

F. H. B. BABBE.
SCREW-PROPELLER.

No. 173,575.

Patented Feb. 15, 1876.

Fig 1.

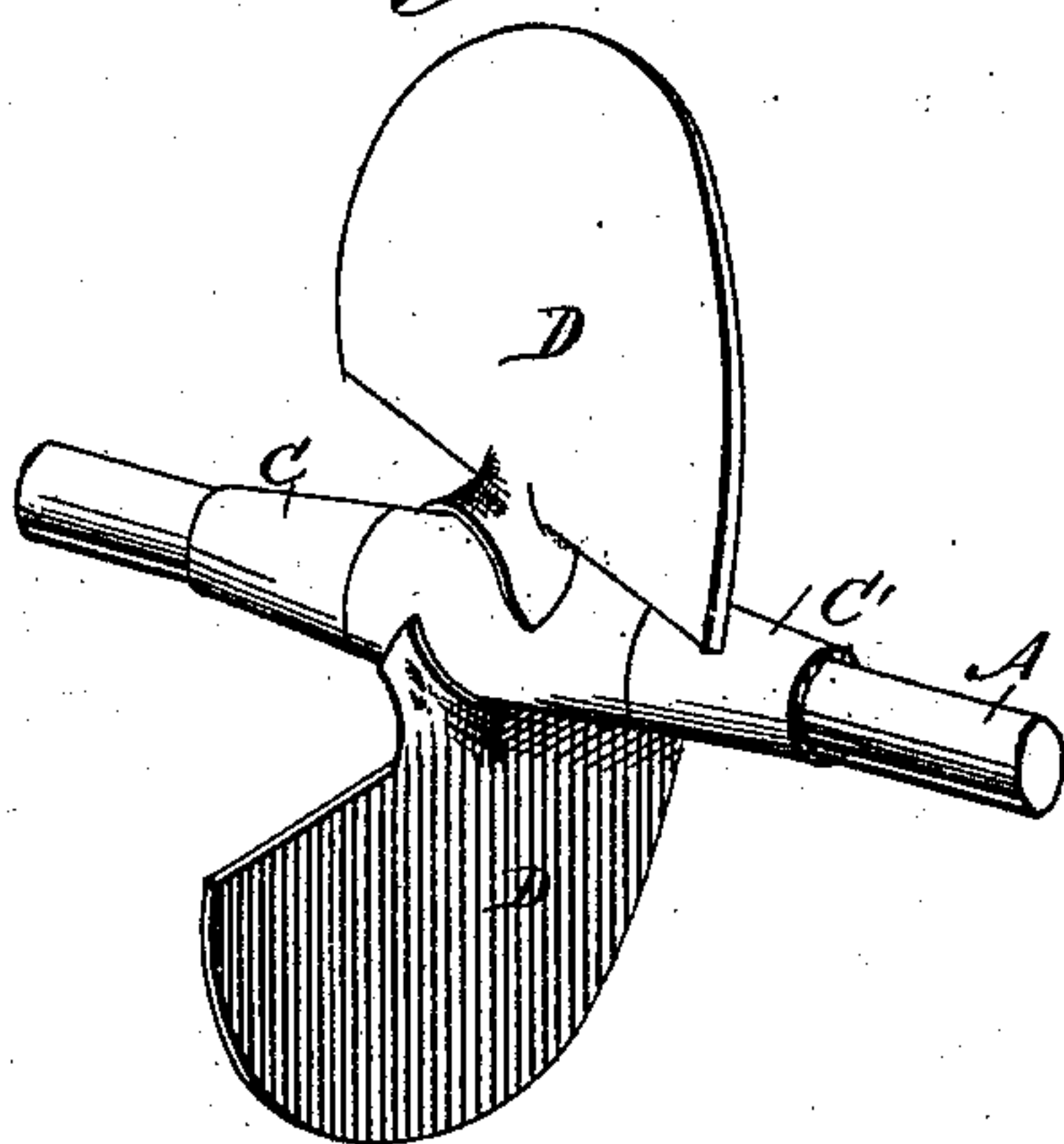
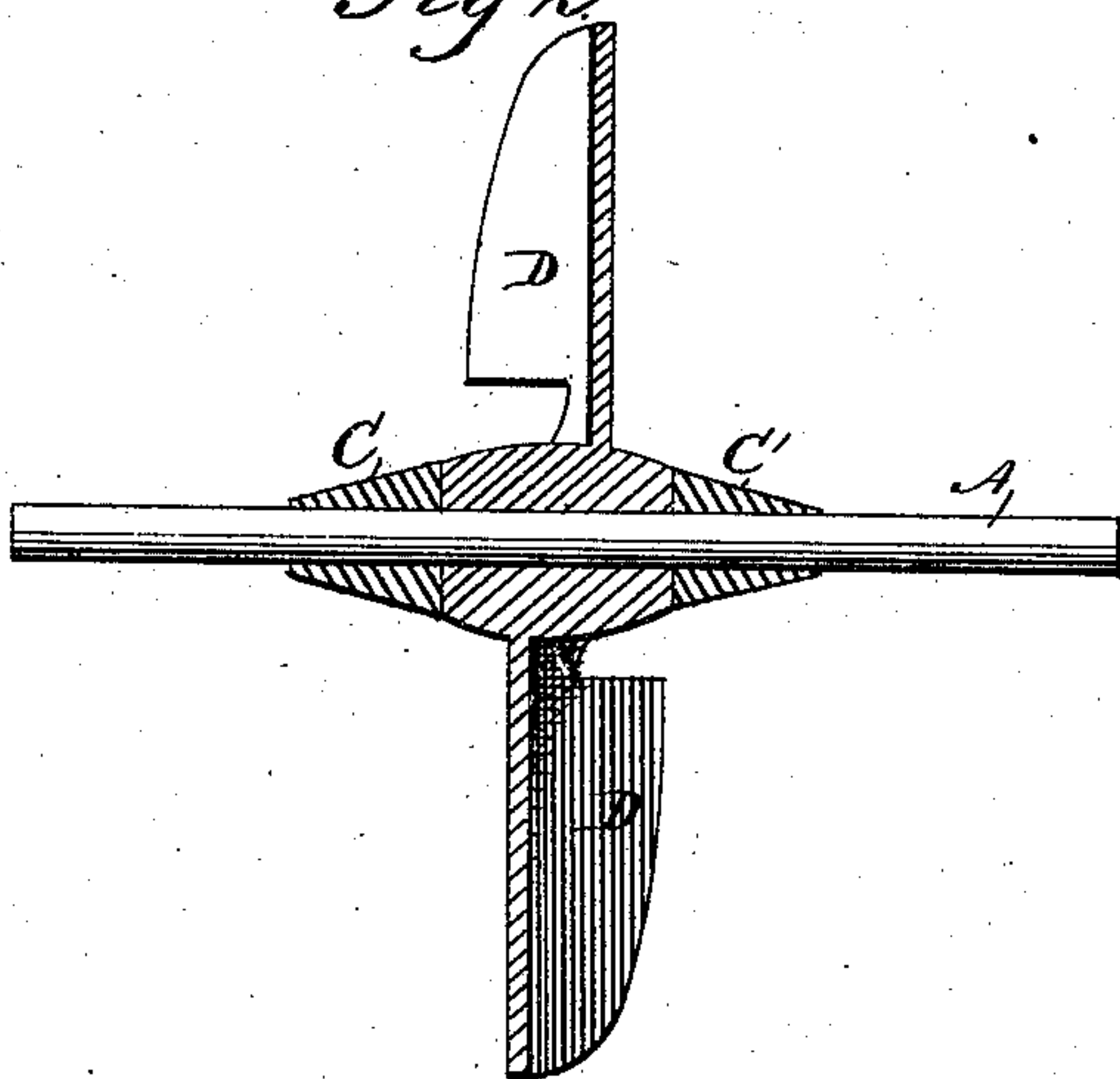


