

W. T. VALENTINE.
Water-Wheel.

No. 132,994.

Patented Nov. 12, 1872.

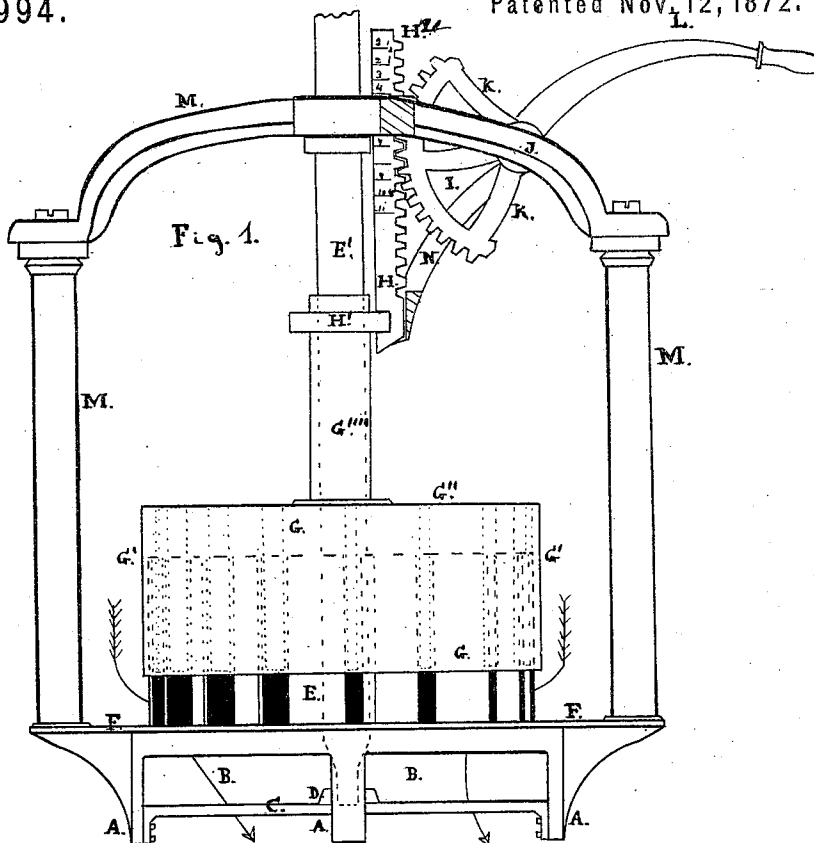


Fig. 2.

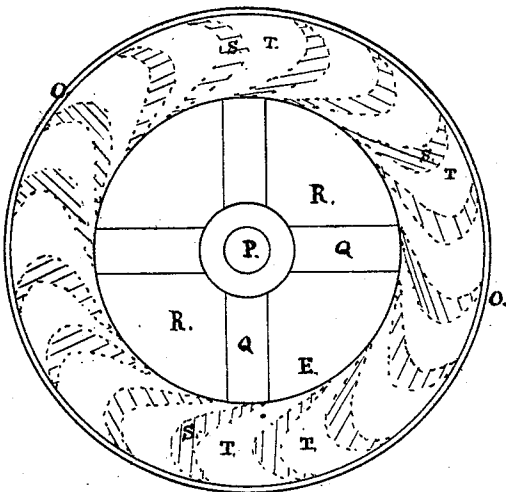
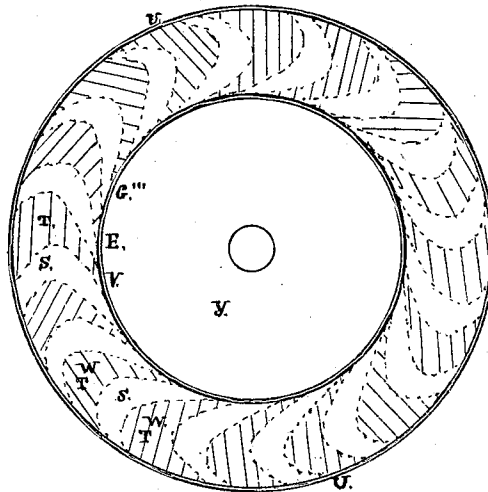


Fig. 3.



L. J. Parker
A. M. Linn } Witnesses.

Warren T. Valentine
Inventor.

UNITED STATES PATENT OFFICE.

WARREN T. VALENTINE, OF ITHACA, NEW YORK.

IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. 132,994, dated November 12, 1872.

To all whom it may concern:

Be it known that I, WARREN T. VALENTINE, of Ithaca, Tompkins county, New York, have invented certain Improvements in Water-Wheels, of which the following is a specification:

My object is mainly to adapt the current of water as it passes through the throats of the buckets of my wheel to the varied demands made on the wheel, or to use the wheel more effectively, while the stream which supplies the wheel varies. In either case the wheel I have invented is and can be adjusted so that a part or the whole of the wheel can be or shall be used. This I accomplish by arranging partitions in the throats of the buckets and attaching them to both the inner and the outer parts of the shell or case of my wheel, as will be apparent as I describe it.

Figure 1 is a side elevation of my wheel; Fig. 2, a view looking down on the water-wheel when removed from the shell or case; Fig. 3, a view of the inside of the case or shell at the bottom where the partitions are situated.

In Fig. 1, the letters A indicate the legs that support the frame-work about the wheel, having the passages of the water, B, out beneath the wheel. The wheel is supported by the cross-bar C; and E is my wheel, fitting a flange, F, which has the case or shell G, also fitting or shutting, when closed down, on it. The shell G also can be raised by the ratchet and segment (at the top of the figure) up any distance above the flange F, so that any part or the whole capacity of the wheel is exposed to the current of water passing, as indicated by the arrows, through the wheel. The shell G is composed of the following parts, viz., the outer rim on which the letter G is placed, the top marked G''; and the inner part, seen in Fig. 3, marked G'''. Between these two parts, G the outer rim and G''' the inner rim, are

placed metallic partitions which slide down, as indicated by the dotted lines of Fig. 1.

In Fig. 2, the dotted and straight lines marked S indicate the position and form of the buckets of the wheel, as seen projecting upward in Fig. 1; and T indicates the spaces for the water to pass through. The same spaces are represented by the black places in Fig. 1. In Fig. 2 the spaces S are the empty places in which the buckets of the wheel slide, and the dotted and straight lines marked T are the metallic partitions, extending from the outer part of the shell through the throats of the buckets to, and attached to, the inner part of the shell G''', thus confining the action of the water to that part of the buckets opened by the lifting of the shell and partition.

The advantages and uses of my invention are apparent, and are to secure the full action of the water on the throats of the buckets by confining the water to the part of the bucket exposed by the lifting of the shell, which revolves with the wheel; and this is especially useful in low water of the stream, and advantageous at all times. Other advantages and uses are apparent to those skilled in the art to which it appertains.

I claim—

1. The partitions T, extending through and confining the water to that part of the throats of the water-wheel buckets exposed by the lifting of the case or shell G, substantially as and in the manner set forth.

2. The combined whole, consisting of the flange F, frame M, wheel and shaft E E', case G and its extension G''', lip H', ratchet and segment-lever H I, and partitions S in the throats of the buckets T, when constructed and arranged substantially as set forth.

WARREN T. VALENTINE.

Witnesses:

S. J. PARKER,
A. M. LUCUS.