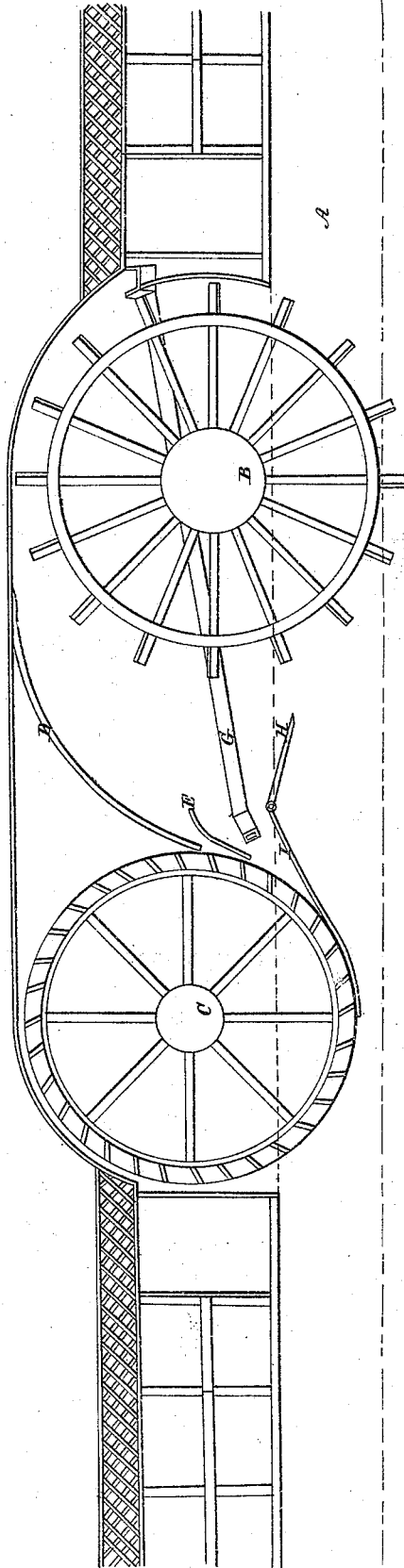


*P.C. Traver*  
*Paddle Wheel*

*Nº 2,598.*

*Patented Apr. 30, 1842*



# UNITED STATES PATENT OFFICE.

PHILIP C. TRAVER, OF RHINEBECK, NEW YORK.

MANNER OF PROPELLING BOATS, &c.

Specification of Letters Patent No. 2,598, dated April 30, 1842.

*To all whom it may concern:*

Be it known that I, PHILIP C. TRAVER, of Rhinebeck, Dutchess county, State of New York, have invented a new and useful improvement in applying the water thrown up by the propelling paddle-wheels of the steamboat for turning a close-bucket, under-shot, or breastwater wheel and conveying the power derived therefrom by suitable gearing to assist in turning the main shaft of the paddle-wheels, or for other purposes, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

The figure is a side elevation.

The steam vessel A, propelling paddle wheels B, and steam engine are made in the usual manner.

Abaft each paddle or propelling wheel B is arranged a close bucket, breast, or under shot wheel C fixed on the ends of a horizontal shaft lying across the vessel and parallel with the main shaft at a suitable distance therefrom, of less diameter than the propelling wheels, having a pulley or pulleys on it with bands leading around the same to a pulley or pulleys on the main shaft for connecting them together. Or the connection may be effected by any suitable mode of gearing.

The wheel guard or wheel house D is extended at the rear end so as to direct the water thrown up by the paddle wheel B into or against the buckets of the breast wheel—a shoot or apron E being placed below and nearly parallel with the lower end of the wheel guard at a short distance therefrom to prevent the escape of the water and conduct it more effectually to the buckets of the breast wheel.

The forward part of the wheel house is also extended and connected with a receiver F in front of the paddle wheel B into which

the water revolved with the wheel is thrown and from which it is conducted by an inclined spout G to the buckets of the breast wheel C.

An adjustable or hinged apron H is attached to the upper end of the breast piece I of the breast wheel for conducting a portion of the surge against the bucket of the breast wheel; which apron may be raised or lowered, as more or less of the surge is to be admitted.

The water thrown up at the rear of the propelling wheel strikes the guard D and is conducted by it and the guide E to the buckets of the breast wheel which it turns—its power being conveyed from the shaft of this wheel by band and pulley or other gearing to the main shaft which it assists in turning and overcoming the dead point.

The water which is discharged into the receiver in front of the propelling wheel is conducted by the inclined spout to the breast wheel against which it acts in a similar manner.

The surge conducted to the breast wheel by the apron H and I also acts upon the breast wheel in like manner.

The tight bucket wheel should revolve about 6 inches more or less above the surface of the water. It may be the same diameter of the propelling wheels, or lesser, or greater.

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

Applying the water lifted or thrown up by the paddle wheels of steam boats so as to produce an auxiliary propelling power in the manner before described or in any way analogous thereto.

PHILIP C. TRAVER.

Witnesses:

WM. P. ELLIOTT,

EDW. MAHER.