

(No Model.)

D. SWEENEY.
LINE HOLDER.

No. 480,351.

Patented Aug. 9, 1892.

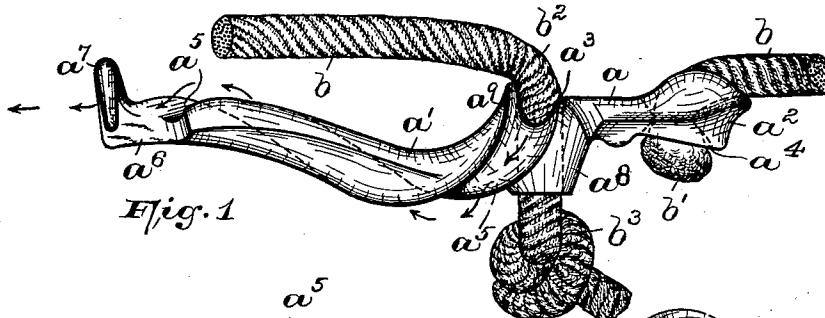


Fig. 1

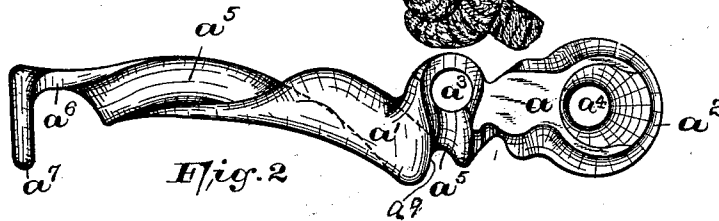


Fig. 2

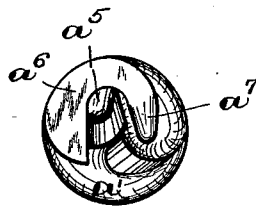


Fig. 3

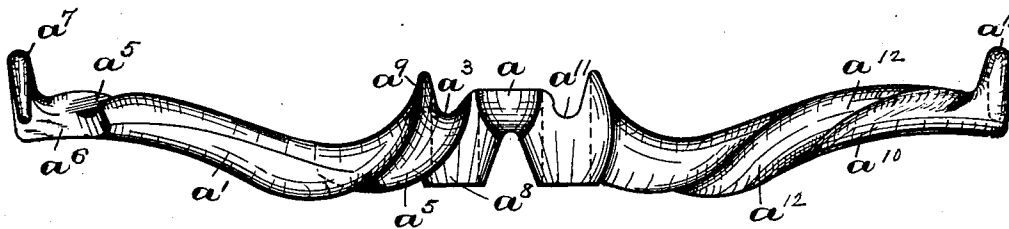
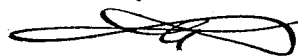


Fig. 4

WITNESSES:

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INVENTOR:

Daniel Sweeney,
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UNITED STATES PATENT OFFICE.

DANIEL SWEENEY, OF NEWARK, NEW JERSEY.

LINE-HOLDER.

SPECIFICATION forming part of Letters Patent No. 480,351, dated August 9, 1892.

Application filed February 18, 1891. Renewed January 20, 1892. Serial No. 418,629. (No model.)

To all whom it may concern:

Be it known that I, DANIEL SWEENEY, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Line-Holders; and I 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.

15 This invention is designed to provide line-tighteners for pulley-lines of the kind used in apartment-houses, tenement-houses, &c., for the hanging of washing thereon, or for the fastening of lines on boats or ships or to any other object, or for securing the ends of electric lines to the device, in which case it acts to establish an electrical connections between the ends of two wires.

25 The invention has for its main object, however, 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, whereby the line can hang slack when not in use.

30 In the accompanying sheet of drawings, Figure 1 represents a front elevation of my line tightener or holder, the same being illustrated in position as applied to the ends of an ordinary pulley-line before the one end of the line is drawn taut and twisted around the holder and is held in a spirally-formed groove in the body of the holder. Fig. 2 is a top view of the holder; and Fig. 3 is an end view of the hooked-end portion of the holder. 35 Fig. 4 is a front elevation of a modified form of holder or tightener provided with oppositely-extending arms provided with a spirally-formed groove around the surface of each for securing the ends of electric wires in said grooves and whereby the holder serves as an electrical connection between the ends of the wires.

