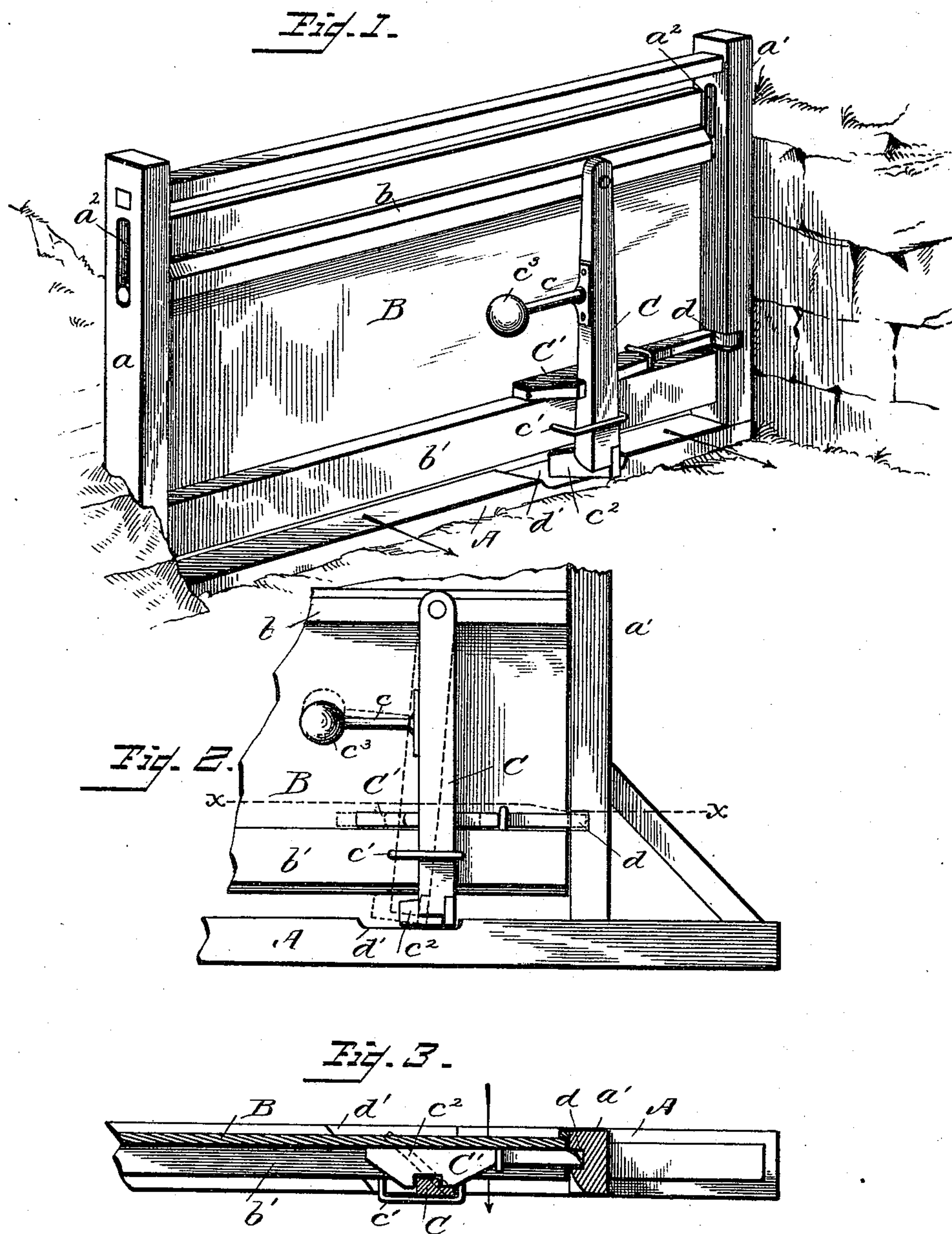


(No Model.)

J. C. RODGERS.
AUTOMATIC FLOOD GATE.

No. 451,953.

Patented May 12, 1891.



Witnesses
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JAMES C. RODGERS, OF APPLETON CITY, MISSOURI.

AUTOMATIC FLOOD-GATE.

SPECIFICATION forming part of Letters Patent No. 451,953, dated May 12, 1891.

Application filed January 28, 1891. Serial No. 379,428. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. RODGERS, a citizen of the United States, residing at Appleton City, in the county of St. Clair and State of Missouri, have invented certain new and useful Improvements in Automatic Flood-Gates; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention has for its object the provision of an improved releasing and relocking device for a flood-gate, whereby the latter is held closed against a weak current, but released when the strength of the current is augmented to such a degree as to endanger the safety of the gate, and is relocked upon its resuming its normal position consequent upon the fall of the water.

