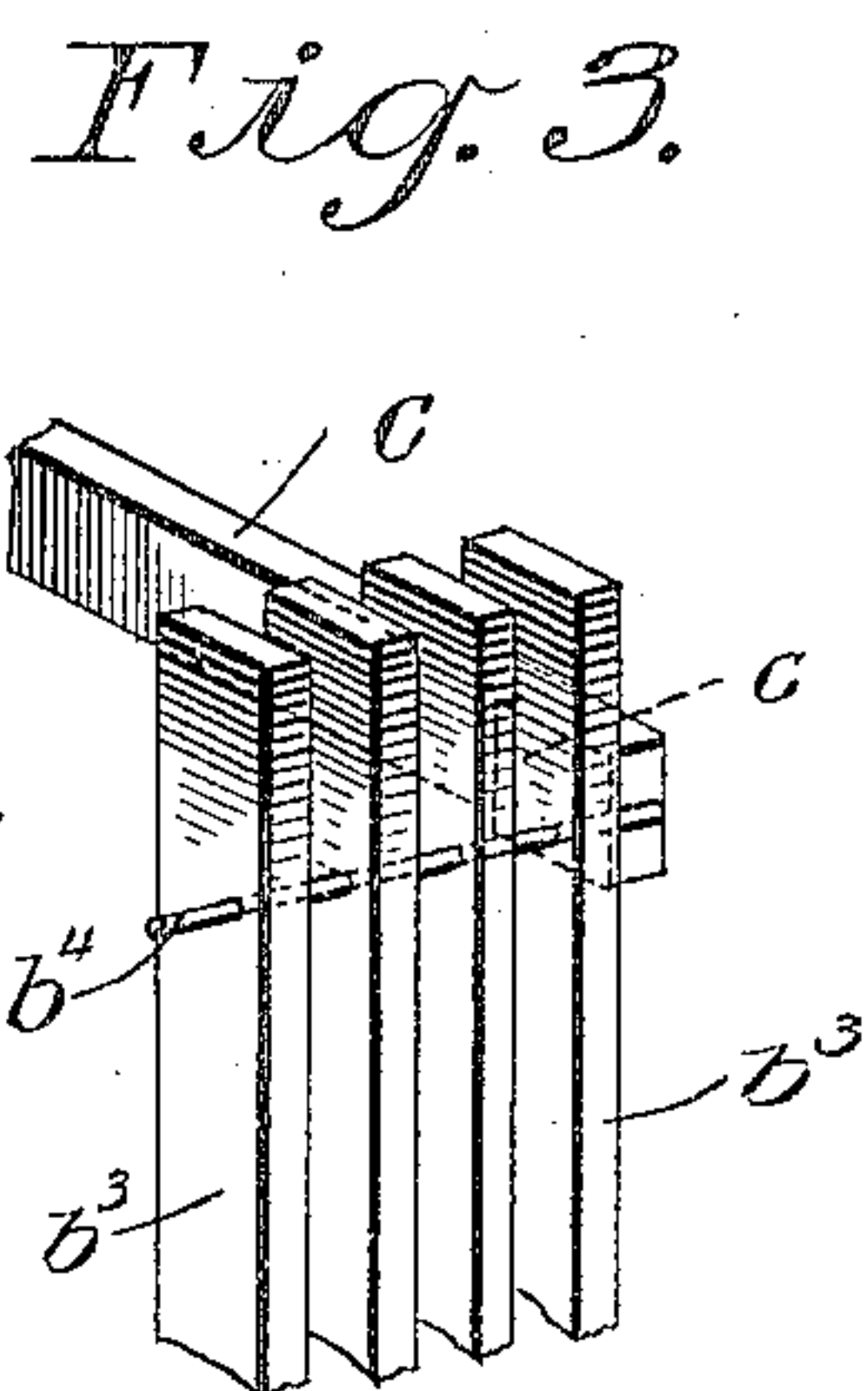
