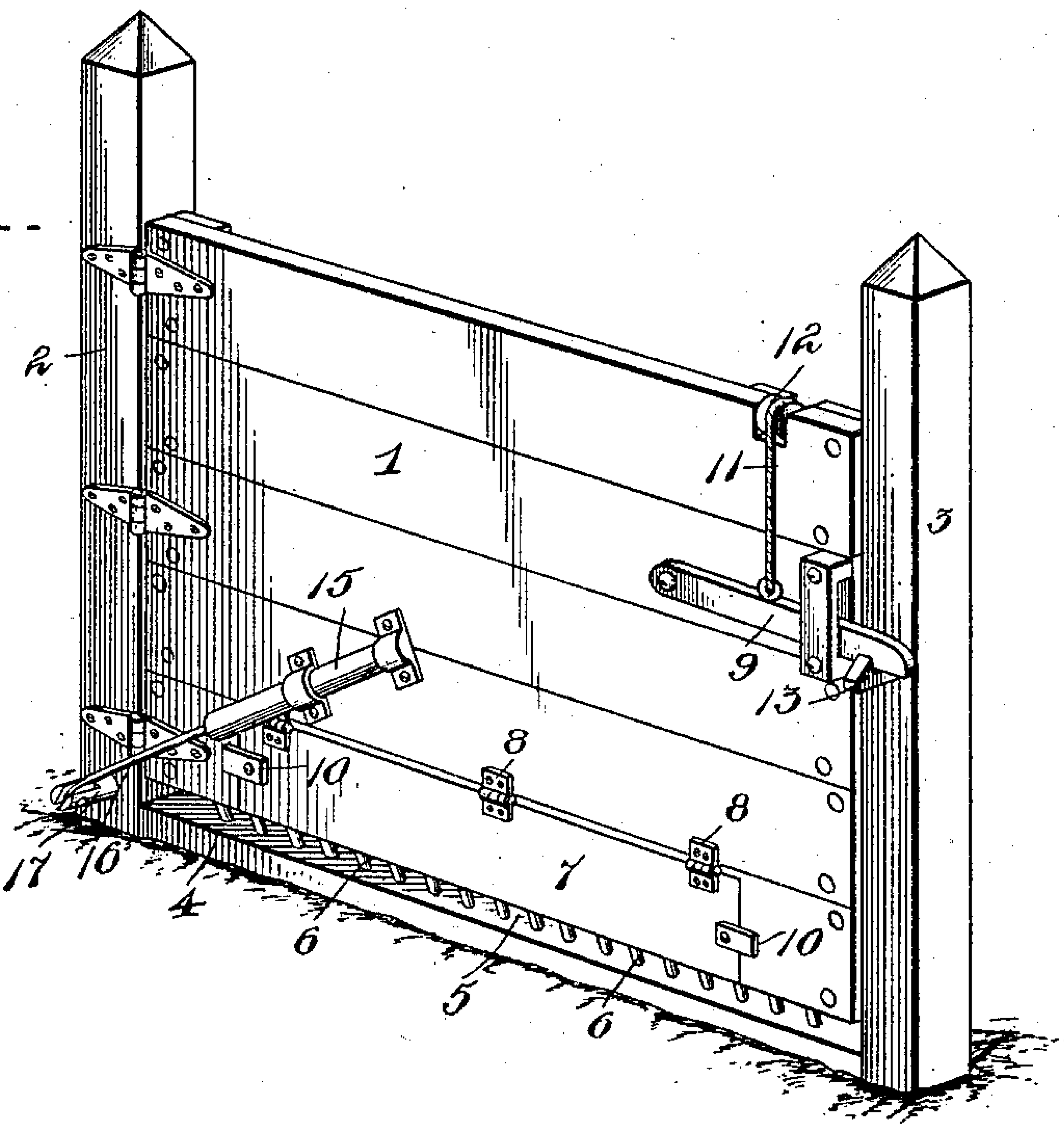
(No Model.)

