

962,675.

L. C. SIMS.
 ROPE FASTENER.
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Patented June 28, 1910.

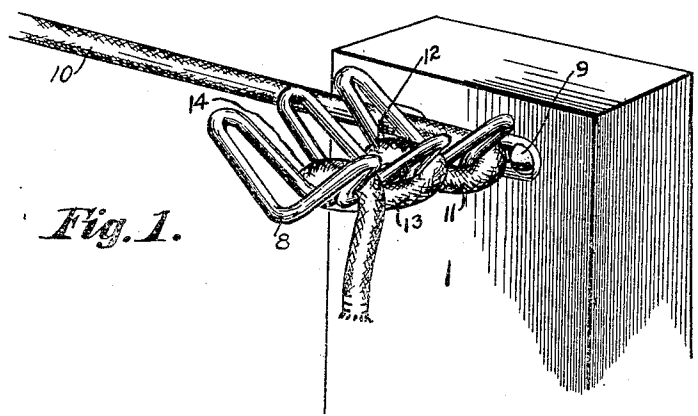


Fig. 1.

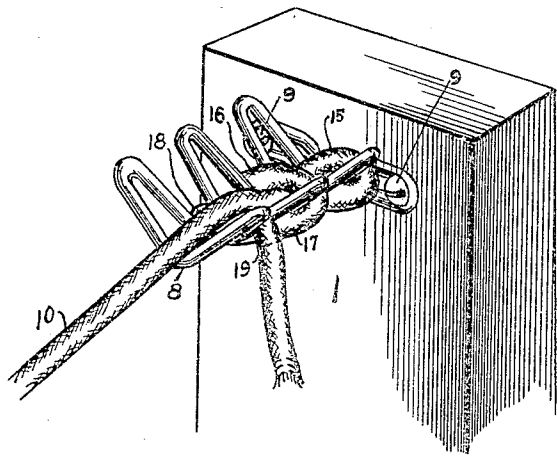


Fig. 2.

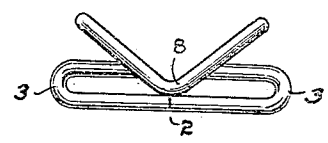


Fig. 3.

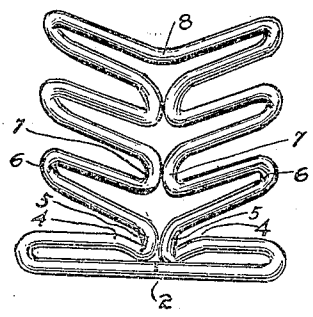


Fig. 4.

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334

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UNITED STATES PATENT OFFICE.

LEWIS C. SIMS, OF LOUISVILLE, OHIO.

ROPE-FASTENER.

962,675.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LEWIS C. SIMS, a citizen of the United States, residing at Louisville, in the county of Stark and State of Ohio, have invented a new and useful Rope-Fastener, of which the following is a specification.

My invention relates to improvements in devices for fastening ropes to stationary posts and the like, it being designed to do away with the tying of knots and other unsatisfactory methods of fastening ropes in such cases, and it particularly relates to and is adapted for the fastening of clothes-lines, awning ropes and the like.

The objects and advantages of my device will be readily apparent to those skilled in the art, and the construction by which I attain these advantages and objects is illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of the device fastened to a post and illustrating a rope properly fastened. Fig. 2 is a similar view of the device showing a practical use of the fastener when it is desired to have the rope extend directly out at right angles from the surface to which the fastener is attached. Fig. 3 is a front elevation of the fastener. Fig. 4 is a perspective view of the fastener, said view being taken from the under-side.

Throughout the several views similar numerals of reference indicate similar parts. The numeral 1 indicates a post or other suitable stationary structure to which the fastener may be attached. The fastener proper consists of a single piece of wire bent into the form shown in the drawings. The ends of the wire are brought together at the point 2; from there the said wire extends to both sides forming the loops 3—3, which are adapted to lie in a vertical plane, as shown in Figs. 1, 2 and 3. At the point 4 the wire is bent downward toward the point 2 and then outward to form the loop 5 from whence it extends upwardly at an oblique angle to a vertical line. The said wire extends in the direction indicated but a short distance when it is again returned at the point 6 to the point 7. A series of similar loops is continued until the desired number, preferably three, has been produced. A similar series of loops is arranged upon the opposite side, and the integral portion 8

unites the two series at what may be termed the end of the fastener.

By reference to Fig. 3 it will be seen that the loops on the two sides of the fastener lie in planes which are disposed at an angle to each other. This angle is preferably an obtuse angle but slightly greater than a right angle, but it is obvious that it may be more or less without departing from the spirit of the invention. The purpose of thus disposing the planes of the loops on the two sides is to facilitate the application of the rope to the fastener as hereafter more fully described. It should be stated that the wire used in constructing this fastener should be spring wire of such weight and strength as to possess considerable rigidity, and the loops should be so arranged that the sides of the same converge slightly as they extend from the outwardly extending loops 6 to the inwardly extending loops 7, thus forming converging sides between which the rope may be placed and drawn down into such position that it will be gripped tightly between the said sides.

