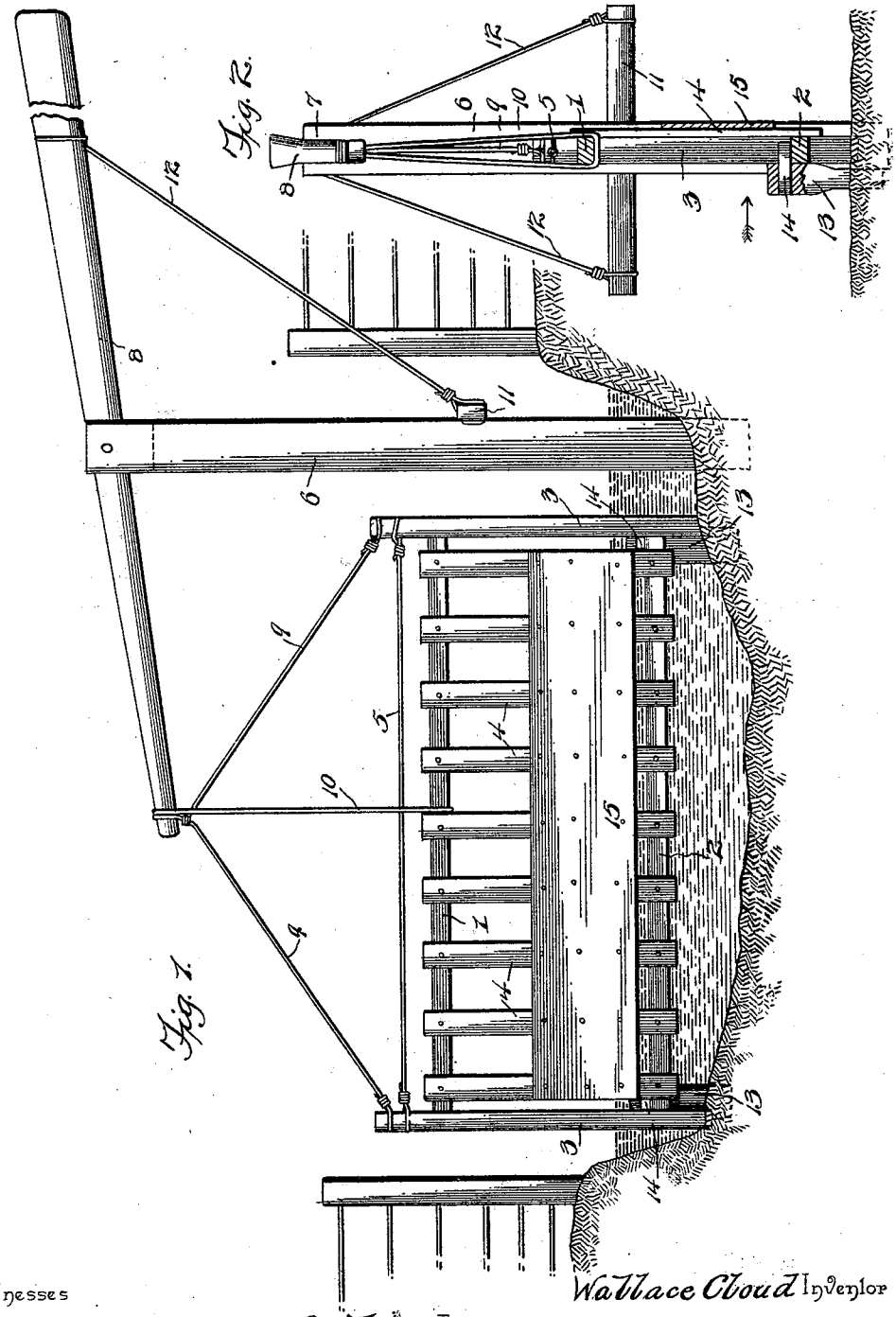
No. 634,442. Patented Oct. 10, 1899.

W. CLOUD.

FLOOD GATE.

(Application filed Apr. 24, 1899.)

(No Model.)



Witnesses

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FLOOD-GATE.

SPECIFICATION forming part of Letters Patent No. 634,442, dated October 10, 1899.

Application filed April 24, 1899. Serial No. 714,209. (No model.)

To all whom it may concern:

Be it known that I, WALLACE CLOUD, a citizen of the United States, residing at Marshfield, in the county of Webster and State of Missouri, have invented a new and useful Flood-Gate, of which the following is a specification.

This invention relates to flood-gates of the class which have a vertical movement, whereby the gate may be elevated out of the stream to prevent backing up of the water and damage to the adjacent fencing and property.

The object of the invention is to provide improved means for holding the gate in its normal position, which will permit of the ready release of the gate when the pressure of the water reaches a predetermined degree and also permit of the gate being elevated out of the water when desired.

To these ends the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a side elevation of the device. Fig. 2 is a transverse sectional view thereof, taken on the line *x x*, Fig. 1.

Corresponding parts are designated by like reference characters in both the figures of the drawings.

