

W. H. Snyder.

No. 88,341. Water Wheel.

Patented Mar. 30, 1869.

Fig. 1.

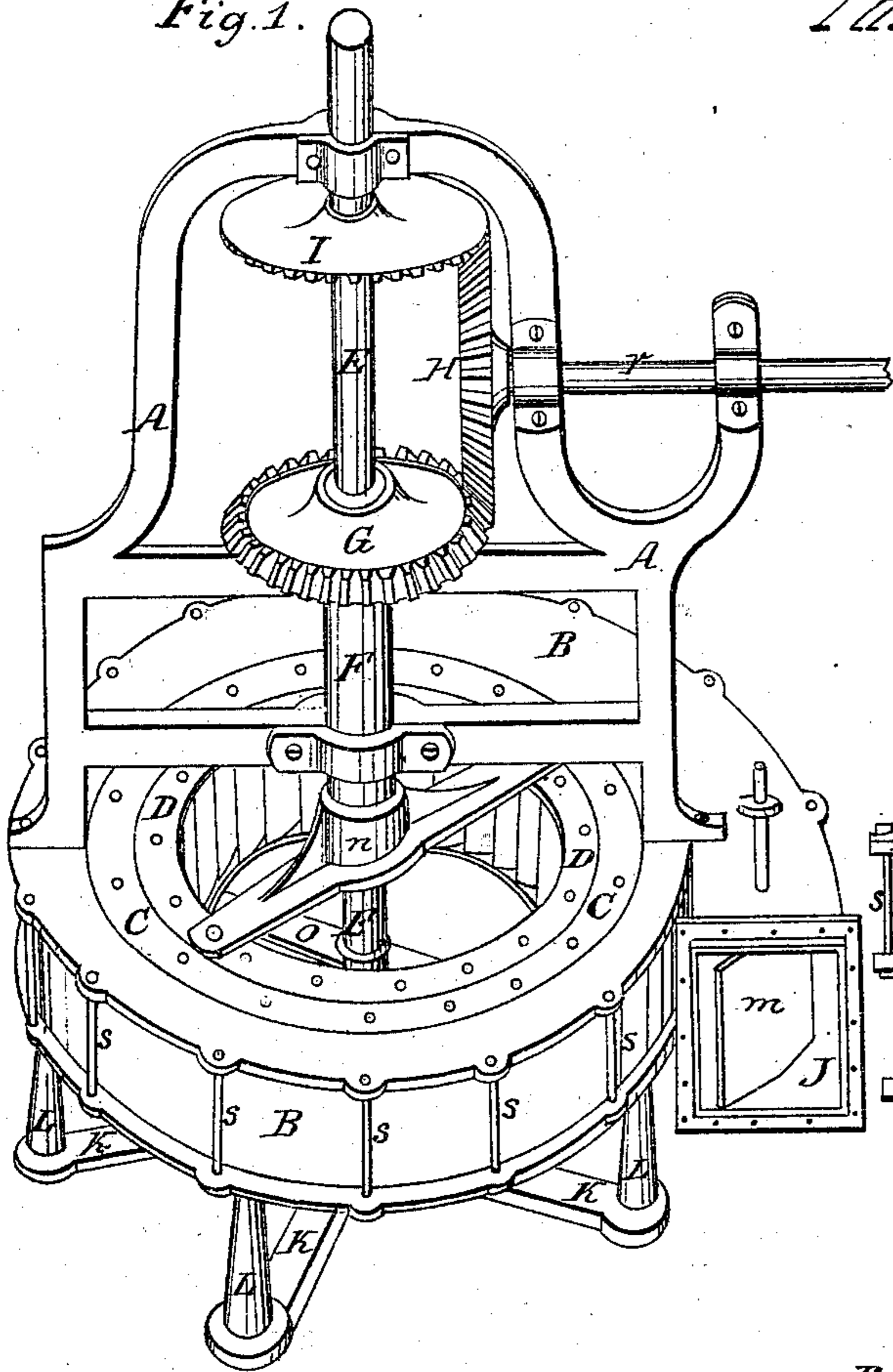


Fig. 2.