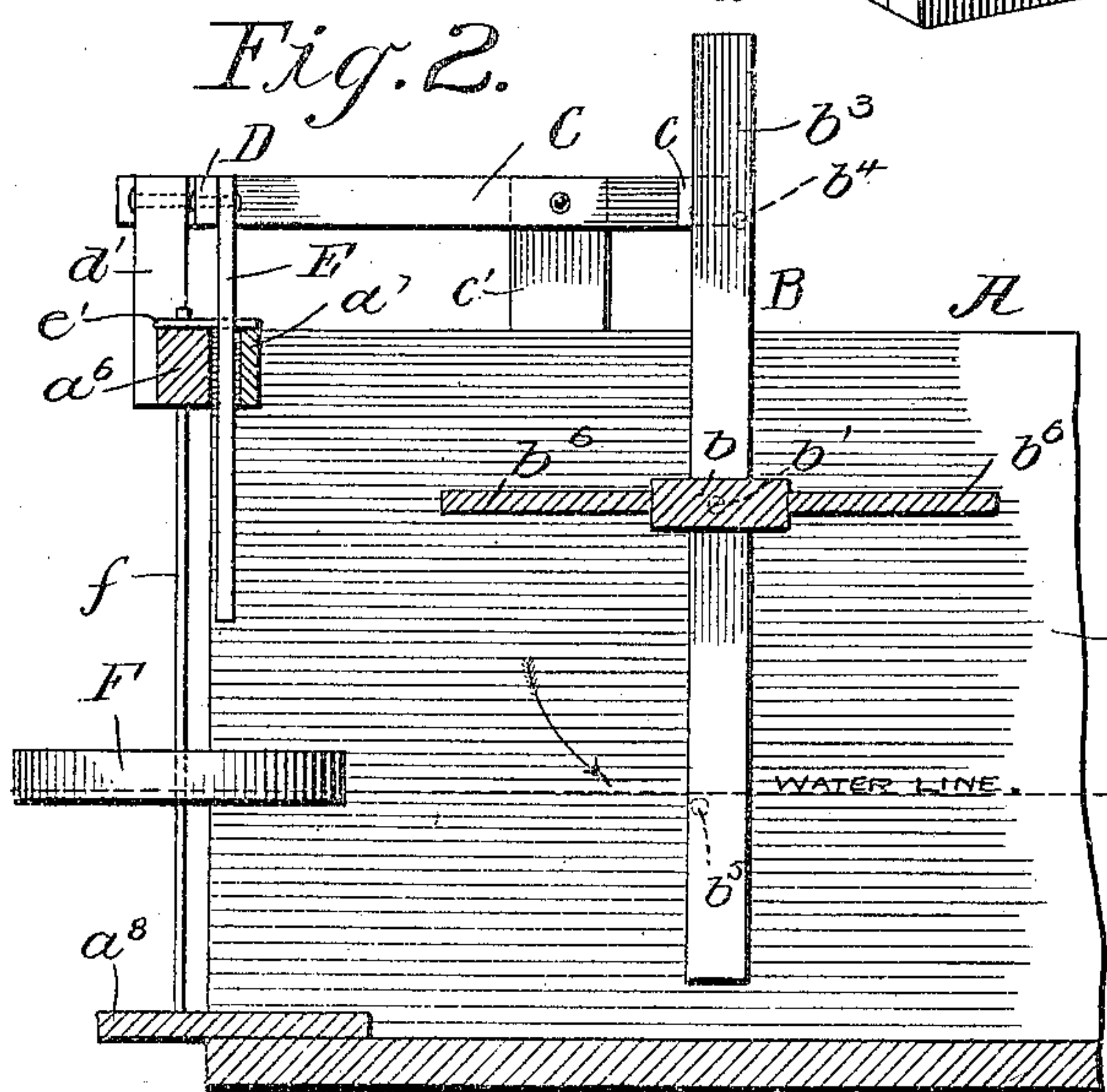
