

No. 854,392.

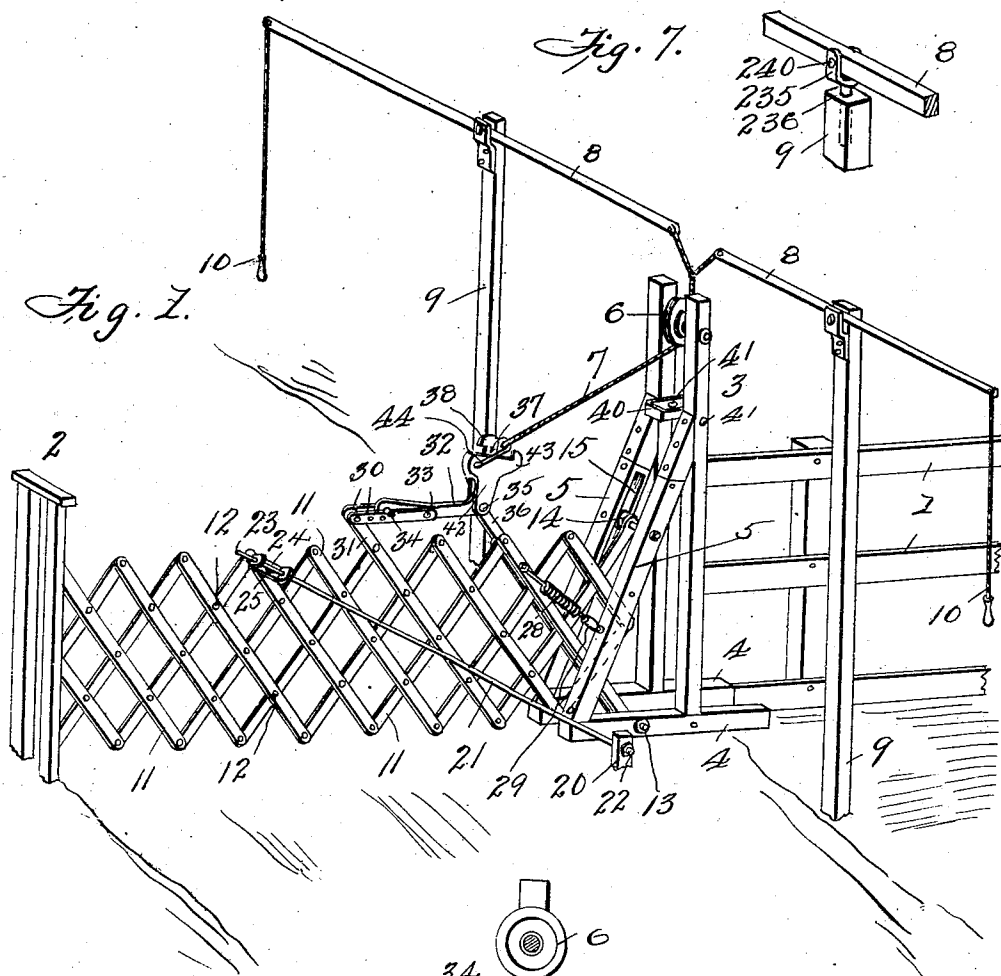
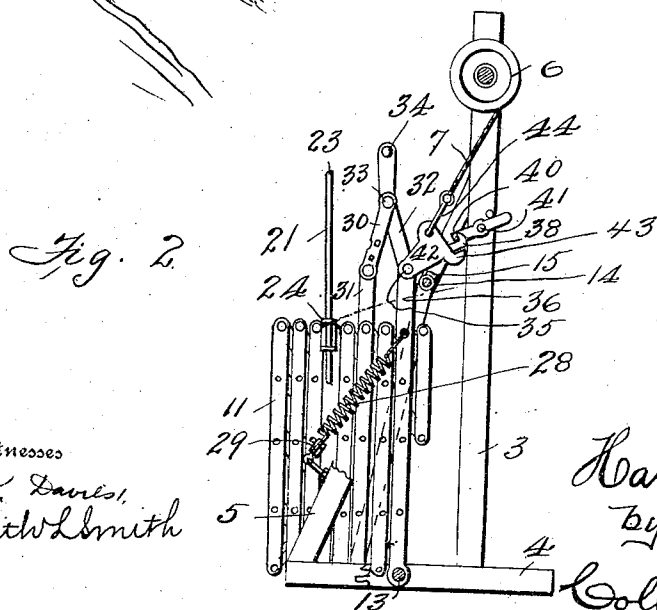
PATENTED MAY 21, 1907.

