

(No Model.)

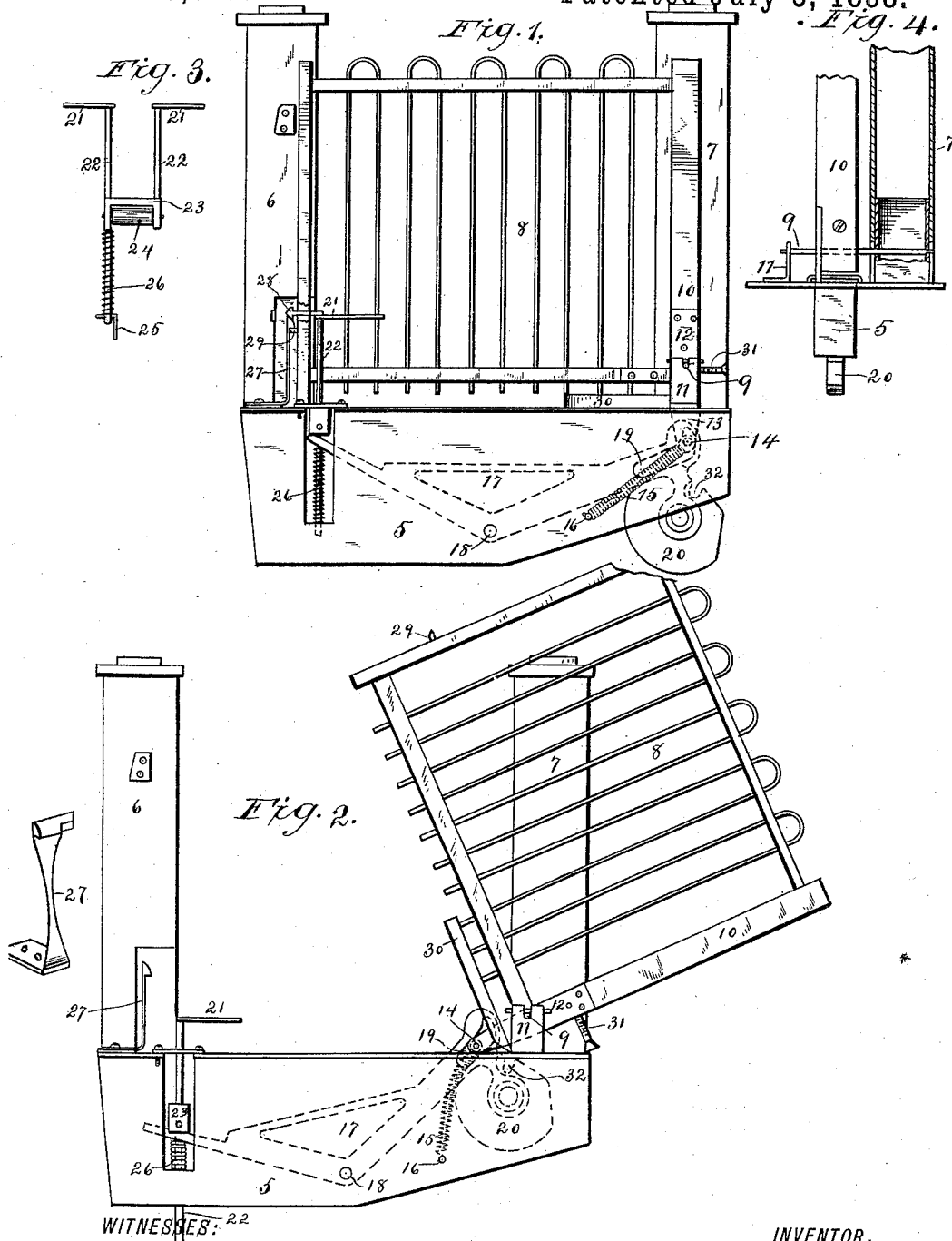
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GATE.

No. 385,517.

Patented July 3, 1888.



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UNITED STATES PATENT OFFICE.

HUGH A. KNOWLES, OF NEW YORK, N. Y., ADMINISTRATOR OF LEWIS G. KNOWLES, DECEASED.

GATE.

SPECIFICATION forming part of Letters Patent No. 385,517, dated July 3, 1888.

Application filed October 22, 1887. Serial No. 253,156. (No model.)

To all whom it may concern:

Be it known that LEWIS GARDNER KNOWLES, late of New York, county and State of New York, now deceased, invented certain new and useful Improvements in Vertically-Swinging Gates, of which the following is a specification.

The invention relates to gates designed more especially for yards, lawns, and roadways for pedestrians, though applicable for carriage-ways.