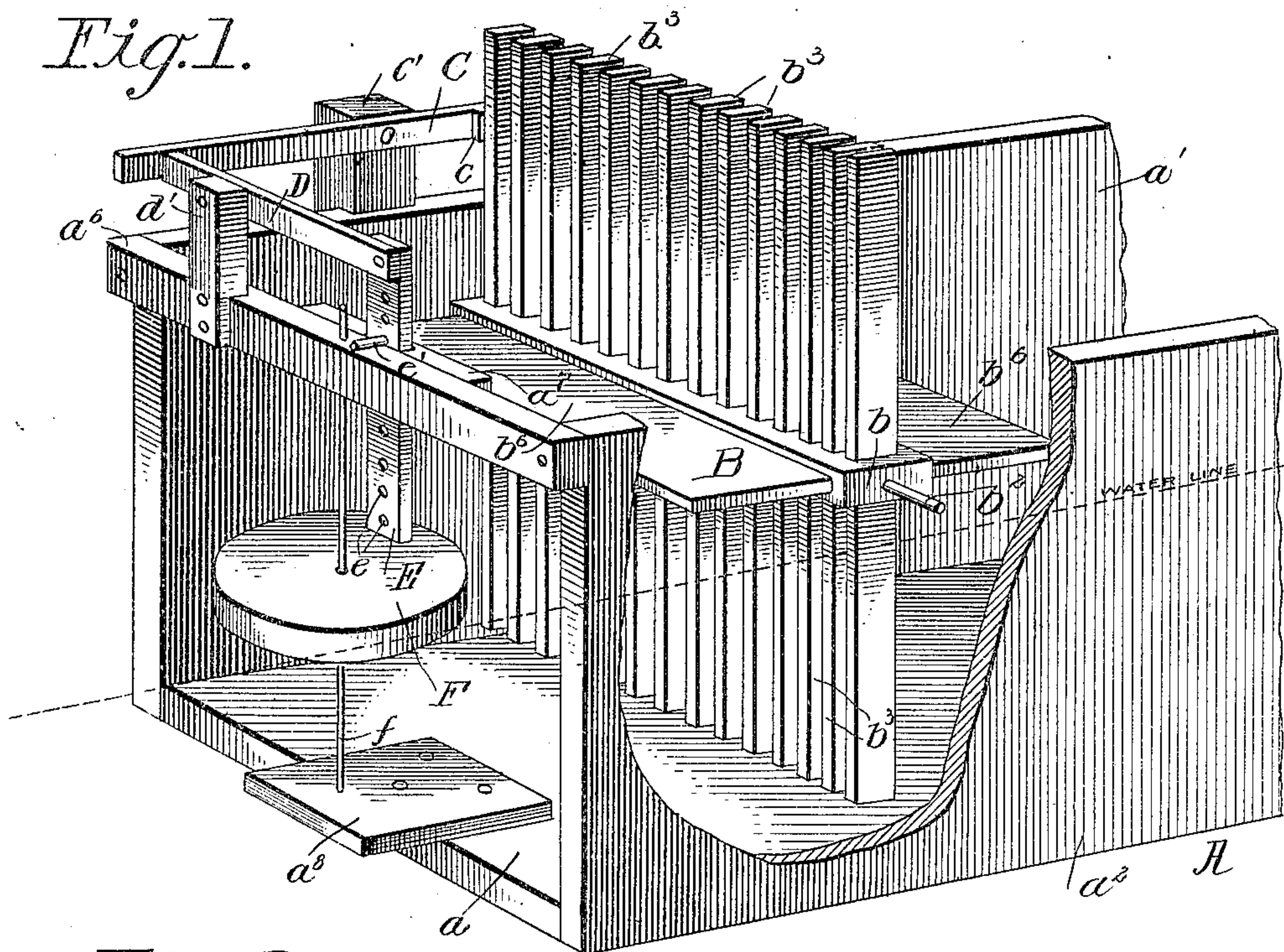


