

G. I. KENDRICK & J. CARROLL.

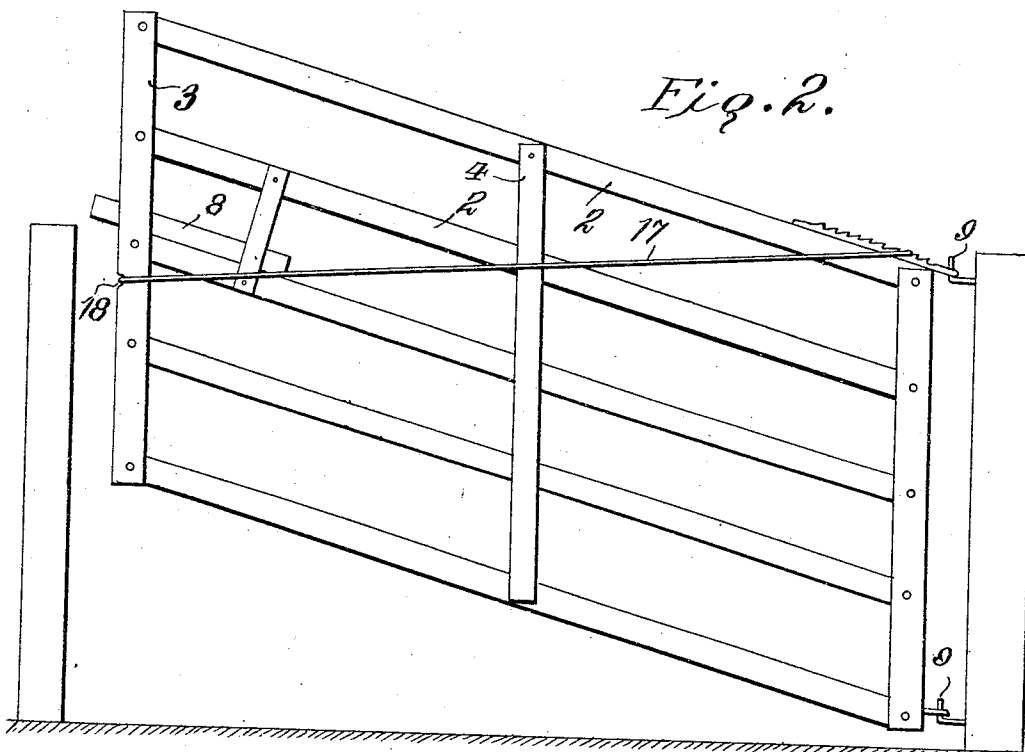
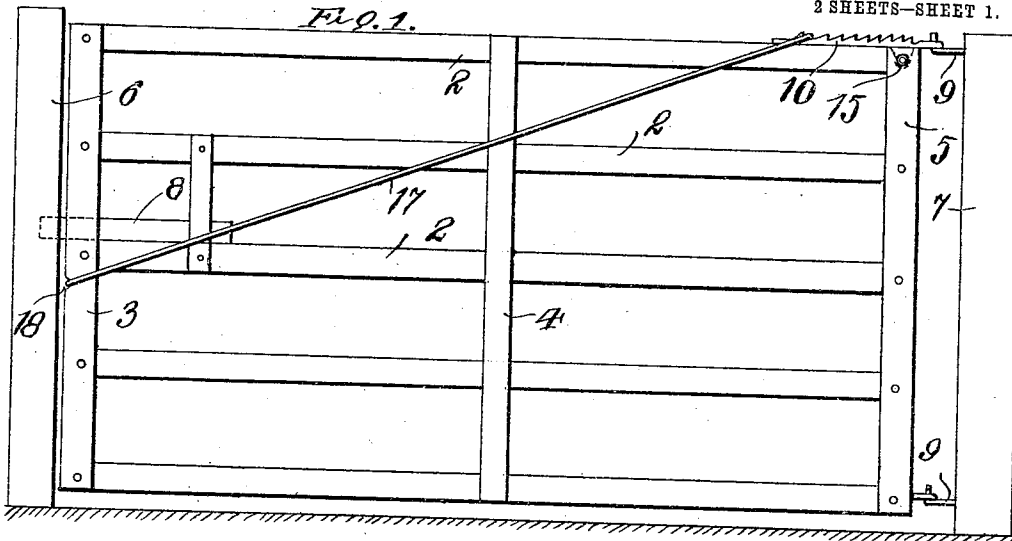
GATE HINGE STRUCTURE.

APPLICATION FILED MAR. 25, 1909.

939,706.

Patented Nov. 9, 1909.

2 SHEETS—SHEET 1.



Witnesses
W. H. Woodson,
J. M. Fallon

George I. Kendrick and
James Carroll

By

W. H. Macy, Attorneys.

G. I. KENDRICK & J. CARROLL.

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2 SHEETS—SHEET 2.

Fig. 3.

