(No Model.) 3 Sheets—Sheet 1.

C. J. LAVEY.

DRAWBRIDGE GATE.

No. 570,029. Patented Oct. 27, 1896.

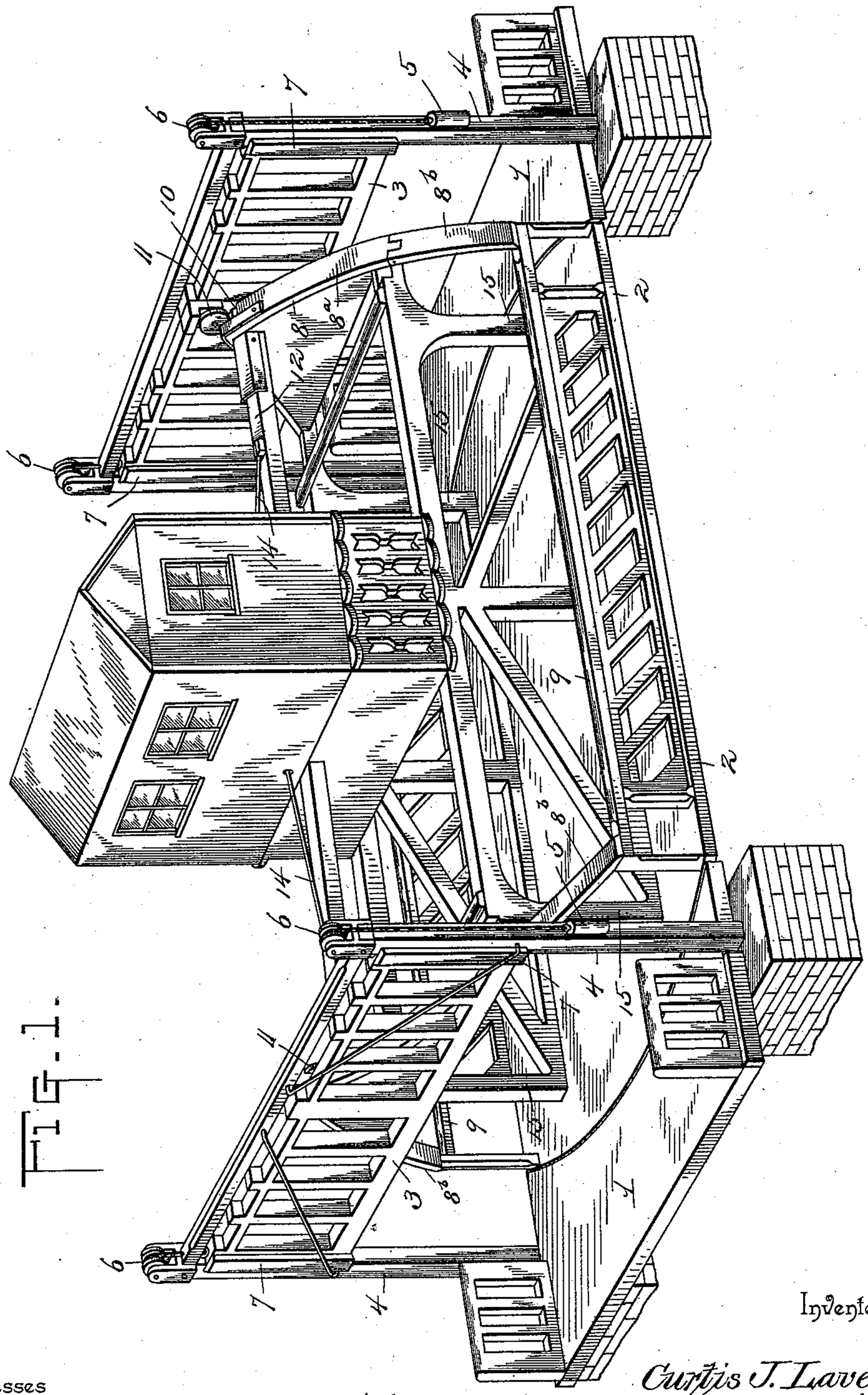

FIG. 1.

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(No Model.) 3 Sheets—Sheet 2.

