

R. Monroe,

Water Wheel.

No. 109,926.

Patented Dec. 6. 1870.

Fig. 1

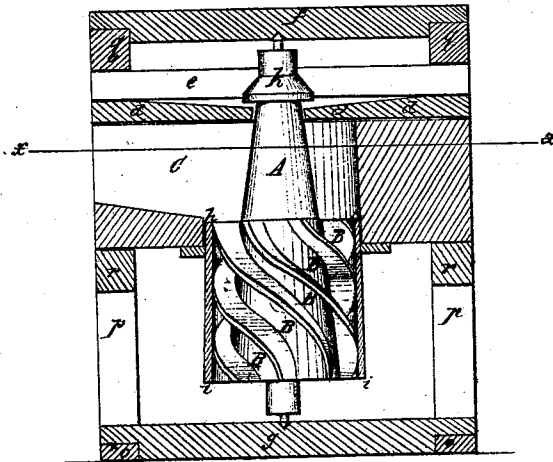
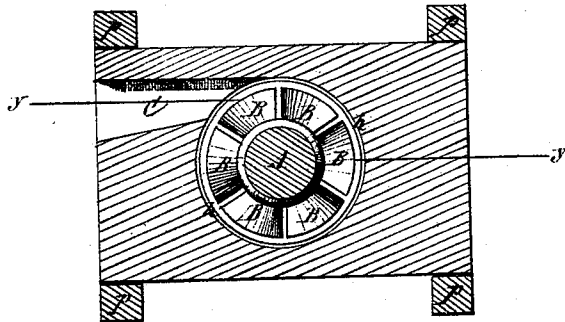


Fig. 2.



Witnesses:

H. J. Smith
Wm. H. Smith

Ransom Monroe, Inventor
by Theodore Munger.

his Attorney.

United States Patent Office.

RANSOM MONROE, OF HENDRICK'S CREEK, PENNSYLVANIA.

Letters Patent No. 109,926, dated December 6, 1870.

IMPROVEMENT IN TURBINE 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, RANSOM MONROE, of Hendrick's Creek, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Turbine Water-Wheels, of which the following is a specification.

Nature and Object of the Invention.

My invention relates to an improvement in turbine water-wheels, and consists in constructing a water-wheel with spiral issues, the upper diameter and the issues at the top of the wheel being greater than the lower diameter and the issues at the bottom of the wheel, and connecting said wheel with a flume, in such a manner that it will receive the force and the weight of the water, and attain greater force and velocity of motion from the same amount of water-power than has been attained by any other wheel heretofore used.

Description of the Drawing.

Figure 1 is a vertical transverse section of the invention, cutting through the lines *y y* in fig. 2, and showing the portion above the lines *y y*.

Figure 2 is a horizontal transverse section, cutting through the line *x x* in fig. 1, and showing that portion of the invention below the line *x x*.

General Description.

The wheel *A* has its bearings in the beams *f* and *g*. Its diameter is about two inches greater at its top *h* than at its bottom *i*.

The issues *B* are about one inch larger at the top than at the bottom of the wheel *A*.

The sills *o*, uprights *p*, girders *q*, and cross-beams

r, compose the frame-work which supports the wheel *A* and a portion of the flume *C*.

d is a covering placed over the flume *C*.

e are key-bars that pass between the girders *q* and the covering *d*, to prevent the water from pressing the covering *d* against the shoulder *k*.

The wheel is really a screw, and the weight of water resting on the screw gives it more power than the force of the water does.

The issues being the full length of the wheel, the water is in full force the full length of the wheel; being smaller at the bottom than at the top causes a firm pressure of the water on the paddles between the issues.

The key-bars *e* and the covering *d* can be removed and the wheel taken out for repairs when necessary.

Claims.

I claim as my invention—

1. The water-wheel *A*, whose diameter is greater at the bottom than at the top, provided with spiral issues *B B*, relatively larger at the top than at the bottom, thus preserving the outer periphery of the buckets in a perpendicular line, substantially as and for the purpose set forth.

2. The wheel *A*, provided with shoulder *k*, in combination with coverings *d d*, and key-bars *e e*, all arranged as and for the purpose set forth.

In testimony that I claim the foregoing improvement in turbine-wheels, as above described, I have hereunto set my hand and seal this 13th day of July, 1870.

Witness: RANSOM MONROE. [L. s.]

CHAS. A. BOONE,
J. L. GLACE.