

No. 635,044.

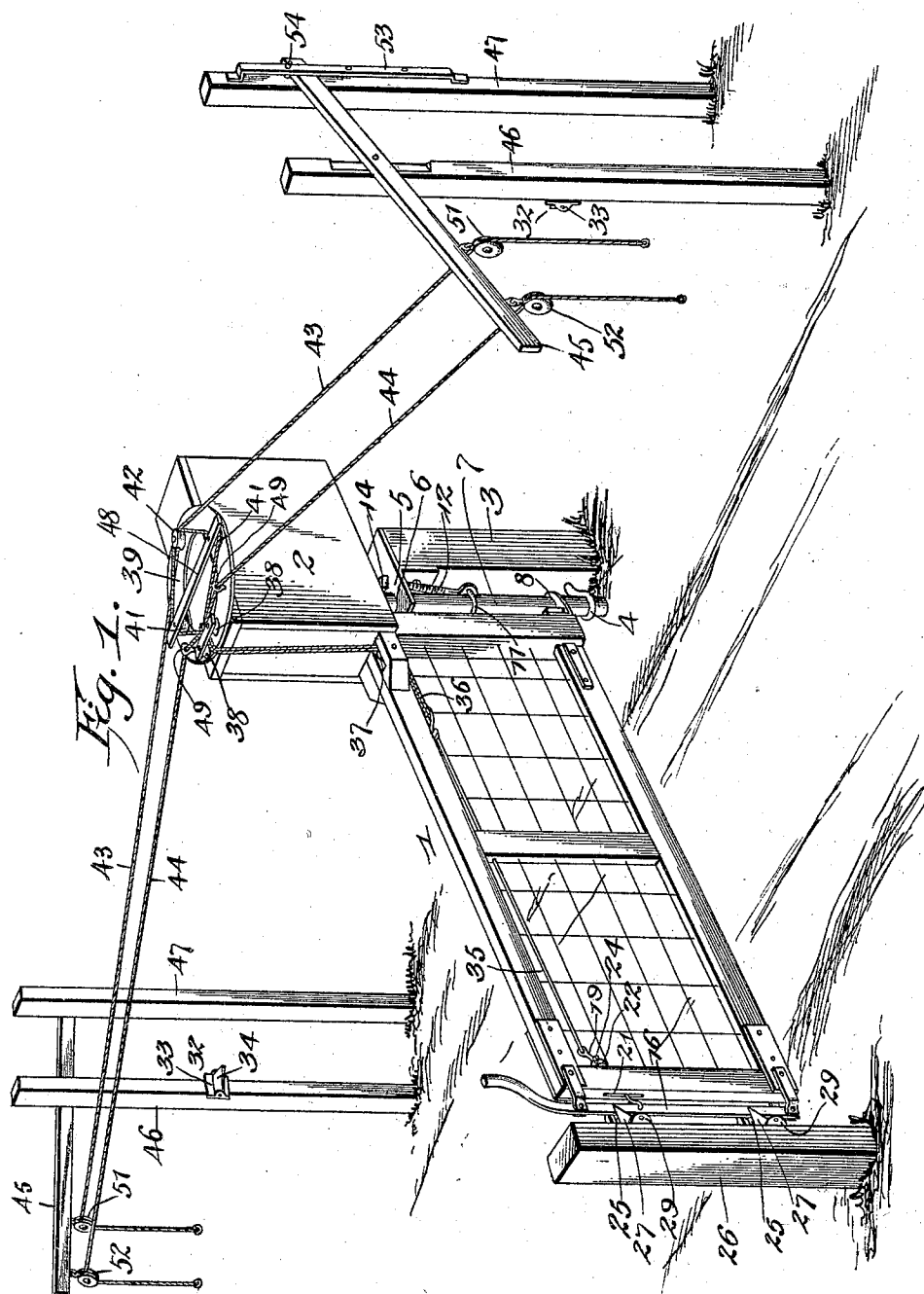
E. E. HANKEN.
GATE.

Patented Oct. 17, 1899.

(No Model.)

(Application filed Apr. 11, 1899.)

