

GEORGE W. LEONARD.

Improvement in Water-Wheels.

No. 116,071.

Patented June 20, 1871.

Fig. 1.

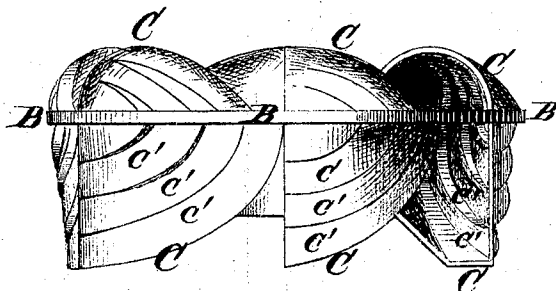


Fig. 2.

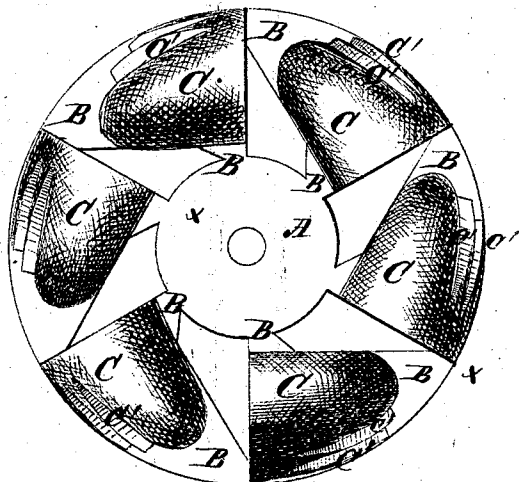


Fig. 3.

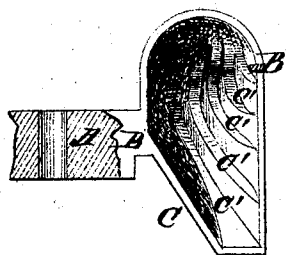
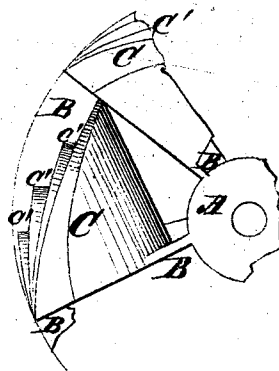


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE W. LEONARD, OF MIDDLE VALLEY, PENNSYLVANIA.

IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. 116,071, dated June 20, 1871.

To all whom it may concern:

Be it known that I, GEORGE W. LEONARD, of Middle Valley, in the county of Wayne and State of Pennsylvania, have invented a new and useful Improvement in 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 drawing forming part of this specification, in which—

Figure 1 is a side view of my improved water-wheel. Fig. 2 is a top view of the same. Fig. 3 is a detail section taken through the line *x x*, Fig. 2. Fig. 4 is a bottom view of a portion of the wheel.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved water-wheel, which shall be so constructed as to overcome the lateral and centrifugal pressure that is wasted upon the rims and scrolls of most wheels, and thus produces no useful effect; and it consists in the buckets, constructed and arranged as hereinafter more fully described.

A is the central part of the wheel, through

which the shaft passes, and upon which is formed the plate B that connects and supports the buckets C, and which is cut away in front of each bucket, as shown in Fig. 2, to allow the water to have a free passage into said buckets. The buckets C are made as shown in the drawing, and upon the interior surface of their outer sides are formed curved flutes, shoulders, or offsets *c'*, as shown in the figures. The effect of the flutes or shoulders *c'* is to give the water a spiral direction and distribute it equally over the discharge or reaction-buckets, thus preventing the wheel from clogging and relieving the scroll from the centrifugal and lateral pressure.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The curved flutes, shoulders, or offsets *c'*, formed in the inner surface of the outer sides of the buckets C, substantially as herein shown and described, and for the purpose set forth.

GEORGE W. LEONARD.

Witnesses:

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