

J. A. JOYNER.
PROPELLER WHEEL.

No. 98,268.

Patented Dec. 28, 1869.

Fig: 1.

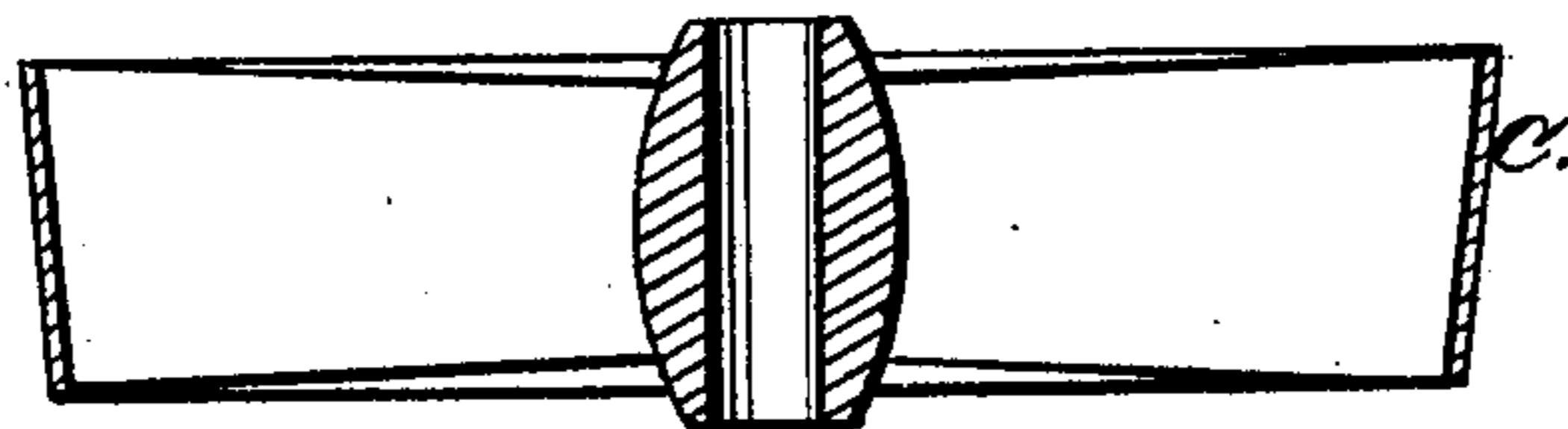
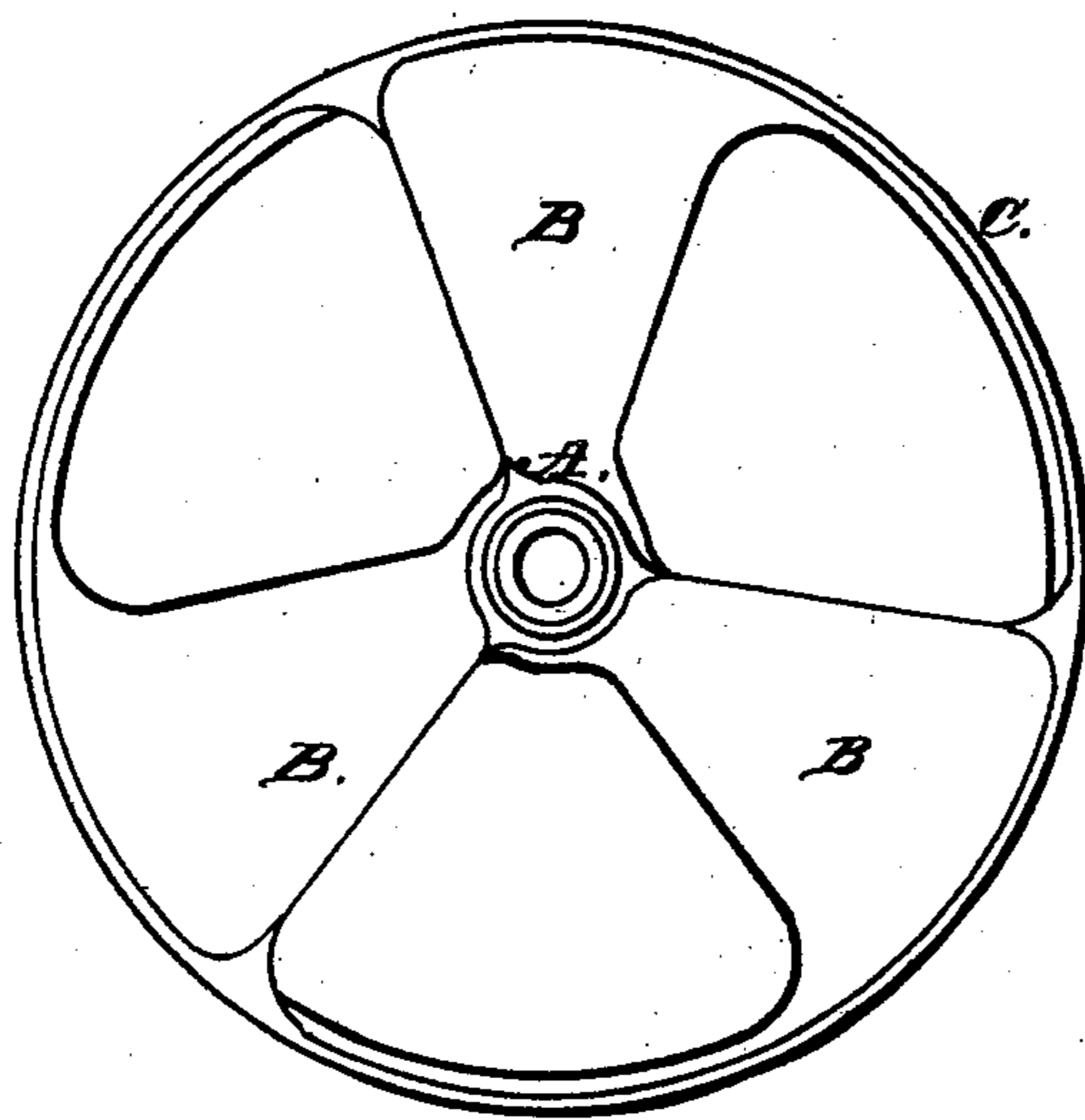


