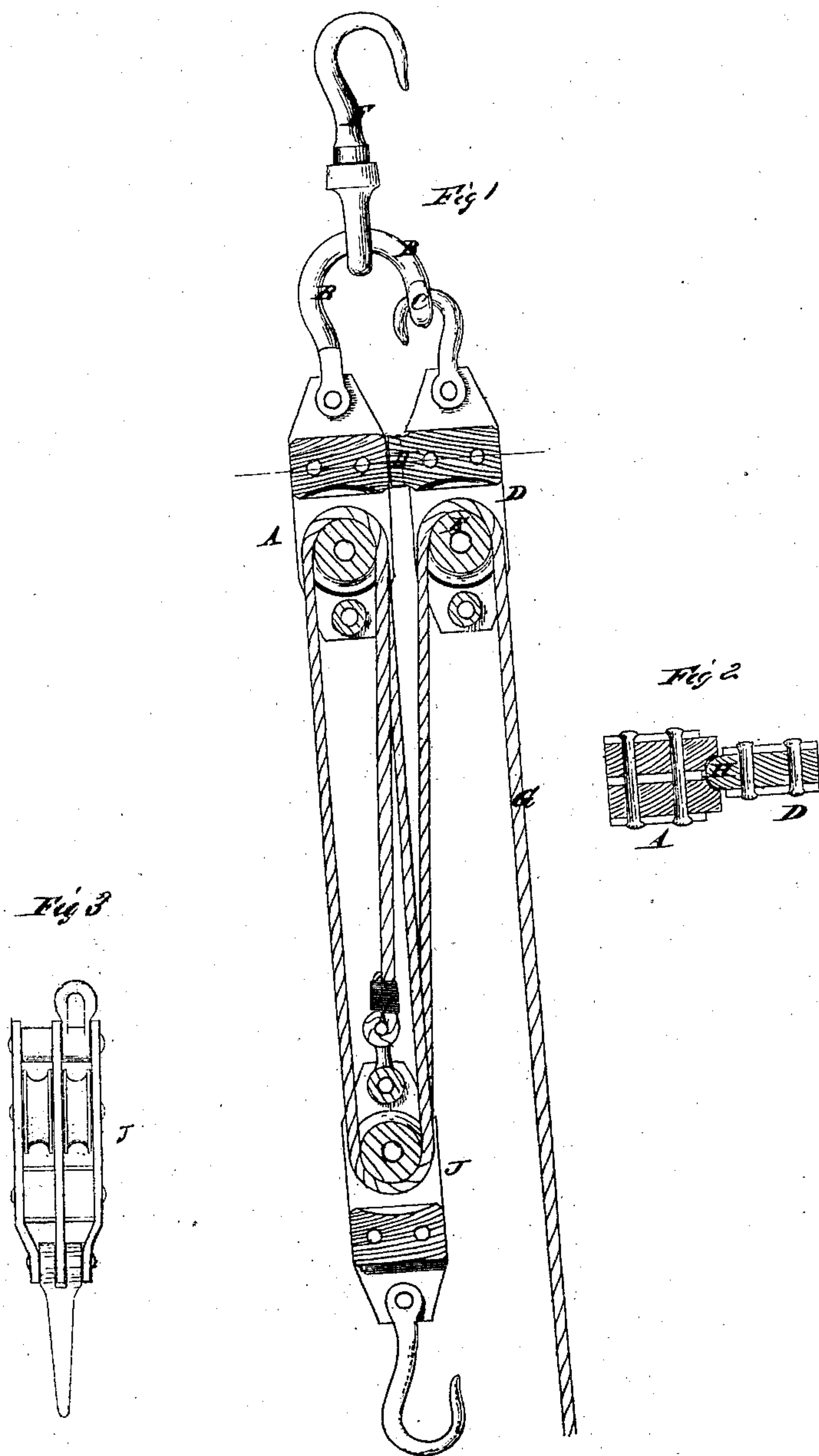


N<sup>o</sup> 27.633.

