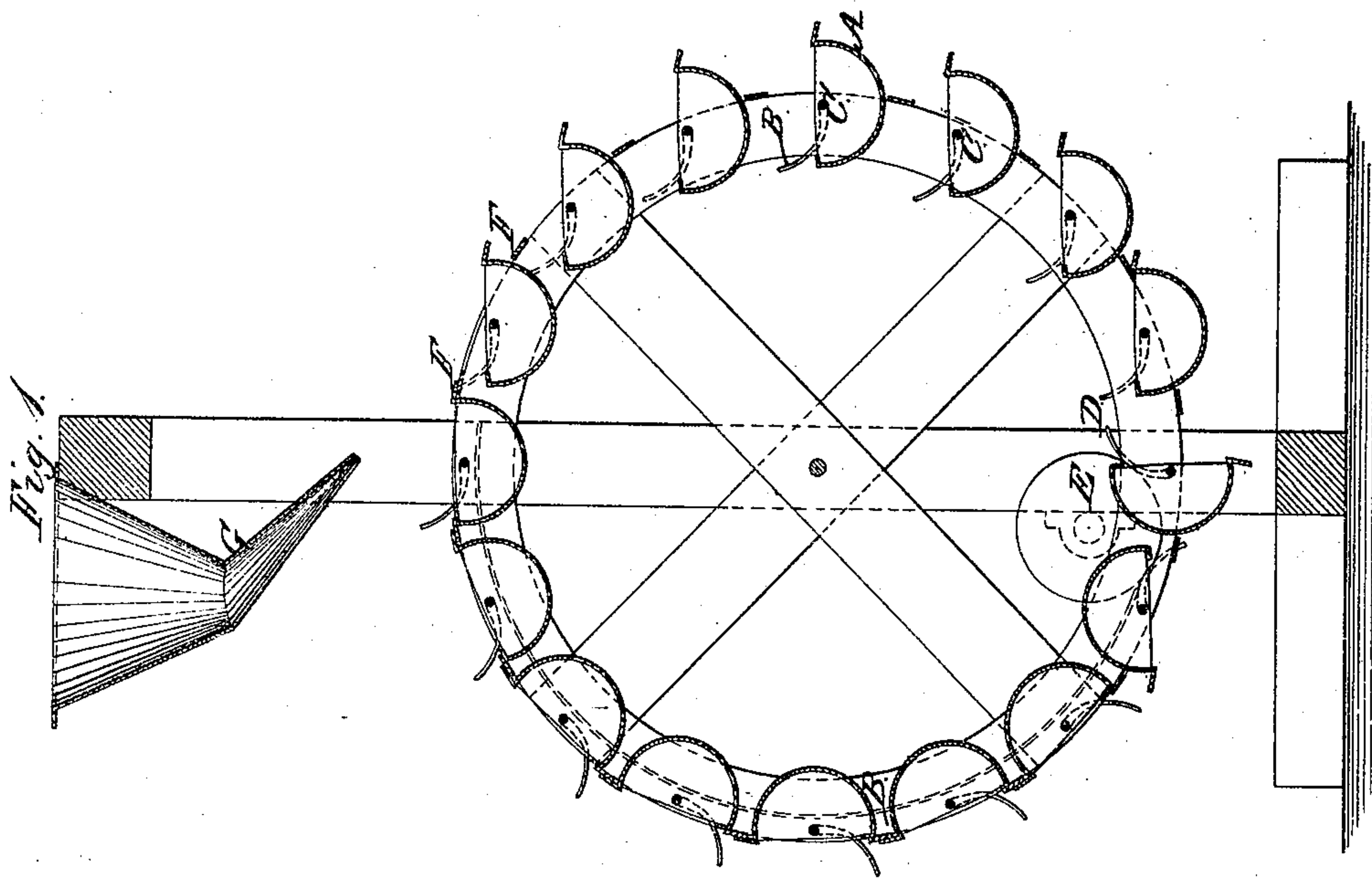
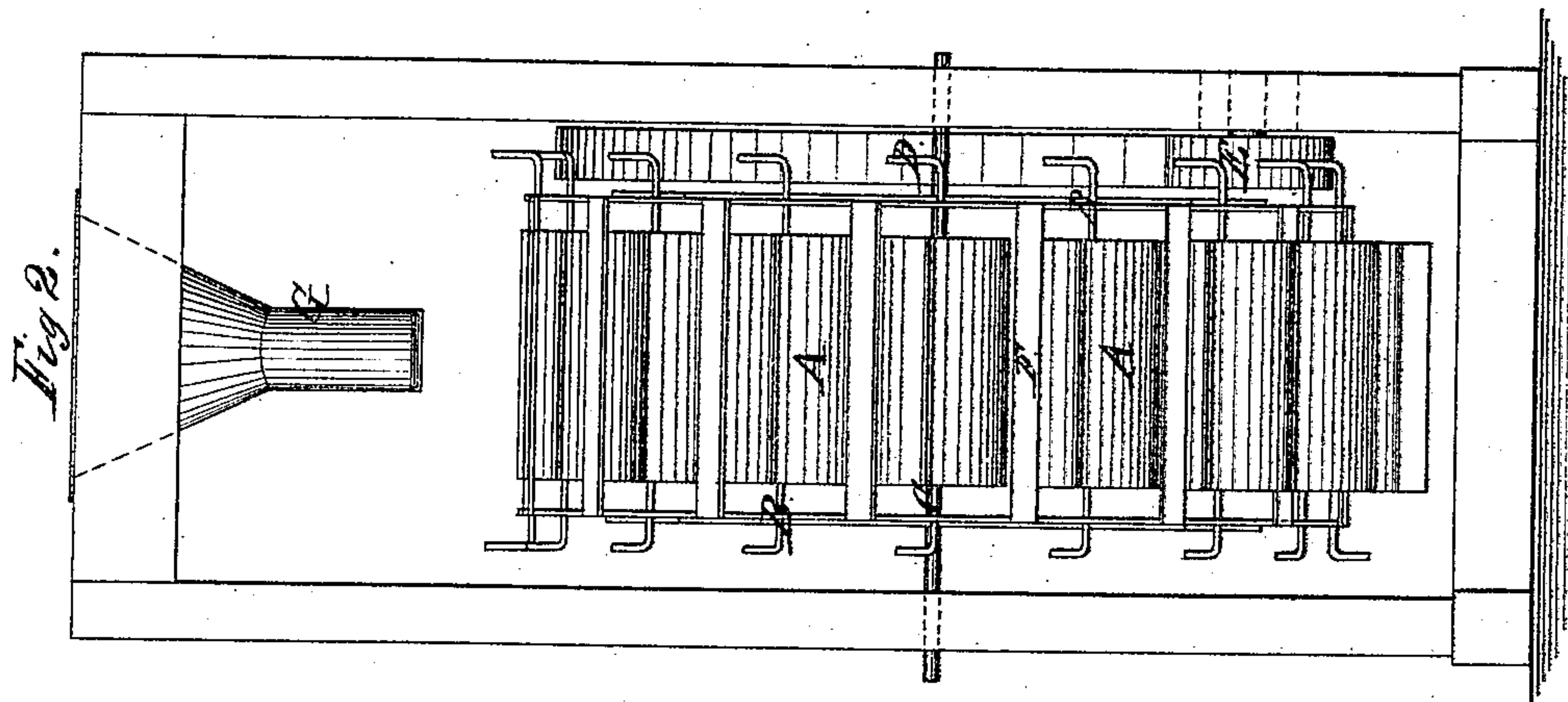