2 Sheets—Sheet 1.



Witnesses:-

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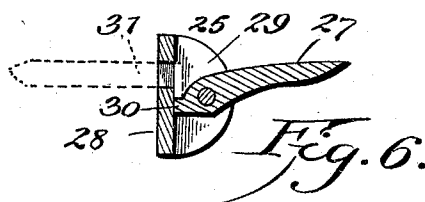
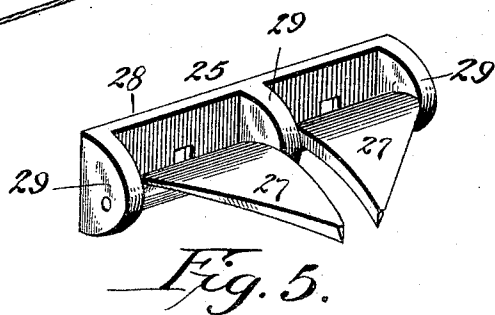
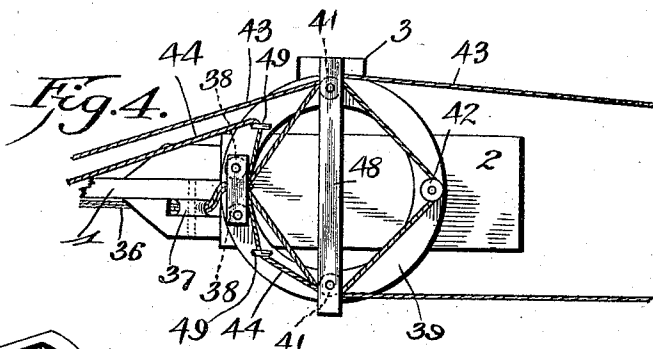
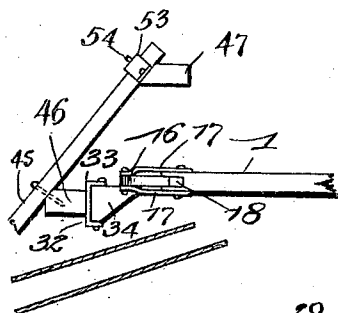
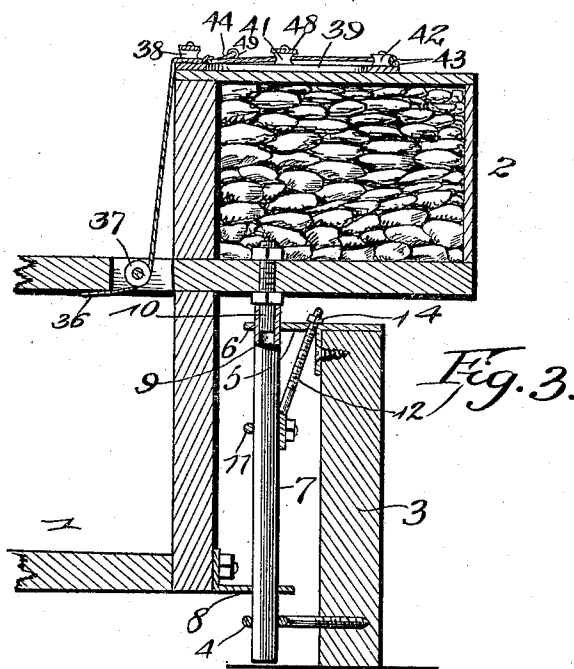
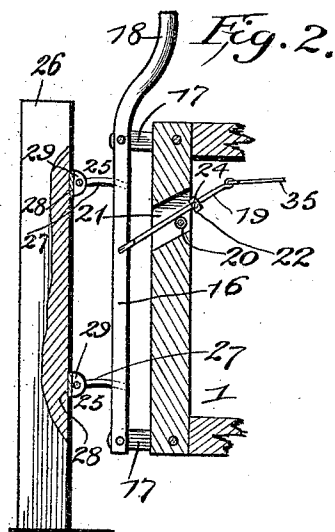
E. E. HANKEN.

GATE.

(Application filed Apr. 11, 1899.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

EDWARD E. HANKEN, OF WAGGONER, ILLINOIS.

GATE.

SPECIFICATION forming part of Letters Patent No. 635,044, dated October 17, 1899.

Application filed April 11, 1899. Serial No. 712,647. (No model.)

To all whom it may concern:

Be it known that I, EDWARD E. HANKEN, a citizen of the United States, residing at Waggoner, in the county of Montgomery and State of Illinois, have invented a new and useful Gate, of which the following is a specification.

The invention relates to improvements in gates.

The object of the present invention is to improve the construction of swinging gates and to provide a simple and comparatively inexpensive one adapted to be readily opened and closed at a distance from either side of it and capable of being readily adjusted vertically to enable it to clear snow and other obstructions.

