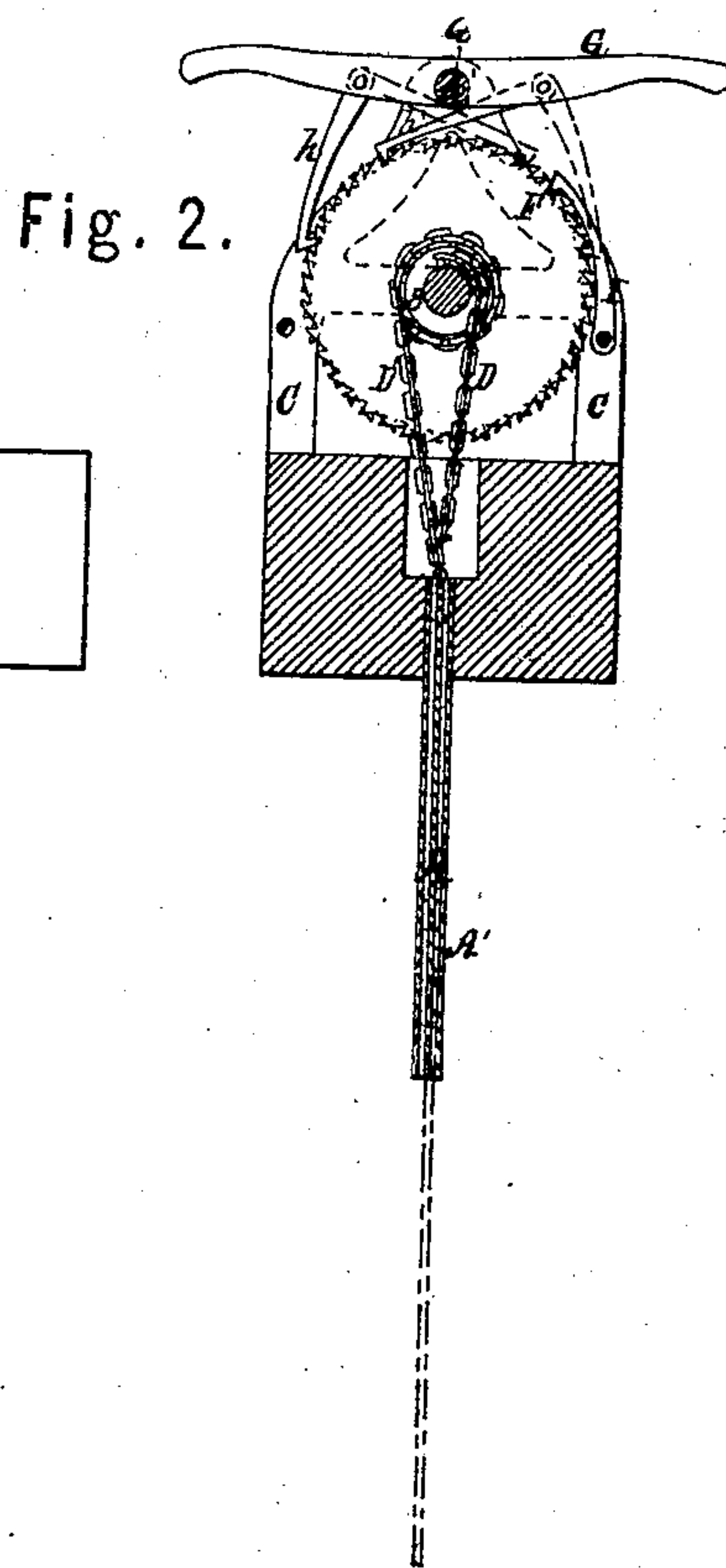
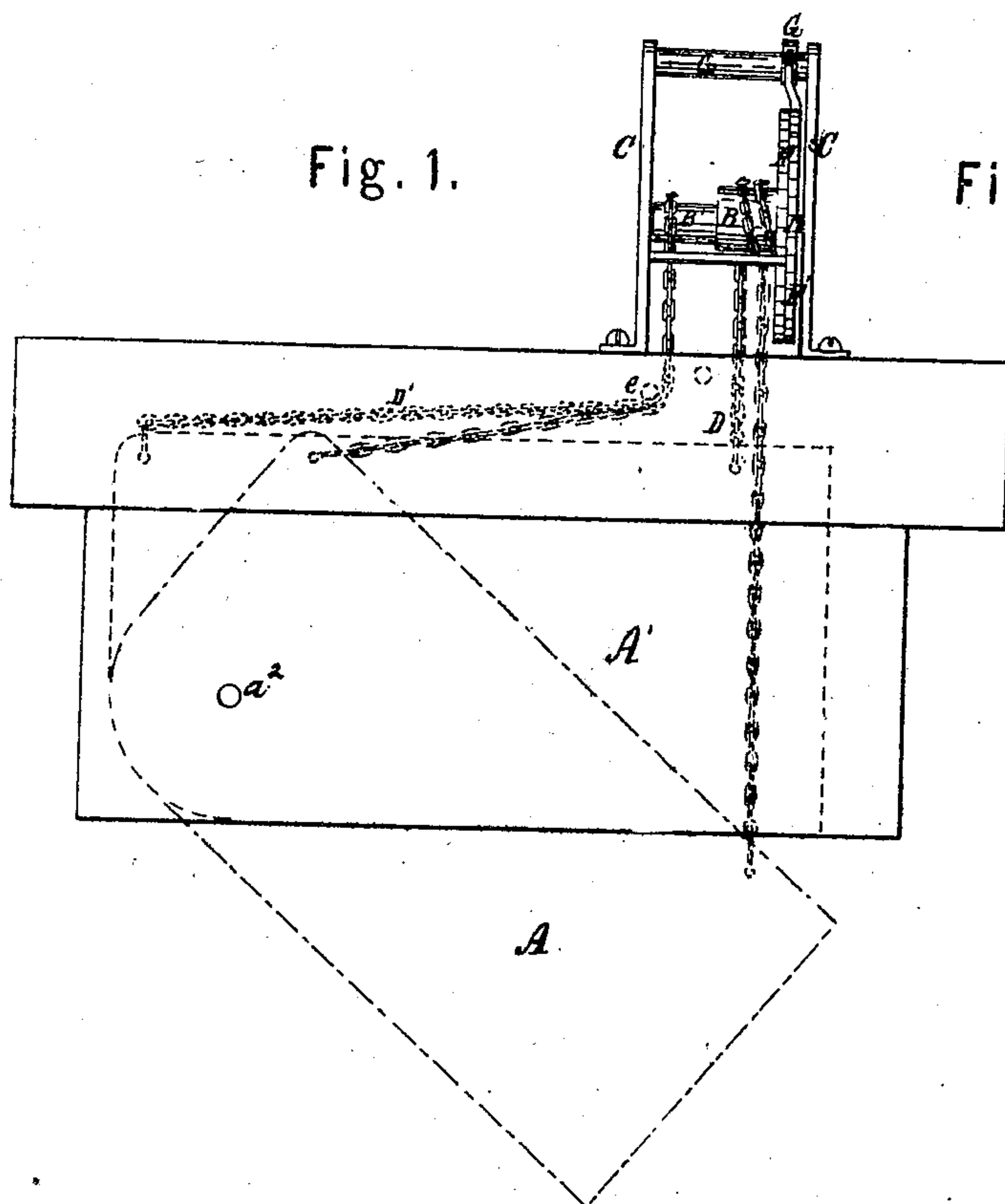


