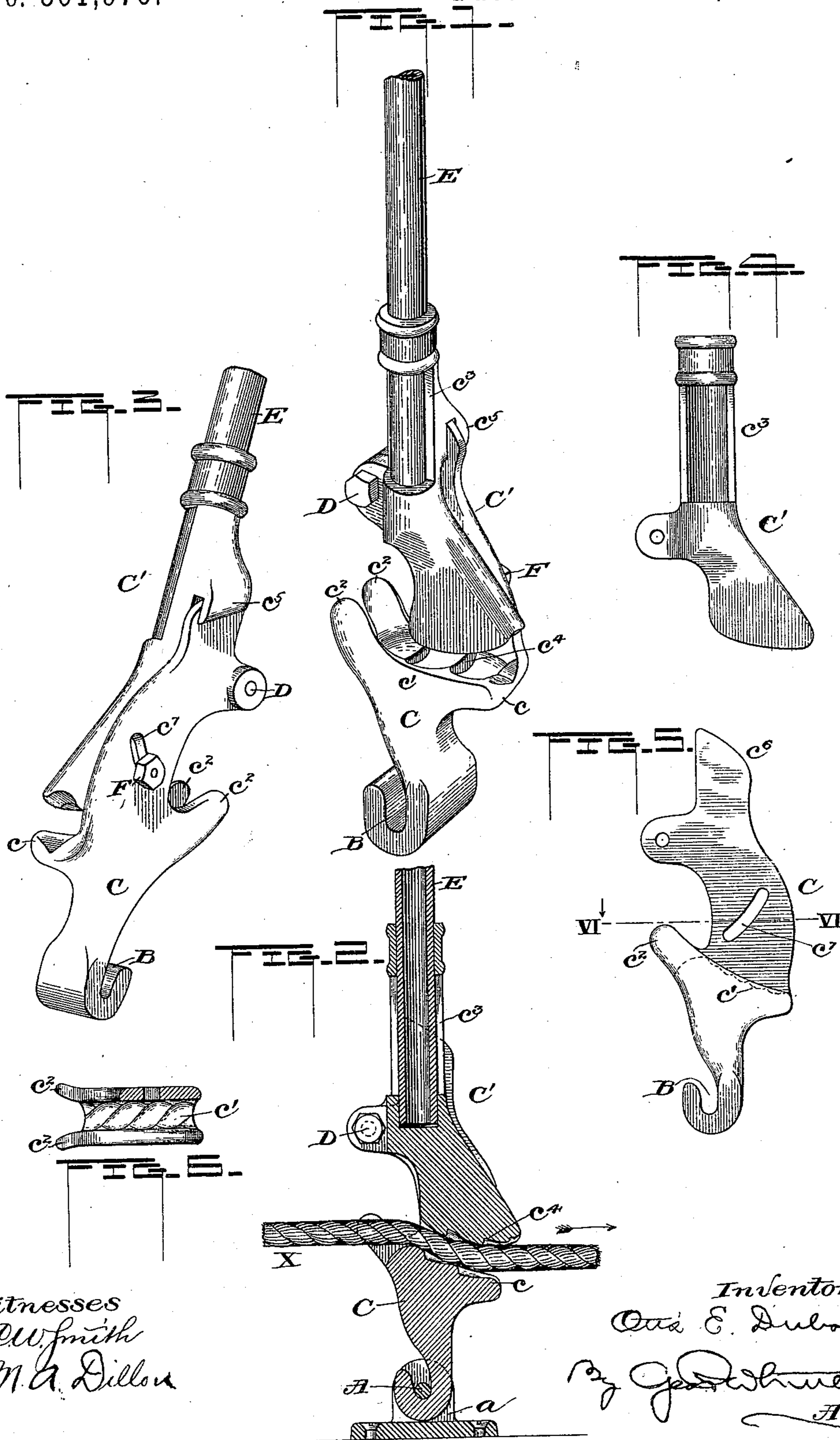


(No Model.)

O. E. DUBOIS.
ROPE HANDLING DEVICE.

No. 561,976.

Patented June 16, 1896.



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UNITED STATES PATENT OFFICE.

OTIS E. DUBOIS, OF FALL RIVER, MASSACHUSETTS.

ROPE-HANDLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 561,976, dated June 16, 1896.

Application filed August 3, 1895. Serial No. 558,055. (No model.)

To all whom it may concern:

Be it known that I, OTIS E. DUBOIS, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Rope-Handling Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to appliances for handling ropes either on shipboard or ashore. In the use of rope-tackle it is frequently necessary to employ a winch or windlass to produce a powerful pull on the rope. At many times, however, the winch is not available for some reason, such as inconvenience of location or the like. On many small sailing boats there is no winch of any kind, necessitating great labor on the part of the boatmen when heavy work has to be done with rope-tackle.

