

No. 66,821.

PATENTED JULY 16, 1867.

S. FLETCHER.
WATER WHEEL.

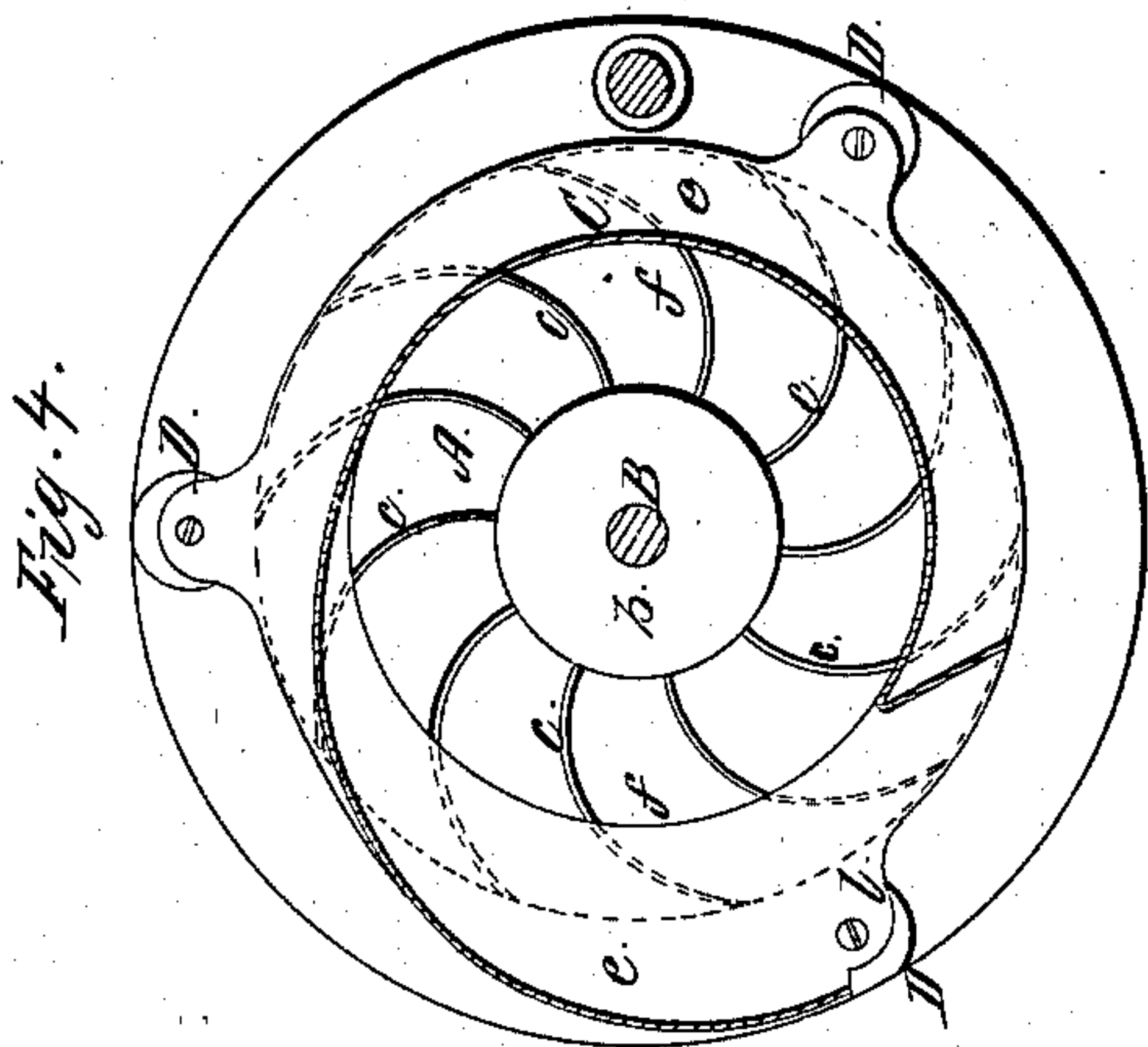


Fig. 3.

