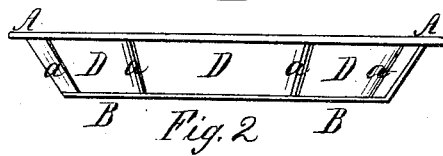
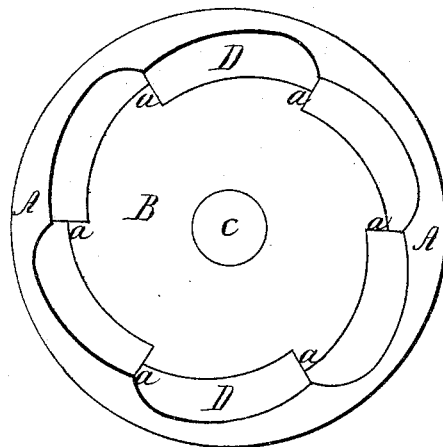


T. ROSE.  
WATER WHEEL.

No. 1,376.

Patented Oct. 18, 1839.

*Fig. 1*



# UNITED STATES PATENT OFFICE.

TIMOTHY ROSE, OF WINDSOR, NEW YORK.

## WATER-WHEEL.

Specification of Letters Patent No. 1,376, dated October 18, 1839.

*To all whom it may concern:*

Be it known that I, TIMOTHY ROSE, of Windsor, in the county of Broome and State of New York, have invented an Improvement in the Manner of Constructing the Reaction Water-Wheel; and I do hereby declare that the following is a full and exact description thereof.

The reaction wheel upon which my improvement is made, is of that kind in which the water admitted on one face of the wheel, is discharged on its periphery, through a series of openings between the overlapping, covered buckets which form its periphery, and from which the water escapes in a direction which is nearly a tangent thereto. It has been the practice hitherto to make the rim that forms the face of such wheels, and the plate that constitutes its back, bottom, or closed end, of the same diameter with each other, the buckets standing vertically from said bottom, or back.

In my improved wheel, I make the rim which constitutes the face of the wheel, and to which one edge of the buckets is attached, four, five, or six inches more in diameter than the back, or lower plate, so that the buckets as they rise from the back toward the rim, will form an obtuse angle therewith, and the diameter of the face of the wheel at which the water enters, shall consequently expose a larger area for its admission, than when made in the ordinary manner.

Figure 1, in the accompanying drawing, is a top view of my improved wheel, A, A, being the rim which constitutes its face, and B, B, the plate forming the back, or bottom, perforated at C, to receive the shaft. D, D, are the buckets, a, a, a, being

the outlets for water. The interior edge of the rim is scalloped out to the curve of the bucket, in order to give to the water from the penstock unobstructed admission to the outlets, thereby preventing that whirling motion from being given to the water which is consequent upon its having to make a short turn over the rim when not so cut away. The buckets rise from the back, or bottom plate, at, or near, its periphery, but they meet the rim forming the face at the distance of an inch and a half, more or less, from its periphery, in order that it may have sufficient width to operate against the deck, or stop water.

Fig. 2, is a side view of my wheel, exhibiting, distinctly, the slope, or cone-like direction, of the buckets.

I have experimentally proved that the power of such a wheel is much increased by giving to it this form, which allows a more free entrance of the water, in proportion to the quantity discharged, than is allowed upon the ordinary mode of construction.

I, usually, make my wheel of cast-iron, and it is, in all respects, to be combined and used in the same way with the ordinary wheels, being like them employed either singly, or in pairs; vertically, or horizontally.

What I claim as my invention, and desire to secure by Letters Patent, is—

The making the buckets of my wheel to flare out from the back, or bottom plate, to the rim, or face, so as to enlarge the opening of the latter, in the manner set forth.

TIMOTHY ROSE.

Witnesses:

JOHN H. SMITH,  
ALBERT STONE.