Fig: 2.



Witnesses:

Swickman
and Brooks

Inventor

J. A. Joyner
PER *M. M. Co.*
Atty

United States Patent Office.

JAMES ALBERT JOYNER, OF NEW YORK, N. Y.

Letters Patent No. 98,268, dated December 28, 1869; antedated December 18, 1869.

IMPROVEMENT IN PROPELLER-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, JAMES ALBERT JOYNER, of the city of New York, in the county and State of New York, have invented a new and useful Improvement in Propeller-Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

My invention relates to a new and important improvement in that class of propeller-wheels for marine vessels, which consists of a central hub and radial blades, surrounded by a band or cylinder; and

The improvement consists in substituting for the plain band or cylinder previously used, one whose ends are of unequal diameters, or which resembles in form the frustum of a hollow cone.

In the accompanying plate of drawings—

Figure 1 is an edge view, with the eye or hub broken away, or shown in section.

Figure 2 is a side view, showing the blades.

Similar letters of reference indicate corresponding parts.

A represents the eye or hub of the wheel.

B represents the blades.

C represents the cylinder by which the blades are connected.

The central hub, and the blades of a screw-propeller, connected according to my invention, may be of any usual or convenient form.

The outer ends or tips of the blades are connected by a circular flat hoop, band, or cylinder, preferably of about the same width across its periphery as the blades.

The cylinder in my invention is made of tapering

form, like the frustum of a cone, and in use is arched with the end of lesser diameter for the leading or fore edge.

It has been conclusively demonstrated that the speed of a vessel cannot be increased by using a plain cylinder, i. e., one of equal diameter at both ends, beyond the speed attained by the ordinary unprotected screw; while, by my improved construction, the volume of water taken in at the fore end of the cylinder is allowed free egress at its wider or rear extremity, the flaring form of the same offering little comparative resistance to the centrifugal force of the water generated during the more or less rapid revolution of the screw, thereby increasing the speed of the vessel, with the same amount of power.

The said cylinder can be cast with the blades and hub, so that the whole may be in one piece, or it can be affixed with rivets or screws, or otherwise fastened.

The tapering form of the cylinder has a tendency to prevent vibration, as the pressure of the water upon it has a different effect from what it has on a true cylinder.

Having thus described my invention,

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

The propeller-wheel, consisting of the hub A and blades B, when provided with the tapering cylinder C, substantially as herein shown and described, for purpose set forth.

The above specification of my invention signed by me, this 17th day of March, 1869.

JAMES ALBERT JOYNER.

Witnesses:

FRANK BLOCKLEY,

ALEX. F. ROBERTS.