The object of the invention is to devise a gate of the type mentioned which may be easily operated by the weight of a person and without the exertion of any power by the person passing through the gate, and also to devise mechanism whereby the gate is rendered wholly automatic in its operation, both in opening and in closing, and finally to locate the operating mechanism with reference to the gate so that it will not be exposed to interference nor to rain and snow.

The invention is described hereinafter, and the novel features pointed out in the claims at the end of this specification.

In the accompanying drawings, forming a part of this description, and in which like features are indicated by like figures of reference in the several views, Figure 1 is a front elevation of the gate closed. Fig. 2 is a similar view with the gate open. Fig. 3 is a detail end view showing the operating foot-rests, and Fig. 4 is a detail end view looking toward the pivot-rail of the gate.

Referring to the drawings, the figure 5 indicates the base upon which the gate is supported and which contains the operating mechanism. Figure 6 is the latch-post; 7, the rear post, and the gate is indicated by 8. The posts 6 and 7 may or may not be supported upon the base 5. The gate is pivoted by an axle, 9, which passes through rail 10 at the foot thereof, and has bearings within the base of post 7, and also in support 11, which is affixed to the base 5. The angle-iron 12, secured to the pivot end of the gate, is provided with a downwardly-projected extension, 13, provided with a lug, 14, to which one end of a spring, 15, is secured, the other end of said

spring being affixed to the inner wall of base 5, as shown at 16.

The figure 17 indicates a lever of peculiar formation, which is pivoted within the base 5 at 18, and is provided with a slot, 19, which co-operates with the lug 14 of the projection 13. At the slotted end of the lever 17 there is a weight, 20, which serves as a guide for spring 15 and as a counter-balance in the operation of the gate.

The figure 21 designates a pair of foot-rests, which are connected by rods 22 to a cross-piece, 23, in which is secured a roller, 24. One of the rods 22 projects below the cross-piece 23 and through a projection, 25, of the base 5, which serves as a guide and steadying means for the foot mechanism.

The figure 26 indicates a spiral spring surrounding the lower end of rod 22, as shown, the function of which spring is to maintain the foot-rests in an elevated position. The free end of the lever 17 bears upon the roller 24, as shown.

The character 27 indicates a catch which is secured in front of post 6 at the forward end of the gate. The catch 27 is composed of an elastic piece of metal with an enlargement at the top, of the form shown in detail to the left of Fig. 2. To one of the foot-rests 21 there is secured a forwardly-projecting lug, 28, of the form shown in Fig. 1, which lug co-operates with the catch 27 in such a manner that when pressure is exerted upon the foot-rest the contact of the head of lug 28 with the top of catch 27 will push said catch away from the gate sufficiently far to release the catch 29 of the front rail of the gate from engagement with the under surface of the head of the catch 27, and thus permit the gate to swing up and over under the weight of the person standing upon the foot-rest 21. As the gate swings upward and over, the spring 15 resists the weight upon the rest 21, as will be obvious from the drawings. After the person steps off the foot-rest the spring will contract, and thus, in conjunction with the weight 20, return the gate to its normally-closed position; and in the act of closing the catch 29 will engage with the head of catch 27, and thereby lock the gate.

The figure 30 indicates a cover at the rear end of the gate, which serves to prevent the snow and rain from entering the base 5 and affecting the operating mechanism. As the gate is opening, the rear end of said cover 30 is prevented from coming in contact with the weight 20 by the stop 31, secured to the rail 10, and by the depression 32 in the surface of said weight 20.

10 The manner in which this gate operates will be entirely clear from the above description of its organization, and need not therefore be recited.

15 Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a vertically-swinging gate, a base, a vertically-moving foot-rest, a lever pivoted to the base and also to the rear rail of the gate, a weight and a spring co-operating with said lever, the front end of said lever also co-operating with the foot-rest, substantially as set forth.

2. In combination with the gate pivoted at its rear end, a pivoted lever provided with a weight and spring, and a vertically-moving

foot-rest provided with a projection, 28, which co-operates with catch 27, secured to the base, substantially as set forth.

3. In combination with the gate pivoted at its rear end, a lever provided with a weight at one end and having a projecting free end, and a vertically-moving foot-rest provided with a roller, 24, with which the free end of said lever co-operates, substantially as set forth. 35

4. A vertically-swinging gate pivoted at its rear end upon axle 9, a platform, posts 6 and 7, supported upon said platform, a lever pivoted within the base and provided with a weight, a spring, 15, and a vertically-moving foot-rest co-operating with the free end of said lever, and a spring, 26, coacting with said foot-rest, the whole combined and operating substantially as set forth. 40

Signed at New York, N. Y., this 19th day of October, A. D. 1887. 45

HUGH A. KNOWLES,
Administrator of Lewis G. Knowles, deceased.

Witnesses:

J. E. M. BOWEN,
H. G. KNOWLES.