

(No Model.)

2 Sheets—Sheet 1.

W. LOUDEN.
PULLEY BLOCK.

No. 524,177.

Patented Aug. 7, 1894.

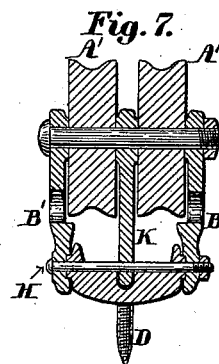
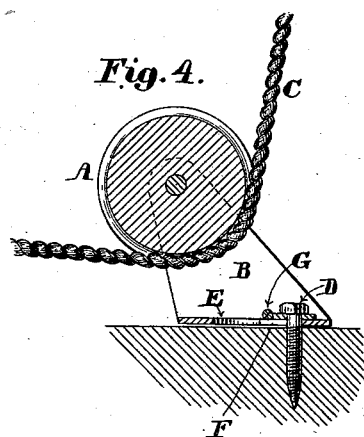
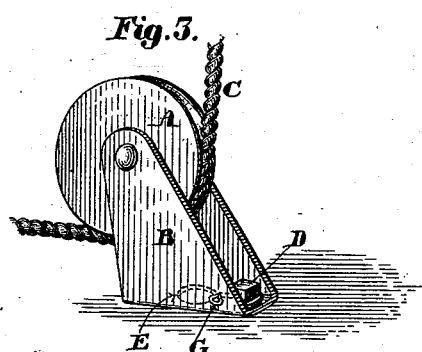
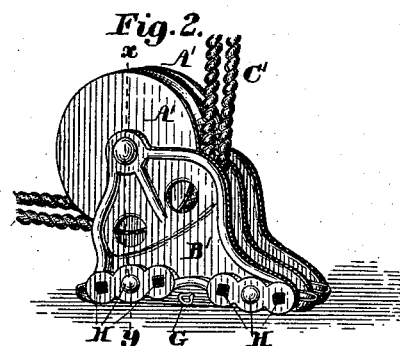
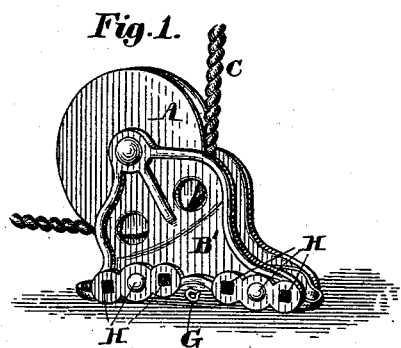
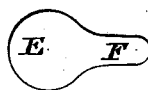


Fig. 5.



Witnesses:

C. J. Fulton
W. J. Fauden

Inventor:

