

(No Model.)

B. W. FELLOWS.
PROPELLER.

No. 462,897.

Patented Nov. 10, 1891.

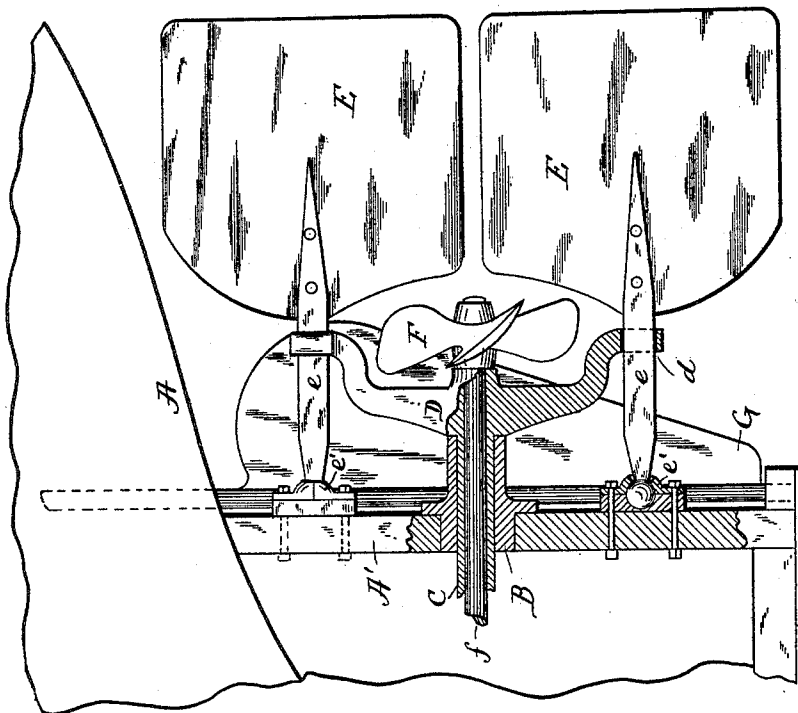


Fig. 1.

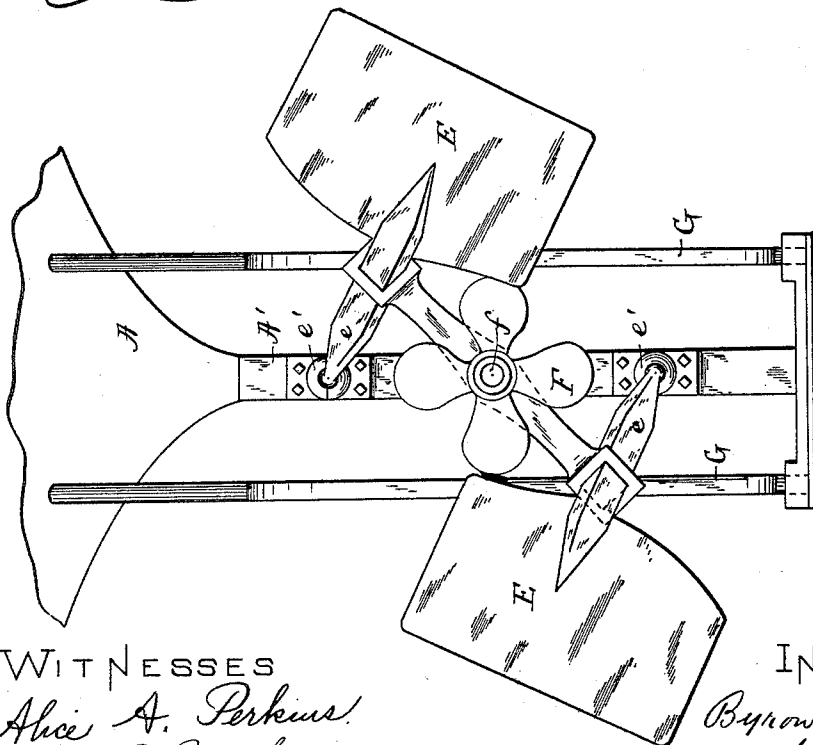


Fig. 2.

