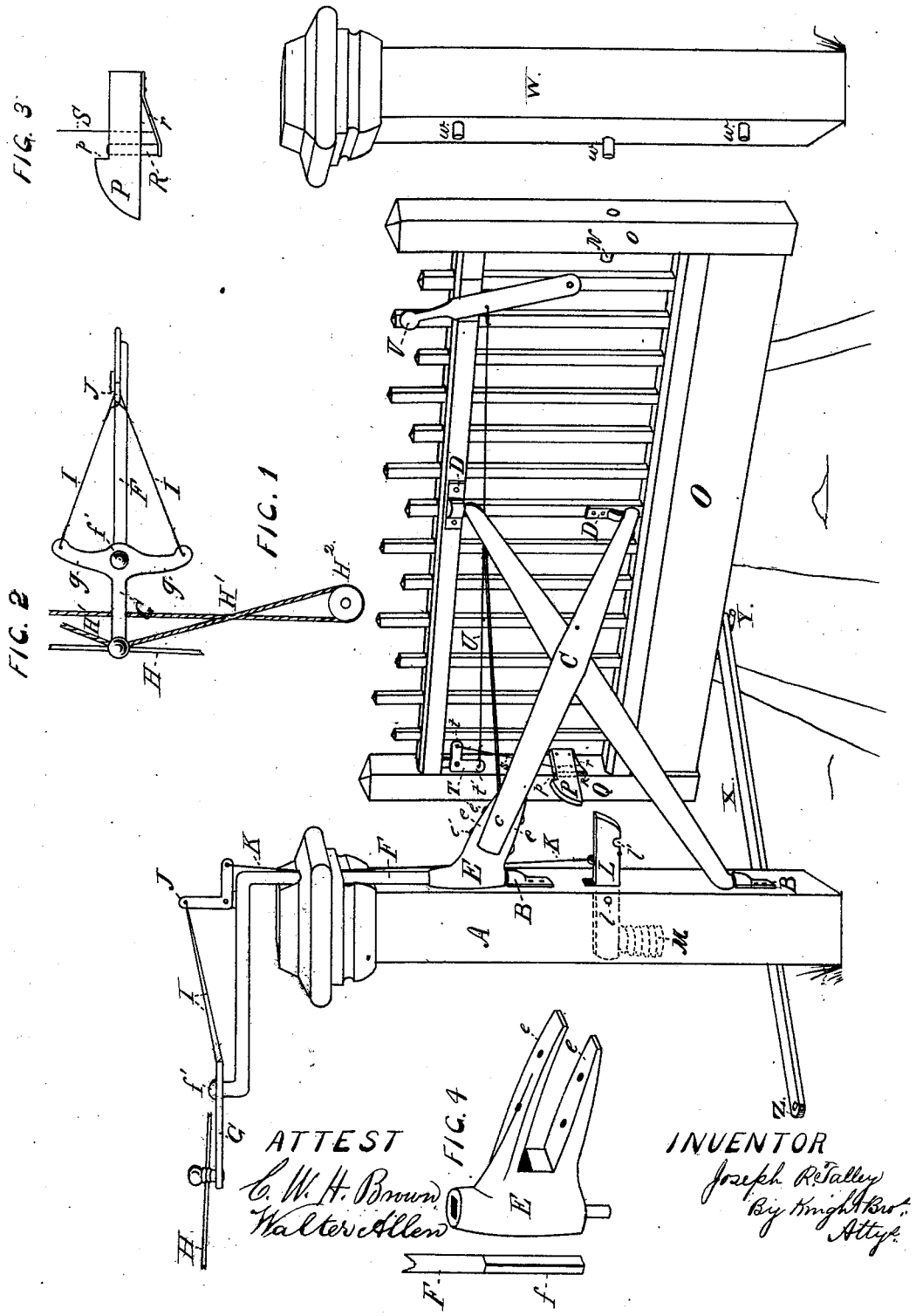
J. R. TALLEY.

Gate.

No. 206,150. Patented July 16, 1878.



UNITED STATES PATENT OFFICE.

JOSEPH R. TALLEY, OF PIASA, ILLINOIS.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. **206,150**, dated July 16, 1878; application filed May 20, 1878.

To all whom it may concern:

Be it known that I, JOSEPH R. TALLEY, of Piasa, Macoupin county, in the State of Illinois, have invented a certain new and useful Improvement in Gates, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My improvement consists in a gate hinged by the middle to a crane, which is in turn hinged to one of the posts.

It also consists in connecting the gate (at one side of the middle) to a post, by means of a bar pivoted to the gate and to the post, so that the ends of the gate, in opening, retreat almost in direct lines from the posts with which they are in contact when the gate is closed.

