J. J. FAULKNER.

Turbine Water-Wheels.

No. 131,865. Patented Oct. 1, 1872.

FIG. 1.

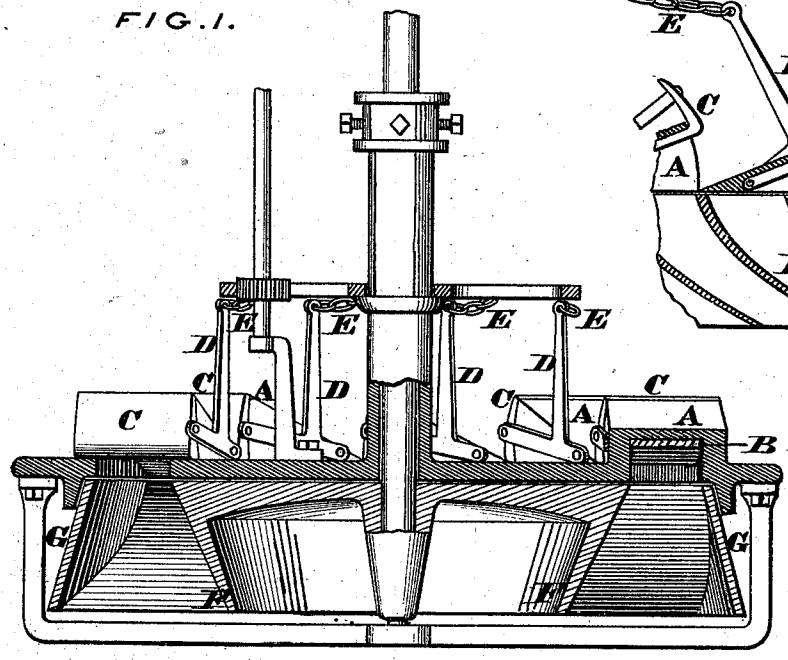


FIG. 3.

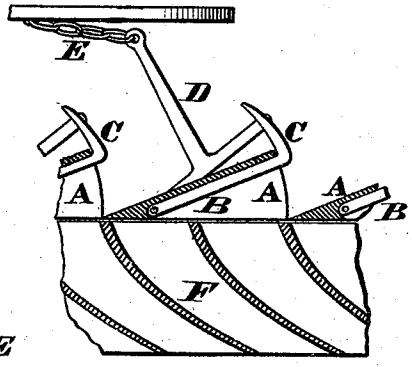


FIG. 4.

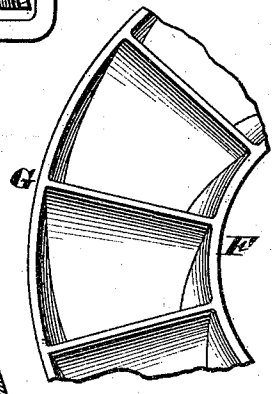


FIG. 2.

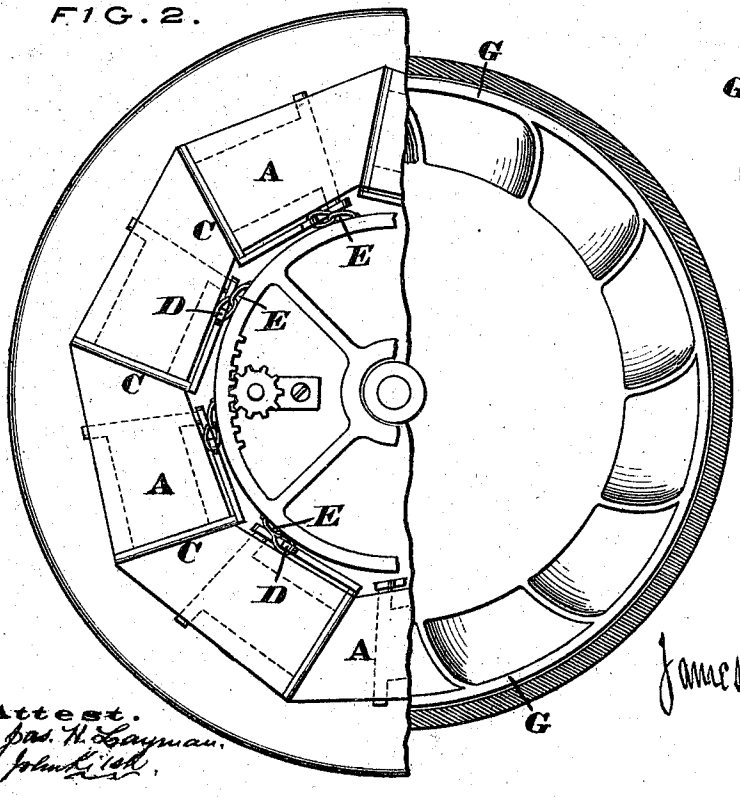
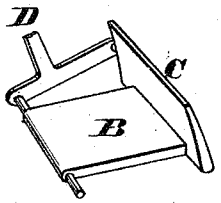


FIG. 5.



Attest.
Jas. A. Layman.
John Kirk.

James J. Faulkner
By Knight Bros.
Att'ys.

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

JAMES J. FAULKNER, OF McMINNVILLE, TENNESSEE.

IMPROVEMENT IN TURBINE WATER-WHEELS.

Specification forming part of Letters Patent No. **131,865**, dated October 1, 1872.

To all whom it may concern:

Be it known that I, JAMES J. FAULKNER, of McMinnville, Warren county, Tennessee, have invented an Improvement in Turbines, of which the following is a specification:

Nature and Objects of the Invention.

This is an improvement in that class of turbines represented in my patent of April 9, 1872; and the first part of my improvement consists in a form of gate which combines the advantages of simplicity, cheapness, and efficiency. The second part of my improvements consists in an improved form of wheel-curb, whereby a greater freedom of ventage is obtained.

Description of the Accompanying Drawing.

Figure 1 is an axial section of a turbine embodying my improvements. Fig. 2 is a part plan and part horizontal section of the same. Fig. 3 is a vertical tangential section of a portion of the buckets. Fig. 4 is an under-side view of the same. Fig. 5 is a perspective view of a gate detached.

My wheel being identical with that described in my aforesaid patent except as to the features premised, I will describe only said features.

My sluice-ways A consist in a series of bonnets having the form of a wedge, whose butt-end is open to form, when the gates are opened, an inlet for the water. Each gate consists of a plate, B, hinged by one edge near the apex of the sluice-way, and having an upturned lip, C, which, in the depressed position of said gate, serves to close the mouth (inlet) of the sluice-way, and in the elevated position of said gate serves, by its peculiar form and angle of presentation, to coact with the entering water to automatically close the gate whenever left at liberty. The gates are simultaneously opened by levers D and chains E, as in my aforesaid patent. Both inner and outer curbs F and G of my wheel flare outward and downward so as to present the form of a truncated conic annulus, as represented. By this means I obtain a perfectly free delivery of the spent water, so that said water does not in any degree, by its tardy exit, obstruct or impede the wheel in its rotation.

I claim as new and of my invention—

1. The winged gate B C hinged within the wedge-formed sluice-way A, and adapted to operate as and for the purpose set forth.

2. The wheel F G having the form of a truncated conical annulus, as set forth, for the purpose explained.

In testimony of which invention I hereunto set my hand.

JAS. J. FAULKNER.

Attest:

GEO. H. KNIGHT,

JAMES H. LAYMAN.