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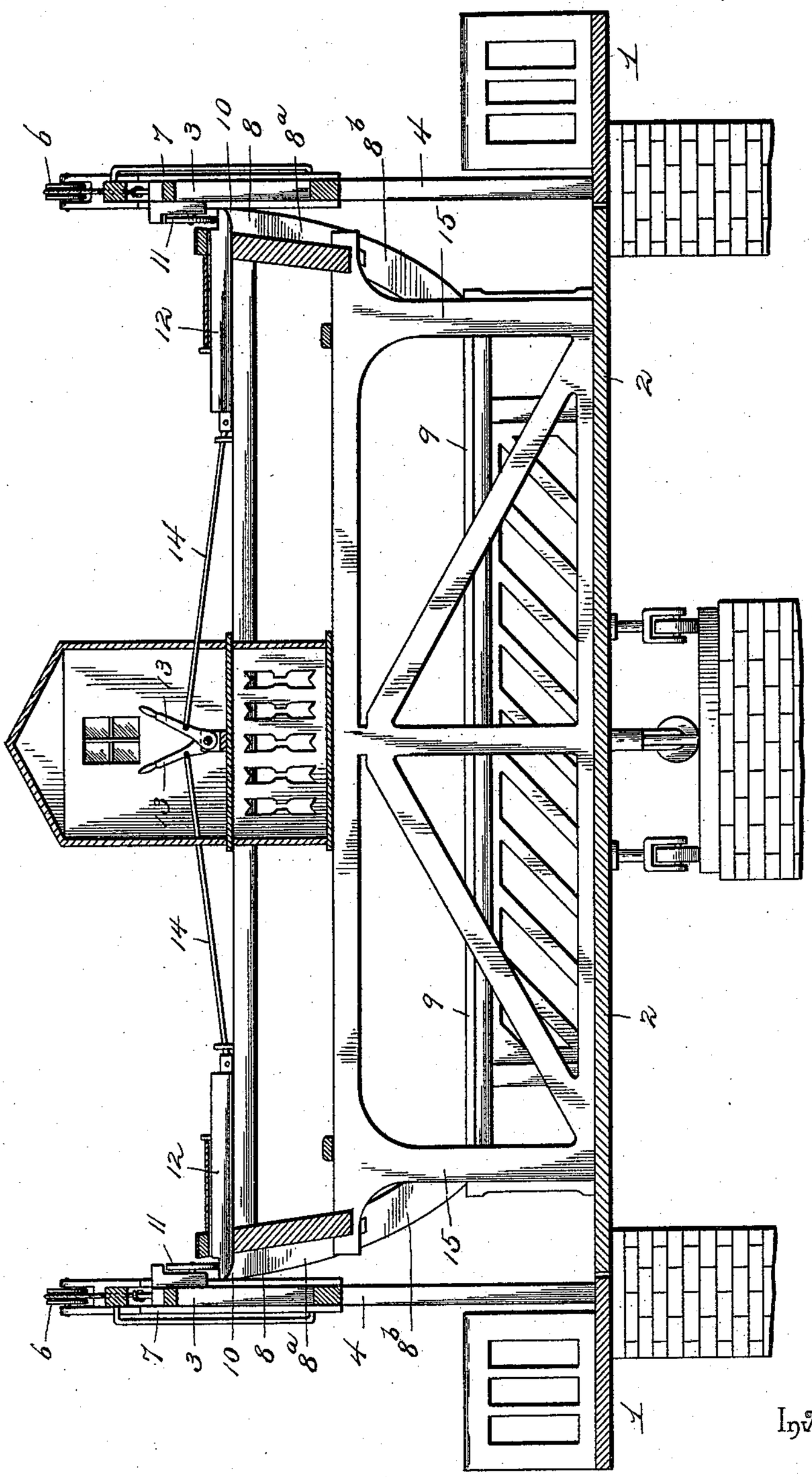
FIG. 2.



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(No Model.) 3 Sheets—Sheet 3.

C. J. LAVEY.

DRAWBRIDGE GATE.

