W. B. AKERS.
Flood-Gate.

No. 217,571. Patented July 15, 1879.

FIG. 1.

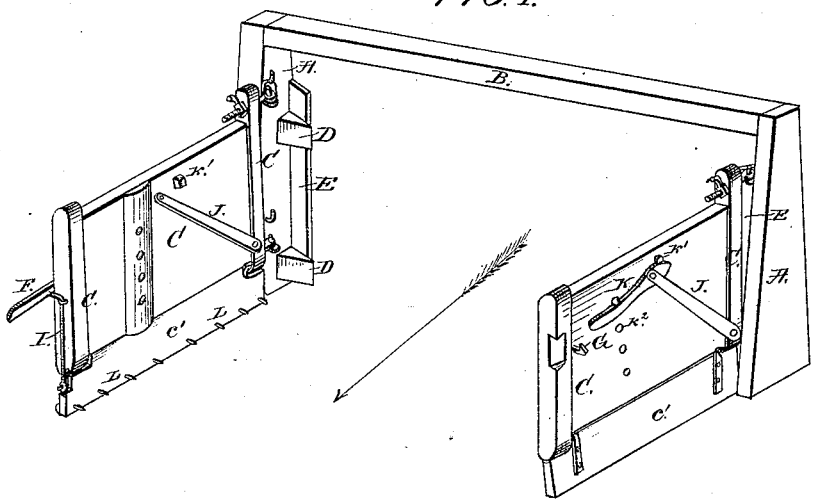


FIG. 2.

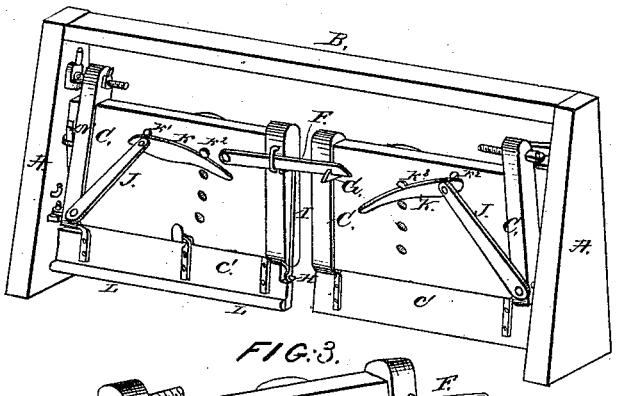
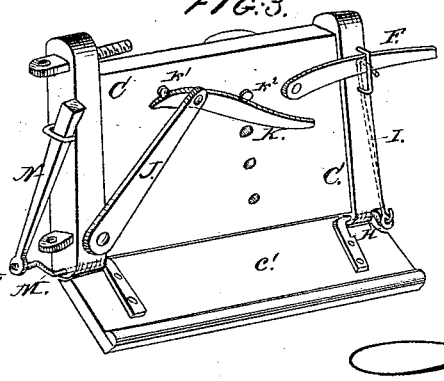


FIG. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM B. AKERS, OF LITTLE RIVER, VIRGINIA.

IMPROVEMENT IN FLOOD-GATES.

Specification forming part of Letters Patent No. **217,571**, dated July 15, 1879; application filed March 11, 1879.

To all whom it may concern:

Be it known that I, WILLIAM BLACKBURN AKERS, of Little River, in the county of Floyd and State of Virginia, have invented a new and useful Improvement in Automatic Flood-Gates, of which the following is a specification.

Figure 1 of the drawings is a perspective view looking up stream, with the gate open. Fig. 2 is a view of the down-stream side of the flood-gate when closed. Fig. 3 is a view of the wing of the gate carrying the counter-weight latch, with the lower part swung partly up to show the movement and co-operation of the parts.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved flood-gate, which shall be so constructed as to swing open as the water rises and swing shut as the water falls, which will prevent trash from lodging about its hinges, and may be readily adjusted to the height of the water at different seasons of the year, and to remedy any sagging of the gate.