J. L. Hovey's Imp<sup>t</sup> in Hanging Pulley Blocks,

Patented March 27. 1860.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

J. L. HOVEY, OF LOCKPORT, NEW YORK.

## PULLEY-BLOCK.

Specification of Letters Patent No. 27,633, dated March 27, 1860.

*To all whom it may concern:*

Be it known that I, J. L. HOVEY, of Lockport, in the county of Niagara and State of New York, have invented a new and useful Improvement in Pulley-Blocks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a system of pulley-blocks, hung in a peculiar manner with a rope passing through them. The front plate of each block is removed, showing one sheave in each, and their shape and the manner of securing the plates together. Fig. 2 shows a projection and recess formed on the blocks of the two upper pulleys for keeping them in a parallel line with each other, when used as represented in Fig. 1. Fig. 3 is a side view showing one block with two sheaves or pulleys.

Similar letters of reference indicate corresponding parts in the three figures.

It is well known to those familiar with pulley blocks that in raising a weight with double or triple reeved blocks that the rope will pull heavier on one side than on the other of the upper, causing it to trip from a vertical or upright position creating an amount of friction, which requires far more power to raise the same heavy upright than when the upper block remains steady in its proper position and the ropes parallel. The reason of this parallel direction of the ropes being better than an oblique one is, that less power is required to sustain the same weight; and in proportion to the obliquity of the ropes must be the increase of the power. When there are many pulleys in the same block, and the end of the rope to which the power is applied terminates over one of the outside pulleys, that pulley always endeavors to get into a line with the center of suspension or middle of the movable pulleys from which the weight hangs.

To remedy this evil my invention consists in projecting up from the top of the fixed double pulley block. A hook having an eye in its end into which is hooked a collateral block with one pulley or sheave, and over this sheave the draw or full rope is passed leading from the movable block, the fixed pulley blocks are hung up by a swivel hook, which hooks under the fixed block hook; and in conjunction with these fixed blocks is a

projecting lip and recess formed, which keeps the fixed blocks in a perpendicular position and the ropes always parallel as will be hereinafter described. 60

The blocks themselves are novel in their form and construction which renders them very strong, and gives great facility in their manufacture, as will be described.

To enable those skilled in the art to fully understand my invention I will proceed to describe its construction and operation. 65

The block, A, is a fixed block composed of two pulleys, which may be of wood, or metal, and grooved in the usual manner to receive the rope or cord. In the top of this block projects a hook, B, having on its end an eye, C, into which is hooked a collateral block, D, having one sheave E. 70

F is a swivel hook by which the blocks, A D, are hung up and established. 75

H is a projection of the block, D, which fits into a notch or recess in block, A; this projection, H, acts in the manner of a fulcrum for the block, D, the hook being one arm, and the pulley the other, thus by drawing down on the pull rope G, which passes over the pulley E, the lower end of the block will have a tendency to incline toward the block A, when it will be kept in an upright fixed state by the hook and eye, and the projection, H, and in this manner the ropes will be kept parallel and vertical. 80

The movable block, J, has two pulleys, and one end of the rope is attached to its upper end passes up and over one of the pulleys in the block, A, down again and under the other pulley of block, J, thence up and over the pulley in collateral block, D, as clearly shown by the drawings. The pull or draft rope may now be drawn from the block, D, either in a direct line with the pulleys, or in a horizontal line, still the pulley block, D, will preserve its proper position. 85 90 95 100

The construction of the blocks shown by the drawings is attended with economy and rapidity and to this end, the side plates are first stamped out of sheet metal strips of a suitable size and thickness either with the corners cut off as shown, or the quadrilateral plates may have their corners slipped off afterward. These plates are then bolted together, wood or metal blocks being interposed between them to form the recesses or wards for the pulleys, and fitted up in the usual manner of making metal pulley blocks. 105 110



The blocks thus made are more favorable to my novel plan of arranging them, as they are longer, stronger and require less work to construct them than the usual round or  
5 oval blocks.

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

The peculiar method of hanging blocks,  
10 A D, both being suspended from one hook,

and kept in an upright position by a projection H, of the collateral block, thus obviating the friction occasioned by the pulleys getting twisted out of an upright position, as above described.

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Witnesses:

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