

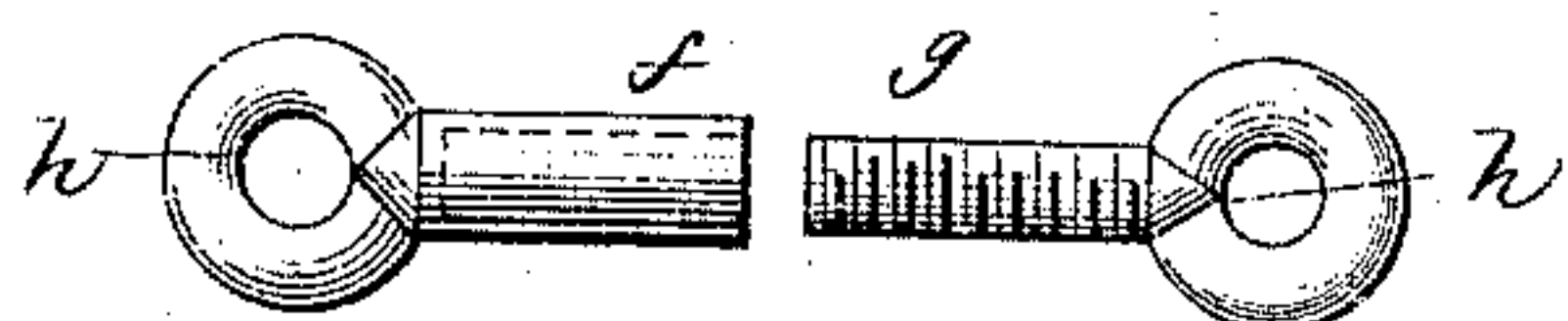
(No Model.)

