

(Model.)

H. D. HODGEMAN.

SCREW PROPELLER.

No. 390,367.

Patented Oct. 2, 1888.

Fig. 1.

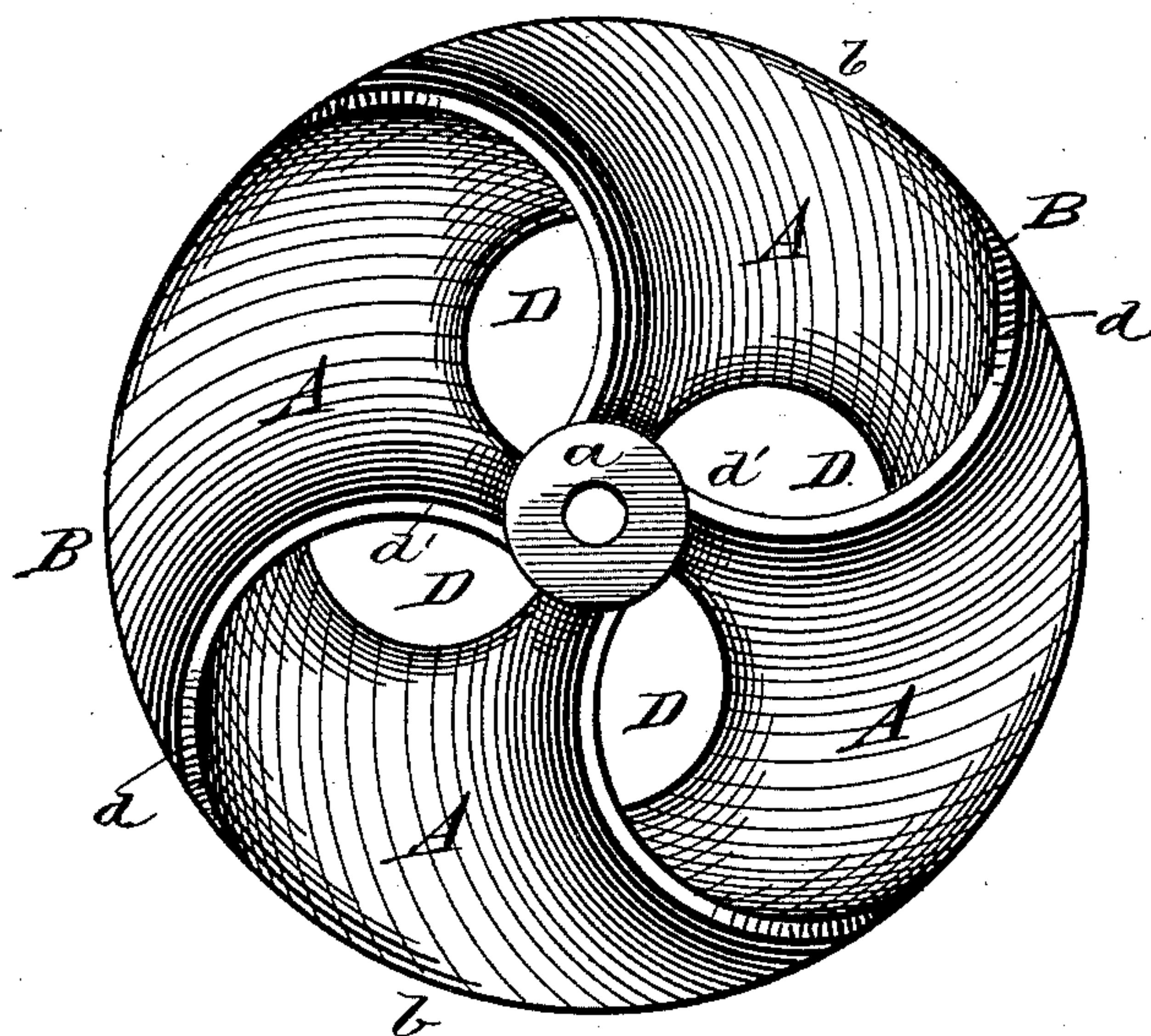
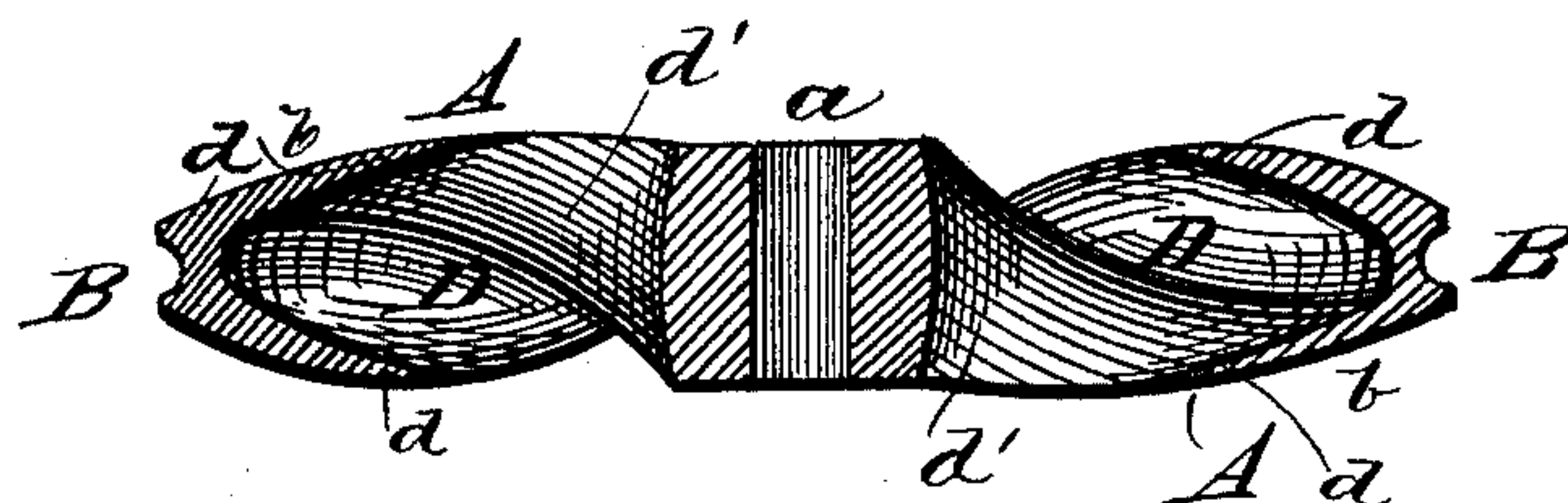


