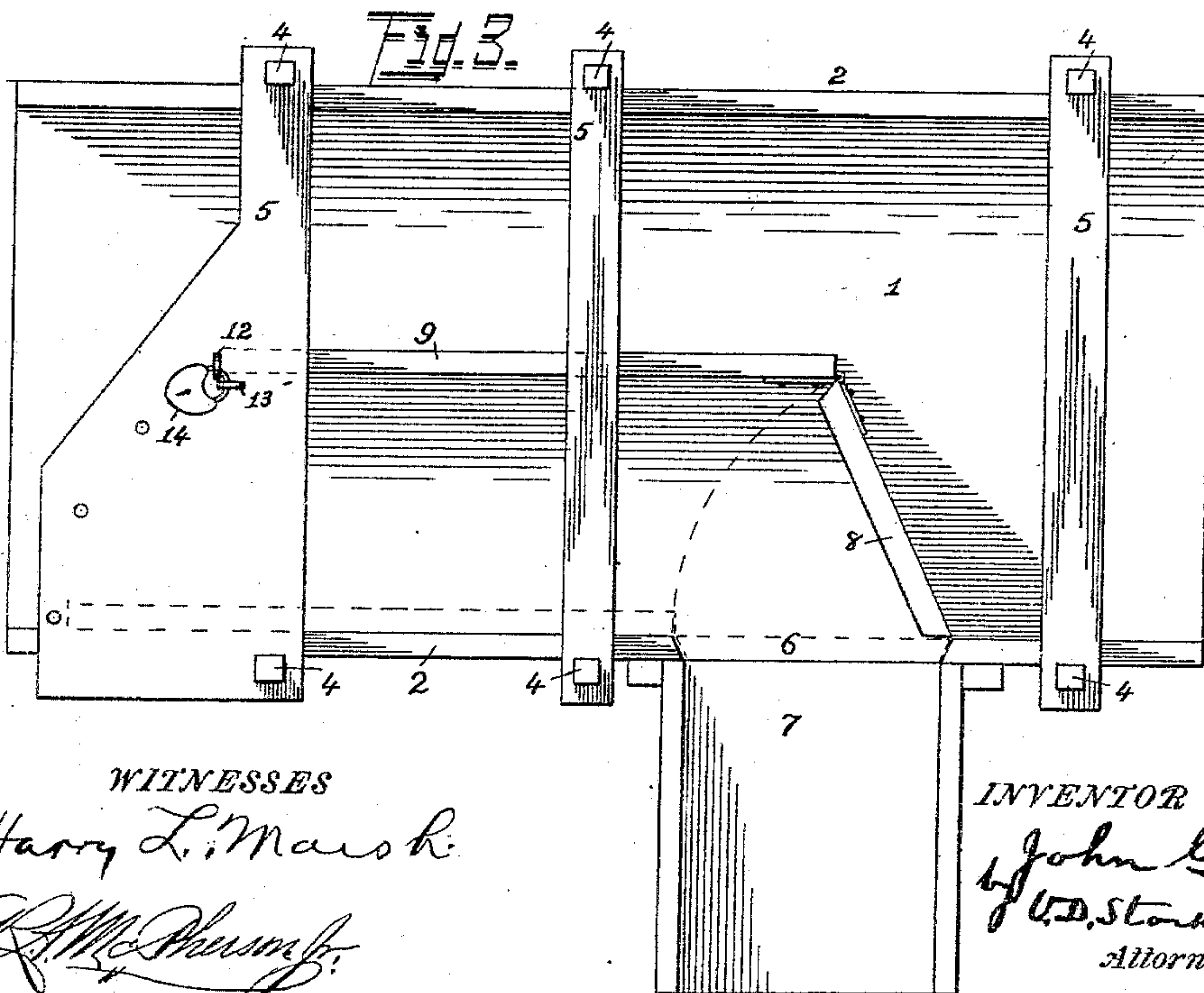
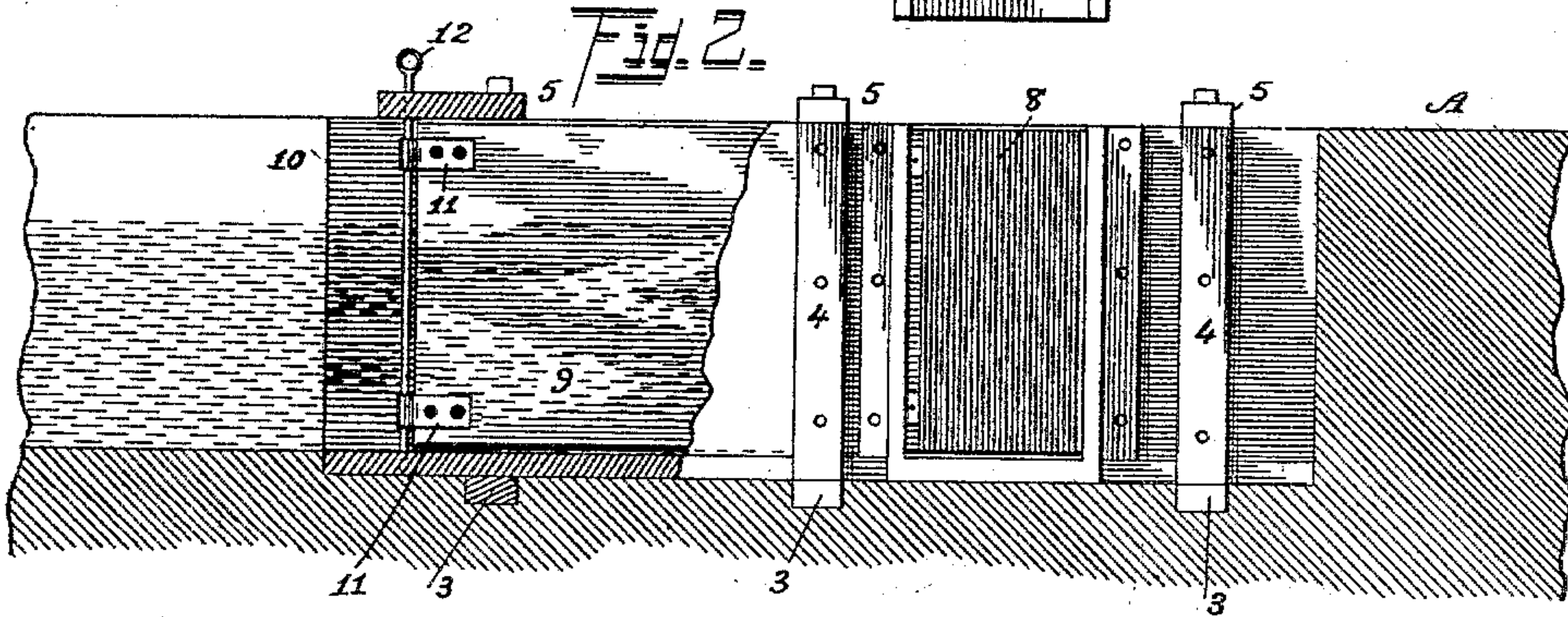