William Loudon

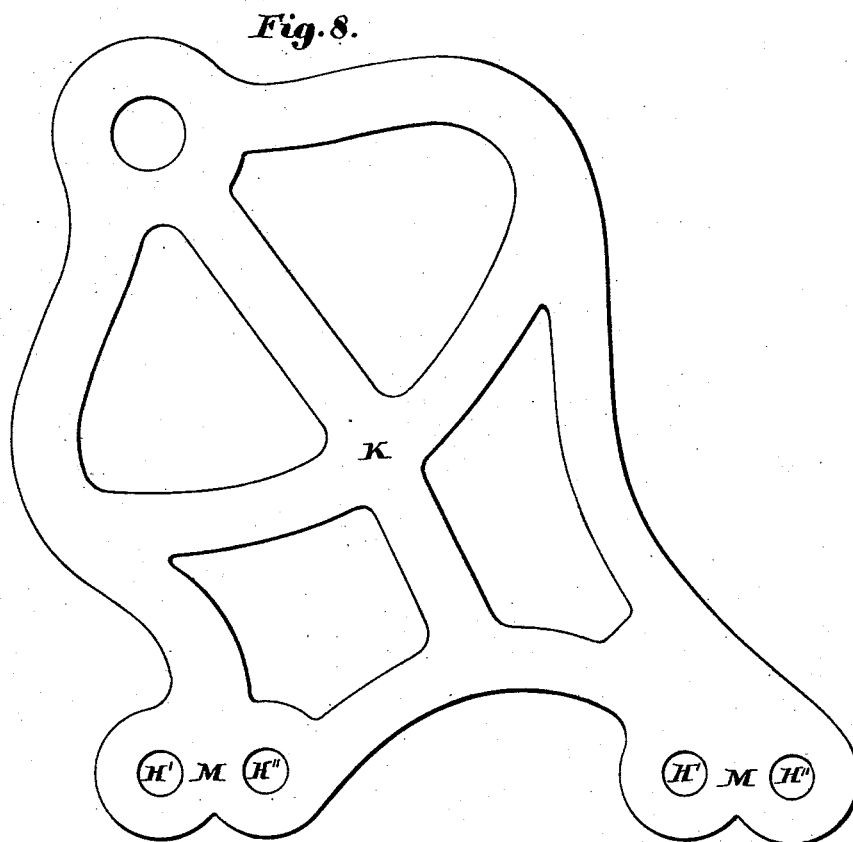
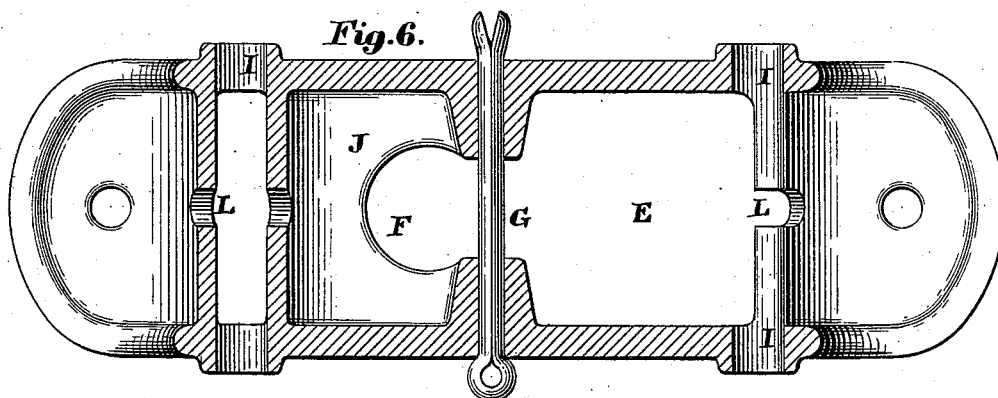
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2 Sheets—Sheet 2.

W. LOUDEN.
PULLEY BLOCK.

No. 524,177.

Patented Aug. 7, 1894.



Witnesses:

C. J. Fulton
R. H. Louden

Inventor:

William Louden.

UNITED STATES PATENT OFFICE.

WILLIAM LOUDEN, OF FAIRFIELD, IOWA.

PULLEY-BLOCK.

SPECIFICATION forming part of Letters Patent No. 524,177, dated August 7, 1894.

Application filed September 29, 1892. Serial No. 447,349. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LOUDEN, a citizen of the United States, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented a new and useful Improvement in Pulley-Blocks, of which the following is a specification.

This invention relates to pulley blocks designed to stand normally at approximately right angles to the floor or foundation to which they are anchored, and it consists in so constructing the frame that the block will be evenly balanced longitudinally while one end of the rope passing through it is held approximately perpendicular, and the other end approximately horizontal, and at the same time, be free to incline to some extent sidewise, and to turn on its anchoring bolt or pin to accommodate the direction of the rope, no extraneous supports being required to accomplish this result.

It further consists of improvements in details hereinafter set forth.

I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective of my pulley block showing it fitted with a single sheave for a single rope. Fig. 2 is a perspective showing it fitted with two sheaves for a double rope. Fig. 3 is a perspective showing the frame of the pulley block made of a single piece of metal. Fig. 4 is a vertical section of Fig. 3. Fig. 5 is a diagram of the opening in the bottom of the pulley frames shown in Figs. 3 and 4. Fig. 6 is a horizontal section of the adjustable bottom used in the pulley blocks shown in Figs. 1 and 2. Fig. 7 is a vertical cross section drawn on the line *x, y* of Fig. 2. Fig. 8 is a side view of the division piece used in the double pulley block.

Similar letters refer to similar parts throughout the several views.