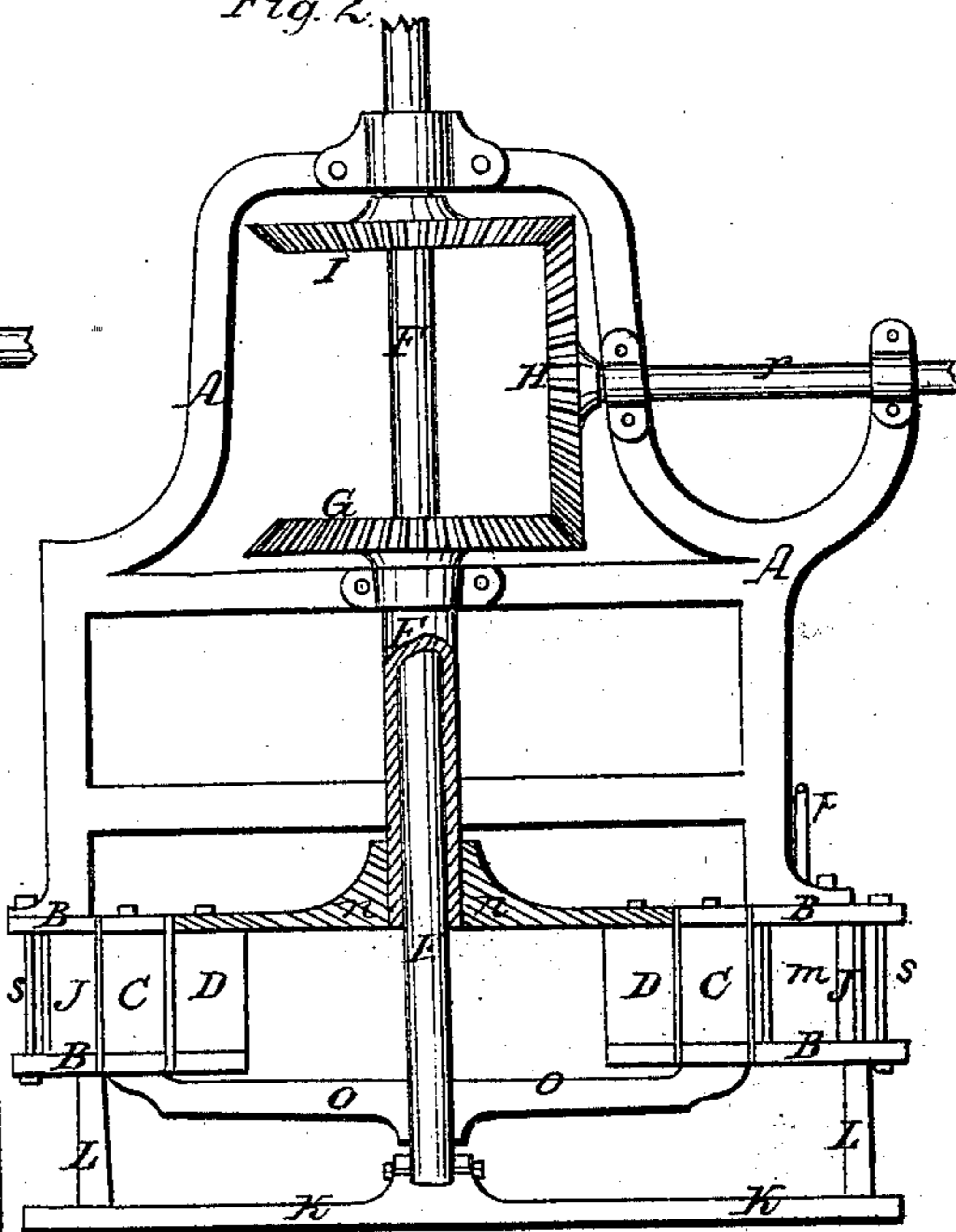
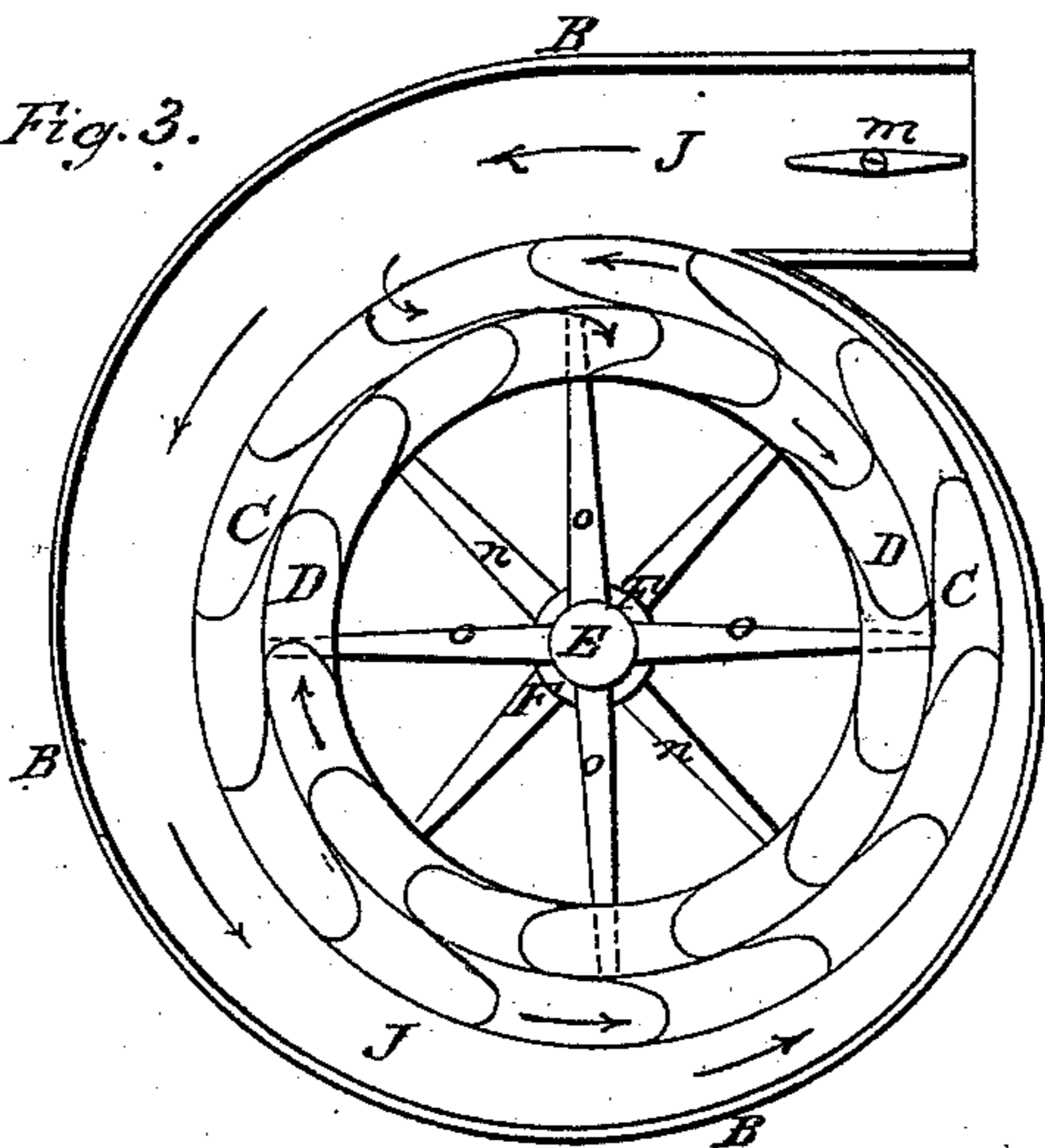


