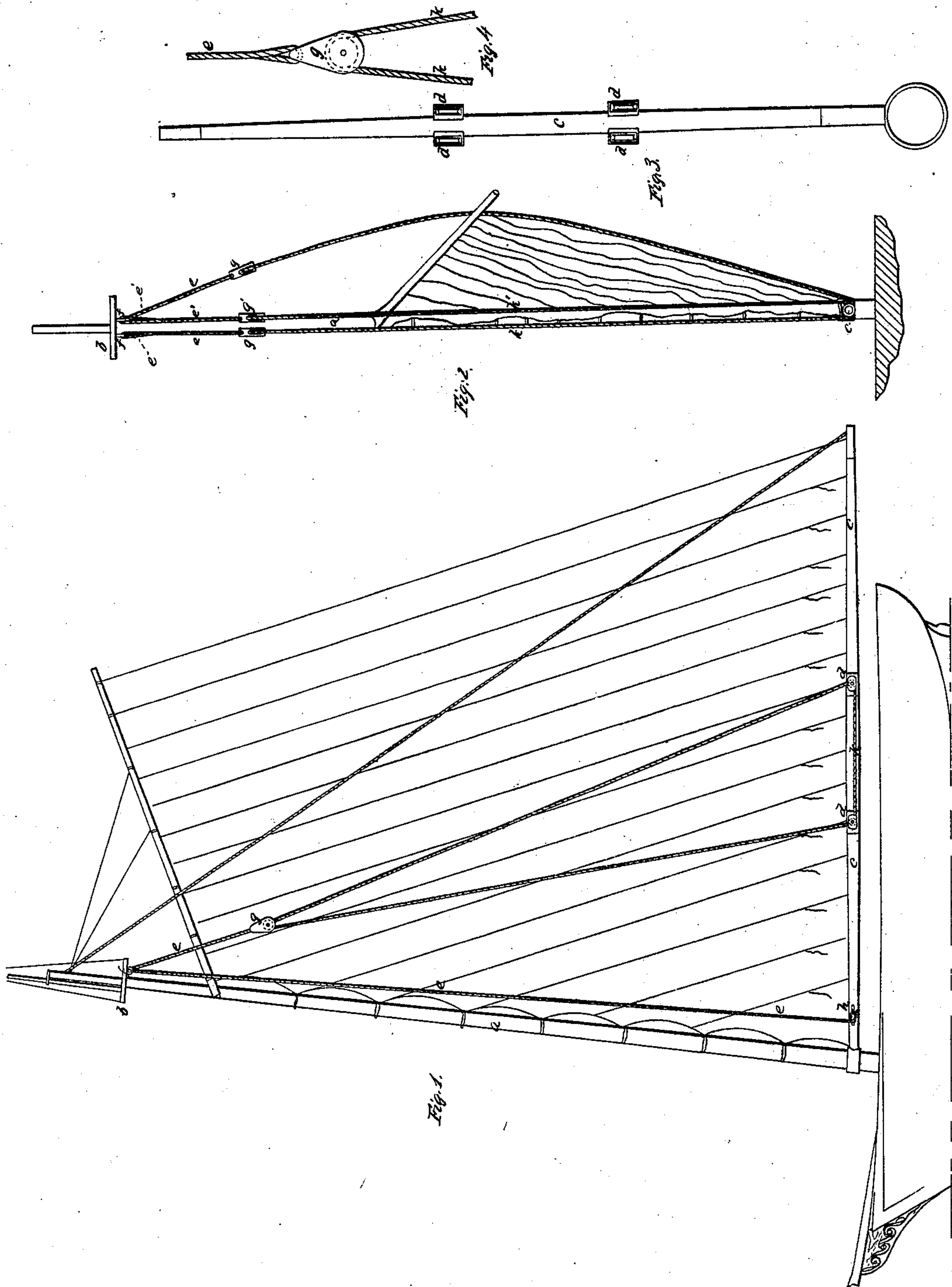


S. B. Butler
Sails & Rigging

N^o 42,072.

Patented Mar. 29, 1864.



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL B. BUTLER, OF MIDDLETOWN, CONNECTICUT.

IMPROVED LAZY-JACK FOR SAILS.

Specification forming part of Letters Patent No. 42,072, dated March 29, 1864.

To all whom it may concern:

Be it known that I, S. B. BUTLER, of Middletown, county of Middlesex, State of Connecticut, have invented a new and useful Improvement in Sail-Vessels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of a sloop having my invention applied to it. Fig. 2 is a stern view of the mast and rigging of Fig. 1. Fig. 3 is a top view of the boom, enlarged. Fig. 4 is an enlarged view of one of the top sheaves, showing the suspension and jack ropes applied to it.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to a new and useful improvement in what are known in seamen's language as "lazy-jacks," which, as hitherto constructed, consist of two sets of ropes attached at several points to each side of the boom between the "top lift" and mast, and carried up and attached to the mast-head. Between these two sets of ropes the sail and "gaff" work. These ropes or lazy-jacks being fixed—i. e., secured, at their ends, as above stated—they frequently tear and form a serious obstruction to the sail in moving it up and down.

The object of my invention is to so construct and apply ropes or lazy-jacks to vessels of any and every description requiring them, that they will answer all the purposes of those hitherto used, and at the same time not obstruct the movements of the sails in running them up or down, nor interfere in any manner with the accustomed work of the sailors in this respect.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

Fig. 1 of the accompanying drawings represents my invention applied to a sloop; but I wish it to be distinctly understood that I do not limit its application to any particular description of vessels.

a is the mast, *b* the cross-trees applied to the head thereof in the usual manner, and *c* the boom. These parts, together with the sail and its gaff, need not differ in any respect from similar parts hitherto used.

At suitable points between the ends of the boom *c*, I apply, on each side thereof, two sheaves, *d d*, arranged in pairs opposite each other, as clearly shown in Fig. 3. These sheaves are applied within boxes or "blocks" which are rigidly secured to the sides of the boom, so that they will not be in the way of the sail in furling it on the boom.

Near the mast-head and suspended by two single ropes, *e e'*, are two sheaves or pulleys, *g g'*. The ropes *e e'* pass through the eyes or pulleys *f f* under the cross-trees *b*, Figs. 1 and 2, and are carried down and attached to cleats *h* on the boom. One of these cleats is shown in Fig. 1, the other being on the opposite side of the boom. A rope is now passed over the sheave *g*, carried down and passed under the two pulleys or sheaves *d d*, corresponding to the pulley *g*, and its ends are properly attached together, so as to form the endless rope *k*. (Represented in Fig. 1.) A similar endless rope, *k'*, is applied to the opposite set of pulleys *d d* and *g'*, as shown in Fig. 2, thus forming on each side of the sail (which is indicated in red) traveling or endless jacks which will freely move over the pulleys and allow the sail to be hauled down even should it become engaged in any manner with either one of these ropes. The sail is supported, when set to the wind, by either one or the other of these jacks, which are loosened or tightened by the single ropes *e e'*, according to circumstances, and in lowering sail the endless ropes will serve as guides for conducting it down properly upon the boom to be furled. Thus it will be seen that instead of using fixed rigging, as hitherto, I employ running ropes in such manner that should the sail become entangled in any one of them, still it may be moved either up or down freely.

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

1. The endless ropes *k k'* and pulleys *d d* and *g g'*, in combination with the single ropes *e e'*, arranged and operating substantially as and for the purposes set forth.

2. Adapting endless ropes for use as lazy-jacks, substantially as described.

SAMUEL B. BUTLER.

Witnesses:

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