

A. N. WOLF.
WATER-WHEEL.

No. 174,885.

Patented March 14, 1876.

Fig 1

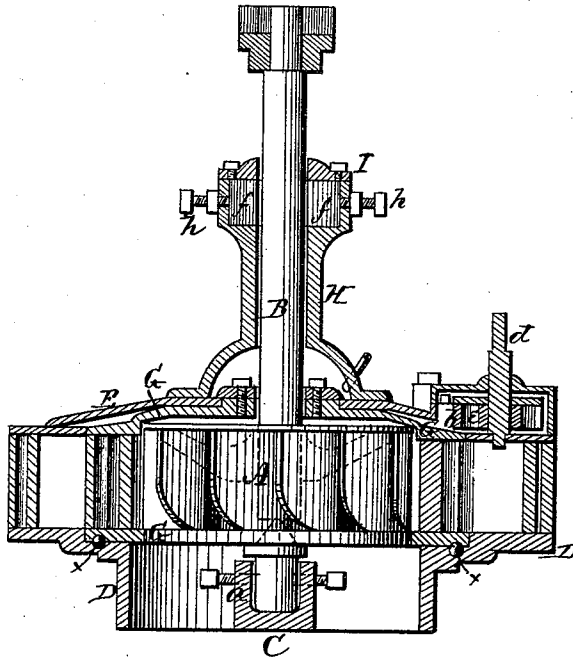
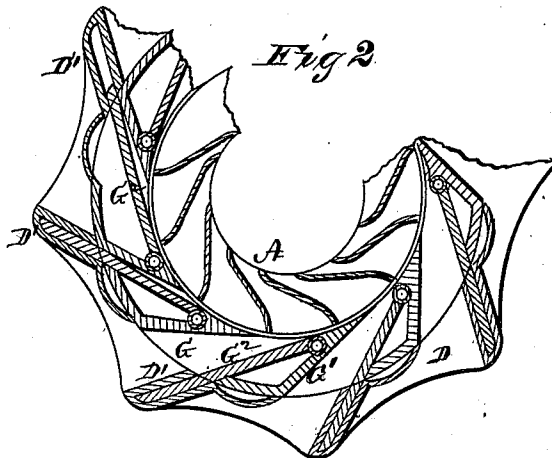


Fig 2



WITNESSES

P. L. Ourand

C. L. Ewert.

By

INVENTOR

Abraham N. Wolf,

J. H. Alexander

Attorney,

UNITED STATES PATENT OFFICE.

ABRAHAM N. WOLF, OF ALLENTOWN, PENNSYLVANIA.

IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. **174,885**, dated March 14, 1876; application filed February 21, 1876.

To all whom it may concern :

Be it known that I, ABRAHAM N. WOLF, of Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Water-Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to water-wheels; and it consists in the construction and arrangement of the inside register, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a vertical section of a water-wheel embodying my invention. Fig. 2 is a horizontal section of a part thereof.

A represents the water-wheel secured on the upright shaft B, resting on the step *a* on the bridge-tree C. D is the outside casing, with chutes or water-ways D'. E is the top plate; G, the inside register, with rack *b*, operated by means of a pinion, *e*, on the shaft *d*. H is the stand for the stuffing-box I, in which are the followers *f*, adjusted by means of the set-screws *h*. The lower rim of the inside register G rests upon a series of balls, *x*, placed in an annular concentric groove made in the bottom of the casing D, and said lower

rim of the register fits in a recess in the casing, as shown in Fig. 1, so that the bottom of casing and register will be flush or level with each other. In the register G are the gates G¹, constructed to close the chutes D' of the casing. Near the inner end of each gate is pivoted a plate, G², the outer end of which extends into the adjoining chute D' of the casing, which is made hollow for the purpose, so that the plate can move out and in therein as the register is moved.

In Fig. 2 I have shown one gate closed and the others open, thus illustrating the position of the parts at both times. The plates G² form additional gates, and at the same time act as stops for the movement of the register in either direction and steady the same. The balls *x* cause the register to move with ease.

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

1. The casing D, having in its bottom an annular recess, in combination with the register G, which rests in said recess with its top flush with the casing, such as set forth.

2. The friction-balls *x*, in combination with the casing D and register G, for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ABRAHAM N. WOLF.

Witnesses:

JOHN NONEMAKER,
F. WARNER.