H. WELLS.

GATE.

APPLICATION FILED OCT. 5, 1906.

2 SHEETS—SHEET 1.



Witnesses
C. H. Davis,
Edith L. Smith

Inventor:

Harold Wells,

by

Collamer & Co. Attorneys.

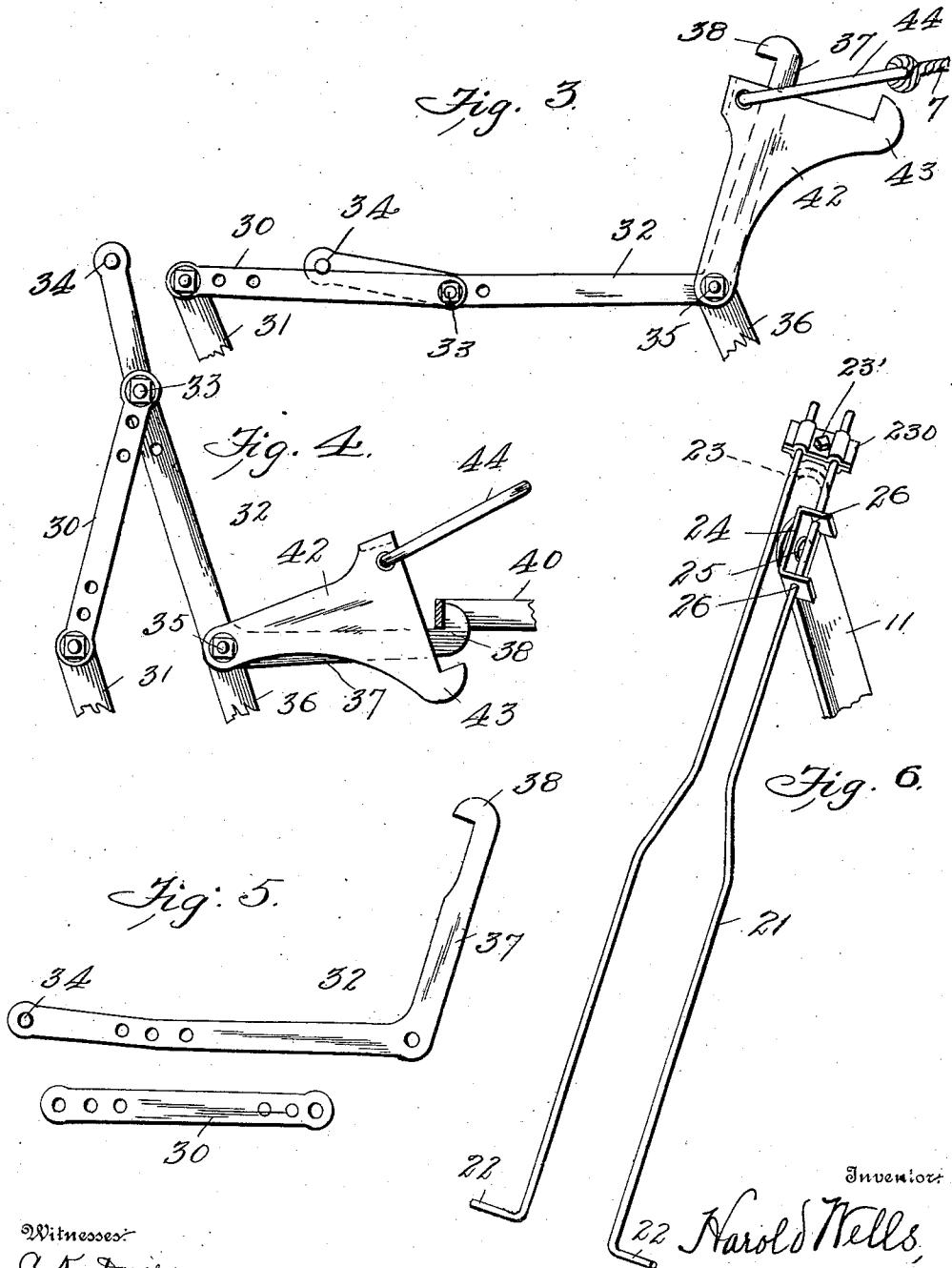
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UNITED STATES PATENT OFFICE.