Fig. 2.



WITNESSES:

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HENRY D. HODGEMAN, OF BALDWINVILLE, NEW YORK.

SCREW-PROPELLER.

SPECIFICATION forming part of Letters Patent No. 390,367, dated October 2, 1888.

Application filed April 11, 1888. Serial No. 270,316. (Model.)

To all whom it may concern:

Be it known that I, HENRY D. HODGEMAN, of Baldwinsville, in the county of Onondaga and State of New York, have invented a new and Improved Propeller-Wheel, of which the following is a full, clear, and exact description.

My invention relates to an improved propeller-wheel for water, wind, or steam, adapted for use in connection with vessels as a ventilator-wheel, or for kindred purposes, and has for its object to construct a wheel in a simple manner, which will produce a maximum power and be subjected to a minimum degree of friction, and wherein the wheel when used in the propulsion of vessels will not produce a perceptible or destructive movement of the water.

The invention consists in the construction of the several parts of the wheel, as will be hereinafter fully set forth, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both figures.

Figure 1 is a plan view of the wheel, and Fig. 2 is a central vertical section thereof.

In carrying out the invention the wheel consists of a series of blades, A, radiating in a diagonal line from a central hub, a, which blades turn as they approach the periphery of the wheel, as shown at b, to lie in a plane at right angles with the hub.

The blades A, at their outer extremities, are merged into a peripheral band or ring, B, and are thickest at the point of intersection, d', with the hub and thinnest at their intersection, d, with the periphery.

By reason of the aforesaid construction of the blades a series of substantially circular

openings, D, are provided between the hub and periphery, which openings project diagonally through the wheel in a double curve or S-shaped line, as best illustrated in Fig. 2.

The wheel may be of any desired thickness and the blades of any desired pitch until the said wheel shall have approached in contour approximately a sphere.

It is evident from the construction of the wheel that the same may be made lighter than heretofore, and yet be as strong, and that, owing to the peculiar curve of the apertures, the blades, while presenting at the proper point and time an efficient bearing-surface to the water, wind, or steam, will not in their revolution produce any harmful work.

The device may be used as a steam-piston and valve combined, or a wheel for pumping water, or a wind-wheel when inclosed in a suitable cylinder.

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

A wheel consisting of a series of blades radiating diagonally from a central hub, turning as they approach the periphery to lie in a plane at right angles to the hub, said blades merging into a peripheral ring and constructed thickest at their point of intersection with the hub and thinnest at the periphery, whereby essentially circular openings are formed projecting diagonally through the wheel in a double curve or S-shaped line, substantially as shown and described.

HENRY D. HODGEMAN.

Witnesses:

HARRY P. BIGELOW,
LUCIEN E. SMITH.