

S. T. TEACHOUT.
Turbine Water-Wheels.

No. 158,147.

Patented Dec. 22, 1874.

Fig. 3.

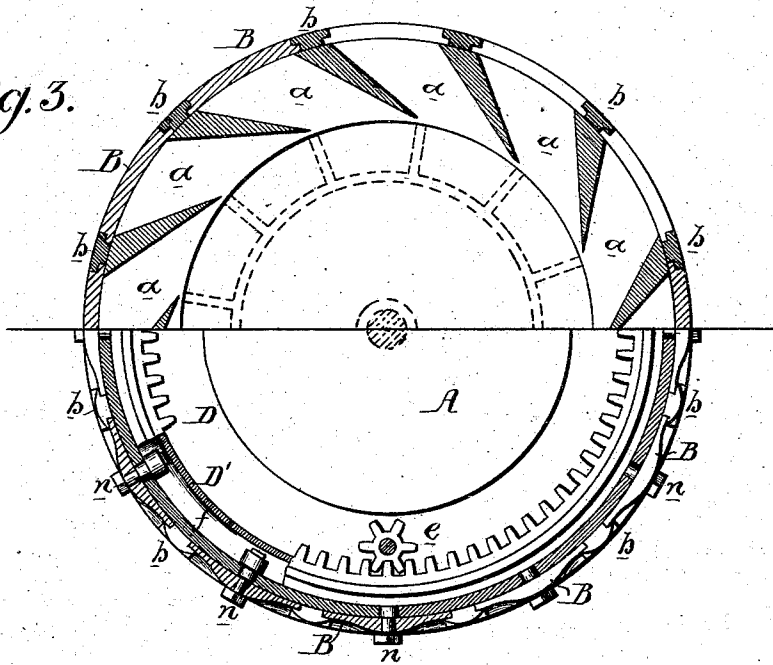


Fig. 1.

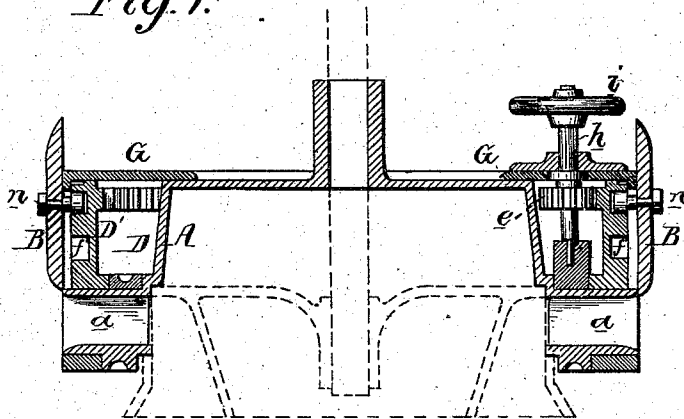
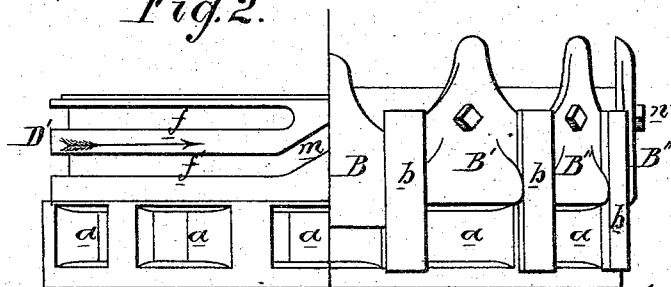


Fig. 2.



Witnesses, Hubert Howson,
Harry Smith

Saml. T. Teachout
by his Attys.
Howson and Son.

UNITED STATES PATENT OFFICE.

SAMUEL T. TEACHOUT, OF TROY, NEW YORK, ASSIGNOR TO HIMSELF AND
JOEL C. PECK, OF SAME PLACE.

IMPROVEMENT IN TURBINE WATER-WHEELS.

Specification forming part of Letters Patent No. **158,147**, dated December 22, 1874; application filed
December 2, 1873.

To all whom it may concern:

Be it known that I, SAMUEL T. TEACHOUT, of Troy, Rensselaer county, New York, have invented an Improvement in Turbine Water-Wheels, of which the following is a specification:

My invention relates to that class of turbine-wheels in which a series of gates are operated by means of a cam-ring; and my invention consists in constructing the casing A so as to afford a bearing for the ring D', which operates directly upon the independent gates B, as shown in the sectional elevation, Figure 1, side view, Fig. 2, and plan view, Fig. 3, of the accompanying drawing. Each gate B slides between vertical guides *b* on the outer casing, and the ring D' rests in a recess, D, on a ledge above the passages *a*, and is confined to its place by an annular plate, G, and on the inner periphery of this ring are teeth, into which gears a pinion, *e*, on a vertical shaft, *h*, which passes through the plate G, and is furnished with a suitable hand-wheel, *i*. In the outer periphery of the ring D' are two grooves, *f f'*, for receiving anti-friction rollers on pins *n*, projecting from the gates B, the pins of one-half of the gates being adapted to one groove, and those of the other half of the gates to other grooves. One portion of each groove is lower than the other, and the two portions communicate with each other through an inclined continuation, *m*, as shown in Fig. 2, where the gates B, B', B'', and B''' are under the control of the groove *f'*, so that on turning the ring D' in the direction of the

arrow the gate B will descend and close its passage simultaneously with the descent of a corresponding gate, which is situated on the opposite side of the wheel, and is controlled by the groove *f*. By continuing the movement of the ring another pair of gates will be closed, and so on, so that by the turning of the ring as many gates may be opened and as many gates closed as the supply of water may suggest.

I do not claim that the improved wheel above described involves any new principle or mode of operation, my invention being restricted to the special construction, whereby simplicity, cheapness, and durability are obtained, such construction consisting in adapting the ring D' to the recess D of the casing, so as to bear on the latter, and act directly on the gates instead of being supported by an independent frame, and operating on the gates through the medium of connecting-rods.

I claim as my invention—

The combination of the casing A, its passages *a*, and gates B, and the ring D' bearing and turning on the casing, and having cam-grooves adapted to receive projections on the said gates, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL T. TEACHOUT.

Witnesses:

IVES LYND,
LORENZO M. RICE.