means for shifting the shifting plate to change the center of gravity of the hinged end of the gate.

2. A hinge connection for gates comprising a pivot plate, a brace plate having an opening through which the upper end of the pivot plate passes, a shifting plate pivoted between its ends to the pivot plate and having operating arms projecting from one end thereof, the other end of the shifting plate being formed with arc-shaped slots provided with lateral recesses at adjacent ends thereof, and a bracket for attachment to the hinged end of a gate and having pins projecting upwardly therefrom through the slots of the shifting plate and formed with lateral projections engaging over the shifting plate to interlock therewith.

3. In combination, a supporting post, a gate, a pivotal connection between the lower end portion of the gate and the post, a shifting plate pivotal between its ends to the post and having spaced arc-shaped slots in one end portion thereof, operating devices connected with the other end of the shifting plate, spaced pins projecting upwardly from the gate into the arc-shaped slots of the shifting plate, and an auxiliary plate secured to the shifting plate and having downwardly extending members adapted to engage the top panel of the gate when the pins on the gate engage certain ends of the arc-shaped slots on movement of the shifting plate.

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

MARCUS ALLEN STICKLEY.

Witnesses:

W. A. EVANS,
W. F. NEELEY.