

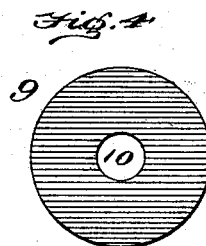
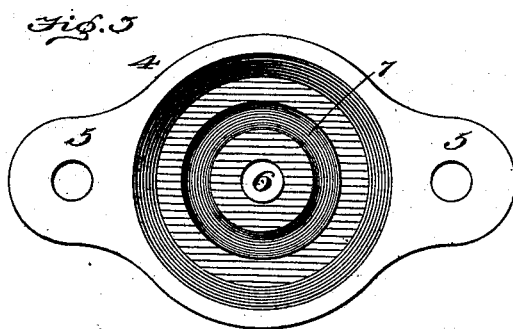
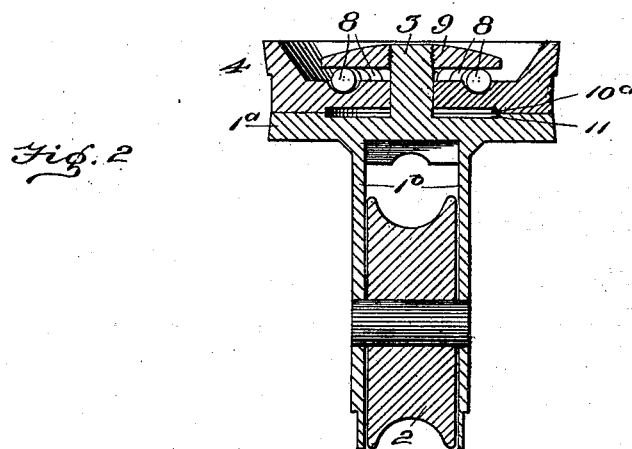
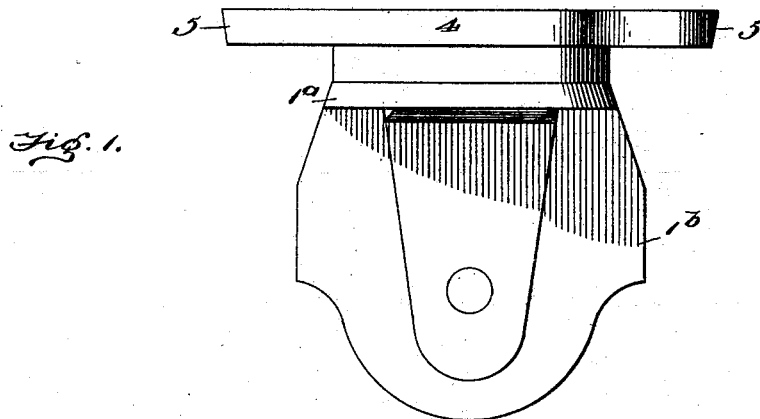
No. 647,830.

Patented Apr. 17, 1900.

L. E. HALE & L. ROBIDOUX.
PULLEY.

(Application filed Jan. 15, 1900.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

LORIN E. HALE AND LOUIS ROBIDOUX, OF KANSAS CITY, MISSOURI.

PULLEY.

SPECIFICATION forming part of Letters Patent No. 647,830, dated April 17, 1900.

Application filed January 15, 1900. Serial No. 1,547. (No model.)

To all whom it may concern:

Be it known that we, LORIN E. HALE and LOUIS ROBIDOUX, citizens of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Pulleys; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to certain improvements in pulleys, more especially the hangers therefor.

It has for its objects, among other things, to greatly lessen friction and wear, to provide for the ready axial adjustment or swiveling of the pulley wheel or sheave, rather its "block," to facilitate the manipulation of the line or rope passing over or rove through said pulley wheel or sheave and prevent the abrading or wearing of said rope or line, and to otherwise improve the construction and arrangement of the parts.

It consists of a dished or concaved casting or bracket adapted to be secured, preferably, overhead or to a ceiling and to contain ball-bearings combined with a pulley block or support having a pivot or axis passing through said casting or bracket and a bearing disk or plate adapted to connect with said pivot or axis and resting upon said ball-bearings, all substantially as hereinafter more fully disclosed, and specifically pointed out by the claims.

It will be understood that latitude is allowed herein as to details, as they may be changed or varied without departing from the spirit of our invention and the same yet remain intact and be protected.

In the accompanying drawings, illustrating the preferred embodiment of our invention, Figure 1 is a side elevation. Fig. 2 is a sectional elevation. Fig. 3 is a detached plan view of the bracket or "dish" which contains the bearing-balls. Fig. 4 is a similar view of the bearing plate or disk.

In carrying out our invention we employ a pulley block or hanger 1 of peculiar construction. It consists of a disk-like or circular portion 1^a, cast or provided upon its under side with pendent spaced-apart parallel plates or bearings 1^b, having coincident apertures receiving the axis of the pulley wheel or sheave 2, hung between said plates. The disk-like or circular portion 1^a has a central vertical pivot or axis 3 extending upward therefrom and threaded at its upper end, further referred to later on. A dished or concaved bracket or casting 4 is also employed, adapted to be suitably fastened overhead or to the ceiling by passing suitable fastenings through apertured extensions or ear-lugs 5 thereof entering said ceiling. In the bottom of the dish or concavity of said casting or bracket is a central hole 6 to receive and permit the passage therethrough of the pivot or axis 3 of the pulley block or hanger 1, and concentrically with said hole said bottom is provided with an annular or circular groove or race 7 to receive balls 8. Said balls are only partially contained in said groove or race, the same extending beyond the latter. Resting upon said balls is a disk or bearing-plate 9, having a screw-threaded central opening or hole 10 to permit it to be screwed upon the pivot or axis 3 down in contact with said balls. Thus a bearing is furnished wherein friction is reduced to the minimum and the pulley-block is swiveled or allowed to swing axially, permitting it to readily conform to changes in the direction the rope or cable passing over the pulley wheel or sheave may assume and prevent the rubbing or wearing of the rope or cable upon the pulley block or bracket, as would otherwise occur. Both the disk-like portion of the pulley-block and the dished bracket are provided with circular recesses in opposite surfaces, as at 11 10^a, to reduce the contacting surface between them, also to lessen friction, &c.

This pulley is especially convenient or useful in connection with suspending fire-engine and patrol-wagon harness, also for various other purposes, among which may be mentioned as for ships' rigging, gymnasium apparatus, &c.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. As an improvement in pulleys, the combination of a pulley wheel or sheave, a pulley-block comprising a circular or disk-like portion having parallel pendent plates upon its under side, with a pulley wheel or sheave

hung between them, a dished or concaved bracket or plate having a circular or annular groove or race in the bottom of its "dish" or concavity, a series of balls arranged in said race, and a bearing-plate resting upon said balls and having a pivotal or axial connection with said pulley-block, substantially as set forth.

2. As an improvement in pulleys, the combination of a pulley wheel or sheave, a pulley-block comprising a disk-like or circular plate having a central hole, and pendent parallel plates or bearings, a pulley wheel or sheave hung between said plates, said disk-like plate having a central screw-thread-ended

pivot, a dished or concaved bracket or plate having a central opening, through which said pivot passes, and an annular or circular groove or race concentric with said opening, balls arranged in said race, and a bearing plate or disk connected to said pivot and resting upon said balls, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

LORIN E. HALE.
LOUIS ROBIDOUX.

Witnesses:

EMMA HALL,
ANNA SHERWOOD.