Jarvis A. Morgan's Water Wheel

109335

PATENTED Nov 15 1870

Fig: 1.

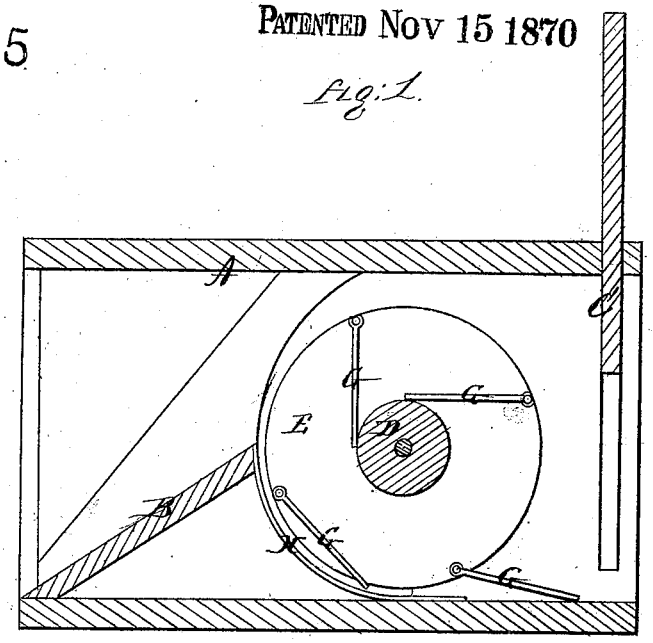
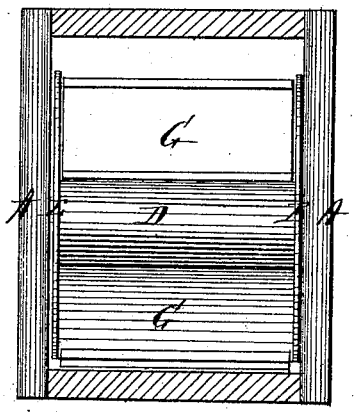


Fig: 2



Witnesses
C. L. Evers
J. C. Hutchinson

Inventor
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Attys.

United States Patent Office.

JARVIS ALONZO MORGAN, OF NAVASINK, NEW JERSEY.

Letters Patent No. 109,335, dated November 15, 1870.

IMPROVEMENT IN WATER-WHEELS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JARVIS ALONZO MORGAN, of Navasink, in the county of Monmouth and in the State of New Jersey, have invented certain new and useful Improvements in Water-Wheel; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "submerged current-wheel," as will be hereafter fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of the trough or box in which the wheel is placed, with a transverse vertical section of the wheel.

Figure 2 is an end view of the same.

A represents the trough or box in which the wheel is placed, said trough having a flaring mouth and a bottom, B, which inclines upward toward the wheel, the rear end of said bottom being at the same height as the shaft of the wheel.

At the other end of the trough is a sliding gate, C, which is to be raised for the passage of the water.

Between the rear end of the bottom B and the gate C is placed the wheel-shaft, D, having its bearings in the sides of the trough A.

At each end of this shaft, within the trough, is secured a disk, E, and between the outer edges of the two disks E E is pivoted a series of paddles, G G, which are of such width that their inner edges will rest against the center-shaft D at the proper time to receive the force of the water.

From the rear end of the inclined bottom B, under the wheel thus constructed, is a concave, H, which acts as a guide to bring the paddles into proper position, as fully shown in fig. 1.

This wheel will work equally as well standing on one end of the shaft as resting horizontal.

Turning the trough up-side down, and changing the current from the upper to the lower part of the wheel, and immersing about one-half of the wheel, it makes a superior under-shot. If used as an under-shot, the motion of the wheel is reversed.

It will, hence, be seen that there are three positions in which this wheel may be used:

First, with the shaft horizontal, as represented in the drawing, making an over-shot wheel;

Second, with the shaft perpendicular; and

Third, as an under-shot wheel, by turning the trough bottom-side up.

The wheel may be used without any trough, as many times the trough would not be needed.

I am aware that a hinged bucket in water-wheels is not new.

What I claim is—

In combination with the trough A, with incline B and sliding gate C, the water-wheel having two disks, E, and hinged gates G G, which impinge on the shaft D, all substantially as set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 22d day of September, 1870.

J. A. MORGAN.

Witnesses:

A. N. MARR,

WILLIAM A. PALMER.