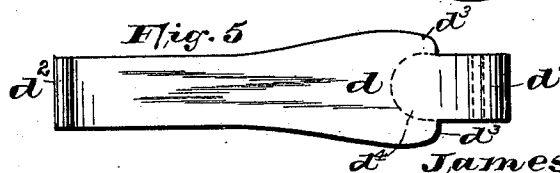
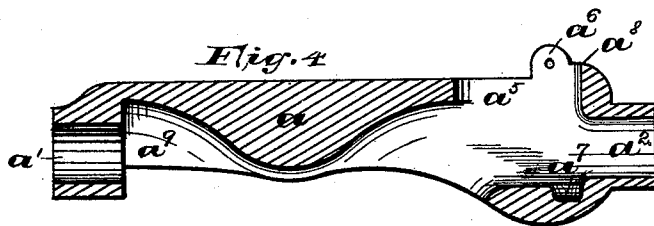
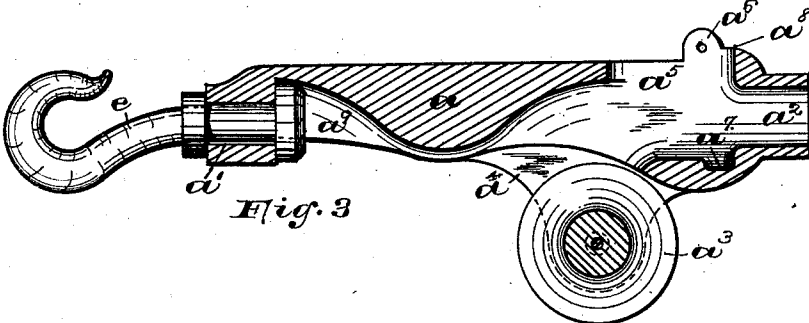
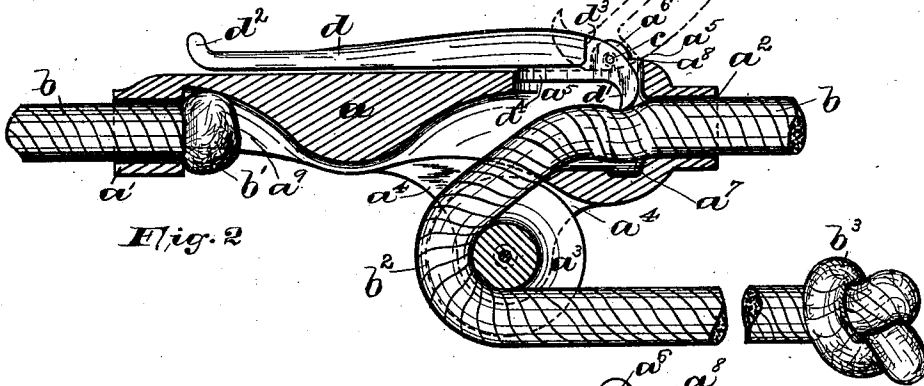
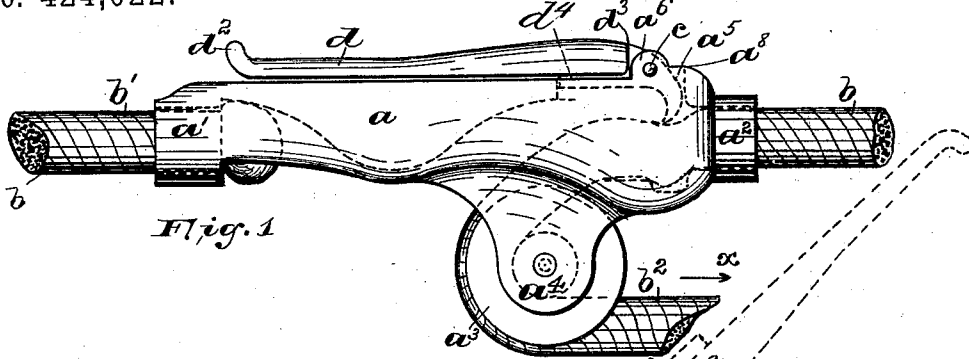


(No Model.)

J. & D. PARK.
LINE TIGHTENER.

No. 424,022.

Patented Mar. 25, 1890.



WITNESSES:

Fred S. Rice
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UNITED STATES PATENT OFFICE.

JAMES PARK AND DAVID PARK, OF NEWARK, NEW JERSEY.

LINE-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 424,022, dated March 25, 1890.

Application filed September 16, 1889. Serial No. 324,029. (No model.)

To all whom it may concern:

Be it known that we, JAMES PARK and DAVID PARK, citizens of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Line-Tighteners; and we do hereby 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 letters of reference marked thereon, which form a part of this specification.

This invention is designed to provide a clamping device for tightening lines, such as pulley-lines for the hanging of washing thereon, or for the fastening of lines on boats or ships or to any other object. The device is of a simple construction, so that the same may be readily cast and the parts put together with but little labor and expense, also one that, because of its simplicity, is not liable to become disarranged, and through the body portion of which the ends of the line may readily be inserted and secured therein, as will be hereinafter more fully described.

The invention has for its object to provide a line fastener or holder by means of which a line may readily be pulled taut and held in its fastened position until released, and thereby enabling the line to hang slack when not in use.

