

J. C. F. Salomon.

Hydraulic Propeller.

N^o 8,558.

Patented Dec. 2, 1851

Fig. 3.

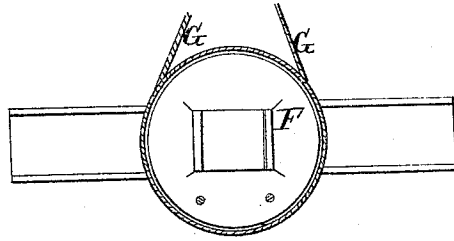


Fig. 4.

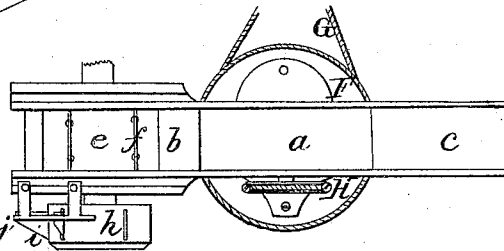


Fig. 5.

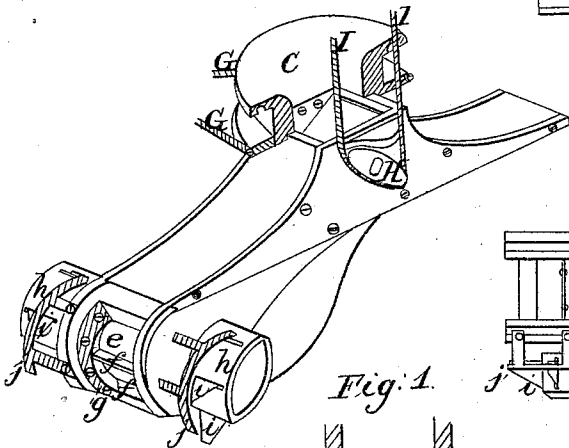


Fig. 1.

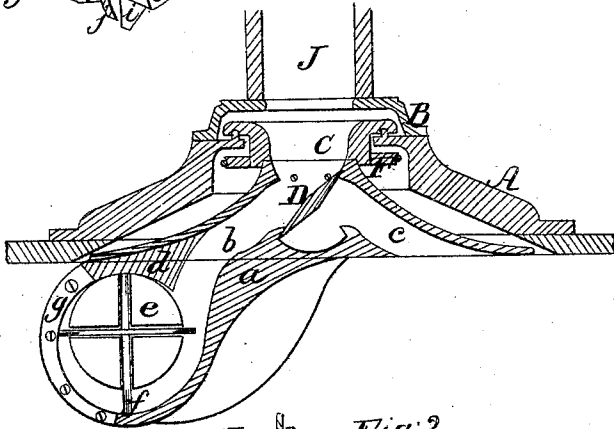
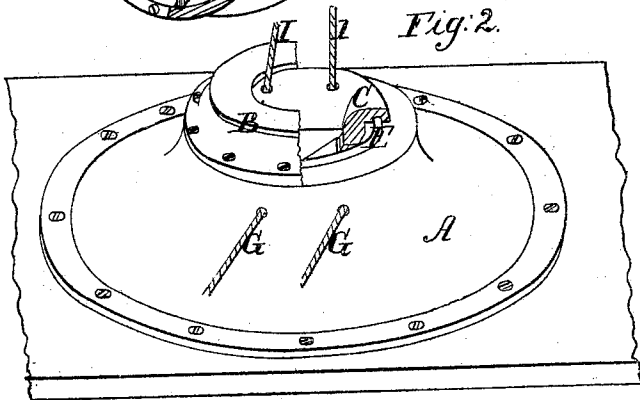


Fig. 2.



UNITED STATES PATENT OFFICE.

JOHN C. FR. SALOMON, OF CINCINNATI, OHIO.

APPARATUS FOR PROPELLING AND STEERING.

Specification forming part of Letters Patent No. 8,558, dated December 2, 1851.