A fastener of the character described having been attached to a suitable post or other stationary structure by means of screws, 9, extending through the loops 3, the method of using the fastener is as follows. Attention is directed to Fig. 1. Let it be supposed that the rope 10 is already fastened at one end to a stationary support. The other end is brought over the top of the fastener at the point nearest the support to which it is attached, namely over the loops 5. The rope is then pulled over said loops until the portion between the other fastened end and the fastener illustrated is sufficiently taut. The free end of the rope is then wound around the fastener under the loops 5 at the point 11 and into the next inwardly extending loop at the point 12, across the top of the fastener and into the corresponding inwardly extending loop, under the fastener again at the point 13 and over and into the next pair of inwardly extending loops at the point 14. It will be understood that the operation of fastening the end of the rope in the manner just described may be performed with great rapidity as it simply consists in drawing the rope over the loop nearest the post and winding said rope along said fastener in a spiral manner bringing it within the converging loops and drawing it down

tight within each of the same. When finally
 brought into the position shown in Fig. 1 it
 will be found that the fastening will be very
 substantial. If the strain on the rope be-
 comes considerable, the portion of the rope
 at 11 will pull in such manner as to draw the
 portion at 12 more tightly into engagement
 with the converging sides of the loops be-
 tween which it is arranged. If these loops
 and their engagement with the rope are in-
 sufficient to hold it against movement, if any
 draft is exerted on the rope at the point 13
 by reason of slippage, the rope at the point
 14 will be drawn more tightly between the
 converging sides of the loop and in this man-
 ner a very secure fastening is afforded. If
 it is desired to extend the rope on from the
 fastener it may be wound around the said
 fastener in a spiral manner back again to the
 loops closest to the support and from that
 point may be extended on to another point
 of fastening.

In Fig. 2 is shown another use of the fast-
 ener when it is desired to have the rope ex-
 tend directly out at right angles from the
 support. In this method the rope 10 is laid
 on top of the converging loops back to the
 point 15, where it is turned down through
 one of the loops 5, under the fastener and
 diagonally across the same, up between two
 of the converging loops at 16, across the top
 of the rope 10 to the opposite side, between
 the loops down under the fastener again at
 17, up between two of the converging loops
 at 18, under the rope 10 and between the con-
 verging loops again at 19. This fastening is
 very secure as any draft on the rope 10 will
 tend to force the rope more tightly between
 the converging loops, as will be readily seen
 by an inspection of Fig. 2.

While two methods of fastening the rope
 have thus been described it is evident that
 the fastener may be used in many ways
 which have not been described. The most
 common and convenient method is shown in
 Fig. 1, however, and the use there shown is
 that for which the fastener is primarily in-
 tended. By placing the loops in planes at
 an angle to each other the outwardly ex-
 tending loops are brought nearer together
 and the winding of the rope about the fas-
 tener is facilitated by reason of the fact
 that the loops into which the rope is drawn
 are closer to each other and the said rope
 will be drawn into the appropriate loop even
 though very little care is exercised to this

end by the one fastening the rope. Fur-
 thermore, since fasteners of this character
 for clothes-lines and the like are usually ar-
 ranged at some height above the convenient
 reaching height of the average user, the
 loops being arranged in planes at an angle
 to each other enables the user to merely
 pull downwardly upon the free end of the
 rope and thus crowd the rope down more
 tightly between the converging loops. This
 operation will be well understood by those
 skilled in the art. By an inspection of Fig.
 2 another purpose in placing the loops in
 planes at an angle to each other will be
 readily apparent. It will be noted that the
 rope 10 lies in what might be termed the
 "trough" of the two series of loops, the an-
 gular arrangement serving to assist in keep-
 ing the rope 10 in place. Furthermore
 where the free end of the rope is passed
 under the rope 10 between the points 18 and
 19, the top portion of the rope 10 will serve
 to crowd the portion under it down into the
 converging loops in a manner which would
 be impossible if the loops were not arranged
 in planes at an angle to each other.

While the fastening of the rope is accom-
 plished with ease and rapidity, it will be
 understood that it may be as conveniently
 unfastened, and that when it is desired to
 unfasten the said rope all that is required
 is to unwind the same, reversing the opera-
 tion just above described.

It will be seen from the above that the
 device described is such as may be cheaply
 made, convenient in use, thoroughly efficient
 and peculiarly adapted to the purposes for
 which it is intended.

I claim:

The herein described rope fastener formed
 from a single piece of wire and provided
 with loops adapted for the accommodation
 of attaching screws and a double series of
 loops with converging sides, wedge slots be-
 ing formed between adjacent loops, the
 loops on the two sides of the fastener lying
 in planes disposed at an obtuse angle to
 each other.

In testimony that I claim the above, I
 have hereunto subscribed my name in the
 presence of two witnesses.

LEWIS C. SIMS.

Witnesses:

CLARENCE A. FISHER,
 BENJAMIN F. FISHER.