

M. Millard,

Water Wheel.

No. 109,225.

Patented Dec. 6. 1870.

Fig. 1.

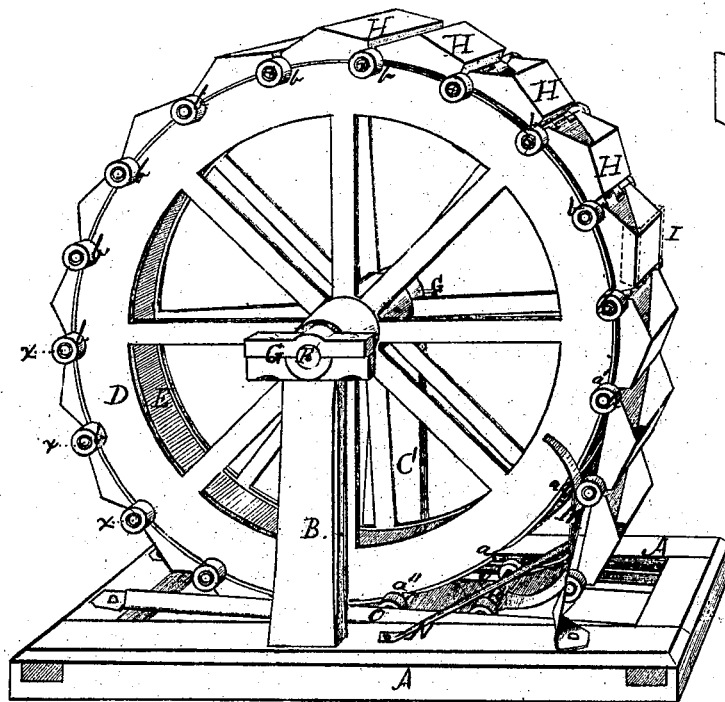


Fig. 2.

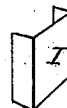
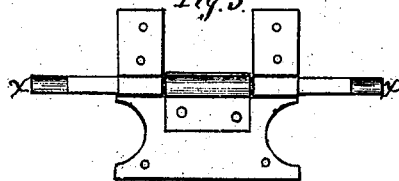


Fig. 3.



Witnessed
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United States Patent Office.

MORDECAI MILLARD, OF FRANKLIN, OHIO.

Letters Patent No. 109,925, dated December 6, 1870; antedated November 26, 1870.

IMPROVEMENT IN 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, MORDECAI MILLARD, of Franklin, in the county of Warren, in the State of Ohio, have invented a new and useful Improvement in Water-Wheels; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Figure 1 represents a perspective view of my improvement in water-wheels.

Figure 2 represents an auxiliary bucket face.

Figure 3 represents a modified construction of the hinge by which the buckets are connected.

In the accompanying drawings—

A denotes the frame of sills, upon which the posts B C are erected.

D E are two metal wheels upon axle F, and the latter is journaled in suitable boxes G upon the posts B C.

The two wheels D E are serrated, and the serrations *a* are at the peripheries of the wheels, at such regular distances apart as to correspond with the distances between the pivots *x* of the hinges which connect the buckets H.

The hinge-pivots or rods *x* extend at each end beyond the wheels D E and buckets H, and are provided with small rollers *b*, as represented in fig. 1.

The hinge-rods *x* correspond in diameter with the capacity of the serrations *a*, and will rest in the serrations at each end of the buckets H, as represented in fig. 1, except while the endless belt of buckets is passing from the point *a'* to *a''*.

It will be observed that the endless belt of buckets is of greater circumference than the wheels D E, and that a bridge, M, secured to the sills A and supported by braces N, is erected to guide the descent of the buckets in a perpendicular line while filled with water.

When the several buckets in their descent arrive at the inclined planes O, and are about to pass under bridge M, the rollers *b* will come in contact with the inclines O, which will cause the buckets to be suddenly emptied of their contents of water while passing under the bridge M.

The auxiliary bucket-face or front I, represented in dotted lines in fig. 1, and detached in fig. 2, will serve to direct the overflow of water from one bucket into the bucket in advance and beneath it during the descent of the buckets.

The provision for passing the buckets when filled with water from the point *a'* to the bottom of the bridge M in a vertical line, and at a greater distance from the axial line of the wheels D E, greatly augments the power of the wheel.

The buckets H, during the descent in the vertical line, will retain their full contents of water, and at the termination of the descent they will be suddenly emptied in passing under the bridge M.

It is proper here to state that I have contemplated the use of the endless belt of buckets upon two pairs of wheels like the wheels D E, one pair being placed above the other pair, as will be readily understood.

Having fully described my improved water-wheel,

What I claim as my invention is—

The endless belt of buckets H, of larger circumference than the wheels D E, in combination with the bridge M and inclines O, or their equivalents, operating conjointly in the manner and for the purpose substantially as described.

In testimony whereof I have hereunto set my hand this 22d day of March, 1870.

MORDECAI MILLARD.

Witnesses:

JAMES F. RUSSELL,
H. P. K. PECK.