No. 818,288.

PATENTED APR. 17, 1906.

W. B. RACE.
SCREEN FOR IRRIGATING DITCHES
APPLICATION FILED SEPT. 7, 1905.



WITNESSES:

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SCREEN FOR IRRIGATING-DITCHES.

No. 818,288.

Specification of Letters Patent.

Patented April 17, 1906.

Application filed September 7, 1905. Serial No. 277,414.

To all whom it may concern:

Be it known that I, WILLIAM B. RACE, a citizen of the United States, and a resident of Lake, in the county of Fremont and State of Idaho, have invented certain new and useful Improvements in Screens for Irrigating-Ditches, of which the following is a specification.

My invention is an improvement in screens for irrigating-ditches; and it consists in certain novel constructions and combination of parts hereinafter described and claimed.

Referring to the drawings forming a part hereof, Figure 1 is a perspective view of my improved screen. Fig. 2 is a vertical section of the same, and Fig. 3 is a detail perspective view of the means for retaining the screen in its vertical position.

In the practical application of my invention I provide a casing A, comprising a bottom a and the side walls a' a'' , the walls being connected at their upper ends by cross-bars a^6 . The casing is intended to form a part of the irrigating-ditch, being interposed in the length thereof at such points as may be desired.

A screen B is arranged transversely of the casing, the screen comprising a transverse bar b and the longitudinal bars b^3 , secured thereto, the said bars being spaced apart and parallel with each other. Journal-pins b' b^2 on the ends of the transverse bar engage bearings in the sides of the casing, and upon the sides of the transverse bar are mounted vanes b^6 , the said vanes standing at right angles to the direction of length of the longitudinal bars. The transverse bar is journaled at such a height in the casing that the ends of the longitudinal bars will be close to the bottom of the casing when the screen is in a vertical position, and the said vertical bars are arranged to cover the entire width of the space between the side walls. The outermost longitudinal bars upon one side of the casing are provided with pins b^4 b^5 , the said pins being arranged transversely of the bars and projecting a slight distance beyond the surface of the outermost bar.

A lever C, having secured to one end thereof a block or catch c , is pivoted upon an upright c' , arising from the side wall of the casing adjacent to the longitudinal bars provided with the pins, the said lever being supported at such a height that the block will

engage the pins to maintain the screen in a vertical position.

A second lever D is pivoted upon an upright d' , secured to the cross-bar a^6 , and the said lever is pivoted at one of its free ends to the free end of the lever C.

A bar E is secured to the free end of the lever D and depends therefrom, having a sliding motion through the bearing a^7 , arranged upon the cross-bar a^6 , and the said depending bar is provided with a plurality of perforations e for engagement by a pin e' to limit the downward motion of the depending bar through the bearing.

A float F is slidably mounted upon a vertical rod f , the rod being supported by a bearing-block a^8 on the bottom of the casing and by the cross-bar a^6 .

In operation the force of the water in the ditch acting upon the lower end of the screen will maintain the same in a vertical position, the catch on the lever c preventing rotation of the screen. Rubbish carried by the water will lodge against the bars of the screen and will dam up the water above the same. As the water rises the float is elevated until it engages the lower end of the depending bar E. A further elevation of the float elevates the said bar, rocks the lever D, and through its connection with the lever C releases the catch, allowing the screen to rotate half round, thus allowing the rubbish to pass under the screen. As soon as the rubbish passes along the ditch the height of the water above the screen is lowered, the float drops, and the catch on the lever C falls into position to engage the pin on the screen. The flow of the water will clean the bars of the screen at each half-rotation thereof. The angular vanes upon the screen are for the purpose of assisting in the rotation of the screen, since were the vanes not provided the screen would have a tendency to lie parallel with the motion of the water instead of rotating half round.

While I have shown my improved screen as being mounted within a casing, it is evident that the casing might be dispensed with, a simple framework being provided to support the parts. My improved screen is entirely automatic in its action, requiring no attention, the rubbish being released when the water above the screen attains a predetermined level, and the height of said level

may be regulated by the length of the bar E, which projects below the cross-bar. By inserting the pin *e'* in different holes a greater or less extent of the bar may be allowed to project below the cross-bar, and as a consequence the catch will be released at a greater or less height of the water above the screen.

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

1. In apparatus of the class described, the combination of a casing, comprising bottom and side walls, cross-bars connecting the side walls at the top, a screen within the casing and comprising a bar arranged transversely thereof, pivot-pins on the ends of the bar and engaging the side walls of the casing, spaced parallel longitudinal bars secured to the outermost longitudinal bars on one side of the casing and projecting beyond the side of the screen, vanes on the transverse bar arranged at a right angle to the longitudinal bars, a lever pivoted on the side wall and provided with a catch for engaging the pins of the screen, a lever pivotally mounted upon a cross-bar and having pivotal connection with the first lever, a bearing on the cross-bar, a bar secured to the free end of the lever and depending through the bearing, a bearing-block on the bottom of the casing, a rod supported by the bearing-block and by the cross-bar, and a float sliding on the rod and adapted to engage the depending bar to release the screen.

