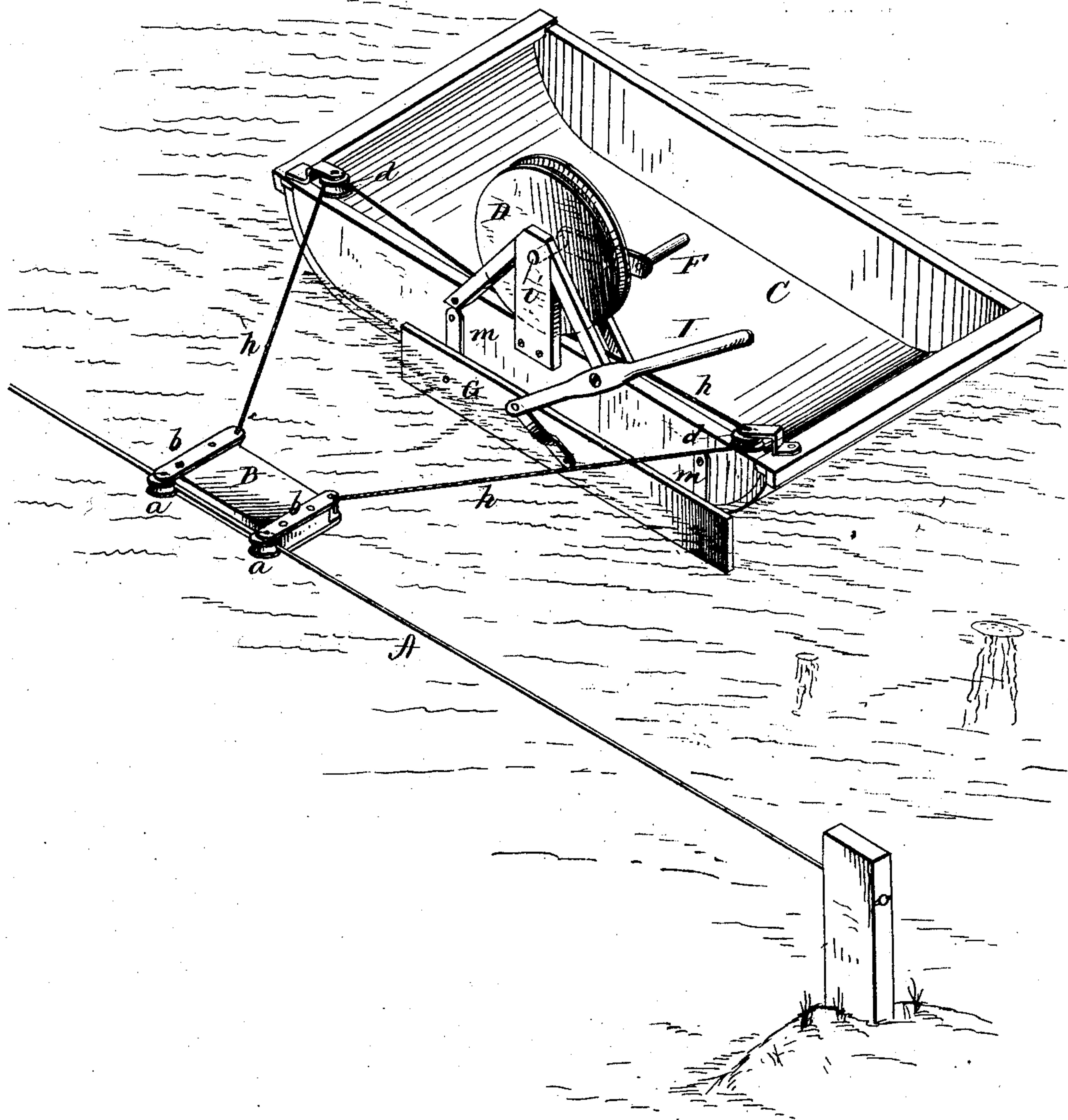


(No Model.)

N. B. ESTEP.
Ferry Boat.

No. 237,262.

Patented Feb. 1, 1881.



Witnesses.
Frank L. Curran
J. J. McCarthy

Inventor.
N. B. Estep
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att'y

UNITED STATES PATENT OFFICE.

NAPOLEON B. ESTEP, OF COUNTY LINE, CARROLL COUNTY, GEORGIA.

FERRY-BOAT.

SPECIFICATION forming part of Letters Patent No. 237,262, dated February 1, 1881.

Application filed June 22, 1880. (No model.)

To all whom it may concern:

Be it known that I, NAPOLEON B. ESTEP, of County Line, in the county of Carroll, and in the State of Georgia, have invented certain
5 new and useful Improvements in Ferry-Boats; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked
10 thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of devices for conveying ferry-boats across a river, as will be hereinafter more fully set forth.

15 In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a perspective view of a ferry-boat with the devices for
20 conveying the same.

A represents a cable stretched across the stream and suitably fastened at both ends. On this cable is a movable frame or traveler,
25 B, provided with two rollers, *a a*, which are held in suitable irons, *b b*, and grooved circumferentially to fit and move on the cable.

C represents the ferry-boat, made in the usual flat-bottomed style and of any desired
30 dimensions. Near each end of the boat C is a roller, *d*, mounted in suitable irons, and on the same side of the boat, at or near the center, is a wheel, D, secured upon a shaft, *i*, which is mounted in suitable bearings, and provided on
35 its inner end with a crank, F.

40 *h* is a cable or rope having one end attached to the frame or traveler B, then passed around the roller *d* at one end of the boat and two or three times around the wheel D, and around the roller *d* at the other end of the boat, and then back to the frame or traveler B, thus

holding the ferry-boat or flat parallel with the cable A.

By turning the crank F the wheel D is rotated so as to throw the boat at an angle to
45 the rope A in either direction, as may be desired, in order that the current may act upon the boat to carry it along the rope A.

Attached to the side of the flat is a lee-board, G, which is connected to the boat by
50 pivoted links or arms *m m* and operated by a lever, I, so as to be raised or lowered at will, the object being to give more or less surface for the action of the water as the water propels the flat across the stream. The idea is to
55 use the action of the current to propel the flat across either way by angling broadside to the current by means of the large wheel D, the sail giving more surface for the action of the water when the current is weak. 60

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

1. In combination with the boat C, the traveler B, adapted to traverse the rope A, the
65 ropes *h h*, passing over pulleys *d* at the corners of the boat, the wheel D and its crank F, and the lee-board G, connected to the boat by links *m m* and operating-lever I, the whole constructed and arranged to operate substantially
70 in the manner specified.

2. In combination with a ferry-boat, the lee-board G, connected to the boat by links *m m* and the operating-lever I, substantially as
75 specified.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of May, 1880.

NAPOLEON B. ESTEP.

Witnesses:

MOSES T. SIMMONS,
R. P. ROBERTS.