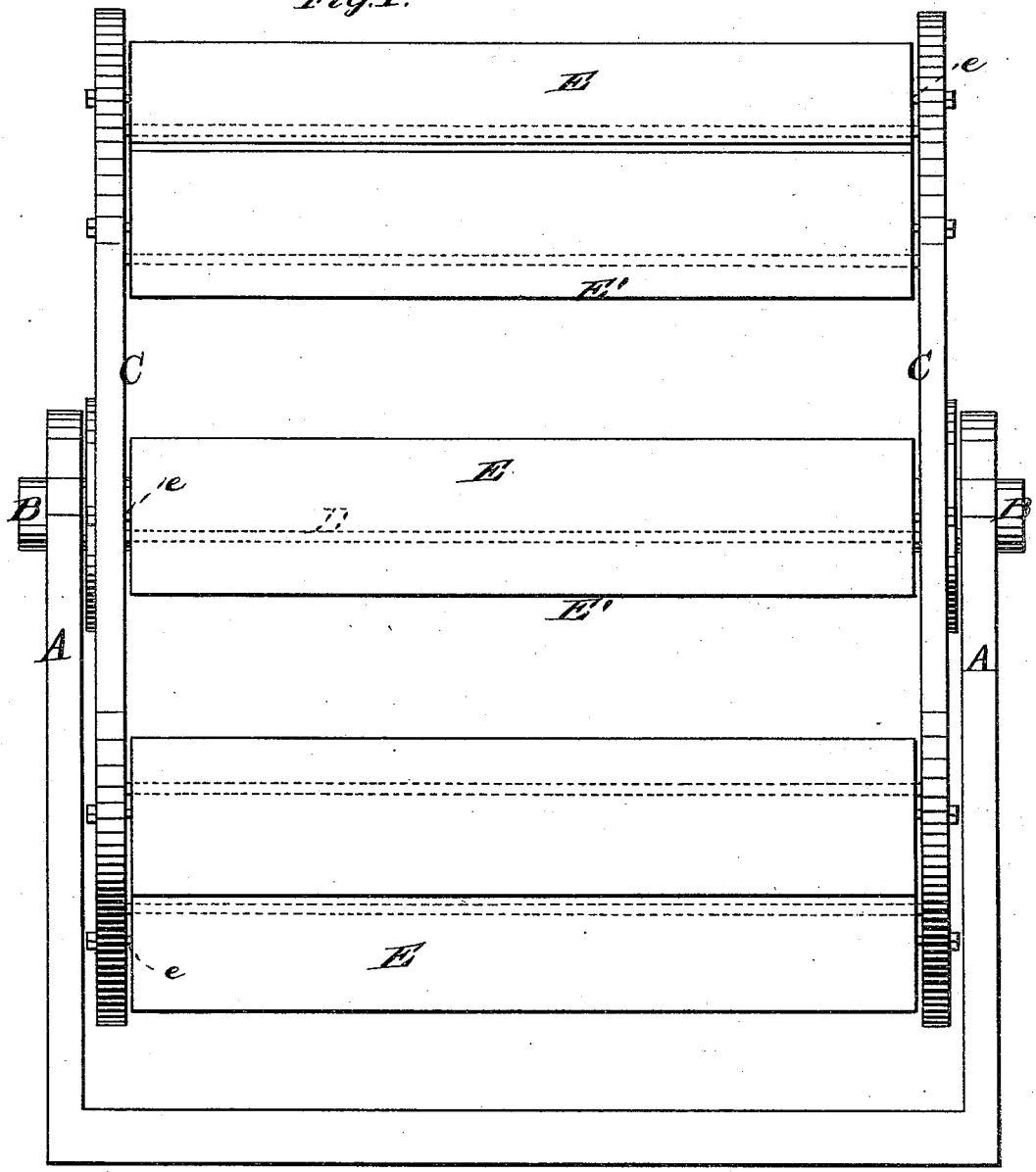
2 Sheets—Sheet 1.

W. C. THOMPSON.

FEATHERING PADDLE-WHEELS.

No. 186,639. Patented Jan. 23, 1877.

Fig. 1.