2. In apparatus of the class described, the combination of a casing, comprising a bottom and side wall, cross-bars connecting the side walls at the top, a screen rotatably mounted transversely of the casing, a lever pivoted on the side wall and provided with a catch for maintaining the screen in a vertical position, a lever pivotally mounted upon a cross-bar and having pivotal connection with the first lever, a bearing on the cross-bar, a bar secured to the free end of the lever and depending through the bearing, a bearing-block on the bottom of the casing, a rod supported by the bearing-block and the cross-bar, and a float sliding on the rod and adapted to engage the depending bar to release the screen.

3. In apparatus of the class described, the combination of a casing comprising a bottom and side walls, cross-bars connecting the side walls at the top, a screen rotatably mounted transversely of the casing, means for restraining the rotation of the screen, a vertical rod supported by the casing, a float sliding on the rod, and means whereby when said float is elevated it may release the screen from the restraining means.

4. In apparatus of the class described, the combination of a casing adapted to form a part of an irrigating-ditch, and comprising a

bottom and side walls, cross-bars connecting the side walls at the top, a screen rotatably mounted transversely of the casing, means for maintaining the screen in an upright position, a float mounted for vertical movement in the casing, and means whereby the upward movement of the float may release the screen-retaining means.

5. In apparatus of the class described, the combination of a casing adapted to form a part of an irrigating-ditch, comprising bottom and side walls, a screen rotatably mounted transversely of the casing, means for retaining the casing in a vertical position, a float adapted to be actuated by the water in the irrigating-ditch, and means connecting the float and the screen whereby the motion of the float may control the movement of the screen.

6. In apparatus of the class described, the combination of a casing comprising a bottom and side walls adapted to form a part of an irrigating-ditch, a screen rotatably mounted transversely of the casing, means for maintaining the screen in an upright position, and means whereby the height of the water in the casing above the screen may control the movement thereof.

7. In apparatus of the class described, the combination of a casing adapted to form a part of an irrigating-ditch, and comprising a bottom and side walls, a screen rotatably mounted transversely of the casing, means for maintaining the screen in an upright position, and means whereby the rise of the water above the screen may release said retaining means.

8. A screen for irrigating-ditches, comprising a plurality of spaced parallel bars mounted to rotate within the ditch, vanes at right angles to the direction of length of the bars, means for normally retaining the screen in a vertical position, and means whereby the rise of the water in the ditch above the screen may release the said retaining means.

9. A screen for irrigating-ditches, comprising a plurality of spaced parallel bars mounted to rotate within the ditch, vanes at right angles to the direction of length of the bars, means for normally retaining the screen in a vertical position, and means whereby the rise of the water in the ditch above the screen to a predetermined level may release the said retaining means.

10. A screen for irrigating-ditches, comprising a plurality of spaced parallel bars mounted to rotate within the ditch, vanes at right angles to the direction of length of the bars, means for normally retaining the screen in a vertical position, a float within the ditch, and means whereby the rise of the float may release the said retaining means.

11. A screen for irrigating-ditches, comprising a plurality of spaced parallel bars mounted to rotate within the ditch, vanes at

right angles to the direction of length of the bars, means for normally retaining the screen in a vertical position, a float within the ditch, and means whereby the rise of the float to a predetermined level may release the retaining means.

12. The combination with an irrigating-ditch, of a screen rotatably mounted therein, means for normally retaining the screen in a vertical position, and means whereby the water in the ditch above the screen may control the motion of the screen.

13. The combination with an irrigating-ditch, of a screen rotatably mounted therein, means for normally retaining the screen in a

vertical position, and means whereby the rise of the water in the ditch above the screen may release the said retaining means.

14. The combination with an irrigating-ditch, of a screen rotatably mounted therein, means for normally retaining the screen in a vertical position, and means whereby the rise of the water in the ditch above a predetermined level may release the said retaining means.

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Witnesses:

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