A further object of the invention is to balance the gate so that it will not sag or pull the hinge-post forward and to counteract the effect of the wind, so that the latter will not interfere with the opening and closing of the gate.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a gate constructed in accordance with this invention and shown closed. Figs. 2 and 3 are vertical sectional views of the front and rear portions thereof. Fig. 4 is a plan view of the rear portion of the gate, illustrating the arrangement of the operating cords or ropes when the gate is open. Fig. 5 is an enlarged detail perspective view of one of the keepers of the main latch-post. Fig. 6 is a sectional view of the same.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a swinging gate provided at its top with a rearwardly-extending weight-receptacle 2, arranged over a hinge-post 3 and adapted to counterbalance the gate and also to serve as a wind-board, so as to counteract the effect of the wind on the gate and thereby prevent the latter from being obstructed in its opening and closing movements by heavy winds. The hinge-post is provided with a lower eye 4, and it has a bracket 5 arranged at its top and provided

with an eye or opening 6, located above the eye 4 and receiving a pintle-rod 7. The pintle-rod 7, which is also arranged in the lower eye 4, passes through a bottom eye 8 of the gate, and it is provided at its top with a socket 9, receiving a depending pivot 10 and adapted to contain a sufficient amount of oil for lubricating the same. The pivot depends from the weight-receptacle and is provided with a suitable shoulder for engaging the lower face of the same.

Secured to the pintle-rod by a clip 11 is a rod 12, which extends through a perforation of the bracket, and this rod, which is threaded for the reception of a nut 14, is adapted to enable the pintle-rod to be raised and lowered and secured at the desired adjustment. By raising and lowering the pintle-rod the gate is elevated and depressed, and it can be readily arranged to clear snow and other obstructions.

The gate is provided at its front end with a vertically-disposed latch-bar 16, connected with the top and bottom of the gate by links 17, arranged in pairs, as shown, and the upper end of the latch-bar is extended to form a handle 18, which is adapted to be readily grasped by persons on foot. The latch-bar is connected to the lower end of an inclined rod 19, extending through a slot of the front end bar of the gate and passing over a pulley 20, which is arranged within the slot 21. A collar 22 is arranged on the upper portion of the rod and is secured to the same by a set-screw 24, and this collar, which is adapted to engage the inner edge of the front end bar of the gate, is capable of adjustment on the rod to shorten the front portion thereof, and thereby limit the outward movement of the latch-bar.

The latch-bar engages upper and lower keepers 25 of a latch-post 26, a pair of keepers being preferably provided to prevent the latch-bar from twisting out of engagement with the latch-post. Each keeper is composed of a pair of pivoted sections or plates 27 and a supporting plate or frame 28, provided with ears 29, arranged at its center and at its ends to receive the pintles of the plates 27. The plates 27, which are substantially triangular, are beveled or undercut at their outer angularly-disposed edges, and they are provided

with flanges or extensions 30, arranged to engage beneath the heads of the fastening devices 31, whereby the pivoted plates or sections 27 are supported in a horizontal position. When the gate is open, the latch-bar engages a supplemental keeper 32, consisting of a plate or frame 33 and a pivoted section 34 similar to those before described.

When the gate closes, it strikes the inclined or beveled edge of one of the sections or plates 27, and such plate or section is moved upward to permit the latch-bar to pass, and it falls by gravity behind the latch-bar and confines it in the space or opening between the inner parallel edges of the plates or sections 27. The latch-bar after raising and passing one of the sections 27 is stopped by the straight inner edge of the other plate or section. When the gate is opened, the plates or sections 27 of the keeper remain down, the latch-bar being drawn inward to clear them by the means hereinafter described.

The inclined rod 19 is connected by a wire 35 with a central latch cord or rope 36, which passes over a pulley 37 of the gate and extends vertically therefrom to the top of the weight-receptacle. The pulley 37 is mounted in a slot or opening of the top of the gate, and the latch cord or rope has its upper end arranged between a pair of pulleys 38 of a supporting-frame 39, mounted upon the weight-receptacle.

The supporting-frame 39, which is substantially circular, is provided at opposite sides with pulleys 41, and it has a pulley 42 at its back. The operating-ropes 43 and 44 are arranged in pairs and extend from the gate in opposite directions to supporting-bars 45, which are mounted on uprights 46 and 47, arranged in pairs, as shown. The pulleys 41 are supported by a transverse bar 48, which connects their pintles. The operating-ropes 43, which open the gate, extend from the latch-rope and pass around the outer sides of the pulleys 41 and cross at the rear pulley 42 and then extend to the supporting-bars 45. By pulling on either of the operating cords or ropes 43, the frame 39 will be rotated and the gate will be swung on its hinges. After passing through the gate the other operating-rope 44 is pulled to return the gate to its closed position, and the gate may in this manner be opened and closed by the ropes 43. The ropes or cords 44, which extend directly from the supporting-bars through eyes 49 to the latch-rope, are provided to enable the gate to be opened and closed from the same side without passing through the gateway. The eyes 49, which are arranged at opposite sides of the frame 39, are located at points between the side pulleys and the front pulleys.