HAROLD WELLS, OF NORMAN, OKLAHOMA TERRITORY.

GATE.

No. 854,392.

Specification of Letters Patent.

Patented May 21, 1907.

Application filed October 5, 1906. Serial No. 337,588.

To all whom it may concern:

Be it known that I, HAROLD WELLS, a citizen of the United States, and a resident of Norman, Cleveland county, Territory of Oklahoma, have invented certain new and useful Improvements in Gates; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to fences, and more especially to gates such as are employed to stand across a roadway and of such construction that they may be opened by the driver of a team on his approach and can be closed after he has passed—both without leaving his seat.

The object of the invention is to improve the operative parts of such a gate so as to latch it when open and lock it when closed and to accomplish either by one actuation of the operative mechanism.

A further object is to produce a gate of this character which can be adjusted so as to close different widths of gate-openings.

My preferred form of the invention is shown in the accompanying drawings in which—

Figure 1 is a perspective view of this gate complete, showing it as closed across a roadway. Fig. 2 is the side elevation of the gate in its open condition, and a section through the supporting posts. Fig. 3 and 4 are enlarged details in elevation of the latching and locking mechanism, the first in the position which the parts would assume when the gate was closed, and the second in the position which they would assume when the gate was open. Fig. 5 is a detail of these parts separated so as to show the adjustments to which they are susceptible. Fig. 6 is a perspective detail of the guide and traveler, showing a modified form of the upper end of the guide. Fig. 7 is a detail showing a modified form of the pivots at the upper ends of the posts.

Referring to the drawings, the numeral 1 indicates a fence which may lead in almost any direction from the gate, leaving a gate-opening between the post 2 and the supporting post 3. The latter is made of twin upright members, twin sills 4, and twin diagonal braces 5, connecting the outer ends of the sills with the upright. Between the uprights at their upper extremity is mounted a pulley 6 under which leads a rope 7 connecting with the inner ends of two levers 8 which are piv-

oted on posts 9 alongside the approaching roadway, and which levers have ropes or handles 10 at their outer ends.

The gate itself consists of a number of bars 11 (preferably of metal) crossing each other and pivoted where they cross as at 12 in the "lazy-tong" fashion, the lower end of the inner member being supported on a pivot 13 through the sills 4 and the upper end of the corresponding inner member having rollers 14 or other elements which move in an oblique track 15 carried by the braces 5 as best seen in Fig. 1. When this lazy-tong gate is contracted as shown in the last-mentioned view, it stands partly or wholly between the sills and braces; and when it is expanded as shown in Fig. 1, its outer end reaches quite to the post 2 so as to close the driveway as will be readily understood.

A guide is preferably employed as best seen in Fig. 6. This consists of posts 20 set in the ground about opposite and some distance from the lower ends of the braces 5, a bail 21 whose feet 22 are pivoted in said posts and whose bent center 23 extends over the gate, and a traveler 24 consisting of a U-shaped member whose center is pivotally mounted as at 25 on one of the pivots at the top of the gate and whose outturned ends have eyes 26 in which an arm of the bail 21 travels. But one of these travelers is shown in Fig. 1, but it is obvious that there could be two of them pivoted on opposite ends of the bolt 25. The function of the guide and traveler is to direct the gate—as it folds or closes—accurately between the braces 5, and to guide it as it opens, whatever the direction of the wind or however strong are the other influences tending to the contrary.

