No. 793,751. PATENTED JULY 4, 1905.

C. J. SYKES.

ROPE CLUTCH.

APPLICATION FILED DEC. 14, 1903.

Fig. 1.

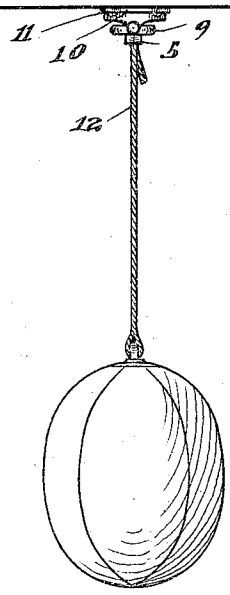


Fig. 2.

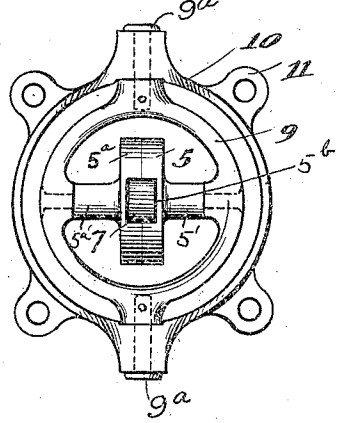
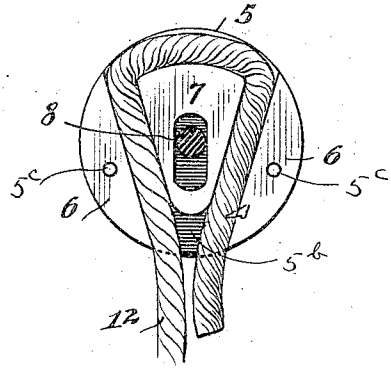


Fig. 3.



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UNITED STATES PATENT OFFICE.

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ROPE-CLUTCH.

SPECIFICATION forming part of Letters Patent No. 793,751, dated July 4, 1905.

Application filed December 14, 1903. Serial No. 185,164.

To all whom it may concern:

Be it known that I, CHARLES J. SYKES, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Rope-Clutches, of which the following is a specification.

My invention relates to a device for securing the free end or bight of a rope or other flexible strand and is adapted for use in a wide variety of situations.

I have illustrated my invention in connection with a punching-bag swivel, the swivel itself being of the ordinary gimbal type, so as to allow the bag to swing freely in all directions. Usually in punching-bag supports the end of the suspending-rope is passed through an aperture in a cup-shaped member and a knot tied in the end. This permits the bag to swing in all directions and also permits the rope itself to turn and increases the tendency of the bag to swing when struck a glancing blow. This spinning of the bag is objectionable. Furthermore, a mere knot in the end of a rope is not a reliable device for securing it, and in suspending a punching-bag the knot will gradually draw tighter and allow the bag to descend, so that it is no longer at the proper elevation. Besides, unless tied very securely the knot will work loose, and if tied very securely it will draw so tight that it is impossible to untie it. Hence in many instances when a mere knot in a rope is depended upon it fails to hold or else it draws so tightly that it cannot be untied, and in innumerable instances disaster is attendant upon the slipping of the knot, and inconvenience is certain to result in untying it. These and many other objections, such as the cutting of the rope, might be enumerated, and to overcome such objections and provide a rope-clutch which shall be simple in construction, efficient to hold the rope with certainty, and whereby the rope may be quickly secured and released I combine with a movable clutch member, preferably in the form of a sliding wedge, a rope block or body provided with a rope-aperture whose walls or abutments are converged, such wedge affording the means for firmly and readily securing the rope in any adjusted position and the strain thereon tending to increase the gripping action of the clutch, while the rope may be readily released by moving the rope forcibly in a direction to release the clutch.

In the accompanying drawings, Figure 1 is a side elevation showing my improved rope-clutch as applied to a punching-bag swivel. Fig. 2 is a bottom plan view of the same with the rope removed, and Fig. 3 is a view of the inner side of one of the duplicate castings of the rope-block with the rope and wedge lying therein.

Referring to the accompanying drawings, the rope-block is composed of a pair of duplicate disk-shape castings 5 and 5^a, axially apertured transversely and having bearing-sleeves $5'$ and $5^{a'}$ extending outwardly from their outer faces concentric with their apertures. Each of the sections of the core-block has a sector-shaped recess or socket 5^b formed in and across its inner face, thereby creating on either side of said socket abutments 6, which sockets and abutments are caused to register, respectively, by fastening the two sections of the block together, with their inner faces in contact, by rivets 5^c.

7 represents a movable clutch member, preferably in the form of a sliding wedge, which is housed within the sector-shaped opening formed by the registering sockets 5^b and is slotted longitudinally for the passage of the pin 8, which affords the axis of the block, said pin passing through the sleeves $5'$ and $5^{a'}$ and at its ends secured in bearings in the gimbal-ring 9, which in turn is pivoted on pivot-pins 9^a in a frame 10, the axis of the ring 9 being at right angles to the axis of the block 5 5^a. The frame 10 is provided with apertured lugs 11, whereby it may be secured to the ceiling or any suitable bracket, beam, or platform. The rope 12 is secured in any desired position when in the block by passing the free end through the narrowest portion of the aperture between the abutments 6 and the wedge 7 and then returning said end around the wedge and allowing the end to protrude, preferably, through the aperture. A pull on the rope tends to draw the wedge downwardly, thus

compressing the strands between the sloping sides of the wedge and the tapering abutments and securing it quickly in any adjusted position. The action of the wedge will prevent the rope from turning; but the flexibility of the rope itself and the swivel action of the block 5 5ª and ring 9 will give all of the necessary movements to the bag, while tending to prevent its spinning. Obviously the rope may be very quickly engaged and disengaged and is securely held without injury to the rope. Other uses to which the invention might be applied and which would naturally suggest themselves are the following: for securing tent-ropes, sail-ropes, derrick and guy ropes for adjustably suspending scaffolding, and in numerous other situations where safety is the prime consideration and convenience of adjustment very important.

I claim—

1. A rope-clutch comprising in combination a block or body formed of a pair of substantially duplicate halves secured together and having their meeting faces provided with registering sector-shaped recesses, and a sliding wedge movably contained within the opening formed by said registering recesses and adapted to laterally press the strands of a rope, substantially as described.

2. A rope-clutch comprising in combination a block or body formed of a pair of centrally-apertured substantially duplicate halves secured together and having their meeting faces provided with registering sector-shaped recesses, a longitudinally-slotted sliding wedge movably contained within the opening formed by said registering recesses and adapted to laterally press the strands of a rope, and a pin passed through the central apertures of the block-sections and the slot of the wedge and confining the latter against escape, substantially as described.

3. The combination with a frame, as 10, of a gimbal-ring pivoted therein, a rope-block pivotally mounted in said ring, and a clutch member coöperating with said block, substantially as described.

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