A. P. Conant,

Water Wheel,

No. 53,788, Patented Apr. 10, 1866.

Fig: 1

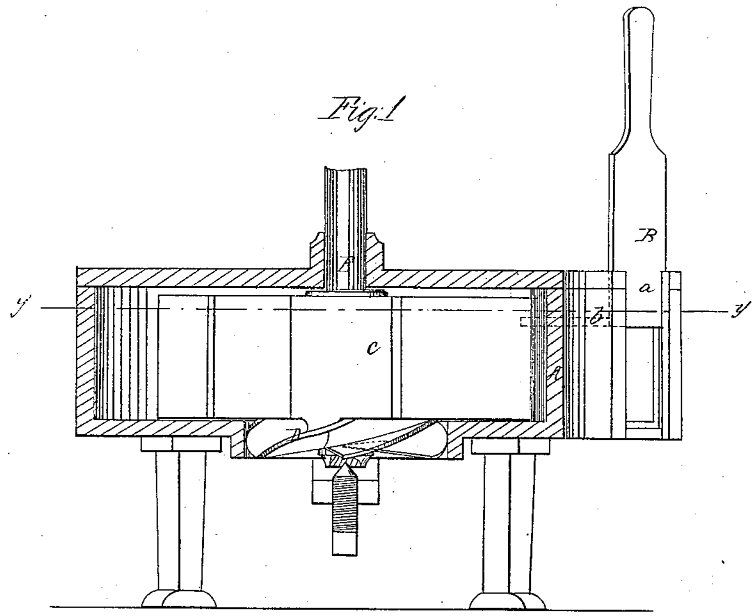
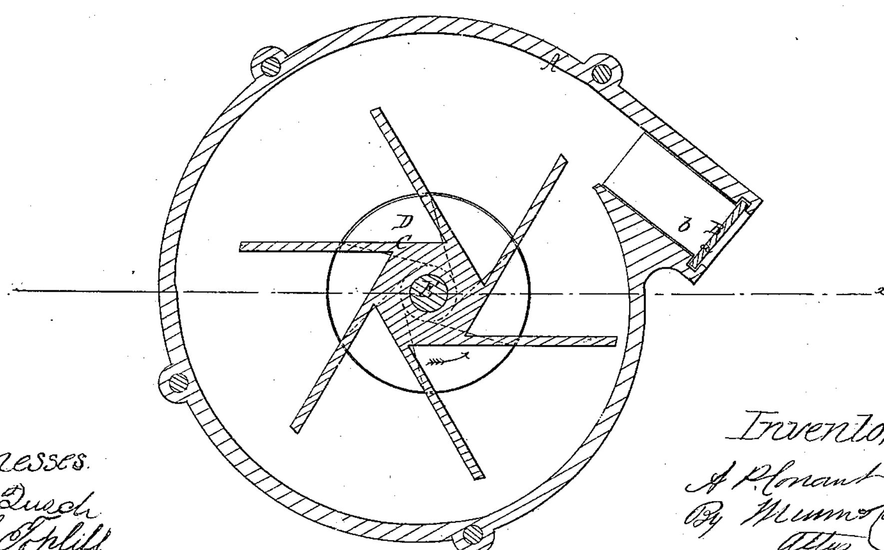


Fig: 2



Witnesses.
Theo Tusch
C. L. Topliff

Inventor:
A. P. Conant
By Munn & Co
Attys

UNITED STATES PATENT OFFICE.

A. P. CONANT, OF SMITHLAND, KENTUCKY.

IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. **53,788**, dated April 10, 1866.

To all whom it may concern:

Be it known that I, ANDREW P. CONANT, of Smithland, in the county of Livingston and State of Kentucky, have invented a new and Improved Water-Wheel; and I 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 drawings, forming part of this specification, in which—

Figure 1 represents a vertical section of this invention, the line *x x*, Fig. 2, indicating the plane of section. Fig. 2 is a horizontal section of the same, taken in the plane indicated by the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a horizontal water-wheel which is inclosed in an air-tight chamber or scroll, and which is composed of a main wheel and a discharge-wheel. The buckets of the main wheel are placed in a tangential position, so that the water on meeting them acts first by percussion and then by reaction, and that by this action the water is carried to the buckets of the discharge-wheel, which is made in the form of a French turbine wheel, so that the water while it discharges acts again by reaction and drops from the center of the wheel after it has spent all its force. The wheel, being inclosed in an air-tight chamber, can be run by suction or by force, and it gives a very great percentage of power.

A represents the scroll, which may be cast of iron or made of any other suitable material, and to which the water is admitted through a gate, B, which is constructed of a vertical plate, *a*, and a horizontal plate, *b*. When the gate is raised only partially the horizontal plate prevents the water from spluttering up immediately behind the gate, and it is compelled to meet the wheel in a solid current.

The scroll A incloses the wheel C D, which is mounted on a vertical arbor, E, and this arbor is stepped in a suitable step below, and it has its bearing above in the cover of the scroll, as shown in Fig. 1. Said cover is screwed down air-tight, so that the wheel can be run by suction or by force.

The wheel is composed of two distinct parts—viz., the main wheel C and the discharge-wheel D. The buckets of the main wheel are placed in a tangential position, as shown in Fig. 2, so that the current of water on entering the scroll meets the same in a perpendicular direction, or nearly so, and after having acted by percussion it (the water) is carried in toward the center of the wheel and acts by reaction until it reaches the discharge D. The buckets of this latter wheel are made in the form of a French turbine wheel, and the water on passing over these buckets acts again by reaction, and when it drops from the wheel all its force is spent.

By these means a wheel is obtained which is very simple in its construction. It is strong and durable and not liable to get out of order and gives a better effect than most wheels put up under equal circumstances.

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

The arrangement of the tangential buckets of the wheel C, curved bucket of the discharge-wheel D, and L-shaped gate B, constructed and operating in the manner and for the purpose herein specified.

The above specification of my invention signed by me this 28th day of June, 1865.

A. P. CONANT.

Witnesses:
M. M. LIVINGSTON,
WM. F. MCNAMARA.