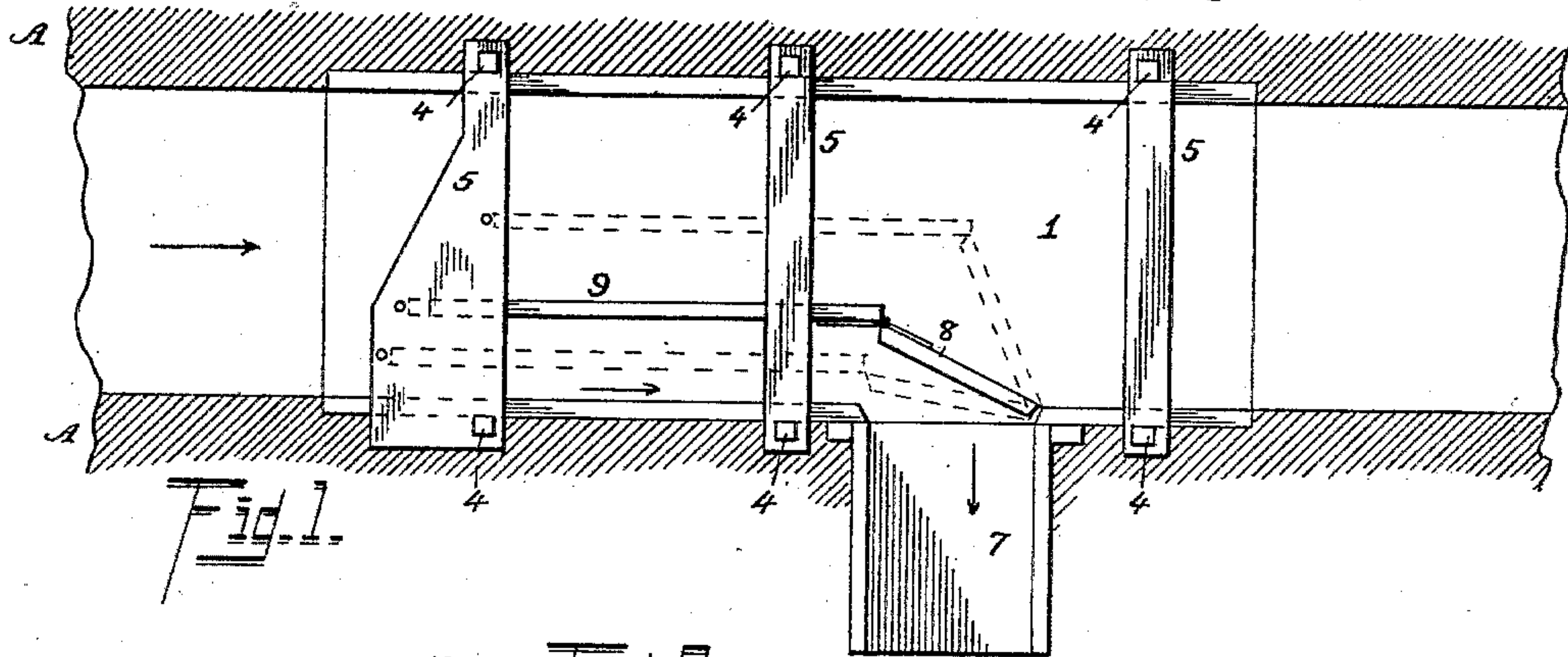