Fig. 3.



Witnesses

Harry W. Snyder.
Asa Dever.

Inventor.

Wm Henry Snyder.

United States Patent Office.

WILLIAM HENRY SNYDER, OF PHELPS, NEW YORK.

Letters Patent No. 88,341, dated March 30, 1869.

IMPROVEMENT IN TURBINE 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, WILLIAM HENRY SNYDER, of Phelps, in the county of Ontario, State of New York, have invented new and useful Improvements in the Turbine Water-Wheel; and I hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

The nature of my invention consists in the employment, or use of two water-wheels, generally known as the turbine, constructed and arranged in such a manner as to run in opposite directions, one within the other, from the same gate, or column of water, in combination with suitable hollow, or tubular shafts, the said shafts being constructed and arranged so as to run, one within the other, in an upright, or perpendicular position, and upon each of which are rigidly secured suitable gear-wheels, which fit and work in a corresponding gear-wheel, that is secured upon the end of a line-shaft, so as to transmit the motion, or power against the resistance or work designed, in the most practical and advantageous manner.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure I is a perspective view of my invention.

Figure II is a longitudinal partial sectional elevation of fig. 1.

Figure III is a transverse section of figs. 1 and 2, showing the arrangements of the buckets.

Letters of like name and kind indicate like parts in each of the figures.

A represents the frame-work of my invention, that may be made of iron, or any of the well-known metals, or other suitable materials, and of any desired dimensions, to correspond to the size, or capacity of the wheel designed to be made.

B B represent the case, or enclosure of the two wheels, in which the latter run, and is of common, or ordinary construction.

C C are curved buckets, or floats, constructed and arranged in such a manner as to reverse the current

of the water in such a manner as to carry, or drive the inside wheel, D D, which is secured to the vertical inner shaft E.

F is the vertical hollow shaft, to which the outer water-wheel, C C, is secured, the former of which is provided with suitable journals, which run in proper bearings.

Upon the upper end of the said shaft F is rigidly secured the gear-wheel G, as, also, is secured to the inner shaft, E, the gear-wheel I, both of which fit and mesh into and drive a corresponding gear-wheel, H, the latter of which is fastened to the end of a line-shaft, *r*. The said shaft is provided with proper journals, which run in suitable bearings. Through the medium of the shaft *r*, power may be imparted, to any required resistance.

K K represent the spider, or foundation on which the whole rests;

J is the aperture, through which the water passes to wheels; and

m is the gate that is used for the purpose of letting on and shutting the water from the wheels C and D.

O O are the arms of the water-wheel C C.

N N are arms to the water-wheel D D.

The case, or enclosure of the water-wheels C and D is bolted fast together by the bolts S S S S, and supported by the steps L L L L.

The advantage of my invention will be readily observed from the fact that the largest per cent. of power is obtained by this arrangement.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent of the United States, is—

The wheels C and D, constructed and arranged substantially as herein shown and described, so as to run in opposite directions, propelled by a lateral horizontal stream, delivered through the chute J, and discharged centrally, at the base, in combination with the case B, all substantially as and for the purposes set forth.

WM. HENRY SNYDER.

Witnesses:

HARVEY W. SNYDER,
JESSE SECOR.