Referring to the accompanying drawings, the gate comprises the upper and lower longitudinal rails or sills 1 and 2, respectively, connected together by the end posts 3, preferably fitted flush against the extremities of the rails and extending a suitable distance above the upper rail and below the lower rail. The frame thus formed is provided with pickets 4, fastened transversely to the upper and lower rails, and a suitable wire brace 5 may be provided, connecting the upper ends of the end posts 3 above the top rail 1. The gate thus constructed is adapted to be suspended from an upright 6, located adjacent to one end of the gate and in line therewith. A longitudinal bifurcation 7 is provided in the upper end of the upright, and in this bifurcation is pivoted a lever 8, located in the plane of the gate. One end of the lever extends outward over the gate, and the latter is suspended from the lever by means of suitable connections 9, extending in opposite directions from the end of the lever to the respective end posts 3 and fastened to the upper ends thereof. The end of the lever is located midway of the ends of the gate, so that the latter may be swung evenly therefrom, and another connection 10 depends vertically from the lever to the upper rail 1. The suspending connections are preferably formed of wire, and the intermediate vertical connection 10 is preferably in the form of a loop embracing the upper rail of the gate and confined in position by the adjacent pickets. The opposite end of the lever is weighted, and when the gate is released the lever is adapted to elevate the gate, as will be understood. Fastened transversely to the upright and extending at opposite sides thereof is a bar or beam 11, and extending downward from the weighted end of the lever and toward the upright is a pair of flexible braces or stays 12, which diverge toward the opposite ends of the beam 11, to which they are connected. The purpose of these braces or stays is to hold the lever against lateral movement in the normal elevated position of the weighted end of the lever and to securely hold down the outer end of the lever, and thereby cause an effective frictional engagement between the bottom rail of the gate and the keepers.

To hold the gate in its normal position, suitable stobs or short posts 13 are driven into the bed of the stream and are provided with suitable pins or shoulders 14, forming rigid keepers for the gate and extending in a direction downstream. The bottom rail of the gate is engaged under the shoulders or keepers of the stobs or posts 13, whereby the gate is effectively held down in the stream and cattle are prevented from passing from one field to another around the end of a fence and through the stream. Being connected at its upper end to the lever, the gate is held in its proper vertical position, and the weight of the opposite end of the lever holds the lower rail of the gate firmly against the under side of the keepers 14, whereby the gate is not affected by the ordinary pressure or force of the stream. However, when the stream becomes swollen and the water backs up and there is danger of the gate and the adjacent fencing becoming damaged or destroyed the

force of the stream is such as to force the gate in a direction down the stream, as indicated by the arrow in Fig. 2, and the lower rail of the gate is disengaged from under the keepers 14, and the weighted lever elevates the gate, and thereby the water and debris are free to pass on down the stream.

The gate is preferably constructed with pickets, as shown, to permit of the water of the stream normally passing through the gate, and a comparatively broad plank or board 15 is fastened transversely to the pickets and intermediate of the top and bottom rails of the gate, so as to permit of the gate acting quickly under an increased pressure of the stream.

It is preferable to locate the stobs or posts 13 near the end posts of the gate, so that the pins or keepers 14 may fit against the inner sides of the respective end posts and prevent longitudinal displacement of the gate when in its normal position. Also the end posts which extend below the bottom rail of the gate, as heretofore described, may be driven temporarily into the ground to brace the gate against the current and yet permit of the ready elevation thereof by the weighted lever.

It will be understood that the operating-lever may be placed at either end or at either side of the gate, and a lever may be employed at each end of the gate. In the latter case the intermediate connection 10 is dispensed with and the end connections 9 connected to the respective levers.

The present invention provides an exceedingly practical and durable flood-gate, as there are no hinges nor movable parts, such as springs and bolts, to become broken or get out of order; but the parts are all substantially connected together, and loss or breakage of any of the parts is effectively precluded.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the present invention.

Having thus described the invention, what is claimed is—

1. In a device of the class described, the combination of a vertically-movable gate, a rigid keeper adapted to engage the bottom portion of the gate and hold it down in its normal position against vertical movement, the gate being capable of a lateral swinging movement whereby it may be automatically released from the keeper by excessive lateral pressure, a lever having one end connected to the gate, and a brace or stay interposed between the opposite end of said lever and a fixed point, substantially as shown and described.

2. In a device of the class described, the combination of a vertically-movable gate, a stob or post fast in the bed of the stream and provided with a rigid laterally-projecting keeper extending downstream and adapted to engage the gate and hold the latter down in its normal position and against upward movement, and means for elevating the gate, the gate being adapted to be automatically disengaged from the keeper by an excessive lateral pressure, substantially as shown and described.

3. In a device of the class described, the combination with a vertically-movable gate having top and bottom rails and end posts connecting the same, of rigid keepers fast in the bed of the stream and adapted to engage over the top of the bottom rail of the gate and bear laterally against the respective end posts, and means for elevating the gate, the gate also being capable of a lateral swinging movement, whereby it is adapted to be automatically disengaged from the keepers by an excessive lateral pressure, substantially as shown and described.

4. In a device of the class described, the combination with a gate comprising top and bottom rails, end posts connecting the same and extending above the top rail and below the bottom rail, the lower ends of the posts being adapted to be driven lightly into the bed of the stream to prevent swinging movement of the gate under ordinary pressure, of a rigid keeper fast in the bed of the stream and adapted to engage over the upper face of the lower rail and hold the gate down in the normal position thereof, and means for elevating the gate connected to upper ends of the end posts thereof, the arrangement being such that an excessive lateral pressure against the gate will effect a disengagement of the lower rail of the gate with the keeper and the escape of the embedded ends of the posts, substantially as shown and described.

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

WALLACE CLOUD.

Witnesses:
JOHN W. THOMPSON,
URIAH THOMAS.