

A. Folsom,

Water Wheel.

No. 113,284.

Patented Apr. 4. 1871.

Fig: 1.

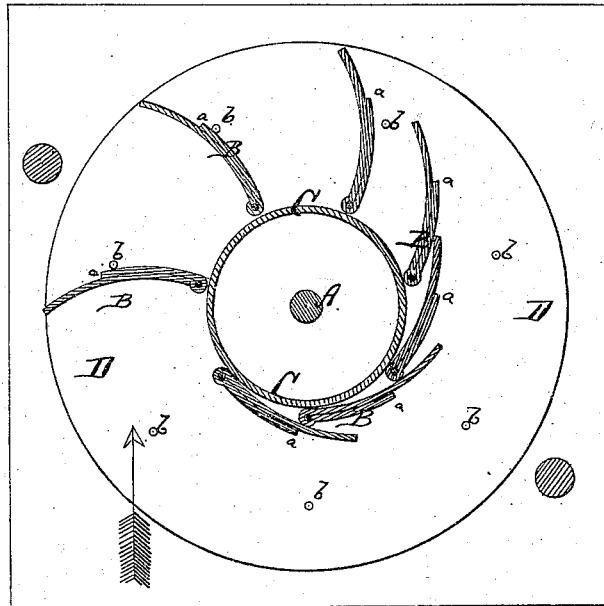
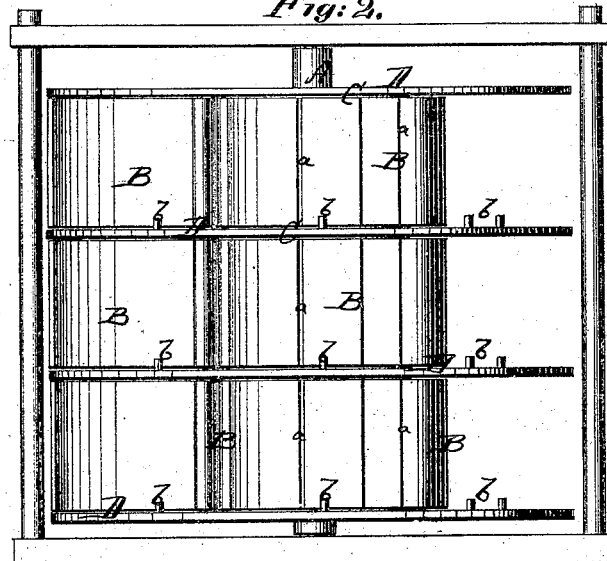


Fig: 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

ANDREW FOLSOM, OF EASTPORT, MAINE.

IMPROVEMENT IN WATER AND WIND WHEELS.

Specification forming part of Letters Patent No. **113,284**, dated April 4, 1871.

To all whom it may concern:

Be it known that I, ANDREW FOLSOM, of Eastport, in the county of Washington and State of Maine, have invented a new and useful Improvement in Wind and Water Wheels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification.

My invention relates to a new way of utilizing the sea-tides which prevail on the north-eastern coasts of the United States, and also the winds at different altitudes. It is well known that on the coast alluded to there are tidal currents at different depths of the sea, which run in opposite directions, and also that there are contrary currents of air at different heights. These phenomena have been often observed and are well known to the public.

My invention consists in combining a series of buckets arranged in such a new way that these natural powers will be utilized and made subject to a valuable purpose.

Figure 1 represents a horizontal section, and Fig. 2 a side view, of a wheel which embodies my plan.

A is a vertical shaft; C, a drum fastened thereto; and B buckets pivoted to the latter, folding thereon, and resting, when open, against stops *b*. These buckets are curved toward the center, and provided with shoulders *a*, against which the current may impinge, and by which it may more readily open the buckets. These buckets are preferably arranged out of line with one another.

It will be observed that these buckets are arranged in two or more sets, each independent of the other and at different heights. This is absolutely indispensable to carry out my invention, as it contemplates two or more opposing currents at different depths or heights, which would otherwise antagonize each other.

It is also a *sine qua non* in my plan that the buckets shall all be separately pivoted in their respective tiers, for the purpose of allowing each current to throw open one portion of its own tier of buckets while it closes the other.

In mill-streams, where backwater clogs and stops the ordinary wheel, my invention will work admirably, as the backwater would act on one tier of buckets and close them around the shaft, while the natural current would open and act on another to rotate the driving-shaft. The wind and water currents are also used together where a mill is located on a wharf built out on an abutment extending out into the sea.

Having thus described all that is necessary to a full understanding of my invention, what I esteem to be new, and desire to protect by Letters Patent, is—

The buckets B, separately pivoted to the drum C, opened against the stops *b*, and arranged in two or more tiers, as and for the purpose specified.

ANDREW FOLSOM.

Witnesses:

R. B. CLARK,
JOHN GRIFFIN.