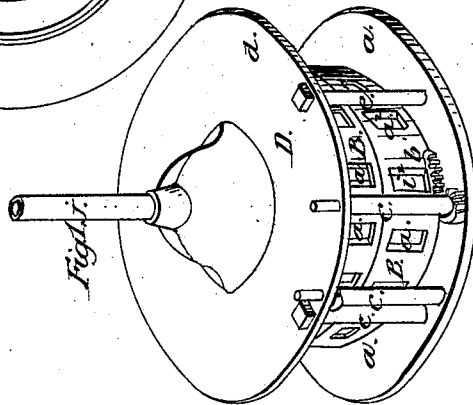
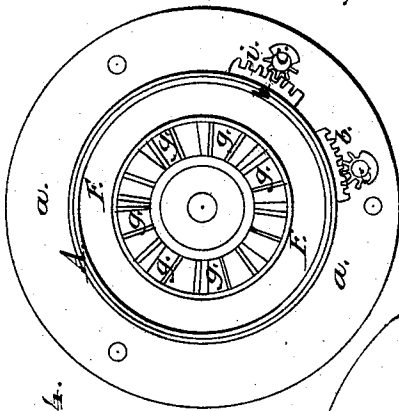
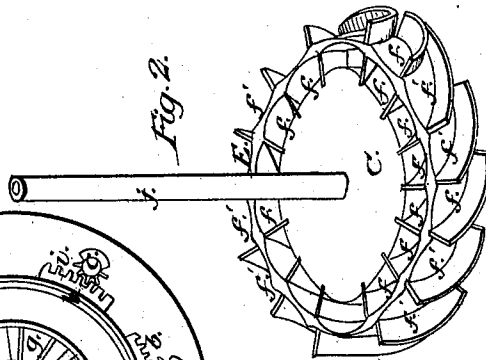
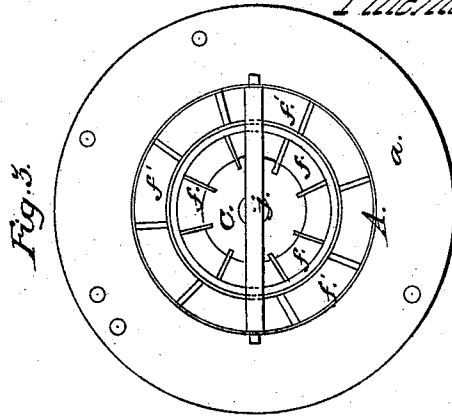


W. Haslup.

Water Wheel.

N^o 89,657.

Patented May 4, 1869.



Witnesses:
John A. Ellis
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Att'y

United States Patent Office.

WILLIAM HASLUP, OF SIDNEY, OHIO.

Letters Patent No. 89,657, dated May 4, 1869.

IMPROVEMENT IN 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 HASLUP, of Sidney, in the county of Shelby, and State of Ohio, 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 a part of this specification, and in which—

Figure 1 represents a perspective view of my water-wheel;

Figure 2, a detached perspective view of the wheel; and

Figure 3 represents an inverted view of the said water-wheel.

Figure 4 is a plan view of the same, showing the perforated plate above the water-wheel.

The nature of my invention consists in constructing the wheel with two sets or rows of buckets, directly over which, and fastened to the inner circumference of the shell or cylinder surrounding the wheel, is situated a plate, supplied with conduit-openings, of different sizes, and furnishing the cylinder above described with two set or tiers of openings, communicating with the buckets of the wheel, and closed or opened, as will be hereinafter described.

To enable others to make and employ my invention, I will now describe its construction and operation.

In the accompanying drawings—

A represents a cylinder or casing, provided, near its lower end, with a flange, *a*, which may have openings, through which screws are inserted, for fastening the wheel in place.

The cylinder A, above flange *a*, is furnished with two sets or tiers of openings, *a'* *a''*, through which the water may enter the buckets of the water-wheel.

B B' represent two bands or rings, encircling the cylinder A, and provided with two sets of openings, corresponding, in shape, with openings *a'* and *a''* of cylinder A. These rings or bands are also supplied with clogged segments, *b b'*, the segment *b* being formed on the upper edge of the outer circumference of ring B, and segment *b'*, on the lower edge of ring B', and gear or engage, with corresponding segments, on two vertical shafts, *c c*, having their bearings in flange *a* and flange *a'*, on cap D.

By means of the above arrangement, the water can

be cut off from the wheel entirely, or from either set of its buckets when desired.

D is a cap, made convex on its upper surface, and provided, at its centre, with an opening, through which the shaft *j* of the water-wheel passes, and formed, at its outer surface, with a flange *d*, provided with openings, for the reception of screw-bolts *e e*, by which said cap may be fastened to the flange *a* of casing A.

C represents the wheel, which is constructed with an inner and outer set of buckets, *f f'*, the partitions of which are slightly curved at their lower ends, as seen in fig. 2.

The buckets *f'* are made to project down a short distance below the buckets *f*, and separated from the same by a circular partition, E.

F is a plate, secured to and near the middle of the inner circumference of the cylinder A, with its solid surface directly above the outer set of buckets, *f f'*, and furnished, immediately above the buckets *f f'*, with openings, *g g*, of different sizes, for the purpose of allowing the water entering the upper tier of openings, in cylinder A, to flow or run into the inner set of buckets of water-wheel C.

Thus, it will be seen from the foregoing, that either or both sets of the buckets of my water-wheel can be used, at the option of the operator, thereby adapting it to the size of the work to be performed.

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

1. The wheel C, provided with the buckets *f f'*, constructed substantially as described, in combination with the plate F, provided with the conduit-openings *g g*, of different sizes, arranged and operating substantially as described.

2. Cylinder A, openings *a' a''*, cap B, shafts *c c*, provided with clogged segments, rings, or bands B B', on which are formed segments *b b'*, and openings, wheel C, and shaft J, all combined, constructed, arranged, and operated substantially as and for the purpose set forth.

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

WILLIAM HASLUP.

Witnesses:

THOMAS BLAKE,
J. G. STEPHENS.