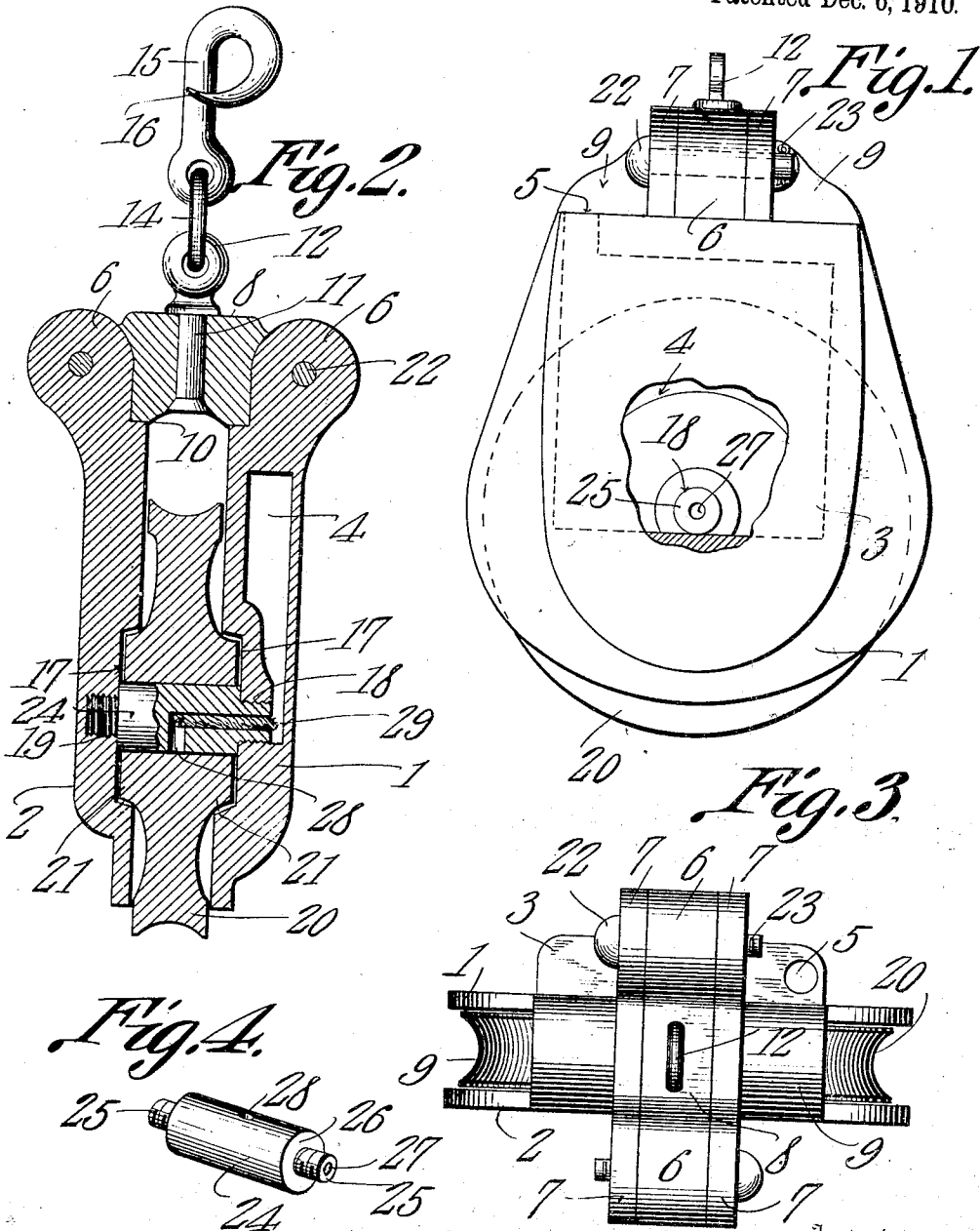


J. E. GILCHRIST.
PULLEY BLOCK.
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JOHN E. GILCHRIST, OF SOUTH BEND, WASHINGTON.

PULLEY-BLOCK.

977,613.