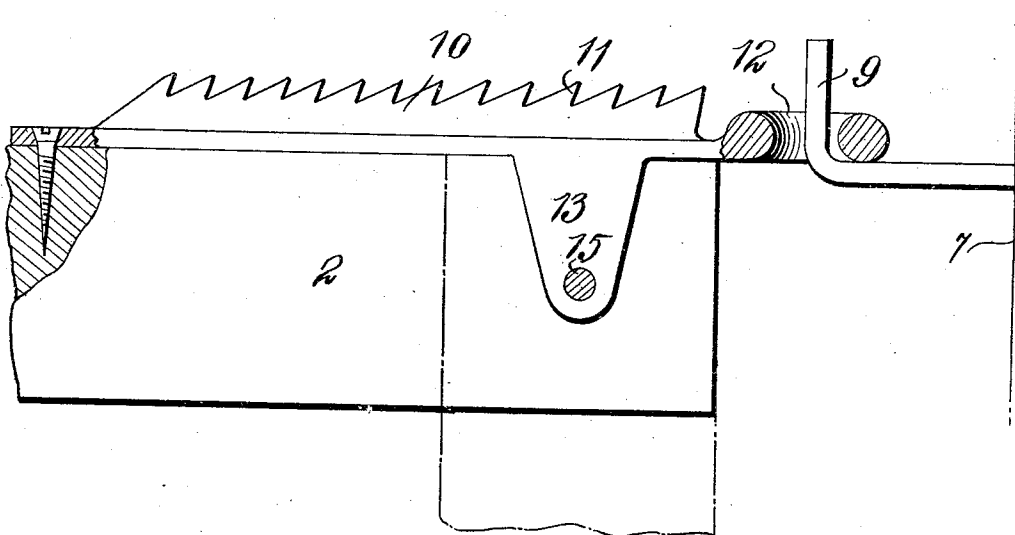


Fig. 4.

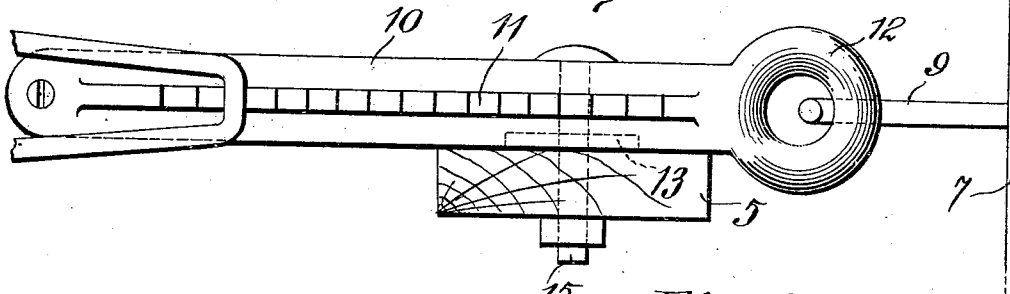
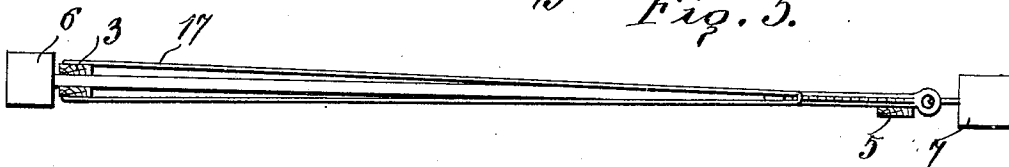


Fig. 5.



Witnesses
W. T. Woodson.
J. M. Galvin

Inventor
George I. Kendrick
James Carroll and

334

W. M. Macy Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE I. KENDRICK AND JAMES CARROLL, OF PITTSFIELD, ILLINOIS.

GATE-HINGE STRUCTURE.

939,706.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed March 25, 1909. Serial No. 485,757.

To all whom it may concern:

Be it known that we, GEORGE I. KENDRICK and JAMES CARROLL, citizens of the United States, residing at Pittsfield, in the county of Pike and State of Illinois, have invented certain new and useful Improvements in Gate-Hinge Structures, of which the following is a specification.

Our invention relates to gates, and particularly to that variety of gate wherein the frame of the gate is formed of members pivoted to each other so that the free end of the gate may be moved up or down, and sagging of the gate may be prevented or taken up.

The object of our invention is to improve gates of this character by providing an upper hinge plate for the rear end thereof, which forms at once a hinge upon which the gate is supported from the gate post, and a ratchet plate over which a tension rod or wire engages. This plate is provided with a plurality of ratchets, whereby a take-up wire or tension rod may be engaged, thereby elevating the forward end of the gate to any degree desired, and thus providing a gate whose forward end may be easily raised to clear an obstruction; may be held in a raised position to allow small stock to pass under, or to pass over snow drifts and which may be adjusted to compensate for any sag of the forward end of the gate.