In the views shown in the accompanying sheet of drawings, Figure 1 represents a front elevation of the clamping device or line-fastener, the same being illustrated in position as applied to an ordinary pulley-line. Fig. 2 is a vertical section of the same, illustrating the tightening or cam lever in its holding or locked engagement with the line, and thereby fastening the same, and also showing by means of dotted lines said lever in its unlocked or disengaged position. Fig. 3 is a similar view to Fig. 2, but illustrating the body portion of the line-fastener provided at the one end thereof with a swiveled hook, thereby adapting the device for use more especially on boats or vessels. Fig. 4 represents a construction in which the pulley shown in the above-described figures is dispensed with,

and Fig. 5 represents a top view of the cam or tightening lever.

In the views described in the above similar letters of reference are employed to indicate corresponding parts in each of the several views.

The clamping or tightening device consists of a body portion *a*, which is formed as shown, being provided with two tubular ends *a'* and *a''*, in one of which, as *a'*, is secured by means of a knot one end *b'* of a line *b*. Through the opposite end *a''* of the body portion *a* is inserted the other end *b''* of the line *b*, which passes through the opening in the end *a''* and down over a pulley *a³*, arranged on the under side of the body *a* and secured thereto by means of ears *a⁴*, as in Figs. 1, 2, and 3, said end of the line *b* passing over and around the pulley to facilitate the pulling on the line with ease when it becomes necessary to tighten the same.

The body portion *a* is formed as indicated more especially in Figs. 2, 3, and 4, and is provided with a chamber *a⁵*, having an opening in the top thereof near the end *a''*, as will be seen from Figs. 3 and 4. Ears or lugs *a⁶* are cast on both sides of the opening in the top of the chamber *a⁵*, to which is secured by means of a pin or rivet *c* the clamping or tightening lever *d*. Said lever is provided at its pivoted end with a cam or jaw *d'*, as shown in Figs. 1 and 2, which is forced down upon the line when the latter has been drawn taut, and thereby secures the line in its fastened position. The tightening-lever *d* is provided at its opposite end with a finger-piece or raised portion *d²* to cause the easy manipulation of the same when it becomes necessary to throw the cam or jaw *d'* out of engagement with the line *b*.

The operation of the tightening device is as follows: When the end *b'* of the line *b* has been secured to the tubular end *a'* of the tightening device and the other end *b''* of the line has been inserted through the opposite end *a''* of the body portion *a* and over the pulley *a³*, a knot *b³* is tied into the end of the line, so that the two ends of the line cannot become disengaged or pull out from the tubular ends of the body portion *a*. The line, when not in use, is slack; but when it becomes

desirable to use the same the end b^2 of the line is pulled in the direction of the arrow x , Fig. 1, and thereby pulled taut. The clamping or tightening lever d , which previous to the pulling on the line b was in the position indicated by the dotted lines illustrated in Fig. 2, is then thrown over and the claw end d' of the said lever firmly forced down upon the line and holds the latter in its fastened position. To further secure the holding engagement of the line and the claw d' , a recess a^4 may be arranged in the hollowed-out portion or chamber a^5 near the end a^2 directly beneath the claw or cam d' , into which the rope or line is forced by the downward pressure of the cam end of the tightening-lever, thus firmly holding the line in position.

As will be seen from Fig. 5, the lever d may be provided with shoulders d^3 , which engage with the edge a^8 of the upper opening in the chamber a^5 , and thereby hold the said lever d in its raised position, as indicated in Fig. 2. The lever d , as will be seen from said Fig. 2, is provided on its under side with a raised portion d^4 , which projects down into the opening in the chamber a^5 in the body portion of the clamping or holding device and conforms with the shape of said opening and prevents any side movement of said lever d . When the lever d has been raised, the cam end d' is thrown out of engagement with the line and entirely out of the way of the passage of the line through the tubular end a^2 , and the line is free to move, and consequently will hang in its slack position.

It will be noticed from the drawings that the body portion a of the line-tightener is provided at the inner end of the tubular portion a' with a recessed chamber a^9 , into which the knotted end b' of the line fits, and is thereby secured therein, as will be evident from Fig. 2. As is indicated in Fig. 3, said end a' of the holding or clamping device may be provided with a hook e for attaching the line-holder to any part of a building or to the bulwark of a ship, the rope or line passing through the other end a^2 and over the pulley a^3 , and being held within the body portion of the device by means of the clamping or tight-

ening lever in the same manner as has been described in the above. It will be understood that the longer the cam or claw d' on the tightening-lever d the greater will be the pressure exerted upon the top of the line by the same.

From Fig. 4 it will be apparent that the pulley a^3 may be dispensed with, the ends of the line being secured to the tubular portion a' and passing through the other portion a^2 , respectively, and being held by means of the holding-lever, as has been described.

It will be understood that when the herein-described tightening or holding device is used on pulley-lines for hanging wash the ends b' and b^2 of the continuous line b pass over ordinary pulleys, which are secured to buildings or to posts in the well-known manner.

As thus constructed and arranged, the clamping or holding device may be secured on any line, and when once attached there is no necessity of removing the same. The end a^2 of the line-holder being placed near the pulley on the building, the end b^2 of the line b may be pulled taut without leaning out of the window, and the lever d closed down upon the line without any danger to the operator.

Having thus described our invention, what we claim is—

The combination, in a line-holder, of a body portion having a chamber a^9 at one end and a similar chamber a^3 at the other end, and provided at each end with tubular portions a' and a^2 , a lever pivoted on the upper side of said body portion and provided with a claw d' , extending downwardly and into an opening in said chamber a^5 , and a recess a^7 in the bottom of said chamber, into which the line is forced when the cam end of the lever is in engagement with said line, as and for the purposes set forth.

In testimony that we claim the invention set forth above we have hereunto set our hands this 14th day of September, 1889.

JAMES PARK.
DAVID PARK.

Witnesses:

FREDK. C. FRAENTZEL,
FREDK. S. RICE.