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To all whom it may concern:

Be it known that I, JOHN E. GILCHRIST, a citizen of the United States, residing at South Bend, in the county of Pacific and State of Washington, have invented a new and useful Pulley-Block, of which the following is a specification.

The pulley block forming the subject matter of this application may be employed under a variety of conditions which will readily suggest themselves to a rigger. However, it may be explained that in logging operations, the line whereby the logs are dragged from the woods to the saw mill, or to the drive, is returned over a series of pulleys, commonly suspended at a considerable elevation. These return pulleys are in constant rotation, and on this account frequently run hot. Owing to their elevated positions, it is difficult to oil them, the oiling process commonly being deferred until it is often found that the pulley has run hot and bound.

It is the object of this invention to provide a pulley which will contain a considerable quantity of lubricant, and feed the same, automatically, and slowly, upon the bearing pin of the pulley.

Another object of the invention is to provide a pulley the component parts of which are assembled in a novel and improved manner.

Another object of the invention is to provide a pulley, the bearing pin of which is adequately protected against dirt and dust.

Another object of the invention is to provide a novel means for suspending the pulley.

With the above and other objects in view, the invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the drawings and claimed, it being understood that changes, falling within the scope of what is claimed, may be made, without departing from the spirit of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings,—Figure 1 is a side elevation, parts being broken away; Fig. 2 is a transverse section; Fig. 3 is a

top plan of the showing of Fig. 2, parts being removed; and Fig. 4 is a detail perspective of the bearing pin.

The pulley block now to be described, comprises parallel sides 1 and 2. The side 1 is provided with an outstanding portion 3, the side being thus enlarged so that a chamber 4 may be formed in the interior thereof. In the upper face of the outstanding portion 3 of the side 1 is, as seen to best advantage in Fig. 3, an inlet 5 communicating with the chamber 4, and constituting a means whereby a lubricant may be introduced into the chamber.

The sides 1 and 2 are provided, upon their upper edges, with outstanding projections 6, oppositely disposed, and adapted to register between lugs 7, outstanding laterally from that portion of the device which hereinafter will be denominated the "top", and denoted by the numeral 8. Through the elements 6 and 7, pins 22 are extended, the pins being maintained in place by means of cotter pins 23, or the like, the construction being such that the sides 1 and 2 are hingedly connected with the top 8, by means of the pins 22. Outstanding from the top 8 at right angles to the lugs 7, are oppositely disposed shoulders 9, adapted to extend over the upper edges of the sides 1 and 2, the shoulders 9 being grooved upon their lower faces, upon a curvature denoted by the numeral 10 in Fig. 2, and designed to facilitate the passage of the rope through the pulley block.

Swiveled in the central portion of the top 8 of the pulley block, is a pivot pin 11, provided with an eye 12, in which is mounted a link 14, with which is connected a hook 15, the point 16 of which is carried around past the shank of the hook. By means of the construction last above pointed out, the pulley block may be mounted for swiveled movement upon a support of any desired construction, the form given to the hook 15 being such that the hook will not jump from the support when the line which is moving through the pulley block is slackened, or jerked violently.

In the adjacent faces of the sides 1 and 2, are annular recesses 17. At the centers of these recesses 17, are threaded openings 18 and 19, the opening 18 in the side 1 being

extended into the chamber 4, at the lower end thereof; while the threaded opening 19 in the side 2 terminates within the contour of said side.

A bearing pin 24, seen most clearly in Fig. 4, is provided, the bearing pin having reduced ends 25, which are threaded for engagement in the openings 18 and 19, the ends 25 defining shoulders 26 in the bearing pin. The sheave 20 is adapted to be journaled for rotation upon the bearing pin 24; and this sheave 20 is provided upon its outer faces, with bosses 21, adapted to fit closely, yet antifrictionally, in the recesses 17 of the sides 1 and 2. The shoulders 26 upon the pin 24, prevent the sides 1 and 2 from bearing against the sheave 20.

In the bearing pin 24, there is an axial opening 27, communicating at one end with the chamber 4. Adjacent the middle of the pin 24, this axial opening 27 is extended through the side wall of the pin, and shown at 28. A packing of some sort, denoted by the numeral 29, and preferably a piece of cotton wicking, is mounted in the axial opening 27 of the bearing pin.