WITNESSES
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BYRON W. FELLOWS, OF BEVERLY, MASSACHUSETTS.

PROPELLER.

SPECIFICATION forming part of Letters Patent No. 462,897, dated November 10, 1391.

Application filed December 4, 1890. Serial No. 373,524. (No model.)

To all whom it may concern:

Be it known that I, BYRON W. FELLOWS, a citizen of the United States, and a resident of Beverly, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Propellers, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention has for its object to provide a novel propeller mechanism for a vessel, whereby an oscillating sculling motion is imparted to the propeller-blades.

To accomplish this object my invention consists in the features of construction and the combination or arrangement of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 represents a side elevation of the invention, parts of which are shown in section; and Fig. 2 represents a rear view of the same.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

A represents the stern of a vessel, and A' represents its stern-post, as usual.

B is a horizontal bearing secured to or forming a part of the stern-post A', and in said bearing is journaled the tubular shaft or sleeve C, to which a rocking motion is imparted by means of any suitable engine, motor, or mechanism, such engine, &c., being, however, not represented in the drawings, as it does not form a part of my present invention. To the rear end of the tubular shaft or sleeve C are rigidly secured a series of radiating arms D, which are oscillated in a vertical plane by the rocking movement of the tubular shaft or sleeve. The extremities of the radiating arms D are provided with slotted perforations *d d* through its ends, in which are guided the horizontal shanks *ee* of the propeller-blades E E, as shown. The forward end of each shank or shaft *e* is universally jointed in a ball-bearing *e'*, secured to the stern-post A' or rear part of the vessel.

As the tubular shaft or sleeve C is rocked, an oscillating sculling motion is imparted to the blades E E, by which the vessel is propelled forward at a rapid rate and with a minimum of expenditure of power. For the pur-

pose of backing the vessel I use an ordinary rotary screw propeller F, mounted on a shaft *f*, preferably journaled within the rocker-sleeve C, as shown in the drawings, said screw propeller being set in motion by means of any well-known engine or motor. (Not shown in the drawings.) The screw propeller F may also be used as an auxiliary in moving the vessel forward, if so desired.

G G represent the rudders, which are preferably arranged one on each side of the sleeve B, or in any other suitable or practical manner, as may be most suitable.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent, and claim:

1. The combination, with the fixed stern-post of a ship or similar vessel, of a horizontal bearing B, supported by the stern-post, a horizontal rocking shaft C, journaled in the said bearing and provided with a radiating arm D, which is oscillated in a vertical plane by the rocking movement of the shaft, and a propeller-blade E, having a horizontal shank *e*, engaged with the radiating arm, and having its inner extremity connected with the stern-post by a universal joint, substantially as described.

2. The combination, with a ship or similar vessel, of a horizontal bearing at the stern, a horizontal rocking shaft journaled in said bearing and provided with a series of radiating arms which are oscillated in a vertical plane by the rocking movement of the shaft, and a pair of propeller-blades having horizontal shanks engaged with the radiating arms, and having their inner extremities connected to fixed parts of the vessel by universal joints arranged, respectively, above and below the rocking shaft, substantially as described.

3. The combination, with the fixed stern-post of a ship or similar vessel, of a horizontal bearing supported by the stern-post, a horizontal tubular shaft or sleeve arranged to rock in said bearing, and provided with a series of radiating arms, which are oscillated in a vertical plane by the rocking movement of the shaft or sleeve, a pair of propeller-blades having horizontal shanks engaged with the radiating arms, and connected with the stern-post by universal joints arranged, respectively,

above and below the tubular shaft or sleeve,
and a revolving shaft supported by and ex-
tending through the tubular shaft or sleeve,
and having at its outer end an attached
5 screw propeller operating between the shanks
of the propeller-blades, substantially as de-
scribed.

In testimony whereof I have signed my

name to this specification, in the presence of
two subscribing witnesses, on this 1st day of 10
December, A. D. 1890.

BYRON W. FELLOWS.

Witnesses:

ALBAN ANDRÉN,

THEKLA ANDRÉN.