R. D. SAYRE.  
WATER WHEELS.

No. 181,365.

Patented Aug. 22, 1876.



WITNESSES:

*H. Rydquist*  
*John Goethals*

INVENTOR:

*R. D. Sayre*  
BY *Munn & Co.*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

REUBEN D. SAYRE, OF WESTERVILLE, OHIO.

## IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. **181,365**, dated August 22, 1876; application filed March 21, 1876.

*To all whom it may concern:*

Be it known that I, REUBEN D. SAYRE, of Westerville, Franklin county, Ohio, have invented a new and Improved Water-Wheel, of which the following is a specification:

My invention consists of the buckets of an overshot or breast wheel, pivoted to the wheel-rims so as to remain upright and hold the water until the center is reached at the bottom, when they are tilted by a cam to empty the water, by which the wheel retains all the water as long as it can do any good, and the weight can be applied farther from the center of the wheel by pivoting the buckets at the periphery of the wheel-rims.

Figure 1 is a sectional elevation of my improved water-wheel; and Fig. 2 is a front elevation.

Similar letters of reference indicate corresponding parts.

A represents the buckets, which are pivoted to the wheel-rims B at or near the periphery C, so as to remain upright and hold all the water as long as it is efficient, when they are tilted by a crank, D, and cam E, and the water emptied, after which they return to the upright position again while ascending to the place

for receiving the water, the cam E being continued up to the top to prevent the buckets from tilting too far to come back again to the upright position. In front of each bucket is a cross-bar, F, to prevent it from being overturned by the water falling into it from the spout G. In practice the cam for tilting the buckets will be constructed so as to revolve to lessen the friction as much as possible.

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

1. The buckets A of an overshot or breast wheel, pivoted to the wheel-rims, and provided with an arm, D, and a cam, E, for emptying them, substantially as specified.

2. The cam for tilting the buckets, extended from the point of tilting the buckets to the point of filling them, or thereabout, substantially as specified.

3. The combination of cross-bar F with the tilting bucket A and the wheel-rims, substantially as specified.

REUBEN DOUGLASS SAYRE.

Witnesses:

WM. HANBY,

A. B. HENDERSON.