The supporting-bars 45 are provided at their outer ends with pulleys 51 and 52, through which the operating-ropes pass, and each supporting-bar is fulcrumed between its ends on the upright 46, and its inner end is arranged in a vertical guide or keeper 53 of

the upright 47. The guide or keeper is provided at intervals with perforations, and the supporting-bar is secured at any desired adjustment by a pin 54 or other suitable fastening device arranged in one of the said perforations and engaging the upper edge of the supporting-bar. The uprights 46, which are located at opposite sides of the gate, form supplemental latch-posts and are provided with the said supplemental keepers.

The invention has the following advantages: The gate, which is simple and comparatively inexpensive in construction, is positive and reliable in operation, and it is adapted to be readily opened and closed at a distance from it. It may be opened in either direction, and its perfect balance insures ease of operation and at the same time prevents sagging. The weight-receptacle, besides counterbalancing the gate, serves as a wind-board and counteracts the effect of the wind, which does not interfere with the operation of the gate. The gate can be readily raised and lowered to clear snow and other obstructions, and the pintle-rod forms an oil-cup for the upper pivot of the gate.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. The combination of a post or support, a tubular pintle-rod mounted on the post and located in advance of the same and capable of vertical adjustment, and a swinging gate connected at its bottom with the lower portion of the pintle-rod and provided at its top with a depending pivot fitting in the upper end of the pintle-rod, substantially as described.

2. The combination of a post having a bracket, a vertically-movable pintle-rod mounted in the bracket, a gate supported by the pintle-rod, and an adjustable rod connected with the pintle-rod and with the bracket and adapted to support the former at the desired elevation, substantially as described.

3. The combination of a post, a bracket arranged at the top of the post, a vertically-movable pintle-rod provided at its top with a socket, a gate connected at its bottom with the pintle-rod and provided at its top with a pivot fitting in the said socket, and a rod clipped to the pintle-rod and adjustably secured to the bracket, substantially as and for the purpose described.

4. The combination of a swinging gate, a latch-post provided with a keeper, a vertical latch-bar arranged in front of the gate, and the upper and lower links arranged parallel with each other at the top and bottom of the latch-bar and adapted to permit the same to swing upward and downward, substantially as described.

5. The combination of a gate, a vertical latch-bar located at the outer end of the same, upper and lower links arranged parallel to each other and pivotally connected to the latch-bar and to the gate, and adapted to permit the former to swing upward and downward, a rod connected with the latch-bar, an adjustable device mounted on the rod and engaging the gate to limit the movement of the latch-bar, and operating mechanism connected with the rod, substantially as described.

6. The combination of a swinging gate, a vertical latch-bar provided with a handle, links connecting the latch-bar with the gate, an adjusting device limiting the outward movement of the latch-bar, and operating mechanism connected with the gate and with the latch-bar and adapted to swing the latter upward, substantially as described.

7. The combination of a gate provided at its front with an opening, a latch-bar arranged vertically at the front of the gate, links connecting the latch-bar with the gate, a pulley mounted in said opening, a rod passing over the pulley and connected with the latch-bar, an adjusting device mounted on the rod and engaging the gate, and operating mechanism connected with the gate and with the rod and adapted to swing the latch-bar upward, substantially as described.

8. The combination of a swinging gate having a latch, a support located above the hinges of the gate, a pair of front pulleys mounted on the support, a rear pulley, side pulleys, and operating-ropes arranged in pairs and connected at their inner ends with the latch, such connection being located between the

front pulleys, one pair of the operating-ropes being extended rearward on the support and arranged on the side and rear pulleys, substantially as described.

9. The combination of a swinging gate, a supporting-frame carried by the gate and arranged over the hinge-point and provided with guides or eyes, a pair of front pulleys arranged between the guides or eyes, a rear pulley, side pulleys, a latch, a latch cord or rope extending from the latch and passing between the front pulleys, and operating-ropes with the latch cord or rope, one pair being passed through the guides or eyes, and the other pair being arranged on the side and rear pulleys and crossed at the back of the support, substantially as described.

10. The combination of a swinging gate, uprights arranged in pairs at opposite sides thereof one of the uprights of each pair being provided with a guide or keeper, the supporting-bars fulcrumed on the other uprights at points between their ends and having their inner terminals arranged within the guides or keepers, means for adjustably securing the bars to the guides or keepers, and operating-ropes connected with the gate and depending from the supporting-bars, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD E. HANKEN.

Witnesses:

C. H. BURTON,
J. L. SHARP.