The invention consists in the combination of the hinged parts of the gate, the stop-blocks, and the guard-boards with the inclined posts and their connecting-beam; in the combination of the crank, the sliding rod, the latch, and the two catches with the hinged parts of the gate, to adapt them to fasten and unfasten themselves automatically; in the combination of the pivoted braces and the pivoted levers with the hinged parts of the gate; and in the combination of the spikes, the cranks, and the weight-bars with the float-boards and the hinged parts of the gate, as hereinafter fully described.

A are two posts, which are set at the opposite sides of the stream at the water side of two abutments, joining the fence of which the flood-gate is a continuation. The posts A are inclined toward each other, and also up stream, and are connected at their upper ends by a cross-beam, B. To the stream sides of the posts A are hinged the parts C of the gate, and the upper hinge is provided with a hand-nut, so that if the abutment and post should settle the gate may be leveled by adjusting the said nut.

To the posts A are attached blocks D, for the gate to shut against, and to the said posts A and blocks D are attached inclined boards E, to serve as guards to prevent trash from lodging about the hinges. Two or more sets of hinges should be attached to the posts A, so that the gate may be adjusted to the height of the water at different seasons of the year. The lower edge of the gate should be at the ordinary level of the surface of the water. The parts of the gate should be made close, so that no trash can lodge upon it.

The lower boards, c', of the part of the gate C are hinged at their upper edges, so that they may swing down stream when the water rises. The parts of the gate C are fastened together when closed by a latch, F, hinged to one of the said parts, and engaging with a catch, G, attached to the other part, which other part should have a catch, G, attached to each side, so that the gate may fasten itself, whichever part swings shut first.

To the end of the float-board c' of the part C of the gate to which the latch F is pivoted is attached the end of a crank, H. The crank H is pivoted to the lower part of the end bar of the part of the gate C, and to its other end is pivoted the end of a rod, I, which passes up through keepers attached to the said end bar into such a position that its other end may rest against the lower edge of the latch F, so that when the float-board c' is raised by a rise of the water the upward movement of the said float-board may unlatch the gate and allow its parts to be swung down stream by the pressure of the water. When the water falls the parts of the gate swing shut and latch themselves.

To the opposite sides of the hinge end bars of the parts C of the gate are pivoted the lower ends of two brace-bars, J, the upper ends of which are connected by a bolt that passes through them, through slots in the parts of the gate, and through levers K placed upon the down-stream side of the said parts of the gate. The short arms of the levers K are fulcrumed against pins k^1, attached to the parts C of the gate, and their long arms are secured in position by pins k^2, attached to the said parts C. Several holes are formed in the parts C of the gate to receive the pins k^2, so

that they may be adjusted as may be required. With this construction, any sagging of the parts of the gate may be remedied by adjusting the braces J by means of the levers K.

To the lower part of the float-boards c' are attached spikes L, with their points projecting upon the up-stream side, to prevent hogs or other small animals from raising the said float-boards and passing through.

To the hinge end of the float-boards c' are attached the ends of cranks M, which are pivoted to the hinge end bars of the gate C, and to their other ends are pivoted the lower ends of bars N. The bars N are made heavy to counterbalance the weight of the spikes L, and pass through and slide in keepers attached to the said hinge end bars to keep them in place.

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

1. The combination of the hinged parts C of the gate, the stop-blocks D, and the guard-boards E with the inclined posts A and their connecting-beam B, substantially as herein shown and described.

2. The combination of the float-board c', the crank H, the sliding rod I, the latch F, and the catches G with the hinged parts C of the gate, to adapt them to fasten and unfasten themselves automatically, substantially as herein shown and described.

3. The combination of the pivoted braces J and the pivoted levers K with the hinged parts C of the gate, substantially as herein shown and described.

4. The combination of the float-boards c', provided with the spikes L, the cranks M, and the weight-bars N, with the hinged parts C of the gate, substantially as herein shown and described.

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Witnesses:
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