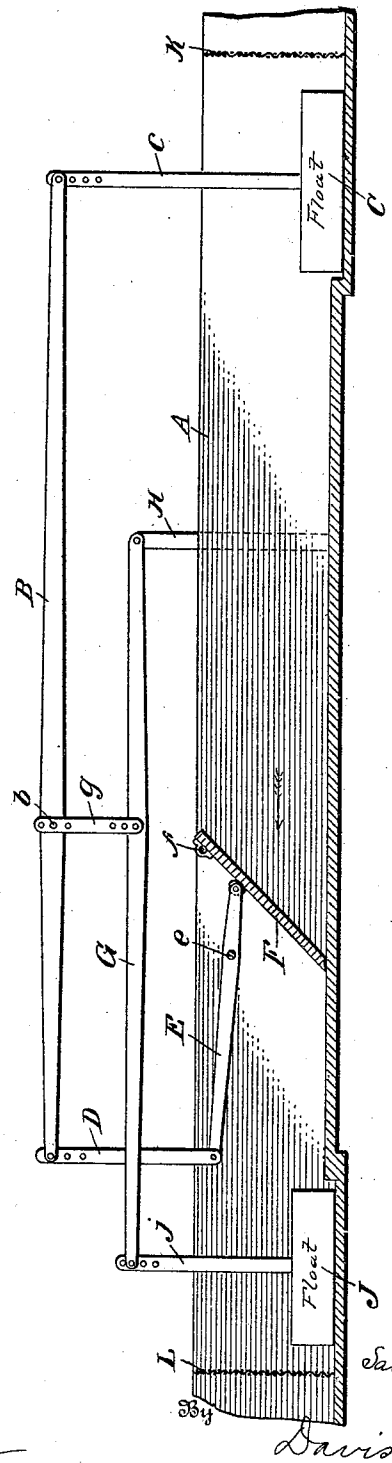
No. 870,256. PATENTED NOV. 5, 1907.

S. C. SMITH.

FLOOD GATE.

APPLICATION FILED JUNE 20, 1907.



Witnesses

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FLOOD-GATE.

No. 870,256. Specification of Letters Patent. Patented Nov. 5, 1907.

Application filed June 20, 1907. Serial No. 379,973.

To all whom it may concern:

Be it known that I, SAMUEL C. SMITH, a citizen of the United States of America, and a resident of Daisy, parish of Plaquemines, State of Louisiana, have invented certain new and useful Improvements in Flood-Gates, of which the following is a full and clear specification, reference being had to the accompanying drawing, in which is represented a vertical longitudinal section of a drainage canal or trough provided with my invention.

The object of this invention is to provide a simple check valve or gate arrangement adapted to prevent flood waters from backing up through the drain canal and at the same time permit the free outflow of any flood waters accumulated above the drain canal, as more fully hereinafter set forth.

Referring to the drawings by reference characters, A designates the drainage canal or channel in which is swung a depending outwardly opening gate F adapted to normally close. At a suitable point above the gate, in the canal, is located a float C which is pivotally attached, by means of a vertical post *c*, to the longer arm of a lever B, this lever being fulcrumed at *b* to a floating fulcrum post *g* and having its shorter arm pivotally connected to the upper end of a depending link D, the lower end of this link being pivotally connected to the longer arm of a lever E which is pivoted within the channel upon a transverse rod *e* and is provided at its free end with a roller adapted to engage the outer face of the gate.

The fulcrum post *g* is pivotally supported on a lever G, which lever is fulcrumed on a post H located at a point between the float C and the gate. The lower end of lever G being pivotally connected to the upper end of the post *j* which is carried by a float J located in the channel at a point below the gate. Suitable screens K and L prevent the floats and valve being interfered with by foreign matters which would otherwise be carried into contact with the floats and the gate.

It will be observed that when water passes down the channel toward the gate the float C will be elevated and thus, through the medium of lever B, link D and lever E, raise the gate and thus permit the water to pass outward. The waters passing out will tend to lift the float J but in view of the fact that this float is smaller than the float C the buoyancy of this float J will not be sufficient to close the gate against the action of the float C. Should, however, the flood waters back up into the channel while the waters are not flowing out through the channel, the float J will be elevated and through the medium of the connecting levers cause the gate to be held tightly in its closed position and thus prevent the flood waters from passing up beyond the gate. In some cases it will not be necessary to use the float J as the normal tendency of the gate itself to close may be relied upon to hold it in its closed position against flood waters backing up through the channel, acting in the nature of a check valve; in this case the fulcrum post *g* will of course be stationarily mounted.

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

1. In combination with a channel, a gate swung therein and adapted to open downwardly and normally close, a lever pivoted within the channel below the gate and adapted to close the same when its lower end is raised, a link attached to the lower end of this lever, a lever attached to the upper end of this link, fulcrum means for this lever, a float in the channel at a point above the gate and means connecting this float to the upper end of the last named lever, for the purpose set forth.

2. In combination with a channel containing an outwardly opening gate, a gate closing lever, a float in the channel above the gate, a float of smaller size in the channel below the gate, and a system of levers and connections connecting the gate closing lever of the two floats, substantially as and for the purpose set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses this 14th day of June 1907.

SAMUEL C. SMITH.

Witnesses:
CONRAD V. KREBS,
JOE N. AMORETTI.