WITNESSES

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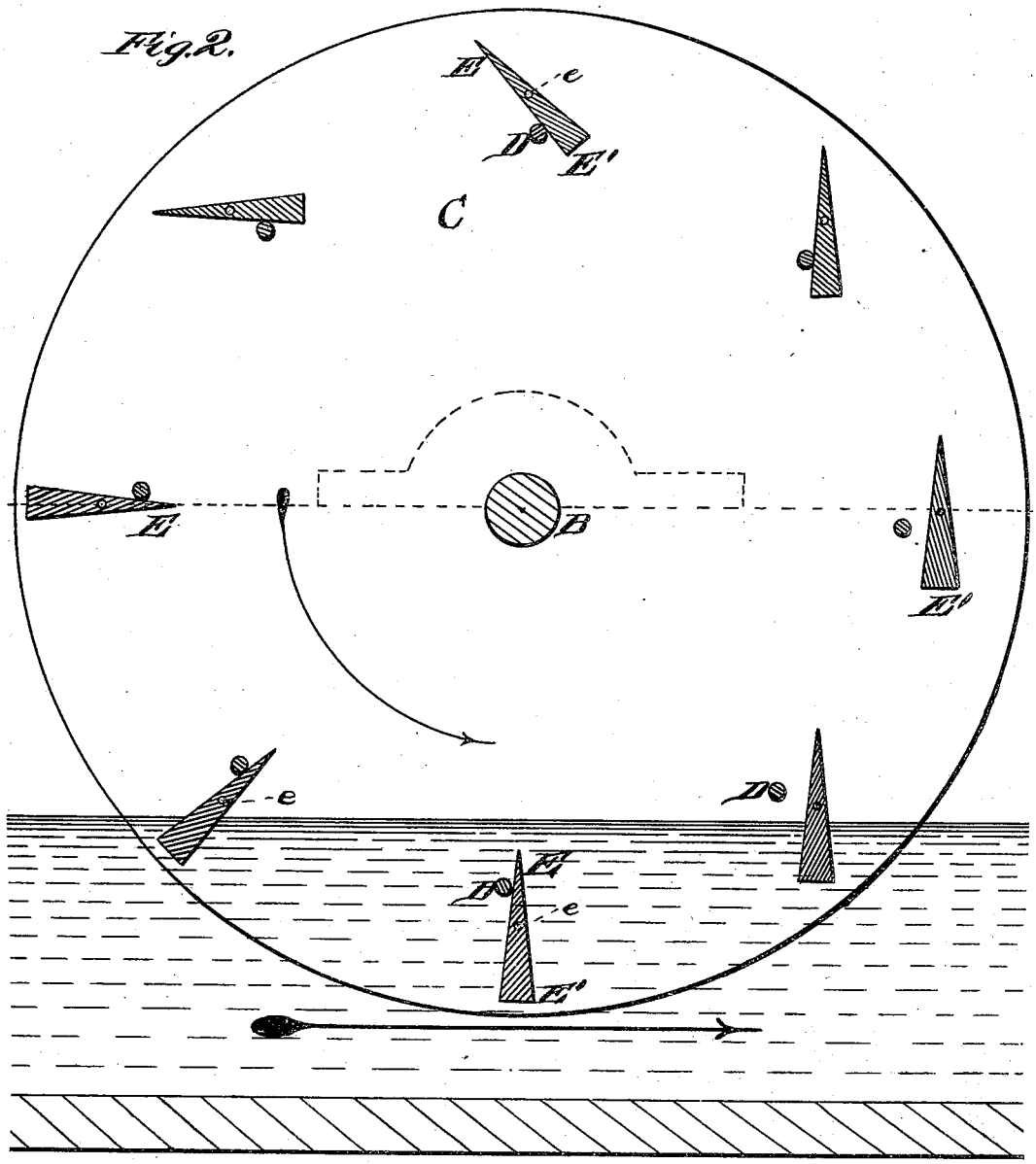
2 Sheets—Sheet 2.

W. C. THOMPSON.

FEATHERING PADDLE-WHEELS.

No. 186,639. Patented Jan. 23, 1877.

Fig. 2.



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George E. Upham

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UNITED STATES PATENT OFFICE.

WILLIAM C. THOMPSON, OF TIPTON, TENNESSEE.

IMPROVEMENT IN FEATHERING PADDLE-WHEELS.

Specification forming part of Letters Patent No. **186,639**, dated January 23, 1877; application filed December 2, 1876.

To all whom it may concern:

Be it known that I, WILLIAM C. THOMPSON, of Tipton, in the county of Tipton and State of Tennessee, have invented a new and valuable Improvement in Paddle-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 and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front elevation of my paddle-wheel, and Fig. 2 is a central vertical sectional view thereof.

This invention relates to paddle-wheels; and it consists in the peculiar construction and arrangement of the paddles, as hereinafter described, whereby, and by the action of gravity, they are caused to cut through the water in front with the least possible resistance, and to rise through the water behind without lifting any of the same.

In the annexed drawings, A A designate the two bearings of a paddle-wheel shaft, B, and C C designate two metal disks, secured on said shaft near said bearings, forming the heads or frame of the paddle-wheel. D designates a series of stop-rods, extended across from one of said disks C to the other; and E designates a series of paddles, each one of which is journaled by rods or gudgeons *e e* to the inner sides of said disks, near one of said stop-rods D. Said paddles extend nearly or quite across the wheel, between the said disks, and are made wedge-shaped in cross-section, so that the part on one side of said pivot-rods or gudgeons *e e* overbalances the part on the other side. The axial line of each one of said paddles is arranged outward in an oblique direction from its stop-rod.

When the said wheel turns forward, the sharp edges E^1 first cut through the water until the paddles successively attain a vertical position. When this point is passed the heavy broad edges E^2 of said paddles successively overbalance the respective opposite edges E^1, and cause the paddles E to successively revolve outwardly, assuming a reversed position, as shown. In this position (broad edge or wedge base outward) the said paddles successively operate upon the water, propelling the boat thereby. When lifted out of the water in the rear part of their revolution, they rise edge E^1 uppermost, as shown, so that they do not lift any water with them.

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

1. A paddle-wheel provided with pivoted paddles, wedge-shaped in cross-section, which extend across the wheel, and are reversible by the action of gravity, substantially as and for the purpose set forth.

2. The combination of disks C C with paddle E, horizontally pivoted directly thereto, and stop-rod D, substantially as set forth.

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

WILLIAM CAMPBELL THOMPSON.

Witnesses:

C. J. SIMONTON,

J. B. CAMPBELL.