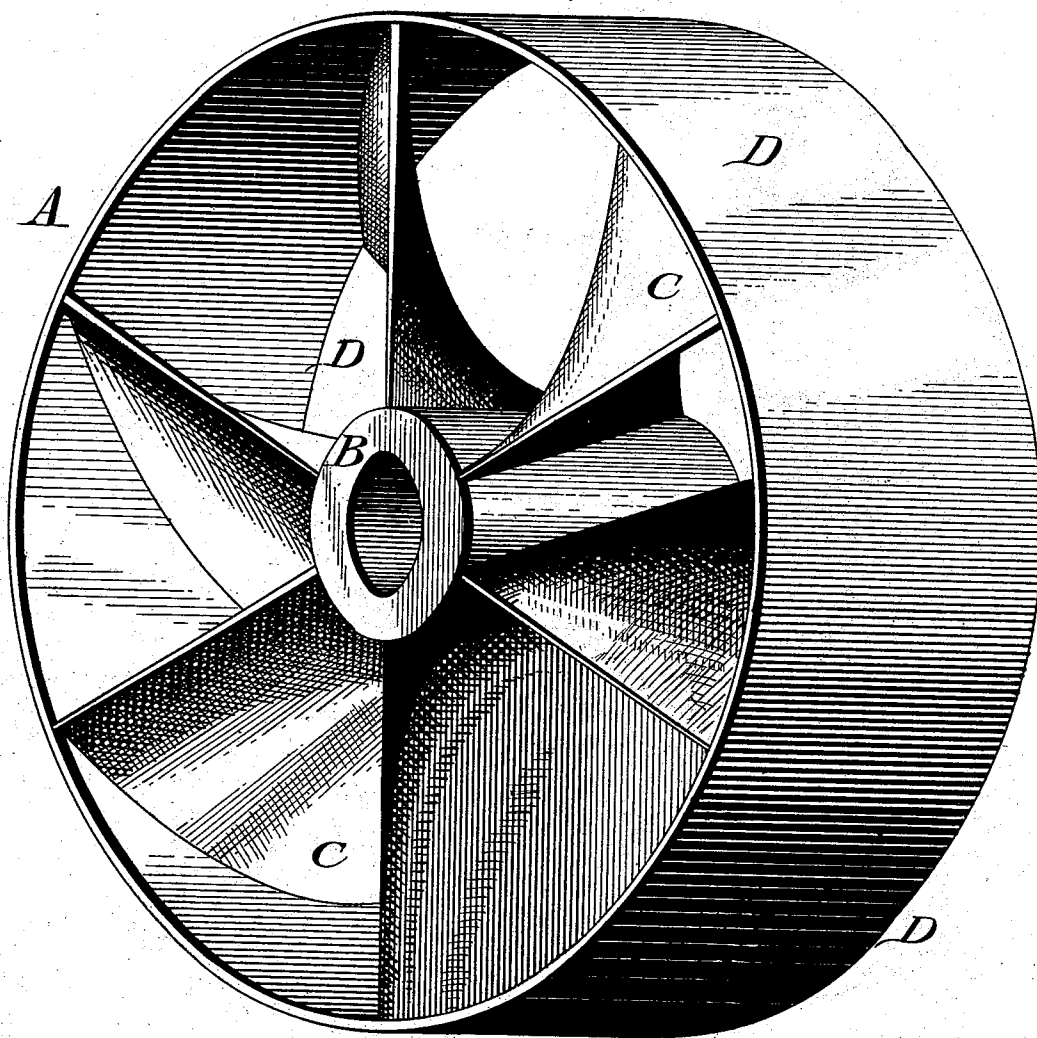


(No Model.)

N. WAGENER.
PROPELLER.

No. 506,572..

Patented Oct. 10, 1893.



WITNESSES:

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PROPELLER.

SPECIFICATION forming part of Letters Patent No. 506,572, dated October 10, 1893.

Application filed November 24, 1890. Renewed April 20, 1892. Again renewed April 5, 1893. Serial No. 469,214. (No model.)

To all whom it may concern:

Be it known that I, NICOLAS WAGENER, a citizen of the United States, residing in the city of Baltimore, State of Maryland, have invented a new and useful Improvement in Propellers, which improvement is fully set forth in the following specification and accompanying drawing.

My invention consists of a propeller having blades of the form hereinafter described, whereby the stopping or pushing back of the water from the front of the screw is prevented, thereby lessening the resistance to the wheel, and reducing it to a minimum.

In the drawing, which represent a perspective view of a propeller embodying my invention, A designates a propeller wheel or screw consisting of the hub B, the blades C, and the rim D. The said blades C are of the form of true screws, and are preferably of greater thickness at their connection with the hub, than at their junction with the rim, and their terminal edges extend radially from the hub, this construction allowing a uniform action of the wheel, whether it is going forward or backward. The lines of connection of the blades and hub are so inclined that a line drawn on the hub from one end of a blade to the opposite end of the adjacent blade, is substantially parallel with the axial center of the hub. The blades are also of such thickness that a line drawn through a series of points on the surface of a blade, and equally distant from the hub, will be parallel or equi-distant from a line drawn through a series of points on the adjacent surface of the next blade, and equally distant

from the hub as the first series of points. The latter described construction permits the water to readily pass through the propeller between the blades without change of form, so that there is no stoppage or pushing back of the same, thus preventing an increased resistance to the passage of the propeller through the water. The rim D, which is of uniform thickness, so as to prevent increased resistance, is firmly secured to the edges of the blades, and extends the width of the same, so as to prevent the escape of the water therefrom until the thrust or full force of the impact of the blade upon the water is received. The rim by directing the water to the back of the wheel, prevents its escape by the side thereof, and avoids a swell of the water at the side, so that the only rough water in contact with the propeller is at its rear end.

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

A propeller wheel forming a true screw, having the opposite exposed edges of its blades extending from the hub in straight radial lines, and the faces of the adjacent blades equally distant from each other on parallel lines, a hub of equal width from end to end of the blades, and a continuous rim or band entirely inclosing the peripheries of the blades and extending from one edge thereof to the other, substantially as described.

NICOLAS WAGENER.

Witnesses:

JOHN A. WIEDERSHEIM,
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