In the drawings, Figure 1 is a perspective view of a flood-gate locked in its normal position by my improved mechanism. Fig. 2 is an elevation of a portion of such gate, showing also, in dotted lines the operation of the locking mechanism. Fig. 3 is a sectional view on the line xx of Fig. 2.

The gate B is swung between the uprights $a a'$, resting on the sill A, by means of the cross-beam b of the gate, the ends of which extend beyond the sides of the gate and are constructed to form journals which work in the vertical slots $a^2 a^2$ in the uprights or posts $a a'$. A second cross-beam b' is also provided at the bottom of the gate, in order to give it greater weight and strength. The gate turns and is normally supported on the journals of the upper cross-beam b , and the slots $a^2 a^2$, in which the latter work, are provided in order to allow for play of the gate when released and floating on the water.

The releasing and relocking mechanism is situated on the rear face of the gate and engages with the upright a' . It consists, mainly, of a sliding horizontal locking-bar C' and a pivoted pendent trip-lever C. The latter is pivoted at its upper end to the upper cross-bar b at a point a suitable distance from the

upright a' , and is of such length that it extends below the bottom of the gate, where it is provided with the board or flange c^2 , extending beneath the gate and at an angle of about forty-five degrees therewith, as shown in dotted lines in Fig. 3. The lower end of the trip-lever C works in a keeper or guard c' , that allows a certain amount of lateral play. Should the space between the sill A and the gate B be too narrow for the flange c^2 , the sill may be recessed, as shown at d' . A weight c^3 is attached by the arm c to the trip-lever on the side opposite the upright a' , and serves to keep the said trip-lever in its normal or vertical position, in which it rests against the end of the keeper c' . The bolt or locking-bar C slides in a keeper on the lower cross-beam b' , and its outer end is adapted to enter the mortise d in the post or upright a' . The broadened inner end of the bolt has a notch, Fig. 3, to receive the trip-lever, whereby the two are loosely connected to allow the mechanism to operate, as follows: The direction of the flow of the current is indicated by arrows in Figs. 1 and 3. When a current of sufficient rapidity and force to overcome the gravity of the weight c^3 acts on the inclined flange c^2 , the free or lower end of the trip-lever C is pushed, as shown by dotted lines in Fig. 2, whereby the bolt C is simultaneously withdrawn from the socket or recess d in the upright a' , thus allowing the gate to yield and swing outward and float on the water. When the water falls sufficiently, the gate will return by gravity to its former vertical position and the weight c^3 will cause the trip-lever to swing toward the upright a' , and thus slide the bolt C, so as to relock the gate. I thus provide a releasing and relocking mechanism that is at once simple, strong, and durable, yet efficient and automatic, and which might be modified in many ways without departing from the spirit of my invention and which might be used on a horizontally-swinging gate, provided with spring hinges to close it.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a swinging gate, of an automatic releasing mechanism con-

sisting of a trip-lever provided with an inclined flange adapted to be pushed laterally by the pressure of a current of water, and a locking device connected with and operated
5 by said trip-lever, substantially as described.

2. The combination, with a gate and supporting-uprights, of a weighted trip-lever provided with an inclined flange, on which the current acts, and a locking device connected
10 with and operated by such trip-lever, substantially as shown and described.

3. The combination, with a flood-gate and supporting-posts, of a locking mechanism comprising a pivoted trip-lever provided with
15 an inclined flange adapted to be acted on by the water, a bolt operated by the said trip-lever and inclined surface and adapted to enter a mortise in one of the uprights, and a weight connected with the trip-lever and
20 adapted to resist the pressure of the water on the inclined surface, substantially as described.

4. The combination, with the uprights and the gate provided with journals having vertical play in slots in the uprights, of a releasing and relocking mechanism comprising a pendent trip-lever pivoted at its upper end to the gate, having an inclined flange extending beneath the gate and adapted thereby to be pushed to one side by the passage of a current of water, a weight secured to the trip-lever at right angles thereto and adapted to resist the pressure of the water on the inclined flange of the said lever, and a horizontally-sliding locking-bar adapted to engage with one of the uprights and be operated by the said trip-lever and attached weight, substantially as described. 25 30 35

In testimony whereof I affix my signature in presence of two witnesses.

JAMES C. RODGERS.

Witnesses:

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A. LUCHSINGER.