

(No Model.)

S. MURRAY.
ROPE GUIDING SHEAVE.

No. 479,296.

Patented July 19, 1892.

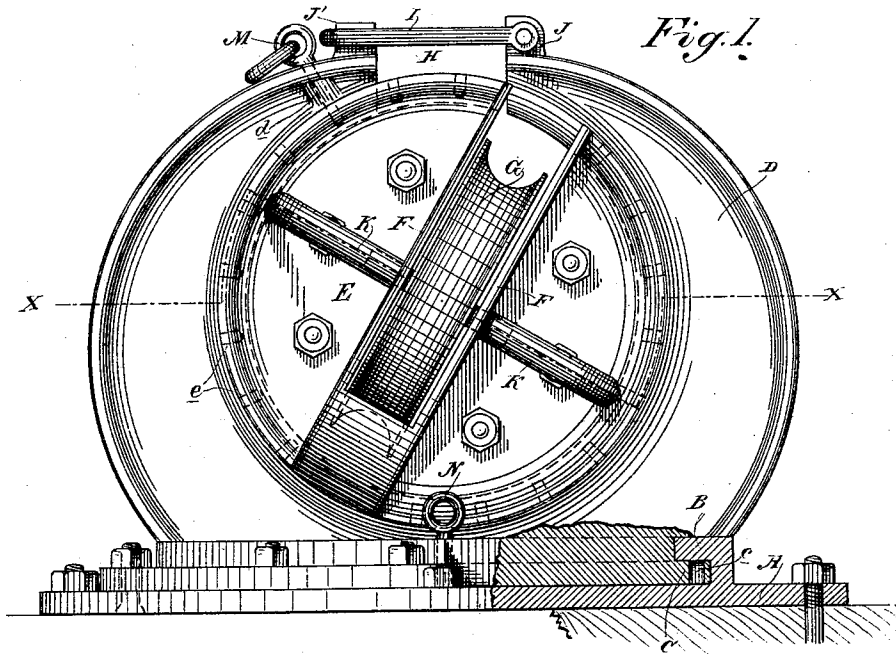
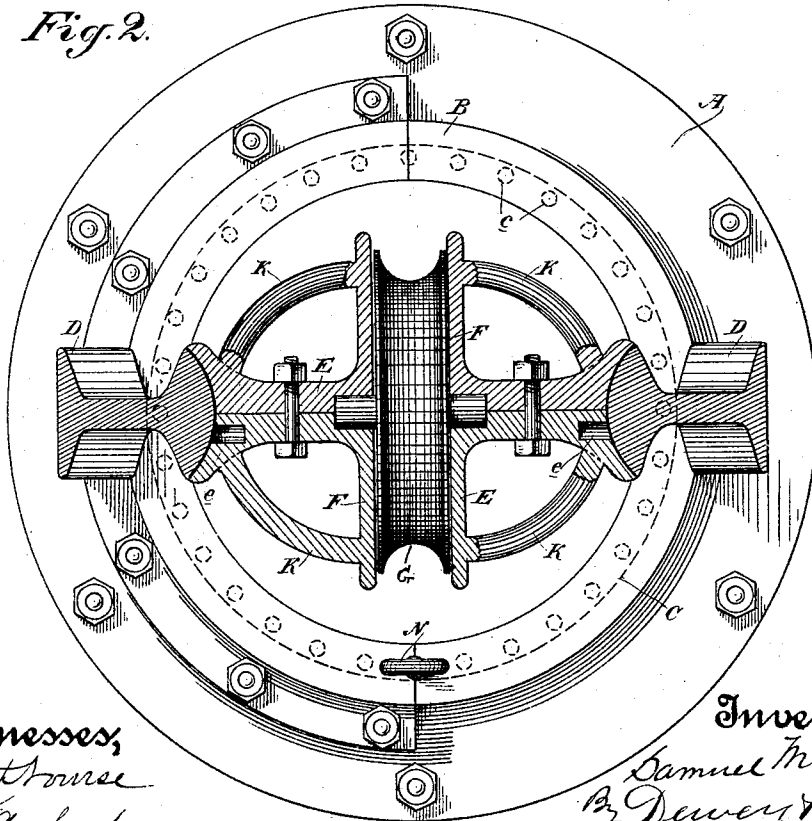


Fig. 2.