It also relates to the construction and attachment of the crane upon which the gate is supported. This consists of a cross-frame whose arms are hinged to the post and the gate, respectively. The upper post-hinge has a bracket fitted to receive the bar of the crane, with a pivot-pin for the hinge, and an angular socket to receive the end of the crank, by which the gate may be opened.

It also consists in the crank aforesaid, combined with a double bell-crank pivoted to its outer end, and having wires connecting it, through a bell-crank (at the angle of the turn-crank) and wire, to a spring-catch, by which the gate is held when closed and when open. By cords or rods attached to the double bell-crank and extending up and down the road, the latch is first raised, and then the gate opened or closed, as the case may be.

It also consists in a pin working in a fixed catch, to lift the latch from engagement with it, the said pin being raised through a bell-crank and wires in connection with a hand-lever.

In the drawings, Figure 1 is a perspective view of the invention. Fig. 2 is a top view of the T or double bell-crank lever. Fig. 3 is an enlarged side view of the unlatching-pin and the fixed catch. Fig. 4 is a perspective view of the hinge-bracket at the upper inner corner of the crane.

A is the hinge-post, having socket-blocks B, forming the female member of the hinge and receiving the turn-pins beneath the ends of the arms of the crane C. The free end of the crane has pivot-pins, that enter sockets in the blocks D upon the side of the gate, at its middle, so that the gate is balanced upon the pins and blocks D.

E is a bracket, which turns upon the upper one of the blocks B, and which has jaws *e e*, between which the end of the arm *c* is inserted and held by bolts or rivets *e'*. The hinge-bracket E has, in line with the pivot-pin, an angular socket to receive the similarly-formed end *f* of the crank F, which turns in bearing at the top of the gate-post.

The end of the crank F is turned up into a pivot-pin, *f'*, which forms the fulcrum of the double bell-crank or T lever G. To the outer arm of the lever G are attached rods or cords H, which extend some distance up and down the sides of the road, so that they may be reached by a person sitting in a vehicle before the horse reaches the gate. It will be seen that any one pulling or pushing on these rods or cords H would tend to move the crank F, and with it the gate, and thus the gate might be opened and closed, supposing it to be unlatched. I will now describe the unlatching mechanism.

The arms *g g* of the T-lever are connected by wires or rods I, to the upper arm of the bell-crank lever J, and the horizontal arm of this lever is connected by a wire, K, to the spring-latch L. The latch works on a pin at *l*, and its inner end is pushed upward by a spring, M, in the gate-post. *l'* is a notch in the under side of the latch, to engage a pin, N, in the outer end piece *o* of the gate O when the gate is open. When the gate is closed, the latch engages in a notch, *p*, in the top of the catch P, upon the inner end piece Q of the gate.

R is a pin working vertically in the catch P, (beneath the notch *p*,) and by raising the pin the spring-latch L is thrown up and disengaged from catch P. The pin R descends by gravity and by the power of a spring, *r*, by which its lower end is connected to the bottom of the catch P.

S is a wire connecting the spring *r* to the horizontal arm *t* of a bell-crank, T. The arm *t'* of this bell-crank is connected by a wire, U, to a hand-lever, V, at the outer end of the

gate, so that when the gate is closed the latch may be disengaged by any person at the outer end of the gate by means of the lever V.

The movement and position of the gate in opening and closing is governed by a rod, X, having one end pivoted to the bottom of the gate at Y and the other end turning on a fixed pin at Z. By means of this connecting-rod the end piece *o* moves from the post W to that B in opening, and back again in closing, one position of the gate being at right angle with the other position.

It will be observed that the gate opens in one direction only, and if it is only necessary that the cords or rods H should be used from one side, the simple single cords H H would be all that would be required; but if it is desired that the gate should be opened by cords from both sides, then the cords must be duplicated in both directions, and one cord, H^1, of each pair be made to pass around a pulley, H^2, so that the gate can be both opened and closed from either side, (see Fig. 2;) or rods may be used, that will act either by pulling or pushing.

w w are guide-pins on post W, between which the end piece *o* enters when the gate is closed.

I claim as my invention—

1. The combination, with the gate O, of the crane C, the two arms crossing one another, as shown, their rear ends turning on the gate-post B, the front ends hinged near the middle and top and bottom of the gate, as set forth.

2. The combination, with the gate O and crane C, of the connecting-rod X, for the purpose set forth.

3. The combination, with the crane C, of the hinge-bracket E and the crank F, with end *f*, engaging in socket of the bracket, to open and close the gate.

4. The combination of crank F, T-crank G, bell-crank J, wires I and K, and spring-latch L, for the purpose set forth.

5. The combination of spring-latch L, catch P, pin R, wires or cords S and U, and bell-crank T, for the purpose set forth.

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Witnesses:
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