W. P. & A. M. CUTLER.

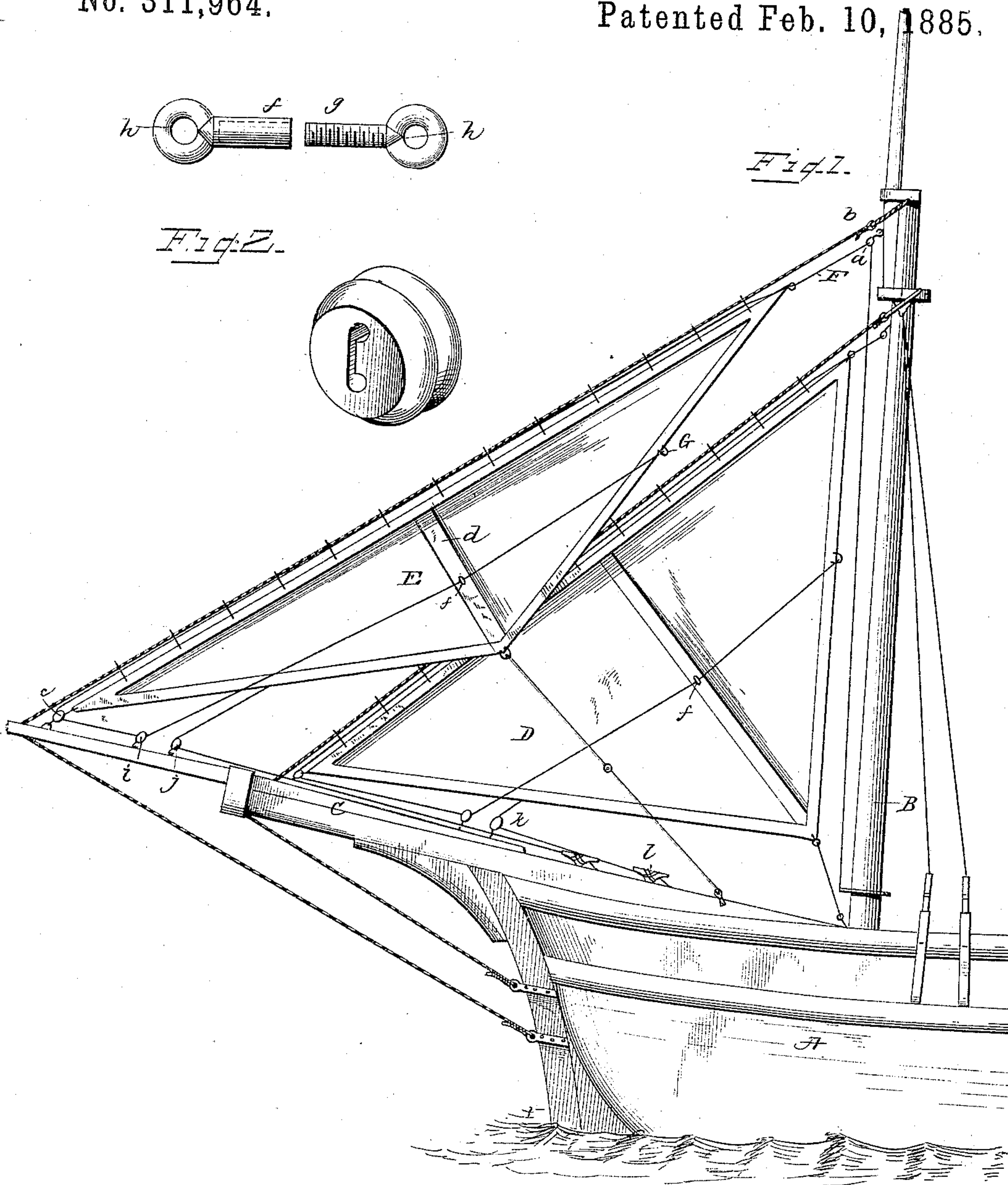
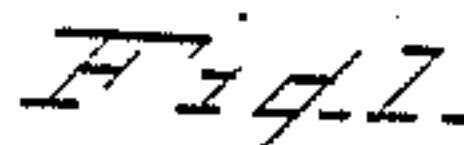
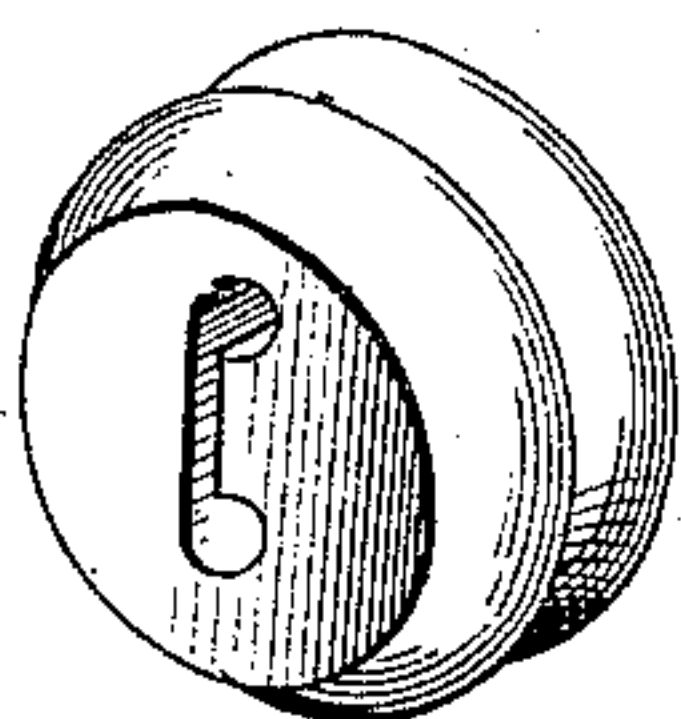
JIB FURLER.

No. 311,964.

Patented Feb. 10, 1885.



F. I. d. Z.



WITNESSES

WITNESSES
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UNITED STATES PATENT OFFICE.

WILLIAM P. CUTLER AND ALEXANDER M. CUTLER, OF BATH, MAINE.

JIB-FURLER.

SPECIFICATION forming part of Letters Patent No. 311,964, dated February 10, 1885.