Figs. 3 and 4 represent my pulley block in its simplest form. The frame B is made of a single piece of metal substantially U shaped (having its ends bent up to support the sheave A, while the central part is left flat or slightly rounding) so it will stand on the floor and hold the sheave A in substantially an upright position without the aid of any extraneous supports. The ends which are bent up to form the

side of the frame and to support the sheave are set obliquely to the bottom longitudinally considered so as to correspond with the draft of the rope C, one end of which is held in a position more or less vertical while the other end is drawn in a direction more or less horizontal. The sheave A is journaled in the upper ends of the sides of the pulley frame and substantially at right angles to one end of the bottom. A bolt or screw D is passed through an opening or hole in the opposite or projecting end of the bottom of the pulley frame, and suitably secured to the floor or timber to which the pulley is anchored. By this means power may be applied to the horizontal end of the rope and the weight to be lifted connected to its vertical end, and the upright position of the pulley block will not be materially disturbed; and no extraneous means will be required to hold it in a substantially upright position. This bolt D should not be drawn down too snugly on the pulley frame, but should be left so the pulley will be free to turn in any direction the horizontal end of the rope may be drawn. The bolt D will hold the pulley in substantially an upright position in whatever direction it may be turned, and substantially in line with the vertical end of the rope. By making the bottom of the pulley frame slightly rounding as more particularly shown in Fig. 7 the pulley will be free to incline slightly to either side, and thus more fully keep in line with the vertical end of the rope should it be slightly inclined.

The hole or opening in the bottom of the pulley frame is preferably made graduated in shape as shown in Fig. 5, the small end F of the opening being set toward the extended end of the bottom. In this way the bolt can be secured to the floor and the pulley frame slipped over it through the large end E of the opening, and then be drawn forward so the small end of the opening will slip under the head of the bolt and securely hold the pulley. A key or pin G passing through the pulley frame may be used to prevent it from slipping off the bolt D.

To adapt the pulley block to work with ropes running at different angles I make the bottom of the frame separate from the sides, and form the sides B' with a series of holes H, H, corresponding with holes *l, l*, in the

bottom piece J, so the sides can be set back or forth on the bottom and the angle of the pulley with relation to the bottom upon which it stands, and the pivot upon which the frame turns, may be varied to suit the angle of the rope.

When desired for the passage of two ropes through it, the pulley block is fitted with two sheaves A' as shown in Figs. 2 and 7 and a central piece K is used to hold the ropes apart. In this case openings L L are formed in the bottom piece J to admit the lower ends M M of the central piece K, and the central piece will be held in place by the same bolts that secure the sides B' to the bottom J, passing through the holes H' or H² as necessary in adjusting the bottom of the pulley block. A washer is preferably used under the head of the bolt D.

What I claim, and desire to secure by Letters Patent, is—

1. A pulley block having a frame substantially U shaped in cross section, a sheave journaled in the upper ends of the frame obliquely from the center of the bottom of the frame, longitudinally considered, the bottom of said frame being adapted to stand on a horizontal foundation and hold the block in a substantially vertical position without any extraneous supports, and means for anchoring the pulley block to its foundation, and permitting the block to swing thereon, substantially as set forth.

2. A pulley block having a frame substantially U shaped in cross section, a sheave journaled in the upper ends of the frame obliquely from the center of the bottom of the frame, longitudinally considered, the bottom of said frame being adapted to stand on a

horizontal foundation and hold the block in a substantially vertical position without any extraneous supports, and an anchoring bolt secured to the foundation, the pulley block being adapted to catch over the said bolt and swing thereon.

3. A pulley block adapted to stand normally at right angles to the foundation to which it is anchored, the frame being substantially U shaped in cross section and a right angle triangle in longitudinal section, and having a graduated opening in its bottom to admit an anchoring bolt, and a key to close the smaller end of the opening and hold the bolt in place, substantially as set forth.

4. A pulley block adapted to stand normally at right angles to the foundation to which it is anchored, the frame being substantially U shaped in cross section and a right angle triangle in longitudinal section, and an adjustable bottom to vary the longitudinal angle of the frame, substantially as set forth.

5. A pulley block adapted to stand normally at right angles to the foundation to which it is anchored, the frame being substantially U shaped in cross section and a right angle triangle in longitudinal section, an adjustable bottom, and a dividing piece fitted to the bottom and adapted to be adjusted thereon.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM LOUDEN.

Witnesses:

C. J. FULTON,
W. H. BLOSS.