In practical operation, the lubricant is introduced into the chamber 4 through the inlet 5. The lubricant will find its way slowly through the axial opening 27 of the bearing pin 24, and, passing out through the portion 28 of the opening in the pin, will serve to lubricate the sheave 20 as the same rotates upon the pin. The presence of the packing 29 in the interior of the bearing pin 24, serves to regulate the flow of the lubricant through the pin. Presupposing that the sides 1 and 2 are separated from the top 8 and the bearing pin 24, the operation of the device is as follows. The pin 24 is threaded into one of the openings in the sides; say into the opening 18 in the side 1. The sheave 20 is then mounted upon the pin 24 and the side 2 is rotated upon the opposite threaded end of the pin until both of the sides are brought into abutment with the shoulders 26 in the pin; or nearly into abutment therewith. The projections 6 upon the sides 1 and 2 are brought into alignment transversely of the pulley block, and the top 8 is mounted in place upon the sides 1 and 2, the lugs 7 of the top 8 inclosing the projections 6 of the sides. The pins 22 are mounted in place, and the cotter pins 23 are inserted through the pins 22. Obviously, when the sides 1 and 2 are separated, the top 8 need not be entirely removed from both of the sides. But one of the pins 22 may be removed, the top 8 being swung back pivotally upon the other pin 22 to permit the side from which the lugs 7 have thus been freed, to be rotated.

It will be seen that the construction of the device is such, that, although the chamber 4 may be entirely filled with lubricant, the top

8 may be unshackled from the side 2, permitting the said side to be rotated free from the bearing pin 24, whereupon the sheave may be removed, and the pulley block repaired, without materially changing the position of the oil holding side 1 of the pulley block or emptying the chamber 4 of its contents.

The parts 21 of the sheave 20 fit closely in the recesses 17 of the sides of the block, and the bearing pin 24 is so housed and protected that dirt will be prevented from accumulating about the bearing of the sheave, to interfere with the rotation thereof.

Having thus described the invention, what is claimed is:—

1. A pulley block consisting of sides, one of which is provided with an interior oil chamber having an inlet adjacent the top of the block; a bearing pin terminally mounted in the sides and having an axial opening communicating with the chamber and extended through the side wall of the pin; and a sheave journaled for rotation upon the pin between the sides.

2. A pulley block consisting of separable sides; a top pivoted into one of said sides; a bearing pin terminally threaded to engage the sides; a sheave journaled for rotation upon the pin; and means for connecting the top with the other of said sides.

3. A pulley block consisting of separable sides; a bearing pin terminally threaded to engage the sides; a sheave journaled for rotation upon the pin; the pin being provided with shoulders adapted to prevent the sides from binding against the sheave; a top terminally provided with elements adapted to interlock with the sides; and means for connecting the top with the sides.

4. A pulley block consisting of parallel sides having annular recesses in their adjacent faces, one of the sides being provided with an interior oil chamber having an inlet adjacent the top of the block; a bearing pin terminally threaded to engage the sides in the recessed portions thereof, the pin having an axial opening communicating with the chamber and extended through the side wall of the pin; a sheave journaled for rotation upon the pin and having oppositely disposed bosses adapted to fit closely but anti-frictionally in the recesses, the pin having shoulders to engage the sides to prevent the same from binding upon the sheave; and a top removably connecting the sides above the sheave.

5. A pulley block consisting of parallel sides, one of which is provided with an interior oil chamber having an inlet adjacent the top of the block; there being a threaded opening in the wall of said side communicating with the chamber adjacent the bottom thereof, and an oppositely disposed threaded opening in the other of said sides;

a bearing pin terminally threaded to engage the threaded openings, the pin having an axial opening communicating with the chamber and extended through the side wall of the pin; a sheave journaled for rotation upon the pin; the sides having lateral projections at their upper ends; a top having spaced lugs between which the projections of the sides are adapted to fit; and remov-

able means for uniting the projections with the lugs.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN E. GILCHRIST.

Witnesses:

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N. W. BAKER.