

C. C. SPRINKLE.
CORD OR ROPE HOLDER.
APPLICATION FILED NOV. 27, 1909.

948,709.

Patented Feb. 8, 1910.

Fig. 1.

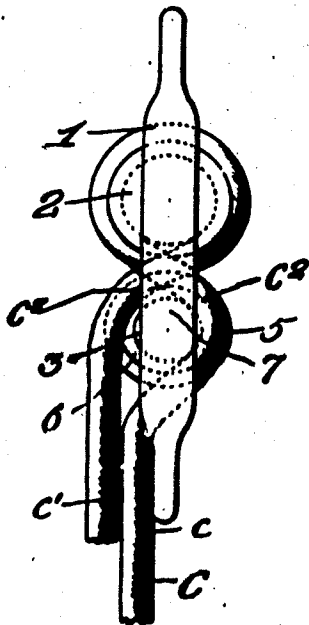


Fig. 2.

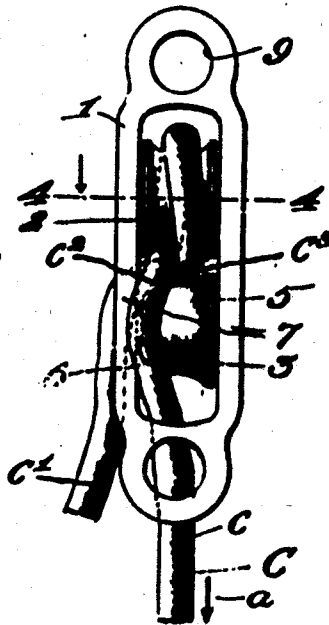


Fig. 3.

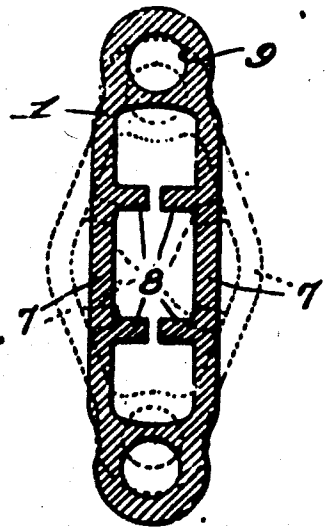


Fig. 6.

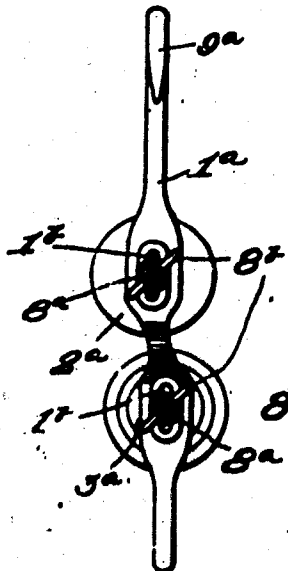


Fig. 7.

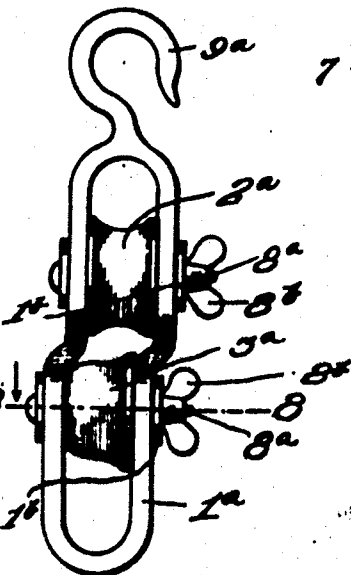


Fig. 4.

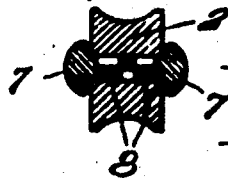
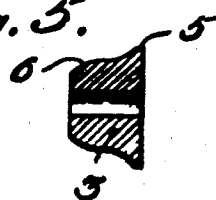


Fig. 8.



Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

CLARENCE C. SPRINKLE, OF MARION, INDIANA.

CORD OR ROPE HOLDER.

948,709.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed November 27, 1908. Serial No. 404,677.

To all whom it may concern:

Be it known that I, CLARENCE C. SPRINKLE, a citizen of the United States, residing at Marion, in the county of Grant and State of Indiana, have invented certain new and useful Improvements in Cord or Rope Holders, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in devices for holding or fastening the end of a cord or rope.

One object of the invention is to provide a simple and practical device of this character by means of which a piece of cord or rope may be quickly and securely held at any point throughout its length without the necessity of tying or knotting and in which the gripping action will increase as the strain on the cord or rope increases.

Another object of the invention is to provide a cord or rope holder or fastener of this character which will be automatic in its action.

A further object of the invention is to provide a device of this character which may be adjusted to accommodate a cord or rope of any size.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of one embodiment of the invention showing a cord arranged in the holder or fastener; Fig. 2 is a rear elevation of the same; Fig. 3 is a sectional view through the body or frame of the holder showing the manner in which it is constructed; Fig. 4 is a transverse section taken on the plane indicated by the line 4—4 in Fig. 2; Fig. 5 is a detail section through the pulley with a single flange; Figs. 6 and 7 are side and front views of another embodiment of the invention which is adjustable for the reception of a cord or rope of any size within certain limits; and Fig. 8 is a transverse section taken on the plane indicated by the line 8—8 in Fig. 7.

