



# UNITED STATES PATENT OFFICE.

PHILLIP STOVALL, OF NEWNAN, GEORGIA.

## IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. **210,164**, dated November 19, 1878; application filed September 21, 1878.

*To all whom it may concern:*

Be it known that I, PHILLIP STOVALL, of Newnan, in the county of Coweta and State of Georgia, have invented a new and valuable Improvement in Water-Wheels; and I do 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, and to the letters of reference marked thereon.

Figure 1 of the drawings is a representation of an interior plan of my water-wheel; and Fig. 2 is a side view, part sectional, of the same.

My invention relates to water-wheels; and consists in the improvements in the construction of the same hereinafter fully described, and particularly pointed out in the claim.

Referring to the drawings, A represents the bottom flange with draft-tube and support for the wheel cast upon the bottom side. B represents the tangential guides, formed into feed-apertures in the usual manner. C represents the dome with a flange at the bottom, between which and the flange A the guides are secured.

In one side of the dome is cast a chamber, D, or recess, and this recess receives the gear-pinion L.

E represents the cover of the dome, and through it pass the shafts of both the pin-

ion L and the water-wheel. Rigidly with the cover of the dome, and extending downward therein, is a post, F, provided on its surface with a spiral groove, *f*, or quick-screw on opposite sides thereof, which grooves receive pins or studs I on the inner surface of the gate-cylinder I'.

The gate K is cylindrical in form, and has radial arms *k* extending from the gate-cylinder to a circumferential toothed band, *n*, which forms the upper periphery of the gate. The pinion L gears with the gear-wheel *n*.

K' is an ordinary central-discharge water-wheel. The gate K, when closed, passes down between the water-wheel and the points of the guides B.

What I claim as new, and desire to secure by Letters Patent, is—

The gate K, having gear *n*, spirally-grooved post F *f*, pinion L, and studs I, housed within the dome C, above the water-wheel, in combination with the said dome and water-wheel K', and with the chutes formed by the parts A B and flange on dome C, as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

PHILLIP STOVALL.

Witnesses:

R. D. COLE, Jr.,  
W. W. FRANNY.