H. LORTON.

FLOOD GATE.

No. 580,876. Patented Apr. 20, 1897.

FIG.1.



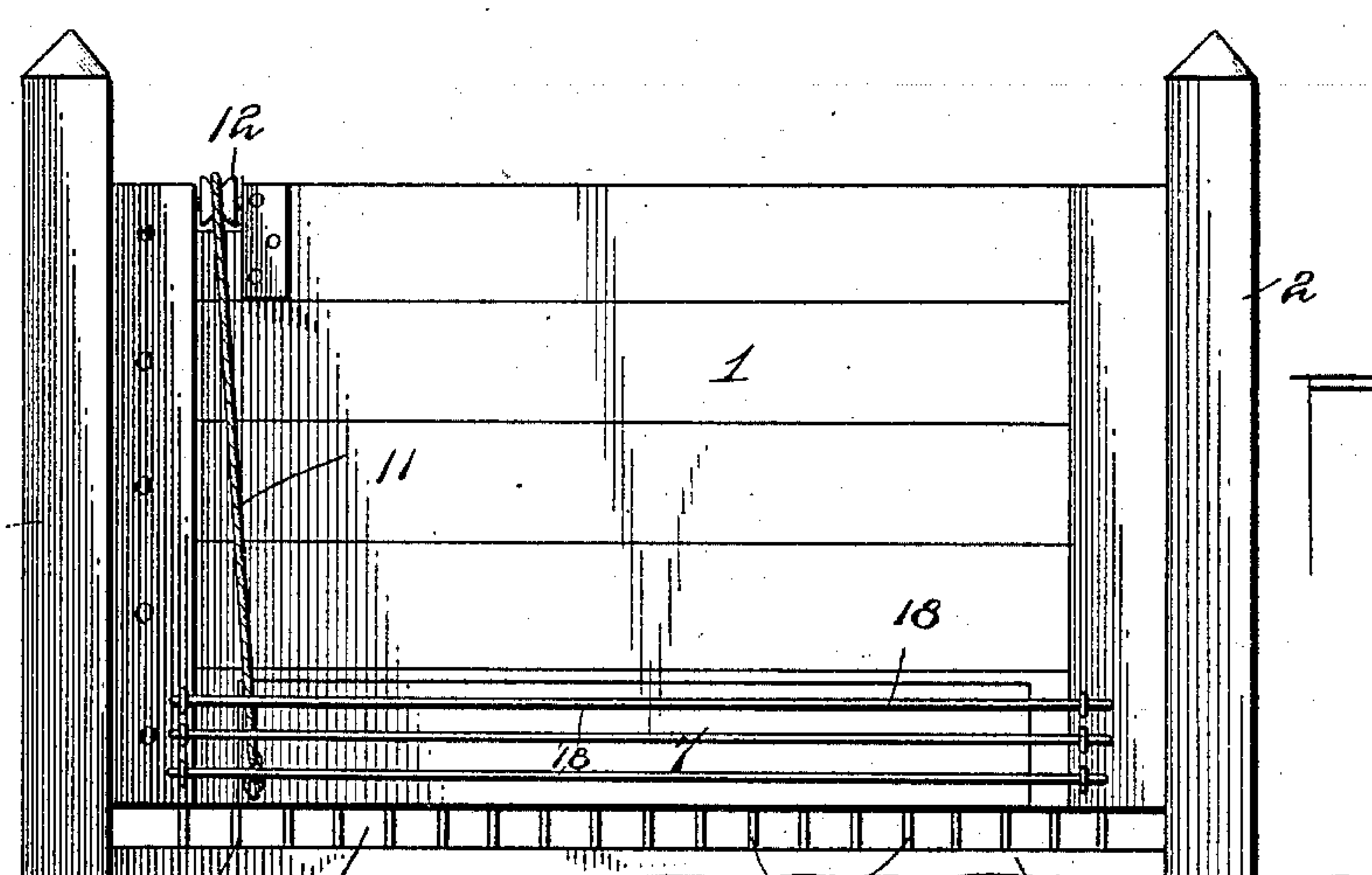
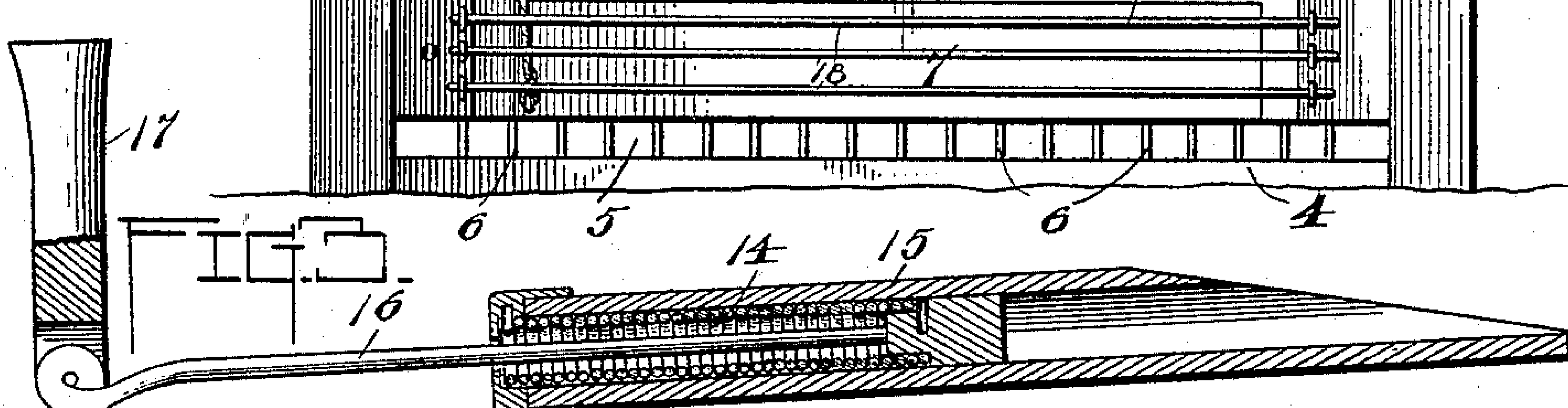