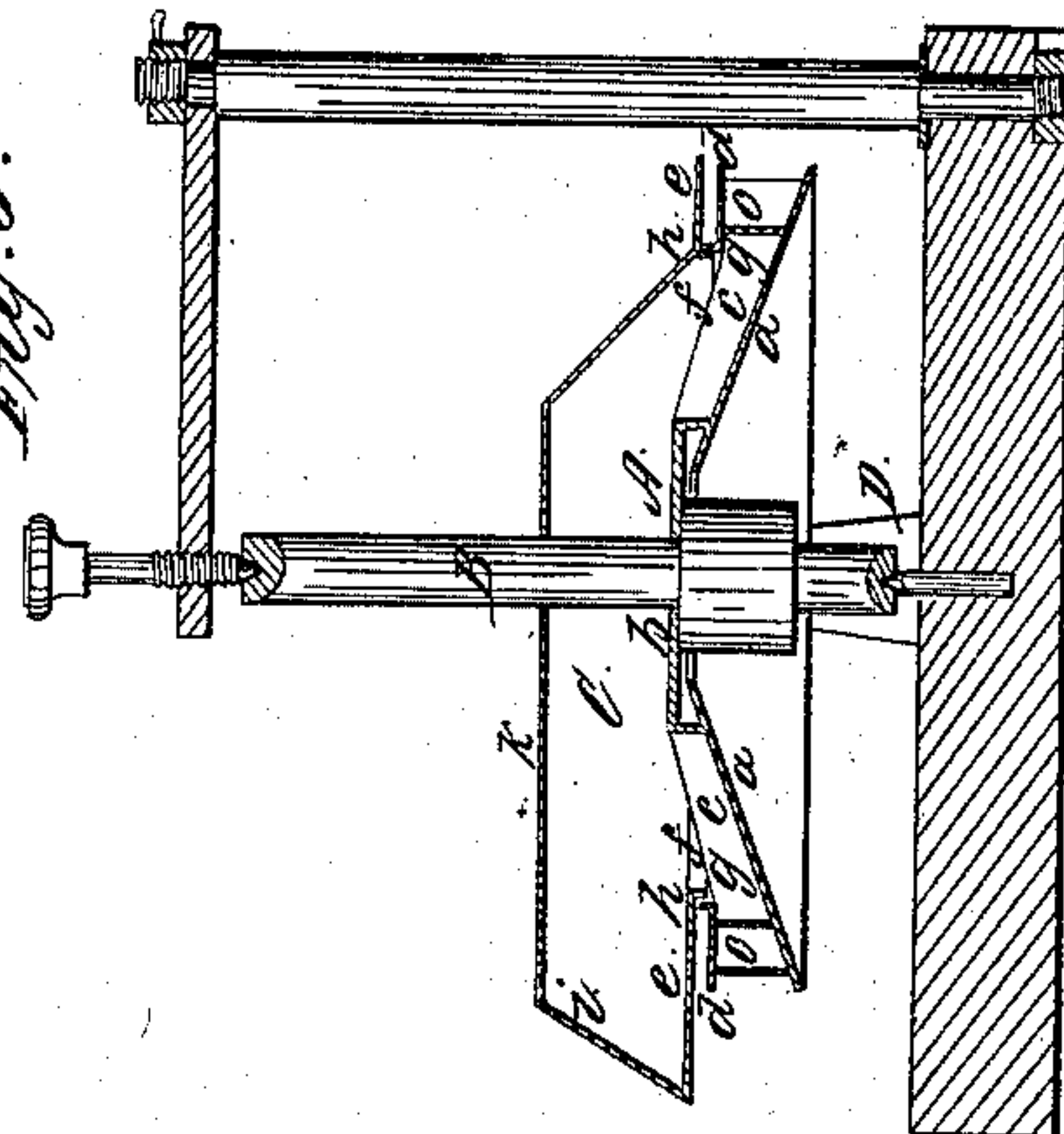


Fig. 1.