*H. V. Corbett.*  
*Winches for Center Board.*  
*Nº 71283*                      *Patented Nov. 26, 1867.*



Witnesses.

*B. H. Muehle*  
*Edw. Wilhelm*

inventor.

*Henry V. Corbett*



# United States Patent Office.

HENRY V. CORBETT, OF BUFFALO, NEW YORK, ASSIGNOR TO HIMSELF  
AND EDGAR S. EVERTS, OF THE SAME PLACE.

Letters Patent No. 71,283, dated November 26, 1867.

## IMPROVEMENT IN WINCHES FOR CENTRE-BOARDS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HENRY V. CORBETT, of Buffalo, county of Erie, and State of New York, (assignor to himself and Edgar S. Everts,) have invented a certain new and improved Centre-Board Winch for Vessels; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure I is a longitudinal elevation.

Figure II is a transverse section.

The nature of this invention consists, first, in a windlass and two chains wound around the same in opposite directions, the ends of the chains being attached to a centre-board, of common construction, at two points in such a manner that when the windlass is revolved in either direction, one of the chains will be wound up thereon and the other will be unwound, thereby preventing the chains from doubling up and wedging between the centre-board and its casing; second, in the construction and use of a detachable hand-lever, having two pawls hinged thereto, one upon each side of its fulcrum, in combination with a double ratchet-wheel, for the purpose of operating the windlass and revolving the same in either direction desired.

Letters of like name and kind refer to like parts in each of the figures.

A represents the centre-board of a vessel, which is of common construction, and is hinged to the casing or box A', as shown at  $a^2$ , in a common manner.

