J. H. MEACHAM.

Centrifugal Water-Wheel.

No. 169,018. Patented Oct. 19, 1875.

Fig. 1.

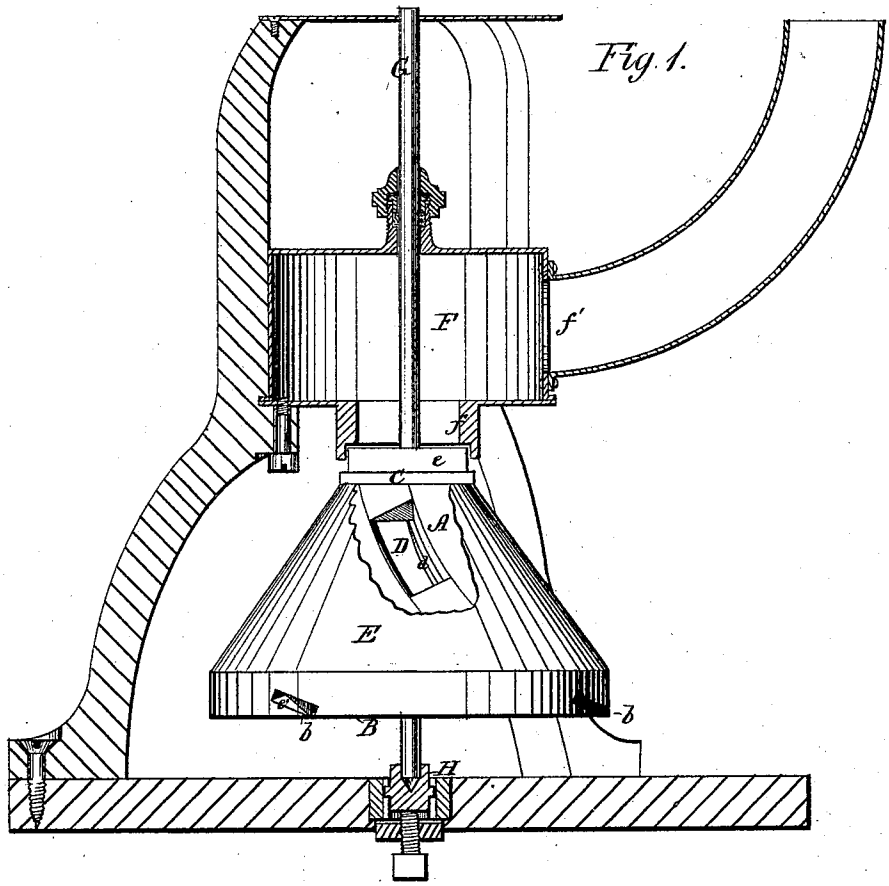
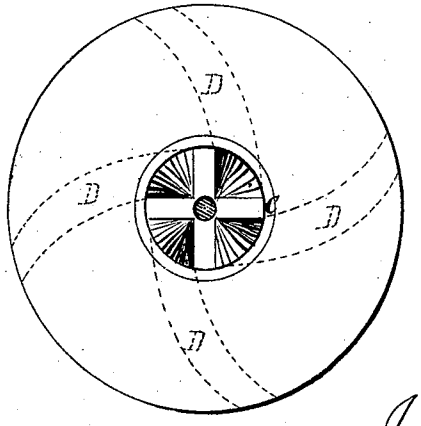


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES H. MEACHAM, OF PETERSBURG, VIRGINIA.

IMPROVEMENT IN CENTRIFUGAL WATER-WHEELS.

Specification forming part of Letters Patent No. **169,018**, dated October 19, 1875; application filed August 10, 1875.

To all whom it may concern:

Be it known that I, JAMES HUGH MEACHAM, of Petersburg, in the county of Dinwiddie and State of Virginia, have invented a new and Improved Centrifugal Water-Wheel; 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, in which—

Figure 1 is a sectional elevation, and Fig. 2 a horizontal section.

The invention relates to turbine water-wheels, or those adapted to be run by the vertical or centrifugal action of a liquid. It will first be described in connection with the drawing, and then pointed out in the claims.

A represents a conical water-wheel, preferably so made that the incline shall be at an angle of about twenty-two and a half degrees to the base B, while only a sufficient space, C, is left on top from which to start the grooves D that begin on each radius of two crossing diameters, and are gradually curved around, so as to issue at corresponding points *b* of the base. This wheel is inclosed by a case, E, that forms part of wheel, and which has the issues or discharge-holes *e'*, one for each of the grooves D, and also a tube or neck, *e*, that couples in a corresponding tube, *f*, of the water-reservoir F. The water is thus allowed to ooze slightly between these tubes, so that as one turns within the other the joint is kept always lubricated. The reservoir F is provided with a pipe or channel way, *f'*, which connects with the water-supply. G is the spindle, fast in and passing through center of wheel, journaled at the lower end in an adjustable bearing, H, to make the tube-joint *e f* tighter or otherwise. In this wheel the water is made to act against the shoulders *d* of grooves in a horizontal as well as a vertical direction, thus utilizing a larger proportion than usual of the water-force. The grooves D may be varied in numbers; but less than two are of little practical advantage, while four is the number which I prefer to employ. The wheel may be constructed of wood, metal, or any other material.

Having thus described my invention, what I claim as new is—

1. A water-wheel having a conical form, and curved grooves D running from apex to periphery of base, as and for the purpose described.

2. The combination of wheel-case and water-reservoir, the former having a tube, *e*, that revolves in a tube, *f*, of the latter, as and for the purpose specified.

J. H. MEACHAM.

Witnesses:

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