

N. Johnson,

Water Wheel,

Nº 3,510,

Patented Mar. 26, 1844

Fig. 1.

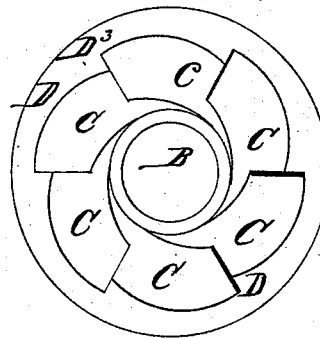


Fig. 2.

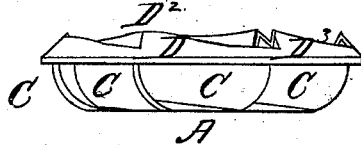


Fig. 4.

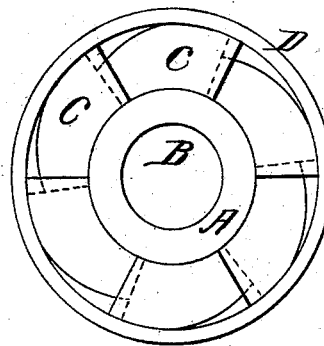
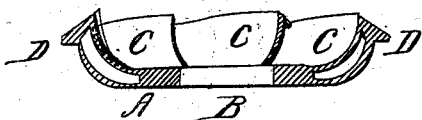


Fig. 3.



UNITED STATES PATENT OFFICE.

NELSON JOHNSON, OF RATHBONEVILLE, NEW YORK.

IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. 3,510, dated March 26, 1844.

To all whom it may concern:

Be it known that I, NELSON JOHNSON, of Rathboneville, Steuben county, State of New York, have invented a new and useful Improvement in the Construction of Water-Wheels, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a top view. Fig. 2 is a side view. Fig. 3 is a vertical section. Fig. 4 is a view of the bottom.

The following description relates to a reaction wheel turning horizontally, the shaft being vertical in a direction contrary to that in which the water escapes. The wheel, however, will act as well in a vertical position, the shaft being horizontal.

The wheel consists of a horizontal circular plate A, having a perforation B in the center for the shaft, called the "eye of the wheel," around the outer circumference of which are a number of tapering spherical buckets C at an angle of about forty-five degrees, overlapping each other at the several outlets, united at their upper edges to a circular rim D, scalloped on its inner circumference, corresponding with the curvature of the upper edges of the buckets, which are attached to the rim of the scalloped portion thereof, said rim flaring downward and outward at an angle of about thirty degrees with a horizontal plane. The buckets taper gradually from the points D³ of the scalloped rim nearest the center of

the wheel to the points D³ of the scallops farthest from the center of the wheel. The concave spherical form of the buckets is extended into the circular plate by scalloping the plate in segments, spiral grooves E extending along the lower or bottom edges of the buckets from the outer lower corners of the buckets, where they intersect the outer circumference of the circular plate, to the inner circumference of the plate.

The object of tapering the aforesaid hollow spherical buckets is to increase the pressure of the water at the outlets or discharging apertures or issues for the water, causing the wheel to run with greater power than the ordinary wheel, with buckets enlarged at the outlets or tapering in a reverse manner.

The tapering form of the buckets is obtained by the use of the aforesaid hollow frustum-of-a-cone rim scalloped in the manner described.

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

The combination of the aforesaid scalloped hollow frustum-of-a-cone rim D with the spherical tapered buckets C and scalloped plate A, in the manner and for the purpose set forth.

NELSON JOHNSON.

Witnesses:

P. S. S. MCNEIL,
HENRY H. BIRDSALL.