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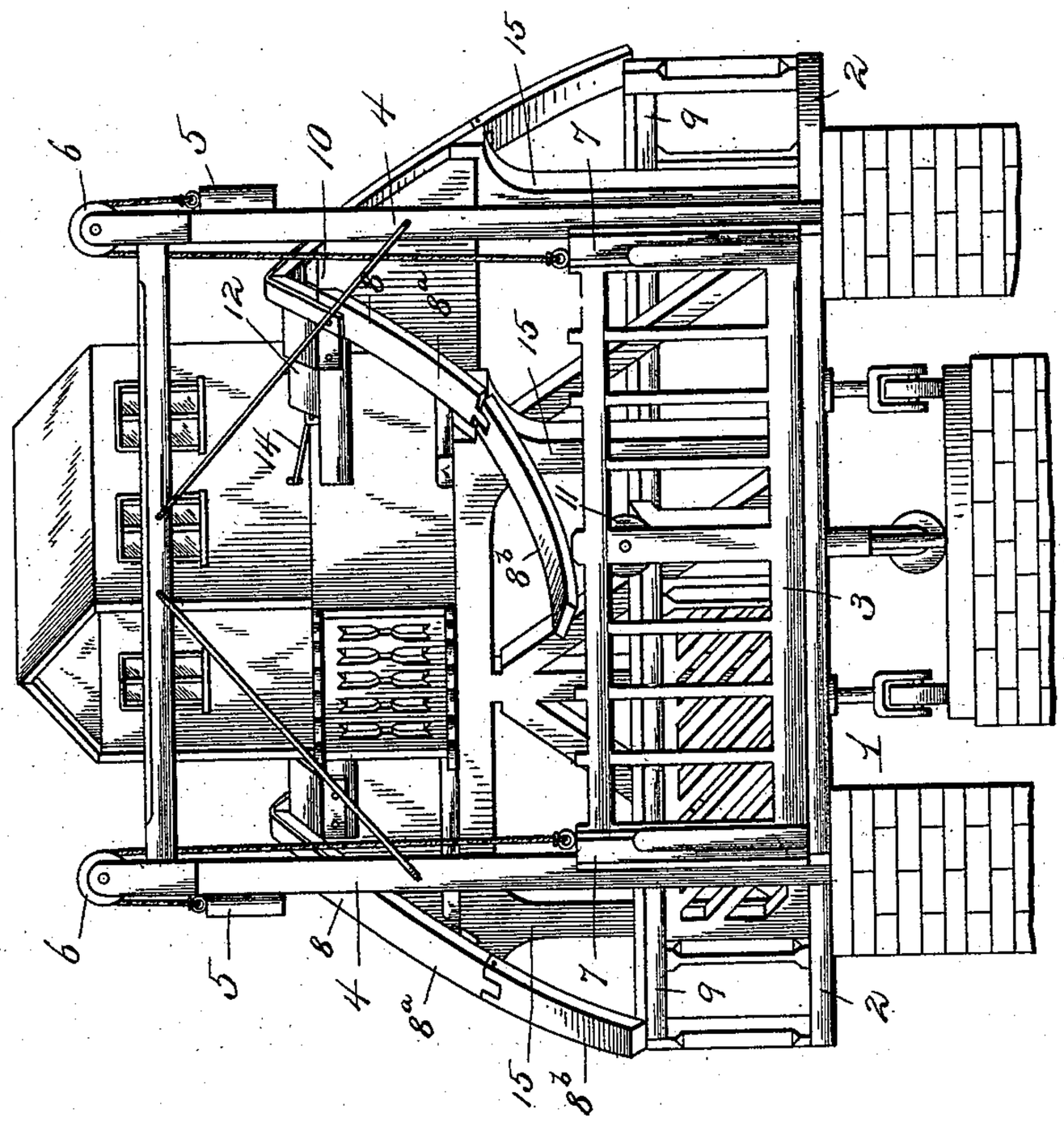
FIG. 1.



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UNITED STATES PATENT OFFICE.

CURTIS J. LAVEY, OF BRISTOL, WISCONSIN.

DRAWBRIDGE-GATE.

SPECIFICATION forming part of Letters Patent No. 570,029, dated October 27, 1896.

Application filed May 19, 1896. Serial No. 592,162. (No model.)

To all whom it may concern:

Be it known that I, CURTIS J. LAVEY, a citizen of the United States, residing at Bristol, in the county of Kenosha and State of Wisconsin, have invented a new and useful Drawbridge-Gate, of which the following is a specification.

My invention relates to gates for drawbridges, and the object in view is to provide simple means for opening and closing a gate located at either or both ends of a drawbridge, said gate being open only when the drawbridge is in its normal position.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a bridge and gates constructed in accordance with my invention. Fig. 2 is a longitudinal section. Fig. 3 is an end view showing the drawbridge partly open.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the end or stationary portions of a bridge, between which operates a swinging or pivotal draw 2, the latter having its ends curved concentrically to fit the concaved or cut-away extremities of the stationary portions.

