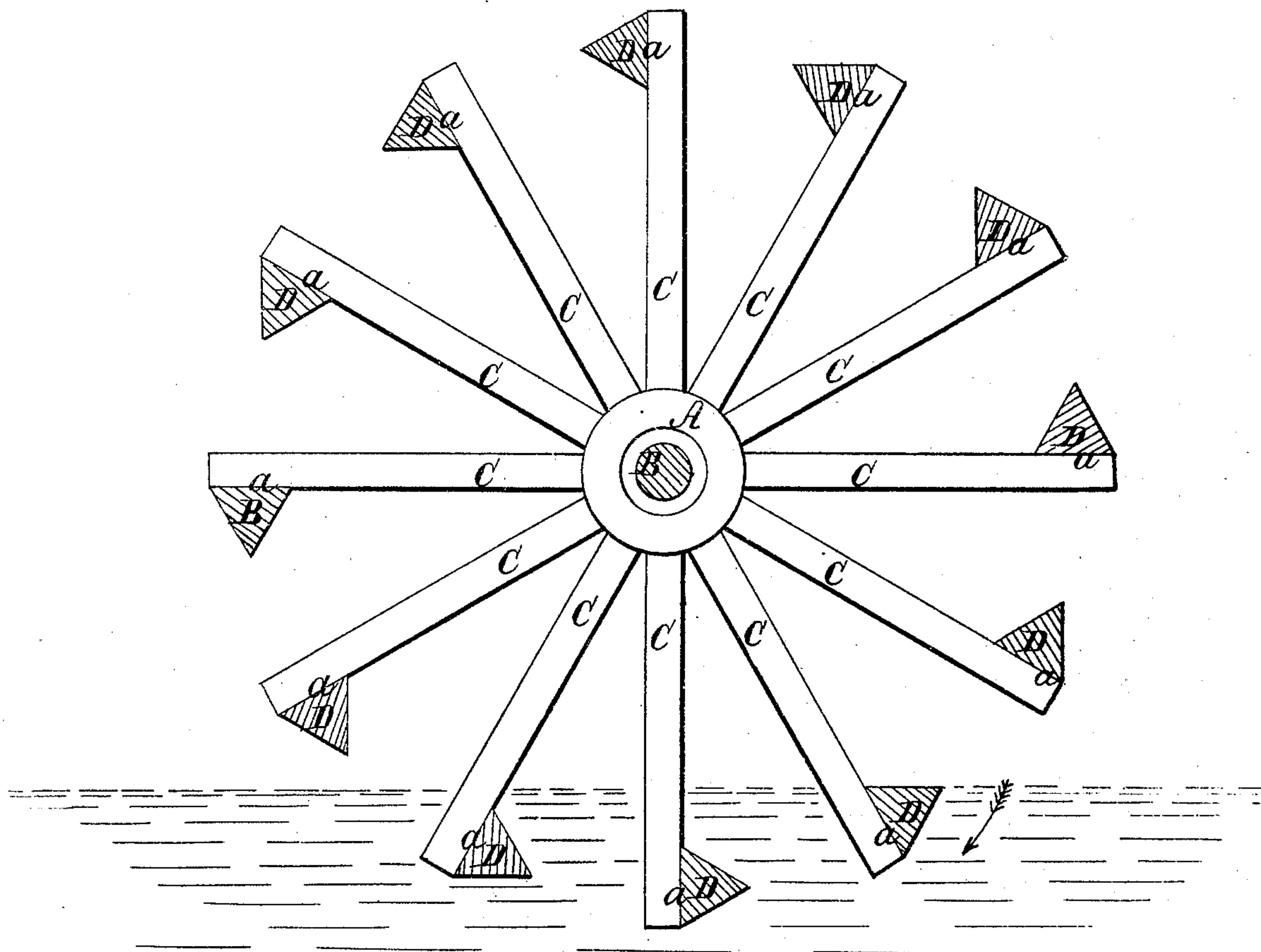


N. Thompson.
Paddle Wheel.

N^o 23,324.

Patented Mar. 22, 1859.



Witnesses;
Philo. F. Bauman
Joshua Lord

Inventor:
Nathan Thompson

UNITED STATES PATENT OFFICE.

NATHAN THOMPSON, OF BRIDGEPORT, CONNECTICUT.

PADDLE-WHEEL.

Specification of Letters Patent No. 23,324, dated March 22, 1859.

To all whom it may concern:

Be it known that I, NATHAN THOMPSON, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a
5 new and useful Improvement in Paddle-Wheels for Propelling Vessels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying
10 drawings, forming part of this specification, said drawing representing a section of a paddle wheel with my improvement taken in a plane perpendicular to its axis.

In applying my invention, the frame of
15 the wheel may be constructed in the usual manner with a suitable number of hubs A, keyed to the shaft B, and with radial arms C, C, secured to the said hubs, which arms may be stayed by rings arranged concentrically to the hubs.

The prismatic floats D, D, which constitute my invention are to be arranged with the length of the prisms parallel or nearly so to the shaft of the wheel, and
25 with one face of each float, viz., that one which is to act upon the water to propel the vessel forward, radial or nearly so to the center of the wheel as shown in the drawing where the direction in which the
30 wheel rotates to propel the vessel forward is indicated by arrows and the propelling faces are indicated by the letters *a, a*. The said floats may consist of solid pieces of wood and be secured to the arms of the
35 wheel by bolting them thereto in the same manner as the flat floats commonly used or they may be made of sheet iron, hollow,

and secured to the arms by bolts or clamps applied in any convenient and suitable manner. The said floats may be applied to the
40 paddle wheels in common use when the old floats are taken off.

The principal advantage to be derived from the use of triangular prismatic floats applied as above described is that while
45 they may present the same area of propelling surface as the flat floats and present the same to the water in a similar manner no vacuum is formed behind them as they pass through the water as there is behind
50 the flat float, and there is much less "back water" as it is termed thrown up so that a much greater proportion of the power applied to drive it,—in fact nearly the whole
55 power—is expended in effecting the propulsion of the vessel instead of in overcoming the vacuum and lifting water.

Another advantage is that the floats present an acute angle and consequently meet with less resistance than the flat float. In
60 backing, these floats act with fully as much effect as the flat floats.

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

The arrangement and combination, in the
65 manner herein shown and described, of the triangular floats D, with the arms C, to prevent the formation of the vacuum, the lifting of backwater, &c., as set forth.

NATHAN THOMPSON.

Witnesses:

PHILO F. BARNUM,
JOSHUA LORD.