

P. M. BLATCHLEY.
Screw-Propellers.

No. 155,003.

Patented Sept. 15, 1874.

Fig. 1.

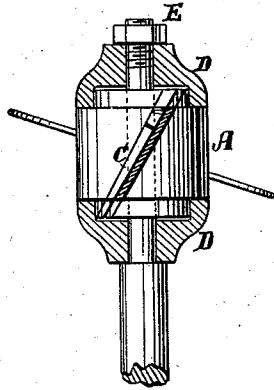


Fig. 3.

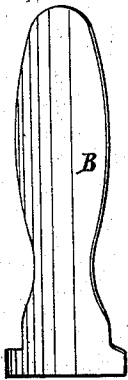


Fig. 2.

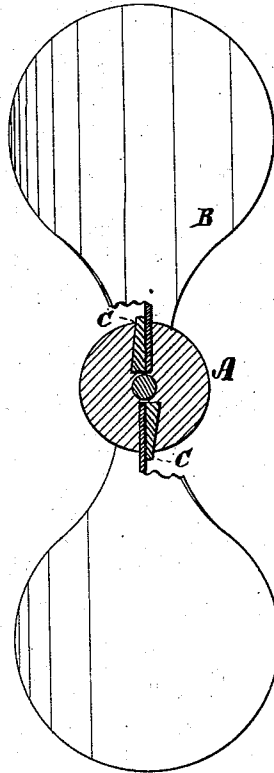
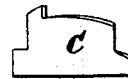


Fig. 4.



WITNESSES:

A. Bennekenhoff.
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INVENTOR:

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UNITED STATES PATENT OFFICE.

PHILO M. BLATCHLEY, OF GUILFORD, CONNECTICUT.

IMPROVEMENT IN SCREW-PROPELLERS.

Specification forming part of Letters Patent No. **155,003**, dated September 15, 1874; application filed August 15, 1874.

To all whom it may concern:

Be it known that I, PHILO M. BLATCHLEY, of Guilford, in the county of New Haven and State of Connecticut, have invented a new and Improved Propeller-Wheel, of which the following is a specification:

My invention consists of detachable blades for propeller-wheels, secured to the hub by the inner end fitted in a dovetail spiral groove, and keyed in the groove by a key, which is itself secured by collars screwed against the hub by a nut screwing on the outer end of the shaft, whereby the blades are fastened more securely than when bolted through a flange. The hub is as smooth and free from projections as a solid hub, and the blades may, on account of not requiring a flange by which to fasten them, be made of steel plates, of which they may be shaped by stamping or pressing in dies.

Figure 1 is a horizontal section of a wheel in which the blades are secured to the hub according to my plan. Fig. 2 is a transverse section. Fig. 3 is a side elevation of a blade, and Fig. 4 is a side elevation of a key.

Similar letters of reference indicate corresponding parts.

A is the hub of the wheel, in which two or more spiral dovetail grooves are made to receive the blades B by the inner end, which will be as wide as the length of the groove, and slightly increasing in thickness from about the periphery of the hub to the inner end, to prevent drawing out when keyed in. C represents the keys for fastening the blades in the hub, and D represents the collars for securing the keys, the collars being fitted on the shaft, so as to be clamped up against the ends of the hub by a nut, E, screwing onto the end; or a key may be used instead, being driven through the shaft, which may have a hole for that purpose.

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

The blades of a propeller secured to the hub detachably by the inner ends being keyed in dovetail spiral grooves, and the keys secured by collars, all combined and arranged substantially as specified.

PHILO M. BLATCHLEY.

Witnesses:

SILVANUS CLARK,
EDWARD R. LANDEN.