In the drawing, we have shown our invention as applied to the simplest form of gate, but it will of course be obvious that we do not wish to limit ourselves to this application, this form of gate being merely shown for illustrative purposes.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a side view of the gate in its normal position; Fig. 2 is a side view of the gate with its forward end raised; Fig. 3 is a detail enlarged elevation of the rear end of the upper bar of the gate and the hinge attached; and, Fig. 4 is a top view of the same. Fig. 5 is a top view of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

The gate illustrated in the drawing, com-

prises a series of longitudinal bars 2 which are pivoted at their forward ends to a vertical bar 3, at their middles to a vertical bar 4, and at their rear ends to a vertical bar 5. The pivoting of these members to each other may be accomplished by the use of bolts, if desired, or any other suitable means to the end. 6 designates the front gate post, and 7 the rear or hinge gate post of any usual construction. A latch 8 is adapted to connect the gate to the front gate post. The hinge post 7 is provided with outwardly and upwardly projecting pintle pins 9, as usual in constructions of this character.

Our specific invention resides in the plate 10 which is shown in detail in Figs. 3 and 4. This plate is adapted to rest upon and be attached to the upper edge of the uppermost of the bars 2 at the rear end thereof. The upper face of the plate is provided with the rearwardly extending ratchet teeth 11, and the rear extremity of the plate is formed into an eye 12 having rounded interior edges which fit loosely over and rotate upon the upwardly turned end of the pintle 9. The side of the plate 10 is provided with the downwardly projecting ear 13 having the opening through which a pivotal bolt 15 passes. This plate 13 fits down on the inside face of the beam or bar 2 and is held in place by the vertical bar 5 and the bolt 15, as before stated. 17 designates a loop of wire or a tension rod preferably in loop form which is connected in any suitable manner to the front bar 3, preferably at or about its middle, as shown in the drawing. This tension loop 17 is connected to the bar 3 in any desired manner, the simplest being by means of a notch 18 in the bar 3. The tension rod or loop 17 is of sufficient extent to extend from the front bar 3 to the ratchet teeth 11 of the plate 10 and to engage with any of these ratchet teeth, depending upon the extent of elevation of the forward end of the gate. Thus, when the gate is in its normal position shown in Fig. 1, the tension loop or bar 17 will engage with the forward tooth of the series of ratchet teeth, and the gate in this position will be horizontal. When, however, it is desired to elevate the free end of the gate, it is lifted, and the tension rod is thus over one of the rear teeth. It will be obvious that the movement of elevation of the free end of the gate will depend upon the tooth to which the tension

loop 17 is connected, and the greatest movement of front lift will be secured by engaging the loop with the rearmost tooth of the series.

5 The general advantage of our invention is of course that it permits the gate to be elevated to any distance required in order to allow it to pass over obstacles and to take up any sagging of the gate. Also of course, 10 when the loop 17 is disengaged from the free end of the ratchet, the free end of the gate may also rest upon the ground, thus taking up any strain upon the gate, as for instance, when the gate is fully opened and 15 it is desired to have it remain open. The specific advantage incident to our peculiar form of hinge and ratchet lies in the fact that the strain upon the tension rod 17 does not come against the frame of the gate, 20 which would tend thus to strain the gate, but against the pintle 9 where it belongs. Thus the pull of the tension members 17 is brought directly to the hinge where it should be; second, that the gate weight on 25 the hinge by combining the plate and the hinge 3 and placing the front end of the tension loop brace 17 at or near the center of the free end of the gate, acts as an equalizer, that is, it braces the gate equally as well 30 when the front end of the gate is three or four feet from the ground, as when it is only two inches from the ground. It will also be seen that with our device there is no strain upon the top part of the gate, and 35 thus there is no tendency for the gate to be racked apart under strain and to sag unduly. While we have shown a wire loop as the tension brace, we do not wish to be limited to this, as it is obvious that this 40 particular might be changed without departing from the spirit of the invention which consists in making the hinge and latch in one, so that the pull of the brace will be

taken up by the hinge and by the pintle thereof.

Having thus described the invention, what is claimed as new is:— 45

1. In a gate, opposed horizontal members pivotally connected by vertical members, a gate post having upwardly projecting pintles, a ratchet plate attached to the rear end of one of said horizontal members, said ratchet plate having teeth upon its upper face and having an eye at its rear end adapted to engage with said pintle, and a tension brace engaging the free end of the gate and extending rearward and engaging with the ratchet teeth of said plate. 50 55

2. A gate having at its rear end a ratchet plate, said plate having teeth on its upper face and being provided at its rear end with an eye, a tension brace engaging the free end of the gate and adapted to extend back over and engage with one of said teeth, and a pintle having an upwardly turned end with which said eye on the ratchet plate engages to pivotally support the gate. 60 65

3. In a gate, the combination with a series of vertical and horizontal gate sections pivoted to each other, and a gate post having pintles thereon, of a horizontal plate attached to the rear end of one of said horizontal sections, said plate having at its rear end means for engaging said pintle and being provided with upwardly projecting ratchet teeth, and a tension brace attached at its forward end to the free edge of the gate and at its rear end extending over said ratchet teeth. 70 75

In testimony whereof we affix our signatures in presence of two witnesses. 80

GEORGE I. KENDRICK. [L. S.]

JAMES CARROLL. [L. S.]

Witnesses:

JAMES H. CRANE,

GEORGE C. WEAVER.