Fig. 6 shows a modified form of the guide wherein its two arms 21 instead of being united by a bend 23 at their upper ends above the gate are there connected by a clamp 230 comprising two members held together by a bolt 231. This clamp is adjustable by means of the bolt, so that the guide can be more accurately set to do its work properly.

By preference I also employ contractile springs 28 connecting the gate with the braces 5 on each side, and preferably adjustable on the latter as at 29 so that their tension may be increased when this gate is placed on a side hill. The function of these springs is to overcome the tendency of the

gate to close under the weight of its component parts, and if rightly used and adjusted they will effect this purpose without adding to the complexity of the entire device.

5 The lock and latch above referred to will now be described. The former consists of a toggle which comprises twin members 30 adjustably pivoted to an extension 31 at the top of one arm of the gate, and an L-shaped member 32 whose stem is pivoted at 33 between the outermost ends of said members 30, and which carries a pin 34 which strikes the upper edge of said members when the gate is opened and the pivot 33 has passed to a slight distance below a line between the pivots at the inner ends of said members and the angle of said L-shaped member 32. The member 32 is secured at its angle by a pivot 35 to an extension 36 on another bar of the gate as shown in the drawings, and the foot 37 of this member is upturned and has a hook 38 for a purpose to be described below.

The latch which holds this gate open consists of said hook, a loop on the supporting post 3, and an unlatching device. In the drawings the loop is numbered 40, and is in this case pivoted at 41 between the upper ends of the braces 5 in such position that when the gate is thrown open the hook 38 passes under the loop 40 and is engaged thereby. The unlatching device consists of a U-shaped member 42 pivotally mounted on the pivot 35 which forms the pivot of the L-shaped member 32; and this member 42 has ears 43 which stand on either side of the hook 38 as shown. Said member 42 also has a link 44 above the foot 37, which link is connected with the rope 7 as shown. The function of this unlatching member is to disconnect hook 38 from the loop 40 so as to permit the gate to close. By preference the gate, the guide, and the lock and latch are of metal, while the remaining parts may be of wood or other material. It is obvious that by providing a series of holes in the members 30 and in the shank of the L-shaped member 32, the pivot 33 can be adjusted in them so as to allow the gate to open to a greater or lesser extent and therefore adapt it to roadways of different widths.

The modification illustrated in Fig. 7 constitutes a different form of pivot at the upper end of the post 9, and may best be described as a row-lock 235 whose stem 236 is stepped in a socket in the upper end of the post 9, while the lever 8 is pivoted at 240 between the arms of its fork. It will be obvious that a pivot of this kind at the top of the post possesses the advantage of removability, and also permits the post to be set at the other side of the road-way or in other position as desired. Moreover, the lever 8 will not bind on the pivot if the handle 10 should not be drawn straight downward or if the pulley 6 were not exactly beneath the inner end of the lever.

A gate of the above construction being properly set up, the operation is as follows: The gate being closed as shown in Fig. 1, when a team approaches the driver pulls on the rope 10 which causes the rope 7 to draw on the unlatching device, turns the L-shaped member on its pivot 35 so as to throw the toggle and disengage the lock, contracts the gate to the position shown in Fig. 2, and causes the hook 38 to automatically engage the loop 40. Having passed through the gate-way, the operator pulls on the other rope 10, and the rope 7 then raises the unlatching device 42 because the latter at that time stands very nearly beneath the pulley 6. As it rises, its ears 45 lift the loop 40 out of engagement with the hook 38, and the springs 28 cause the gate to move outward back to the position shown in Fig. 1. In the inward and outward movement of the gate the guide swings on its pivot in the posts 20 and the traveler or travelers move thereon in the manner set forth above.