The gates 3 are mounted between vertical guide-posts 4, located at opposite sides of and rising from the stationary portions of the bridge, said gates being provided with counterbalancing-weights 5, extending over pulleys 6, located at the upper ends of the guide-posts. These weights are insufficient to support the gate, but are adapted to relieve the operating mechanism of a portion of the weight thereof, thus materially facilitating the elevation of the same from the closed to the open position. (Shown, respectively, in Figs. 3 and 1.) Any suitable means for guiding the gates upon the guide-posts may be employed, such as guide-strips 7.

The draw is provided at its extremities with double inclined guides 8, which extend from the ends of the side rails 9 of the draw to the longitudinal center of the same, the apexes of the guides being cut away to form openings 10 of sufficient width to allow the rollers 11, which are mounted, respectively, upon the gates at their centers, to pass through. These openings at the centers of the double inclined guides 8 are normally closed or bridged by means of releasing-bolts 12, which serve to support rollers, and hence the gate, when the draw is in its normal position. When it is desired to lower the gate previous to turning the draw, the releasing-bolt is withdrawn by means of a releasing-lever 13, which is connected to the bolt by means of a rod 14, the weight of the gate being sufficient to carry it to the closed position. (Indicated in Fig. 3.) As the draw is turned to its normal position the guides pass under the rollers, and thus lift the gates to their normal positions, (indicated in Fig. 1,) the releasing bolt or bolts having meanwhile been turned to their normal positions to close the openings at the apexes of the guides. Each arm of each guide is of sectional construction and includes a stationary section 8^a and a pivotal section 8^b, the latter being hinged at its upper end to the lower end of the contiguous section and being free at its lower end to rest upon the end post of the contiguous rail 9, said post forming a support to maintain the swinging section of the guide in alinement with the stationary or fixed section. The main or fixed sections of the guides are supported by intermediate posts 15.

In operation, after the gates have been lowered, as above described, the draw is turned to the open position, and as the rollers on the gates are then beneath the guides the movable or swinging sections of the guides will be raised over the rollers and will subsequently drop down to occupy positions with their free extremities below the plane thereof. Thus the function of the loose or swinging sections of the guides is to adapt them to ride over the rollers during the opening of the draw.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. The combination with a vertically-mov-

able gate mounted between guide-posts upon a fixed portion of a drawbridge, and a swinging draw operating at one end contiguous to the plane of the gate, of a double inclined guide arranged upon the draw to engage a roller on the gate and thus elevate the latter to its open position, and a releasing-bolt normally closing an opening at the uppermost point of the guide to support the roller and adapted to be withdrawn to allow the gate to close by gravity before the draw is moved from its normal position, substantially as specified.

2. The combination with a gate mounted to slide vertically upon guide-posts arranged upon a fixed portion of a drawbridge, and a swinging draw arranged to operate at one end contiguous to said gate, of a double inclined guide carried by the draw to engage a roller upon the gate and elevate the latter to its open position, and a releasing-bolt normally closing an opening to support said roller at the uppermost point of the guide and adapted to be withdrawn to allow the gate to close by gravity, said guide having a lower pivotal section adapted to ride over the roller during the opening of the draw to provide for a subsequent engagement of the guide with the underside of the roller, substantially as specified.

3. The combination with the fixed extremities of a drawbridge and a pivotal draw arranged therebetween, of vertically-movable gates mounted upon fixed guides at the extremities of said stationary portions of the bridge, counterbalancing-weights for the gates, the same being of less weight than the gates to allow the latter, when released, to descend to their closed positions by gravity, double inclined guides S located at opposite ends of the draw, each arm of the guides comprising upper fixed and lower swinging sections, and the fixed apexes of the guides being cut away to form openings through which the rollers upon the gates may pass, sliding bolts mounted upon the draw and normally arranged to close said openings at the apexes of the guides and support rollers on the gates, whereby when said bolts are withdrawn the gates are allowed to drop by gravity to their closed positions before the draw is moved from its normal or closed position, substantially as specified.

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

CURTIS J. LAVEY.

Witnesses:

HERBERT E. ROBBINS,

ANTHONY VAN WYCK.