(No Model.)

J. GROOM.
WATER GATE.

No. 602,803.

Patented Apr. 19, 1898.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN GROOM, OF DENVER, COLORADO, ASSIGNOR OF ONE-HALF TO OSCAR REUTER, OF SAME PLACE.

WATER-GATE.

SPECIFICATION forming part of Letters Patent No. 602,803, dated April 19, 1898.

Application filed August 30, 1897. Serial No. 649,927. (No model.)

To all whom it may concern:

Be it known that I, JOHN GROOM, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Water-Gates; and I do hereby 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.

This invention relates to improvements in water-gates and divider-boxes for irrigating canals or ditches and other flumes and waterways.

The object of the invention is to provide improved means for dividing or apportioning the water that flows through the box at whatever velocity and under whatever pressure it may flow and at whatever height the water may be in the box.

It is also an object of the invention to provide an improved adjustable gate for dividing or apportioning the water, by means of which the amount apportioned may be altered or shut off, the adjustable gate being locked or secured in a position that cannot be changed by unauthorized persons without leaving a trace of the change.

The invention consists in certain combinations and arrangements of instrumentalities hereinafter described and claimed.

In the drawings, Figure 1 is a plan of a main or branch canal or ditch having my divider-box and gate arranged therein for use. Fig. 2 shows the bank of the ditch at the right in section, a portion of the outside of the divider-box and the movable gate in elevation, and at the left hand the water in the ditch. Fig. 3 is a plan of my improved box and jointed laterally-swinging gate.

A A are the banks of the canal or ditch. The divider-box consists of a bottom 1 and sides 2 2. The bottom and sides are tied together to form a trough in any suitable way. One way consists of the bottom sills 3 3, posts or stanchions 4 4, and tie-pieces 5 5. The box is set in the canal or a branch thereof, as shown, so that all the water of the stream may flow through it. At the sides of the box is an opening or distributing-passageway 6, preferably having a beveled mouth such as shown,

the opening leading to a trough or spout 7 or to a distributing-ditch, as the case may be. To one side of this opening is hinged a section 8 of the movable and adjustable gate. This gate-section is beveled to fit in the mouth of the opening 6 when the gate is closed. To the extremity of the gate-section 8 is hinged the wing-section 9, which is readily adjusted laterally in the channel to regulate the relative quantity of water to be deflected from the stream to the branch. The wing 9 is secured in its adjusted position by any suitable means.

I have illustrated one way of fastening the gate consisting of a pin or rod 10, which extends through one of the ties 5, the eyes 11 11, connected with the wing, and into the bottom 1. The eyes 11 consist of looped metallic straps screwed or riveted to the wing. By having a wide tie or by arranging the sockets for the pin or rod 10, as shown, the wing 9 may always be parallel with the side of the box in whatever position it may be adjusted. The pin or rod is provided with a loop 12 at the upper end, through the medium of which and a staple 13 in the tie it may be secured in position by means of a padlock 14. Obviously other means of locking the gate may be adopted without departing from my invention. When the gate is entirely closed, it may be secured in the same way that it is in its adjusted open position.

The box or section of flume is commonly open at the top, but may be closed and, as well as the gate, may be constructed of wood, metal, or masonry, or, indeed, of any suitable material.

The gate is held down to position by means of the ties or by the top of the box, as the case may be.

In most cases a movable gate will be required to change the proportion of water allotted from time to time or to entirely cut off the supply. In some cases, however, when the gate is once fixed it remains without change, and no adjustment is necessary and therefore need not be hinged, but may be permanently connected with the box.

Having described my invention, I claim—
1. In apparatus for apportioning water flowing through an irrigating-canal or other

waterway, the combination of a water box or flume having a distributing-passage leading from the bottom thereof, and a separator or deflector extending from the bottom to the top of the box and from a margin of said distributing-passage into the flume-channel for deflecting a predetermined proportion of the entire stream through the lateral passage, substantially as described.

2. In apparatus for apportioning the water flowing through an irrigating-canal or other waterway, the combination of a water-box having a distributing-passage leading laterally from the bottom thereof, a lateral-swinging gate extending from the bottom to the

top of the box, and from a margin of said distributing-passage into the flume-channel, and means for locking the gate in a plurality of adjusted positions, substantially as described.

3. In water-distributing systems the combination of a water-box and a laterally-swinging gate composed of sections jointed together, substantially as described.

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

JOHN GROOM.

Witnesses:

N. WAGNER,

R. D. REES.