Centre-boards have been used on vessels navigating the western lakes for a long time, and are now considered indispensable. They are supported as shown in the drawings, and have heretofore been lowered by their own weight and raised by means of one chain and windlass, of common construction, operated by a crank.

This mode of operating the centre-board has many disadvantages. When, for instance, it becomes necessary to lower the same while the vessel is on a "tack," the centre-board being, in consequence of side pressure, firmly pressed against the side of its casing, and cannot therefore drop of its own weight, it becomes necessary to change the course of the ship in a manner to equalize the pressure of the water on both sides of the centre-board, so that the same may fall of its own weight, an operation which is usually called "shaking out," and involves a considerable loss of time and change in the ship's course.

Another great objection to this old style of handling the centre-board is, that whenever the centre-board, on entering a harbor or shallow water, should strike the ground or any other obstruction, and be revolved upon its fulcrum, and raised, (which is a common occurrence, and of itself no particular objection,) the single chain will become slack, double up, and often wedge in between the centre-board and its casing, rendering a movement of the centre-board either up or down extremely difficult and sometimes impossible.

My improvement is intended to obviate these difficulties, and furnish a safe and reliable and convenient apparatus for operating the centre-board of vessels.

B B' represent a windlass, which is supported in appropriate bearings upon the stationary side frames C. One-half of this windlass, B, is made larger in diameter than the other half, B', and to each is fastened a chain, which is wound around its part of the drum and leads down below the deck. That chain, which is attached to the part B of the windlass, is connected to the centre-board at a point immediately below the windlass, and is represented at D. The other chain, which is attached to the part B' of the windlass, passes down below deck into the casing or box A' and around a stationary roller,  $e$ , and leads horizontally to its point of attachment upon the centre-board immediately above the fulcrum of the same. This chain is shown at D'. The chains D and D' are wound around the windlass B B' in opposite directions. The difference of the diameters of the two parts of the windlass is in the same proportion as the difference in the distance of the two points of attachment of the chains D D' to the centre-board from its fulcrum  $a^2$ ; hence when the centre-board moves upwardly the chain D winds up on the drum B, and the chain D' unwinds from the drum B', and *vice versa*.

This mode of connecting the centre-board to the windlass has the advantage of keeping the connecting-chains tightened, and preventing them from doubling or clogging up or obstructing the casing A'. It further serves the purpose of enabling the operators to lower the centre-board while the vessel is on a tack, and overcome the consequent pressure of the centre-board upon the sides of the casing. By turning the windlass-barrel



in the proper direction, the chain D will not only be unwound therefrom to allow the centre-board to drop of its own weight, but the other chain D' will at the same time be wound up on the drum B' and revolve the centre-board upon its fulcrum,  $a^2$ , so that sufficient power may be applied to overcome the pressure of the centre-board upon the casing, and force the former downwardly at the proper time, without the necessity of changing the course of the vessel.

F F' represent a double ratchet-wheel attached to the drum B B', one-half of its face having teeth inclining in the opposite direction from those formed upon the other half.

G represents a hand-lever, which has a notch cut upon its under side, and fits upon a stationary cross-bar, G', connecting the two side frames C. This notch forms the fulcrum of the lever, upon which it rocks.  $h h'$  are two pawls, which are hinged to the under side of the lever, one upon each side of the fulcrum, their other ends lying in the same direction upon the ratchet-wheel, and engaging with the teeth of either portion thereof in such manner that when the position of the lever is reversed they may engage with the other portion of the ratchet-wheel. As a modification, the double ratchet-wheel may be divided into two distinct wheels, and one placed upon each end of the drum B B', the operation being the same.

I represents a stop-lever, which engages with the ratchet-wheel F', and may be hinged to any convenient part of the side frame C.

The operation of my improved winch may be readily understood upon examination of the drawings. The double lever is more efficient in its operation than a common crank upon the end of the drum-shaft would be. It has a greater purchase, and, being made detachable, may be removed, and only placed in the proper position when it is required. The two pawls  $h h'$ , though hinged upon opposite sides of the fulcrum of the lever, are parallel to each other, and act alternately at each up or down stroke of the lever, causing a continuous movement of the ratchet-wheel. When the centre-board is lowered and should strike bottom, it will be lifted up without doubling or slacking the chains, and retained in such raised position by the stop-lever I.

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

The windlass barrel B B' and chains D D', in combination with the centre-board A, constructed, arranged, and operating in the manner substantially as herein described.

HENRY V. CORBETT.

Witnesses:

B. H. MUEHLE,  
EDW. WILHELM.