The invention consists primarily in a body or frame 1 of any suitable form and construction and containing two guide elements 2, 3 around which the cord or rope is passed so that when one end of the cord is drawn upon it will bind that portion of the

cord between the two elements to fasten or hold the cord against movement. The elements 2, 3 are preferably, but not necessarily, in the form of rollers or pulleys suitably journaled in spaced relation in the body 1 and the latter is preferably in the form of an open frame or loop through which the cord may be passed. Either one or both of said rollers may be either plain, or grooved and flanged at both ends, or provided with a flange at only one end or side and a reduced or tapered portion at its other end or side. However, the preferred construction of said rollers is shown in Fig. 2 in which the upper roller 2 is grooved to provide a double flanged pulley or sheave and the lower one 3 has its exterior surface or periphery tapered from one side or end to the other so that it has a flange 5 upon one end and a reduced or tapered portion 6 at its other end. When such a tapered or cone-shaped roller or pulley is used as one of the guide elements of the device the gripping action of the latter will be automatic as presently explained.

The preferred manner of constructing the body or frame 1 and journaling the rollers or pulleys therein is shown in Fig. 3, upon reference to which it will be noted that said body has two connected side bars 7 formed at opposite points upon their inner or opposing faces with pivot studs 8 adapted to enter the pivot openings in said roller. Said body is cast of malleable iron or other metal in the shape indicated by the dotted lines in Fig. 3 so that its side bars 7 are curved or bowed outwardly in opposite directions and the pivot studs 8 are far enough apart to permit the rollers or pulleys to be placed between them. After the rollers are arranged between the opposing pivots 8 the side bars 7 of the body or frame are straightened to their full line position in Fig. 3 so that the pivot studs will enter the journal openings or sockets in the rollers and their longitudinal axis will align to permit them to serve as pivots or journals. This construction of the body renders the device inexpensive to produce since it dispenses with the necessity of drilling the side bars and inserting and fastening pivot pins. The ends of the body or frame 1 may be plain or suitably shaped for the attachment of anchoring or fastening means, as illustrated, however, it is formed with integral eyes 9 with which may be engaged a snap

hook, a rope or any other element which may be used for fastening or anchoring the device.

The embodiment of the invention illustrated in Figs. 6, 7 and 8 of the drawings is similar to the one above described with one exception, namely, the adjustability of both of the rollers 2^a, 3^a in the body or frame 1^a. The latter is in the form of an open loop-like frame having its side bars formed with offset upper and lower portions and with longitudinal slots 1^b to receive adjustable bolts 8^a which serve as pivots for the rollers or pulleys 2^a, 3^a. When the wing nuts 8^b on the threaded ends of the bolts 8^a are loosened said bolts may be adjusted longitudinally in the body or frame 1^a for the purpose of positioning the rollers 2^a, 3^a nearer to or farther from each other to accommodate rope or cord of any diameter within certain limits depending upon the size of the device. While this is the preferred manner of adjustably mounting said rollers, it will be understood that within the scope of my invention either one of the rollers or guide elements may be made adjustable toward and from the other in any suitable manner and that, if desired, both of said elements may be made adjustable. In this embodiment of my invention the upper end of the body or frame 1^a is formed with an integral suspending or attaching hook 9^a, but it will be understood that any equivalent device may be substituted for the same.

In using the invention it is suitably fixed to a support at either one or both of its ends and the cord C is passed through the body or frame 1 above the upper roller or element 2, and then around the latter and its ends c, c' passed in opposite directions through the body between the rollers. One of its ends c is then passed through the lower portion of the body beneath the roller 3 so that when such end is drawn downwardly, as indicated by the arrow a in Fig. 2, the portion c' of the cord passing over the roller 3 will engage the opposing portion c' of the cord, which portion extends between the two rollers, and will bind the same beneath it and against the roller 3; and the tighter said end of the cord is drawn, the greater will be the gripping action, as will be readily understood upon reference to Fig. 2. This gripping action will be obtained whether the upper element 2 is a plain or flanged roller or merely a stationary guide pin, but in order to start the gripping action, when the lower pulley 3 is a plain or double flanged pulley, it is necessary to draw the end c' of the cord to one side to start its portion c' beneath the portion c'. When, however, the lower roller or pulley 3 is cone-shaped or tapered at its

end, as at 6, the tendency of the portion of the cord passing over the roller 3 will be to move laterally or toward the reduced end 6 of said roller and owing to the contact of this portion of the cord with the portion c' it will automatically draw said portion in the same direction and beneath it, thereby rendering the gripping action entirely automatic. When it is desired to loosen the cord it is only necessary to draw upon the end c' of the cord.

While I have set forth the principle of my invention and the preferred constructions embodying it, I wish it understood that I do not limit myself to the details of construction shown and described and that various changes in the form, proportion and arrangement of parts may be resorted to.

Having thus described the invention what is claimed is:

1. A device of the character described comprising a body having an opening, a pair of guide and clamping elements arranged in said opening in spaced relation and one having an inclined surface to oppose the other and a flexible element passed around one of said elements, and in opposite directions through the body between said elements, one end of said flexible element extending partially around the guide element having the inclined surface and then through the opening in the frame, substantially as and for the purpose specified.

2. A device of the character described comprising an open body having spaced side bars with laterally offset portions and a pair of guide elements arranged in the opening in the body between the side bars, one of said elements being arranged in the offset portions of the side bars of the body and having an inclined surface to oppose the other element.

3. A device of the character described comprising an open body having spaced side bars formed at opposite points with longitudinal slots, a pair of guide and clamping elements arranged in the opening in the body between the side bars, one of said elements having an inclined surface to oppose the other and one of said elements being in the form of a roller, a journal bolt passed through the roller and the slots in the side bars of the body, said bolt having a head at one end and screw threads at its other end and a clamping nut upon the threaded end of said bolt, whereby the latter may be clamped in adjusted position in the body to vary the space between said elements.

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

CLARENCE C. SPRINKLE.

Witnesses:

T. A. HARRY,
J. M. WHITE.