Witnesses,
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UNITED STATES PATENT OFFICE.

SAMUEL MURRAY, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF
TO WILLIAM F. MURRAY, OF SAME PLACE.

ROPE-GUIDING SHEAVE.

SPECIFICATION forming part of Letters Patent No. 479,296, dated July 19, 1892.

Application filed March 21, 1892. Serial No. 425,814. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL MURRAY, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Rope-Guiding Sheaves; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a novel guiding-sheave for ropes; and its object is to enable the operator to provide for any change of direction of rope through which power is to be transmitted.

It consists in certain details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is an exterior view of my device. Fig. 2 is a horizontal cross-section of the same on the line $x x$, Fig. 1.

A is a base-plate, which is adapted to be fixed or secured in any suitable position either upon the deck of a vessel, upon the bits of the windlass, or in any place where it can be conveniently employed. Upon the surface of this plate is formed an inwardly-projecting circular-channeled flange B, within which the correspondingly-shaped flanged disk C is fitted, so that it may be turned about upon the base A to any desired point in the circumference. In order to introduce the flanged disk C, the flange B is made in two halves, one of which may be cast with the plate A and the other half may be bolted upon the plate after the disk C has been introduced into its place, thus locking the latter securely, but allowing it to turn freely about within the channel.

Upon the disk or plate C is cast or secured the standard D, which has a circular opening made within it in a plane at right angles with the plane of the base A. The inner surface of this opening is made convex, as shown, and a circular block E has its periphery grooved to fit the opening, so that it may turn about freely within this opening and be retained therein. The block E is made in two parts, so that it can be fitted into this opening, and the two parts are afterward bolted together, as shown.

F F are segmental flanges standing at right

angles with the faces of the block E and situated a sufficient distance apart to admit the sheave G, the pin of which is secured between the two halves of the block E when the latter are put together. The upper part of the standard D is left open, as shown at H; so that when the block E has been turned around within the standard D to bring the sheave G in line with the opening H a rope may be introduced into this opening and the block E afterward turned about within the standard D until the periphery of the sheave stands out of line with this opening H. After the rope has been introduced the two parts of the top of the standard D are connected together by means of a link I, which is swiveled to lug J upon one side of the opening and engages a similar lug J' upon the opposite side, thus closing the opening and at the same time forming a strengthening-brace to hold the two parts together and resist the strains that may be brought upon them by the tension upon the rope.

K K are curved braces extending from the faces of the block E to the faces of the segmental plates F, between which the sheave G revolves. Holes e are made around the periphery of the block E, and a hole d is made through one part of the standard D in a plane corresponding with the holes in E. A pin M is adapted to be introduced into these holes, and the block E will thus be locked, so that the sheave or pulley G will stand at any desired angle within the standards D. By this construction a rope may have its direction changed in a vertical plane by simply turning the block E around and locking it, so that as the rope passes around the sheave G it will lead fairly from the sheave in any direction.

In order to change the horizontal plane of direction, the disk C is turned around within the flanges B, and this is similarly locked by a pin N, passing through a hole in the flange and holes c in the rim of the disk, or through the disk and the bottom plate A. These two combinations enable me to lead a rope in any desired direction and always approaching the sheave and leaving it so as to move in the plane of rotation of the sheave and lead fairly.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A rope-guiding sheave consisting of the
5 circular block, a pulley journaled within the
block, a standard having a circular groove
made in it within which the block may be
rotated, said standard having an opening
10 through which the rope may be introduced to
the sheave or removed therefrom, a pin by
which the block is locked when the pulley
stands at the desired angle, and a closing and
locking yoke by which the opening in the
15 standard is closed, substantially as herein de-
scribed.

2. A rope-guiding sheave consisting of the
circular block having a grooved periphery, a
standard having a correspondingly - shaped

circular opening to receive the block, a pul-
ley journaled within the block at right an- 20
gles with its face, a means for locking the
block in the standard with the pulley at any
desired angle, a flanged disk upon which the
standards are supported, a corresponding base 25
within which the disk may be rotated at right
angles with the plane of rotation of the pul-
ley-block, and a means for locking this disk
in any desired position, substantially as here-
in described.

In witness whereof I have hereunto set my 30
hand.

SAMUEL MURRAY.

Witnesses:

LEWIS B. HARRIS,

W. M. F. MURRAY.