

WATER WHEEL.

No. 111,077.

Patented Jan. 17, 1871.

Fig. 1

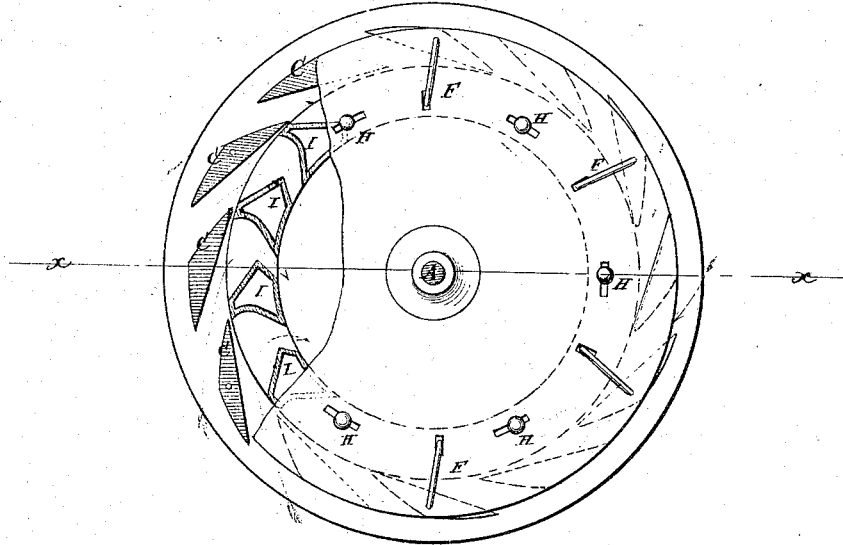
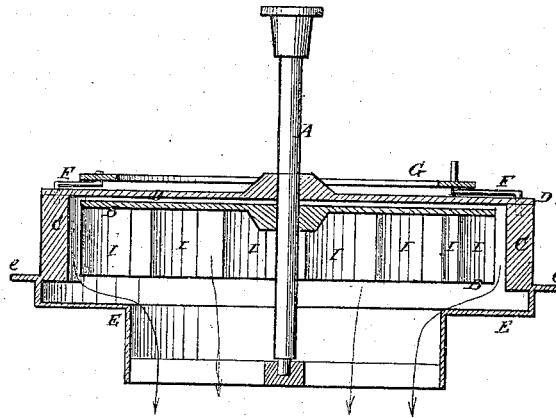


Fig. 2



Witnesses.

A. W. Almqvist
L. S. Moberg

Inventor,

per *A. L. Moore*
J. S. Parker
Mumford
Attorneys

United States Patent Office.

ALBERT L. MOORE AND NORMAN S. PARKER, OF EL DORADO, OREGON.

Letters Patent No. 111,077, dated January 17, 1871.

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 we, ALBERT L. MOORE and NORMAN S. PARKER, of El Dorado, in the county of Baker and State of Oregon, have invented a new and useful Improvement in Central-discharge Water-Wheels; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others, skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a top view of our improved water-wheel, part being broken away to show the construction.

Figure 2 is a vertical section of the same taken through the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

The principle of our invention consists in guiding the water so as to impinge upon the wheel at a tangent to its circumference, and to roll back behind the axis into a central discharge. The result of this mode of operation is to utilize nearly the entire force of the water and at the greatest advantage of leverage.

The means which we employ to carry out this principle consist in the peculiar relative construction and arrangement of the chutes and buckets, which will be first described in connection with all that is necessary to a full understanding of the invention and then clearly pointed out in the claim.

A is the driving-shaft, to which the wheel B is attached, and the lower end of which revolves in a step in the ordinary manner.

C are the chutes or gates which are made in the form and manner shown in fig. 1. Every other one of the chutes C is stationary and every other one is movable.

The stationary chutes C are attached to the upper and lower rims or casings D E, and the movable chutes C are pivoted to and between said rims or casings.

The movable chutes are moved to open and close them

by the levers F, the ends of which are connected with a ring-plate, G, so that they may be all moved at the same time.

The movement of the chutes C is limited by bolts H attached to the upper stationary plate or casing D, and passing through slots in the movable ring-plate G.

I are the buckets of the wheel B, which are cast hollow, and in the shape shown in fig. 1, and are securely attached to the top and bottom plates of said wheel.

The line of issue upon the flat surface of the buckets ranges half-way from the center to the outer edge of the wheel B, or in other words is tangent to a circle concentric with the wheel B, and of half its diameter.

The middle part of the bottom plate of the wheel B is cut away, as shown in fig. 2, to give a free discharge to the water.

The rim *e'* of the casing E may be made to project, as shown in fig. 1, for convenience in bolting it to the forebay.

Having thus described our invention,

We claim as new and desire to secure by Letters Patent—

The buckets I, protruding forward to an angular point, and receding backwardly in a curve behind the axis of the wheel, combined as described, with chutes C arranged at a tangent to the circle whose radius extends from the axis to the farthest outward extremity of the buckets, as and for the purpose described.

ALBERT L. MOORE.
NORMAN S. PARKER.

Witnesses:

CHAS. H. CAMPFIELD,
O. KIRKPATRICK.