Fig 2.



Witnesses;
Harry L. Clark
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By L. M. Smith,
His Atty

UNITED STATES PATENT OFFICE.

FRIEDRICH H. B. BABBE, OF ANTIOCH, CALIFORNIA.

IMPROVEMENT IN SCREW-PROPELLERS.

Specification forming part of Letters Patent No. **173,575**, dated February 15, 1876; application filed March 1, 1875.

To all whom it may concern:

Be it known that I, FRIEDRICH H. B. BABBE, of Antioch, in the county of Contra Costa and State of California, have invented an Improved Propeller-Wheel for Ships, &c.; and I do declare that the following is a full, clear, and exact description of the same, that will enable those skilled in the art or science to which it most nearly appertains to construct and use my said invention without further invention or experiment.

Reference may be had to the accompanying drawings.

This invention relates to an improved construction of propelling-blades, and means for attaching the same to the shaft by which it is operated, whereby much less "slip" and "cut up" of the water is had, and the screw be operated with much less resistance than other devices for the same purpose.

This invention consists, mainly, of a disk cut in halves, each half of which being connected by a stout short arm to a hub or nave. The positions of the blades, with reference to the hub and each other, are such that the point of each blade is on the center line, or nearly so, of the axis of revolution, and so that the strain will be received on the hub or nave at its greatest diameter, the whole construction of the screw being on curved lines, with no flat or angular surfaces or abutments against which the sea can strike to impede its progress or break the blades and bend the shaft on which they operate, all of which will hereinafter more fully appear.

Referring to the accompanying drawings, Figure 1 represents a perspective view of my improved propeller; Fig. 2, a central sectional elevation of the same.

A represents the shaft, upon which the screw is forced by hydraulic pressure or other well-known means. Conical bosses or collars, C C',

are forced against each end of the nave, so as to form tight, smooth joints, and present rounding surfaces from end to end.

The blades D D are connected to the nave by short stout arms, which are also constructed so that no resistance is had by a counter wave or current striking a resisting surface, but will pass around the throat of the arms harmless. The blades D D are so bent or inclined as to act on the central line or axis of revolution of the hub, and, consequently, the strain is transmitted to the hub at a point best able to resist—i. e., its greatest diameter, while the diameter of the two arms are equivalent to three of the longest diameters of the hub.

It will be seen that by this construction of screw-propellers no sharp angles or abutments appear against which the wave may strike or friction be had in its progress through the water, and that instead of angles, as in the ordinary construction, nothing but curves are presented for the water to act upon.

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

1. The blades of a screw-propeller, constructed of half-disks, connected to the nave by short, stout arms, and bent substantially as described and shown.

2. The combination, with the shaft A and blades D, of the nave and the bosses C C', when the said nave and bosses are constructed so as to present rounding surfaces from end to end, substantially as described and shown.

In witness whereof I have hereunto set my hand and seal.

FRIEDRICH H. B. BABBE. [L. S.]

Witnesses:

C. W. M. SMITH,
PHILIP MAHLER.