To all whom it may concern:

Be it known that I, JOHN CHARLES FREDERICK SALOMON, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new Combination of a Rudder and Propeller for Steamships; and I do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings, making a part of this specification.

The nature of my invention consists in forming water-ways in the rudder and appending thereto a submerged water-wheel and propelling wheel or wheels to be worked by a force of water through said water-ways.

To enable others to make and use my invention, I will proceed to describe its construction and operation, viz:

Figure 1 is a vertical sectional view of the water-ways, propeller, and cover with the flanged mouth-piece of supply-pipe. Fig. 2 is a perspective view of the cover, showing section of the mouth-piece of water-ways and the endless ropes for operating the same. Fig. 3 is a vertical view of the water-ways and their mouth-piece with the endless rope for steering. Fig. 4 is an inverted view of the water-ways, their mouth-piece, and propeller. Fig. 5 is a perspective view of the water-ways and propeller with a section of the mouth-piece.

A is the cover of the water-ways, in the form of an inverted bowl, secured in the bottom of the ship, Fig. 2.

B is the flanged mouth-piece of the force-pipe secured to the top of cover A.

C is the revolving mouth-piece of the water-ways in the rudder, forming a continuation of the force-pipe J to the water-wheel.

D is the balance flap-valve for changing the passage of water in ways *b c*, Fig. 1.

E is a circular projection on cover A, fitting into a corresponding groove in the mouth-piece C, and on which said mouth-piece turns, Fig. 2.

F is a collar or flange on mouth-piece C, forming a pulley on which is an endless rope for steering the ship, Figs. 1 and 4.

G is the endless rope just named, Figs. 2 and 4.

H is a balance-lever on pivot of flap-valve D for reversing flap-valve, Figs. 4 and 5, and I is an endless rope attached to said lever for actuating the valve, Figs. 2 and 5.

J is the force or supply pipe, Fig. 1.

a is the bed-plate of the water-ways, Figs. 1 and 4.

b is the water-way to the propeller, Fig. 1.

c is the reaction water-way, Fig. 1.

d is the concave over the water-wheel, Fig. 1.

e is the water-wheel, Figs. 1, 4, and 5, and *f* are the sliding paddles in said water-wheel.

g is the cam for regulating the action of paddles in water-wheel, Figs. 1 and 5.

h is the propeller-wheel, Figs. 4 and 5. *i* are the sliding paddles in said propeller-wheel, Figs. 4 and 5, and *j* is the cam for regulating the action of said paddles, Figs. 4 and 5.

Having described the various parts of my invention, I will proceed to explain its operation, viz: A regular supply of water is to be drawn from the river or sea and forced by the engine through the pipe J and water-way *b*, which operates the water-wheel *e* and gives motion to the propeller-wheels *h* on the same shaft. The sliding paddles *f* in the water-wheels and *i* in the propeller-wheel, being always pressed downward on their revolution by the cams *g* and *j*, give a progressive motion to the ship by their action on the water. The whole of this apparatus being connected with the force-pipe J by a revolving joint C E, it can be turned in any direction by the endless rope G to act as a rudder, or may be turned half round to back the ship, or, in case of emergency, the valve D can be reversed by the endless rope I, so as to throw the current of water through the channel or water-way *c*, immediately stopping the propeller, without stopping the steam-engine, and the current of water passing through the channel or water-way *c* will tend to back the ship, or, should she be on a sand-bar, will help to wash it from under her.

I do not claim the peculiar wheel here used as a water-wheel and propeller; but

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

The combination of the water-ways in the rudder with a water-wheel and submerged propeller to be operated by hydraulic pressure for propelling and steering vessels, substantially as herein set forth.

In testimony whereof I have hereunto

signed my name before two subscribing witnesses.

JOHN C. FR. SALOMON.

Witnesses:

J. F. PRUCKNER,
WM. M. SMITH.