Application filed December 4, 1884. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM P. CUTLER and ALEXANDER M. CUTLER, citizens of the United States, residing at Bath, in the county of Sagadahoc and State of Maine, have invented certain new and useful Improvements in Jib-Furlers; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to a jib-sail down-haul and furler; and it has for its object to provide means for the effective lowering and furling of the jib-sail, which shall be simple in their construction, easily operated, and to provide devices for the above-mentioned purpose that may be applied at a slight cost.

With these and other objects in view the invention consists in the improved construction and combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of so much of a sailing-craft as is necessary to illustrate the application of our invention thereto. Fig. 2 is a view of parts in detail.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in both the figures, A represents the vessel; B, the foremast; C, the bowsprit; D, the jib, and E the flying jib, all being arranged and located in the usual well-known manner.

Secured to the upper end of the flying jib is a rope, F, which passes through eyes *a*, secured to the foremast stay-rope *b*, down to the lower end of said flying jib, at which point it passes through a block or pulley, *c*, secured to the bowsprit.

Midway between the upper and lower ends of the flying jib E, and upon each side of the same, are secured re-enforcing strips *d*, which extend the breadth of the sail. A hole or opening is formed in the sail at about the middle of said re-enforcing strips, in which hole or opening is secured a toggle consisting of two sections, *f g*, each section having an eye, *h*, formed at its end. The section *f* is provided with a threaded opening, which is adapted to receive the exteriorly-threaded portion of the section *g*. As the ends of the

toggle-sections are larger than the shanks, it will be seen that if said toggle were made of one piece it would necessitate the use of a hole in the sail of a larger diameter than the shank of the toggle, in order to allow the toggle to be fitted in the opening. Hence it will be seen that by constructing the toggle as above described the same may be readily placed in position with but little trouble. By the employment of the re-enforcing strips all possibility of the toggle tearing out is prevented. Near the upper end of the flying jib is provided a bull's-eye, G, which may, if desired, be provided with a sheave, though the same may be dispensed with, if desired, it having no other office than to assist the passage of the furling-line. The jib D is provided with a similar arrangement of bull's-eye, toggle, and re-enforcing strip. The rope F is passed through the eye in the toggle on one side of the sail, through the bull's-eye, and down through the eye in the toggle on the other side of the sail. The said rope is then passed through a pulley, *i*, secured to the bowsprit. The said line F is then carried rearwardly and passed through a pulley, *j*, up through the eye in one end of the jib-toggle, through the bull's-eye down through the other eye of the toggle, through a pulley, *k*, thence to a cleat, *l*, to which it may be made fast. Where only one jib is used, the rope or line would be carried directly therefrom through a pulley, as at *i*, thence direct to a cleat.

It will be seen that to lower and furl the flying jib and jib it is only necessary to release their respective sheets and then haul on the rope F, which will, through the agency of the means and arrangement of the same before described, cause the sails to be speedily lowered and furled.

We claim and desire to secure by Letters Patent—

1. The combination, with the jib-sail of a vessel, of a line connecting the upper end thereof with the vessel, thence passing through a pulley on the bowsprit, through guides on the sail to a point near the upper end of the sail, and connecting such point of the sail with the bowsprit, substantially as set forth.

2. In a jib down-haul and furler, a toggle consisting of two sections, each having an eye

at its end, one of said sections being interiorly threaded, while the other is exteriorly to engage the same, substantially as set forth.

3. The combination, with the jib-sails, of
5 toggles arranged near the middle of the same, bull's-eyes arranged near the upper end of the sails, and furling-ropes for lowering, furling, and securing sails, substantially as set forth.

4. The combination, with the jib - sails, of
10 toggles arranged near the middle of the same, bull's-eyes arranged near the upper ends of the sails, and a rope connected to the upper end of the flying jib passing through a pulley secured to the bowsprit, thence through the
15 toggles and bull's-eyes of both sails, as de-

scribed, and through a block or pulley, as set forth.

5. The combination, with a sail, and with the re-enforcing strips, of the toggle passing through said strips and sail, and having an eye at each end, and consisting of two sections adapted to be secured together, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM P. CUTLER.

ALEXANDER M. CUTLER.

Witnesses:

ARIETTA M. CUTLER,

JOSEPH M. TROTT.