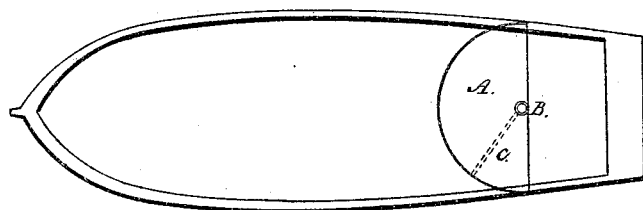
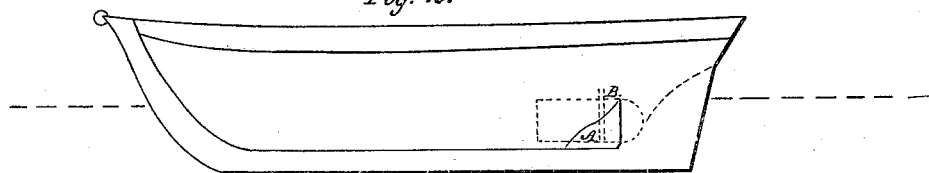


*P. Lear,*  
*Vibrating Propeller.*  
*Nº 2,410.* *Patented Dec. 30, 1841.*

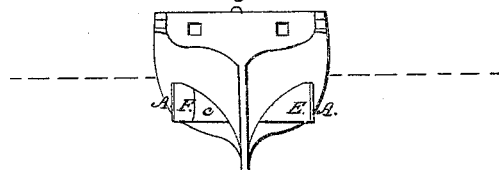
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



# UNITED STATES PATENT OFFICE.

PETER LEAR, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN THE MODE OF PROPELLING BOATS, &c., BY MEANS OF JETS OF WATER.

Specification forming part of Letters Patent No. 2,410, dated December 30, 1841.

*To all whom it may concern:*

Be it known that I, PETER LEAR, of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Machinery for Propelling Vessels Through the Water, of which the following is a full and exact description, reference being therein had to the accompanying drawings, which, combined herewith, form my specification. In the same I have set forth the principles of my improvements by which they may be distinguished from others of a like character, together with such parts or combinations as I claim to be my invention, and for which I solicit an exclusive property for fourteen years to be secured to me by Letters Patent.

Figure 1 represents a top view of a vessel having my improved propelling apparatus arranged in the stern. Fig. 2 is a side view, and Fig. 3 is an end view, of the same.

My arrangement of machinery consists of a semicircular box A, placed in the counter forward of the run of the vessel, as seen in the drawings. This box extends across the entire width of the vessel, projects externally beyond the counter, where it has its straight or diameter side opening in the direction of the after part of the run or stern post. It is intended that this box shall be entirely immersed in the water, or be fixed in the vessel below the light water-line, so as in war-steamers to be entirely out of the reach of the shot from the guns of an enemy's ship. Standing vertically in the center of the curve of the box is a shaft B, (see Fig. 1, and shown in Fig. 2 by dotted lines,) supported and moving in suitable boxes or bearings applied to the top and bottom of the box, and to this shaft a vertical plate or paddle C is fixed, the said plate being rectangular and of the same or about the same depth as that of the interior of the box, and in length extending from the shaft to the curved side of the box, or very nearly in contact with the same.

The shaft B and paddle C are to be moved by suitable machinery alternately forward and back, so as to cause the paddle to pass through a segment of a circle of one hundred and eighty degrees or thereabout. Therefore when the paddle is thus turned from the opening E, Fig. 3, toward the opposite opening F it acts against the water in the box and forces the same through said opening F, thus impelling the vessel forward. When turned in the opposite direction, a similar effect is produced.

From the above it will be seen that the principle on which the propelling apparatus acts is that which is employed by nature in many of the piscatory tribes, the lateral movement of their tails giving to them a similar progressive motion; also, that the box and propeller may be arranged between the stern and bow in any part of the vessel below the line of flotation, provided said box shall extend beyond the sides of the hull a sufficient distance to open toward the stern in manner similar to that described.

Having thus explained my invention for propelling vessels, I shall claim—

Arranging in the counter or other suitable part of a vessel the semicircular box having a vertical paddle affixed to a shaft placed in the center of the curve of the box, and connected with suitable machinery so as to move alternately back and forth, as above described, the whole being arranged and operating substantially as hereinbefore set forth.

In testimony that the foregoing is a true description of my said invention and improvements I have hereto set my signature this 28th day of October, in the year 1841.

PETER LEAR.

Witnesses:

R. H. EDDY,  
EZRA LINCOLN, Jr.