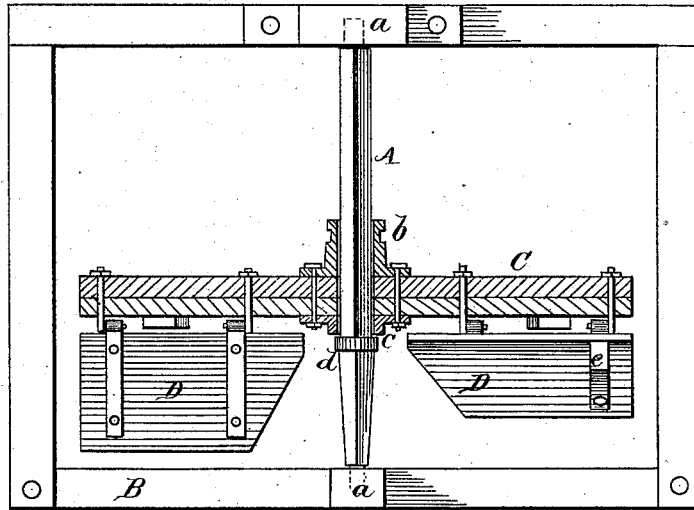


E. H. SMITH.  
Current-Wheel.

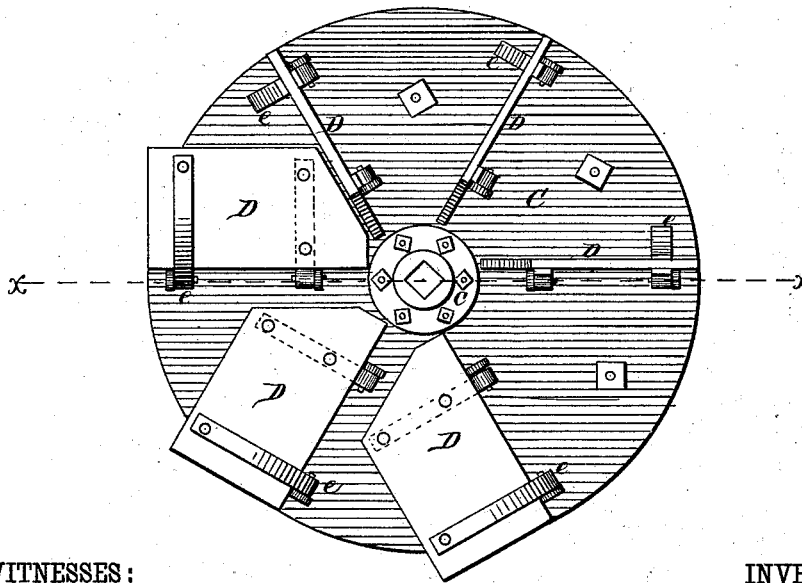
No. 203,382.

Patented May 7, 1878.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

*Henry W. Miller*  
*C. Sedgwick*

INVENTOR:

*E. H. Smith*

BY

*Munn & Co.*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

ESTILL H. SMITH, OF KEELER, MICHIGAN.

## IMPROVEMENT IN CURRENT-WHEELS.

Specification forming part of Letters Patent No. **203,382**, dated May 7, 1878; application filed March 2, 1878.

*To all whom it may concern:*

Be it known that I, ESTILL H. SMITH, of Keeler, in the county of Van Buren and State of Michigan, have invented a new and Improved Current-Wheel, of which the following is a specification:

Figure 1 is a side elevation, partly in section. Fig. 2 is an inverted plan view.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

Referring to the drawing, A is a square vertical shaft, having round bearings at each end, which are supported in boxes *a* on the frame B. Upon the shaft A is placed a wooden wheel, C, having the iron bosses *b c*, firmly secured to opposite sides by bolts. The upper boss, *b*, is grooved circumferentially, to receive the fork of a bar for shifting the wheel on the shaft. The shaft is provided with a shoulder, *d*, upon which rests the wheel C.

To the under surface of the wheel C several blades or paddles, D, are hinged, so that they may all fold in one direction against the under face of the wheel. Each blade is provided with a bracket, *e*, which stops the blade when

it is at right angles with the face of the wheel C.

The blades on one side of the axis of the wheel drop down or unfold by the action of the current, while upon the other side of the wheel they automatically fold up against the face of the wheel.

The wheel may be readily raised or lowered, to accommodate it to water of varying depth, and a number of the wheels may be placed in a stream, and the united power of all may be employed in propelling machinery.

The wheel may be constructed by an ordinary mechanic, and the materials of which it is made are common and easily obtained.

I am aware that it is not new, in current-wheels, to hinge a series of buckets to the under side of an adjustable hub; but

What I claim is—

The combination of the shaft A, having shoulder *d*, frame B, disk-wheel C, hinged paddles D, and brackets *e*, as shown and described.

ESTILL HENRY SMITH.

Witnesses:

CHAS. G. GEORGE,  
DUDLY GEORGE.