What is claimed as new is:

1. In a folding gate, the combination with the supporting post, the gate proper consisting of lazy-tong members connected with said post, and the operating mechanism; of a guide comprising posts set in the ground, a bail whose feet are pivoted in said posts and whose bent center extends over the gate, and a traveler pivoted on the latter and having eyes which slide on the bail.

2. In a folding gate, the combination with the supporting post consisting of twin upright members, twin sills, and twin braces having oblique tracks, the gate proper consisting of lazy-tong members whose inner lower end is pivoted between said sills and whose inner upper end carries elements moving in said tracks, and the operating mechanism; of a guide comprising a U-shaped bail whose feet are pivoted in supports opposite the sills and whose bent center passed over the gate, and a traveler on the latter having eyes which slide on the guide as the gate is moved.

3. In a folding gate, the combination with the supporting post, a gate carried thereby, a swinging guide, and a traveler pivoted on the gate and sliding on the guide; of operating mechanism for opening and closing said gate.

4. In a folding gate, the combination with the supporting post, a gate carried thereby, a swinging guide, and a traveler pivoted on the gate and sliding on the guide; of operating mechanism for opening and closing the gate, a latch for holding it in opened condition, and means for tripping the latch by the operating mechanism.

5. In a folding gate, the combination with the supporting post, a gate carried thereby, a swinging guide, and a traveler on the gate sliding on the guide; of operating mechanism for opening and closing the gate, means for latching the gate in opened condition, means

for locking it in closed condition, and devices for tripping the latch and the lock by the operating mechanism.

6. In a folding gate, the combination with the supporting post, the gate proper consisting of lazy-tong members connected with said post, and operating mechanism including a rope led around a pulley on the post; of a lock for holding the gate open, the same consisting of a toggle comprising two members whose outer ends are pivotally connected with adjacent arms of the gate, one of said members being of L-shape with its upturned foot connected to said rope and its stem extending beyond its pivot to the other member and carrying a pin resting on the latter when the central pivot of the toggle has passed a straight line between the other pivots.

7. In a folding gate, the combination with the supporting post, the gate proper consisting of lazy-tong members connected with said post, and the operating mechanism including a rope led around a pulley on the post; of a lock for holding the gate open, the same consisting of a toggle comprising two members whose outer ends are pivotally connected with adjacent arms of the gate, one of said members being of L-shape with its upturned foot connected to said rope and its stem pivoted to the other member, a latch on said foot, a loop on said post with which the latch engages to hold the gate open, and means for disengaging these elements by the operating mechanism.

8. In a folding gate, the combination with the supporting post, the gate proper consisting of lazy-tong members connected with said post, and operating mechanism; of braces leading from the post, springs attached to the gate and adjustably connected

to the braces, a toggle connecting two of the arms of the gate and having its members adjustably pivoted to each other for the purpose set forth, and means for tripping this toggle by the action of the operating mechanism.

9. In a folding gate, the combination with the supporting post, a loop and a pulley carried thereby, and the operating mechanism including a rope led around said pulley; of the gate proper, a latch thereon having a hook engaging said loop when the gate is opened, and an unlatching device adjacent the hook and having ears which pass beneath said loop when the gate is latched open and which lift the loop and trip the latch through an impulse on said rope.

10. In a folding gate, the combination with the supporting post, a loop and a pulley carried thereby, and the operating mechanism including a rope led around said pulley; of the gate proper, consisting of lazy-tong members, a toggle between two of its arms comprising twin links for the outer member and an L-shaped inner member with an upturned foot having a hook adapted to engage said loop, and an unlatching device consisting of a U-shaped member loosely mounted on the pivot of said L-shaped member and having ears at opposite sides of the hook adapted to pass beneath said loop when the gate is latched open and to lift the loop and trip the latch through an impulse on said rope.

In testimony whereof I have hereunto subscribed my signature this the 28th day of September, A. D. 1906.

HAROLD WELLS.

Witnesses:

H. S. PEEBLES,
ARTHUR WILLIAMS.