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

45 The holder or tightening device shown in Figs. 1, 2, and 3 consists of a body portion a ,

which is provided with oppositely-extending end portions a' and a^2 , respectively, said portion a' being provided with a hole a^3 and the 55 portion a^2 with a hole a^4 , in which is secured, by means of a knot b' , the line b . Through the hole a^3 , being preferably formed in a hub a^5 in the end portion a' , is inserted the other end b^2 of the line which passes down through 60 said opening and is provided with a knot b^3 , to prevent the end of the rope from being withdrawn when the line hangs slack. The arm or end portion a' , as will be seen from the figures, is provided with a groove a^5 , which winds 65 itself spirally around the body part of said arm, beginning on the top directly to one side and approximately at a right angle to the longitudinal axis of the holder in a very short curve to the under side of the arm a' and ending near the end a^6 on the upper side of said 70 arm, said arm being provided at its free end with a downwardly-extending hook a^7 , as will be more evident from Fig. 3. The end b' of the rope having been firmly secured in the 75 hole a^4 of the arm a^2 , when it becomes necessary to pull the line b taut this can be readily accomplished by taking hold of the knot b^3 on the end b^2 of the line with one hand and pulling the line firmly through the hole a^3 , 80 and then by means of the other hand twisting the arm a' of the holder, as it were, about the taut line, so that the same will be caused to lie in the spirally-formed groove a^5 and pass from the end of said arm a' beneath the hook 85 a^7 . The central axis of the line as it passes from beneath this hook coincides with the central axis of the other end of the line secured in the hole a^4 and, as will be seen from Fig. 2, the hole a^3 , being to one side of the longitudinal axis of the holder, will cause said hooked 90 end to bear firmly against the line and prevent the untwisting of the holder, while the line bears firmly against the shoulder a^9 , directly in front of the hole a^3 , thereby exerting great holding power upon the line, which will thus be 95 held taut and carry the greatest loads, provided that the holder and the line are of the requisite strength. By this construction I have secured a line-tightening device which is of simple construction and which can be readily 100 cast, and there being no separate parts it can be made with but little labor and expense and cannot become disarranged. The device can

be secured to any line, and when once attached there is no necessity for removing the same, and as there are no clamping-levers which bear tightly upon the rope there is very little wear on the rope, and the latter lasts much longer.

In Fig. 4 I have illustrated a holder which is more especially adapted as an electrical connection between the ends of electric-light wires or telegraph-cables. As will be seen from said figure, the body portion a is provided with two oppositely-extending arms or portions a' and a^{10} , which are alike in construction to the arm a' , described in connection with Fig. 1. Said arms are provided with the holes a^3 and a^{11} , respectively, and the spirally-formed grooves a^5 and a^{12} , and the hooked ends a^7 and a^{13} . Said grooves, as will be seen, wind around their respective arms in opposite directions to each other, so that when the ends of the wire or cable have been passed through the holes a^3 and a^{11} , respectively, and are twisted to fit in the grooves, they will be firmly grasped and held by the holder, which in this case acts as a coupling device, and, being made of a metal, the electric current readily passes from the one wire or cable through the connecting means into the other wire, thereby establishing a complete circuit.

Of course it will be evident that this device can also be successfully used in securing together the ends of ropes for hoisting or other purposes instead of splicing the ends.

I do not wish to be understood as limiting myself to the exact form and shape of the holder herein shown, as the same and the curve of the groove a^5 can be varied without departing from the scope of my invention.

Having thus described my invention, what I claim is—

1. A holding device provided with means for securing one end of a line or cable thereto,

a hole a^3 in the body portion of said device, through which the other end of the line is passed, and a longitudinally-extending arm provided with a groove, said groove being spirally formed and winding around the body of said arm, as and for the purposes set forth.

2. A holding device provided with means for securing one end of a line or cable thereto, a hole a^3 in the body portion of said device, through which the other end of the line is passed, and a longitudinally-extending arm provided with a groove, said groove being spirally formed and winding around the body of said arm, and a hook on the free end of said arm, substantially as and for the purposes set forth.

3. A holding device consisting of the main or body portion a , provided with arms a' and a^2 , said arm a^2 having a hole for securing the end of a line therein, and said arm a' having a hole a^3 , in which is loosely arranged the other end of the line, and said arm a' being provided with a spirally-formed groove winding from said hole a^3 around the body of the arm to its free end, as and for the purposes set forth.

4. A holding device consisting of a main or body portion a , provided with arms a' and a^2 , said arm a^2 having a hole for securing the end of a line therein, and said arm a' having a hole a^3 , in which is loosely arranged the other end of the line, and said arm a' being provided with a spirally-formed groove winding from said hole a^3 around the body of the arm to its free end and a hook on said end, as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 24th day of January, 1891.

DANIEL SWEENEY.

Witnesses:

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FREDK. C. FRAENTZEL.