FIG.2.

FIG.3.



Witnesses.

W. J. LeHane (?)

T. J. Riley (?)

By his Attorneys,

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UNITED STATES PATENT OFFICE.

HENRY LORTON, OF FAYETTE COUNTY, ILLINOIS.

FLOOD-GATE.

SPECIFICATION forming part of Letters Patent No. 580,876, dated April 20, 1897.

Application filed February 24, 1897. Serial No. 624,802. (No model.)

To all whom it may concern:

Be it known that I, HENRY LORTON, a citizen of the United States, residing in the county of Fayette, (Cowden P. O.,) State of Illinois, have invented a new and useful Flood-Gate, of which the following is a specification.

The invention relates to improvements in flood-gates.

The object of the present invention is to improve the construction of flood-gates and to provide a simple, inexpensive, and efficient one capable of opening and closing automatically when the water of a stream rises and falls and adapted to exclude hogs and other animals and prevent them from opening it.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and pointed out in the claims hereto appended.

In the accompanying drawings, Figure 1 is a perspective view of a flood-gate constructed in accordance with this invention. Fig. 2 is an elevation showing the other side of the gate. Fig. 3 is a detail sectional view illustrating the construction of the device for closing the gate.

Like numerals of reference designate corresponding parts in the several figures of the drawings.