My invention aims to supply this want and to provide a simple, efficient, and portable substitute for a winch or windlass which can be used whenever a fulcrum can be found and room to work a lever.

This invention consists in a lever carrying a clamp or grip to engage and hold the rope, so that when the lever is moved it produces a pull on the rope. The clamp is by preference one which automatically grips the rope when moved in one direction, but releases it when moved in the opposite direction.

In the drawings, Figure 1 is a perspective showing an approved form of a lever and clamp. Fig. 2 is a longitudinal section. Fig. 3 is a perspective of the reverse side. Figs. 4 and 5 are separate views of the two jaw-pieces of the clamp. Fig. 6 is a plan view of the lower jaw as seen by taking a section on line 6 6 of Fig. 5.

The lever is preferably of metal and may be of any suitable length and thickness. At its foot it is properly shaped to engage with a suitable fulcrum. This is preferably a stout bar or pin A, securely held in standards a, which are fastened to the deck of the boat

or to any stationary support. The lever has a slot B cut into one side of it near its lower end, thereby forming a hook to engage with the bar A. By this or any equivalent construction the lever is enabled to be engaged or disengaged at will. At a suitable distance above the fulcrum the lever is constructed to automatically engage with a rope when moved in one direction and automatically disengage therefrom when moved in the opposite direction. In the drawings I have shown the lever made in two parts, forming two clamping-jaws, as seen in Figs. 1, 2, and 3. The lower part C of the lever has on one side a shoulder c, preferably curved and slightly grooved and provided with serrations c'. These are preferably made like the reverse of the strands of a rope, as seen in Fig. 6, such as would be obtained by taking a plaster cast from the rope. The object of this construction is to obviate the danger of cutting the rope, since these serrations fit the strands of the rope accurately and do not cut across them as do the straight transverse serrations shown in Fig. 1; but the latter may be used if desired. At the end of the shoulder c, where the rope enters, there are preferably two horns c², one on each side. A suitable distance above the shoulder c is fulcrumed on a bolt D the upper part C' of the lever, which has a long handle E, preferably tubular, so as to be capable of lengthening by adding another piece or section. The handle may be integral with the upper part of the lever, but is preferably composed of a piece of tubing inserted in a socket c³ in the upper portion of the lever. The foot c⁴ of this portion is curved to fit the shoulder c and is serrated, preferably as shown in Fig. 6. The foot and shoulder therefore form two clamping-jaws. The pivot D is somewhat in front of their meeting faces, so that they will be pressed closely together by a backward pull on the handle. To relieve the pivot from side strains, the upper portion of the lever has a flange c⁵, overlapping the upper curved edge c⁶ of the lower portion of the lever. The range of relative movement of the two portions is limited by a slot c⁷ in one part and a stop-pin F on the other playing in said slot.

In using this device the rope X is placed between the shoulder c and the foot c⁴, the

lever being inclined forward. Then by pulling on the handle E the foot is pressed upon the rope, which is securely held by the serrations, and the backward movement of the lever causes the rope to be hauled in in the direction of the arrow in Fig. 2. The slack having been taken up and the rope belayed, the lever can then be swung forward again to get a new hold, the foot automatically lifting from the rope at the first forward movement of the handle.

The device can be used at any place where a fulcrum can be found for the end of the lever, whether it be the special fulcrum shown or merely a convenient cleat, timber, or other stationary object. It is therefore possible to make use of the lever almost anywhere on a boat, so that the labor of getting up a killock or small anchor or of hoisting a heavy sail or any other severe work can be greatly lightened.

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

1. A device for hauling in ropes, consisting of a pin secured in standards, and a lever having near one end a slot to engage with said pin and provided with an automatic self-tightening rope-clamp comprising a station-

ary jaw and a pivoted movable jaw, substantially as described.

2. A device for hauling in ropes, consisting of a lever composed of a short lower part C having a shoulder c, and a long upper part fulcrumed above and at one side of said shoulder, and having a foot to coact with said shoulder, and carrying a pin playing in a slot in said lower part, to limit the relative movements of the two, substantially as described.

3. A rope-handling device, consisting of a lever composed of a short lower part C adapted to engage with a fulcrum, and provided with a shoulder, and a curved upper end, a long upper part C' pivotally united to the lower part at a point between the shoulder and said curved upper end, a foot on the lower end of the upper part to close down upon said shoulder, and a flange on said upper part overlapping the curved end of the lower part to relieve the pivot from side strains, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

OTIS E. DUBOIS.

Witnesses:

ARBA N. LINCOLN,
CHARLES L. FOOTE.