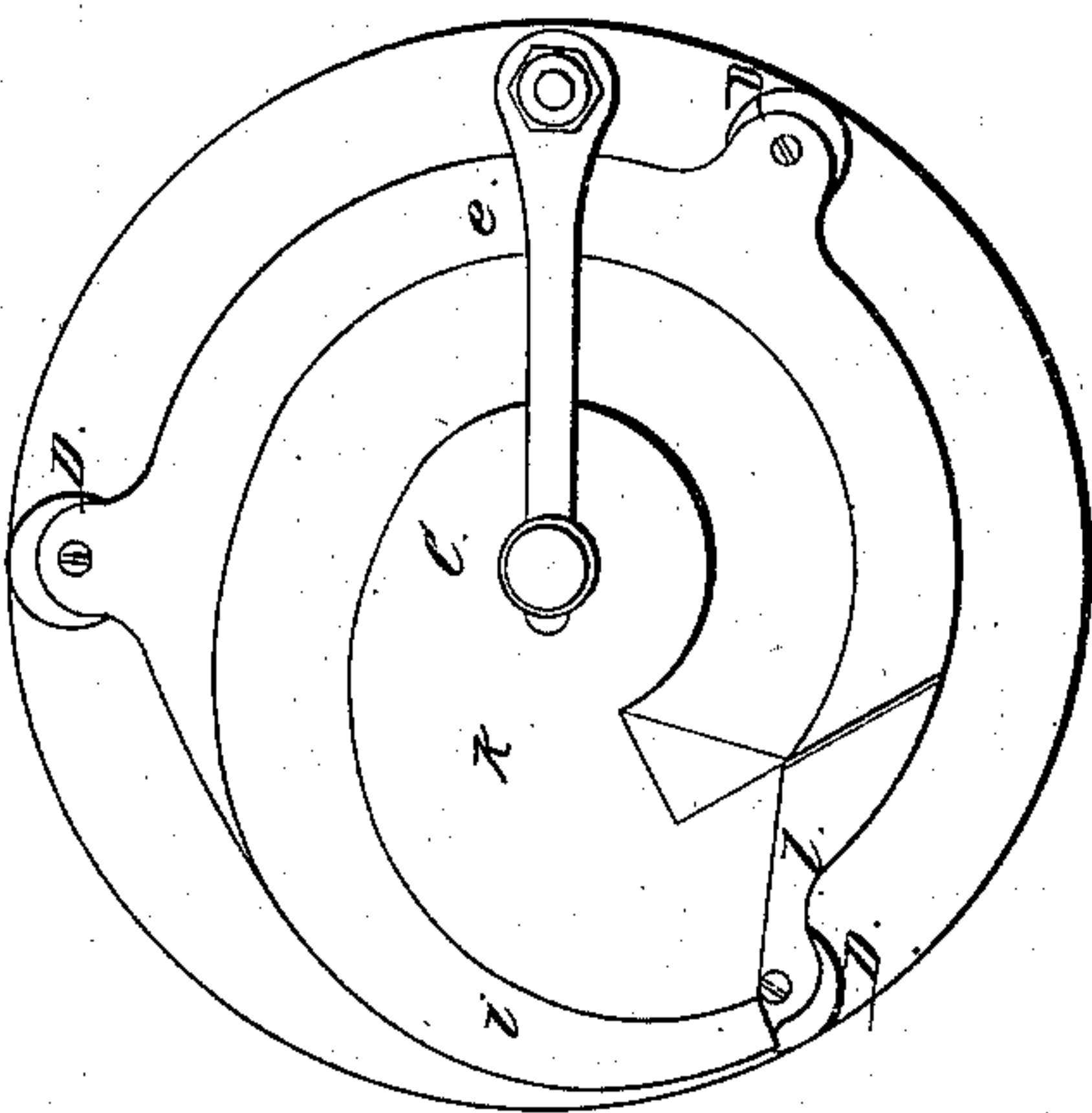
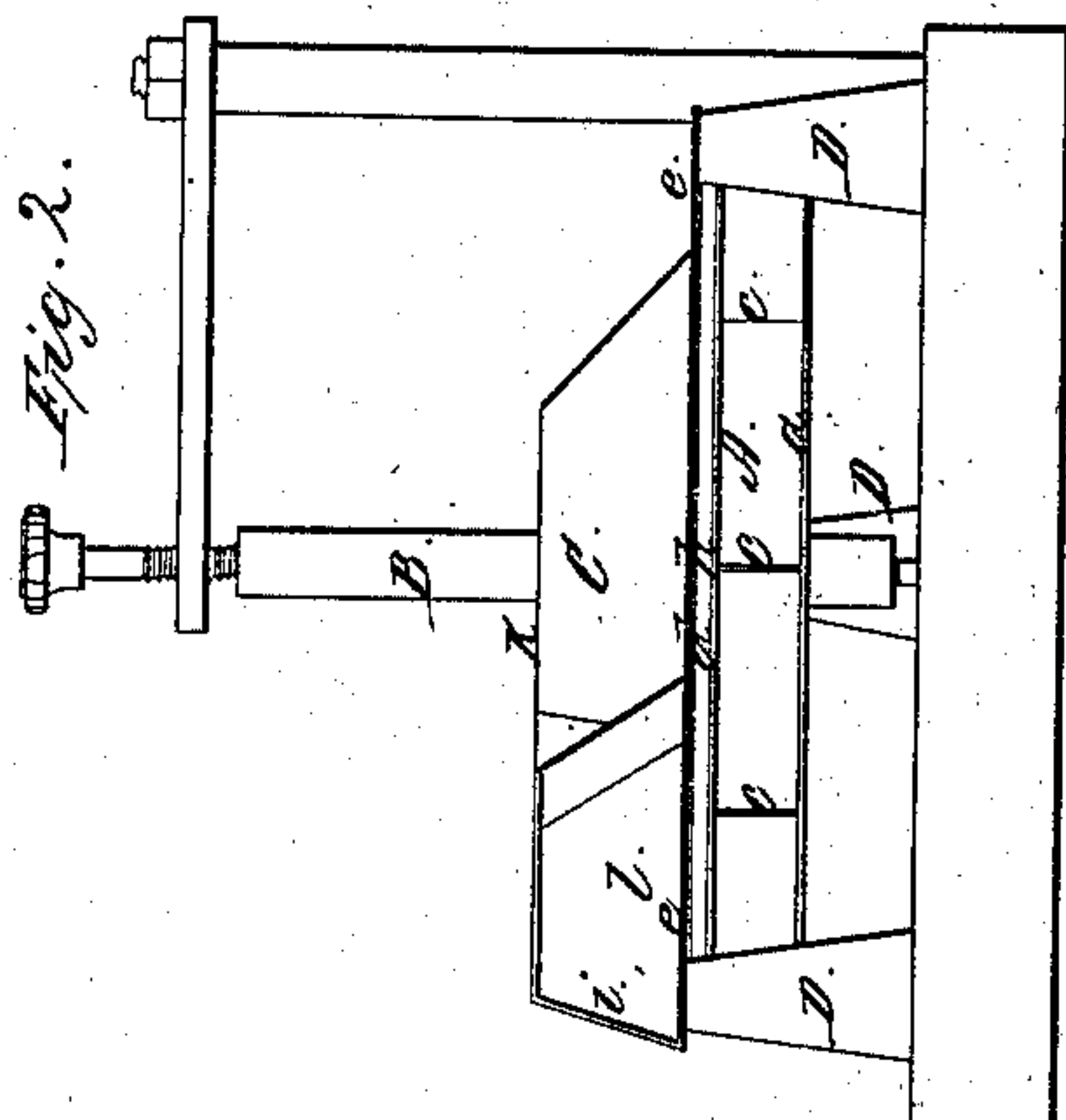