1 designates a flood-gate connected by hinges to a post 2 of a supporting-frame, which is also provided with a latch-post 3 and the sill or bottom piece 4, which connects the posts 2 and 3. A space 5 is provided between the lower edge of the gate and the sill or bottom piece 4, and the latter is provided with a series of pins 6, which extend upward to the gate and which divide the space 5. These pins assist in supporting the gate when the latter is closed, relieving the hinges of strain and preventing the gate from sagging and binding, and they provide spaces so that water can flow through the gate without operating the latch mechanism, hereinafter described, when the water is low. By supporting the gate above the bottom sill or piece 4 it is prevented from freezing and sticking to the latter. The pins incline slightly downstream, so that any trash collecting at the gate will pass over them freely when the gate opens.

The gate is provided at its bottom with a hinged section 7, disposed horizontally, the hinges 8 being arranged at the upper edge of the section, and the latter, which is operated by the pressure of the water as the latter rises, is adapted to swing backward to operate a latch 9 and release the gate, whereby the latter is permitted to swing open under the pressure of the water. The hinged section, which is provided at its ends with projecting lugs 10 to prevent it from swinging forward too far, is connected by a chain or wire cable 11 with the latch 9, and the said lugs 10 project over the adjacent portions of the gate 1, as clearly illustrated in Fig. 1 of the accompanying drawings.

The wire rope or chain which passes over a pulley 12 at the top of the gate has one end attached to the front face of the hinged section 7 and the other end of it is secured to the latch, which engages a keeper 13 of the latch-post 3, and when the hinged section is swung backward it draws on the wire rope or chain, lifting the latch and releasing the gate.

The gate is automatically closed by a spring 14, arranged within a tubular casing 15 and engaged by a rod 16, and the latter is pivoted in a bifurcation of a horizontal pin or pivot 17. The spring is coiled and the tubular casing, which has its lower end open, is disposed diagonally on the rear face of the gate. The pin or pivot 17 is mounted in a socket of the hinged post 2 and is adapted to rotate partially as the gate opens and closes to avoid twisting the rod. As soon as the water subsides the spring is permitted to operate and close the gate automatically.

It will be seen that the flood-gate is purely automatic in its operation and that its opening and closing are regulated by the height and pressure of the water.

In order to prevent hogs and other animals from forcing the hinged section backward and automatically opening the gate, the latter is provided with a series of horizontal wires 18, secured to the front face of the gate and extending across the opening which is provided for the hinged section. These wires do not interfere with the passage of the water,

but prevent any accidental operation of the latch.

What is claimed is—

1. In a device of the class described, the combination of a swinging gate provided with a hinged section, a latch mounted on the gate, and a flexible connection extending over the gate from the latch to the hinged section, whereby when the latter is swung backward, the latch will be raised, and means for automatically closing the gate, substantially as described.

2. In a device of the class described, the combination of a hinged flood-gate provided with a swinging section, a latch mounted on the gate, a pulley located above the latch, a flexible connection passing over the pulley and extending from the latch to the hinged section, and a spring-actuated device for closing the gate, substantially as described.

3. In a device of the class described, the combination of a hinged flood-gate provided with a swinging section and having a series of wires extending across it and located at the front of the swinging section to form a shield, a latch, and connections between the latch and the swinging section, substantially as described.

4. In a device of the class described, the combination of a hinged flood-gate provided with a tubular casing, a coiled spring housed within the casing, a rod connected with and actuated by the spring, and a horizontal pivot connected with the outer end of the rod and adapted to turn as the gate opens and closes, substantially as and for the purpose described.

5. In a device of the class described, the combination of a supporting-frame provided with posts and having a bottom piece or sill with upwardly-extending pins, a gate hinged to one of the posts, a keeper mounted on the other, a latch carried by the gate and engaging the keeper, a pulley located above the latch, a hinged section arranged at the bottom of the gate, a flexible connection passing over the pulley and extending from the latch to the hinged section, means for automatically closing the gate, and a series of guard-wires mounted on the gate in advance of the hinged section, substantially as described.

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

HENRY LORTON.

Witnesses:

W. W. HANCE,

S. S. LORTON.