Fig. 2.



Witnesses:
J. H. Decker
et al.

Inventor:
Seth Fletcher
By his attorney
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United States Patent Office.

SETH FLETCHER, OF SKOWHEGAN, MAINE.

Letters Patent No. 66,821, dated July 16, 1867.

IMPROVEMENT IN WATER-WHEELS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL PERSONS TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, SETH FLETCHER, of Skowhegan, in the county of Somerset, and State of Maine, have invented a new and useful Improvement in Turbines; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view.

Figure 2, a front elevation.

Figure 3, a transverse section; and

Figure 4, a horizontal section of a turbine and its curb made in accordance with my invention.

In such drawings, A denotes the turbine, its bottom plate, *a*, being the frustum of a hollow cone. This frustum is surmounted by a cylinder, *b*, and a series of curved floats, *c c c*, the said floats being extended from the circumference of the cylinder to that of the plate *a*, and being supported by an annulus, *d*, provided with a raised flange, *h*, and arranged on the floats, the whole being as represented. This wheel, so made, is mounted on a vertical shaft, B, which runs concentrically through it and its curb. Over the wheel or turbine is a curb, C, of peculiar construction. This curb is supported by a series of posts, D D D, and consists of a plate, *e*, provided with a circular opening or vent, *f*, having a flange, *g*, projecting down from its circumference, and within and close to the flange *h*, hereinbefore mentioned. An inclined scroll-shaped deflector, *i*, terminating in a flat top, *k*, extends above and over the opening *f* in manner as shown in the drawings, such deflector ending in a receiving-mouth, *l*. The inclination of the said deflector to the plate *e* gradually diminishes from the outer edge of the mouth *l* to the inner terminus of the deflector.

The purpose of the said deflector is to cause the water, after being raised within the curb, to be deflected downward and outward, so as to act against the buckets of the wheel to the best advantage. The inclination of the bottom plate of the wheel co-operating with the deflector aids in deflecting the water against the buckets, so that, by the combined action of the inclined bottom and the inclined deflector, the useful effect of the water on the bucket is found to be much greater than were the bottom plate or were the curb provided with vertical sides.

What, therefore, I claim as my invention, is—

The curb as made with the inclined scroll-deflector, as specified, in combination with the wheel, as made with the conical bottom, and having its buckets arranged as specified.

SETH FLETCHER.

Witnesses:

M. W. TURNER,

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