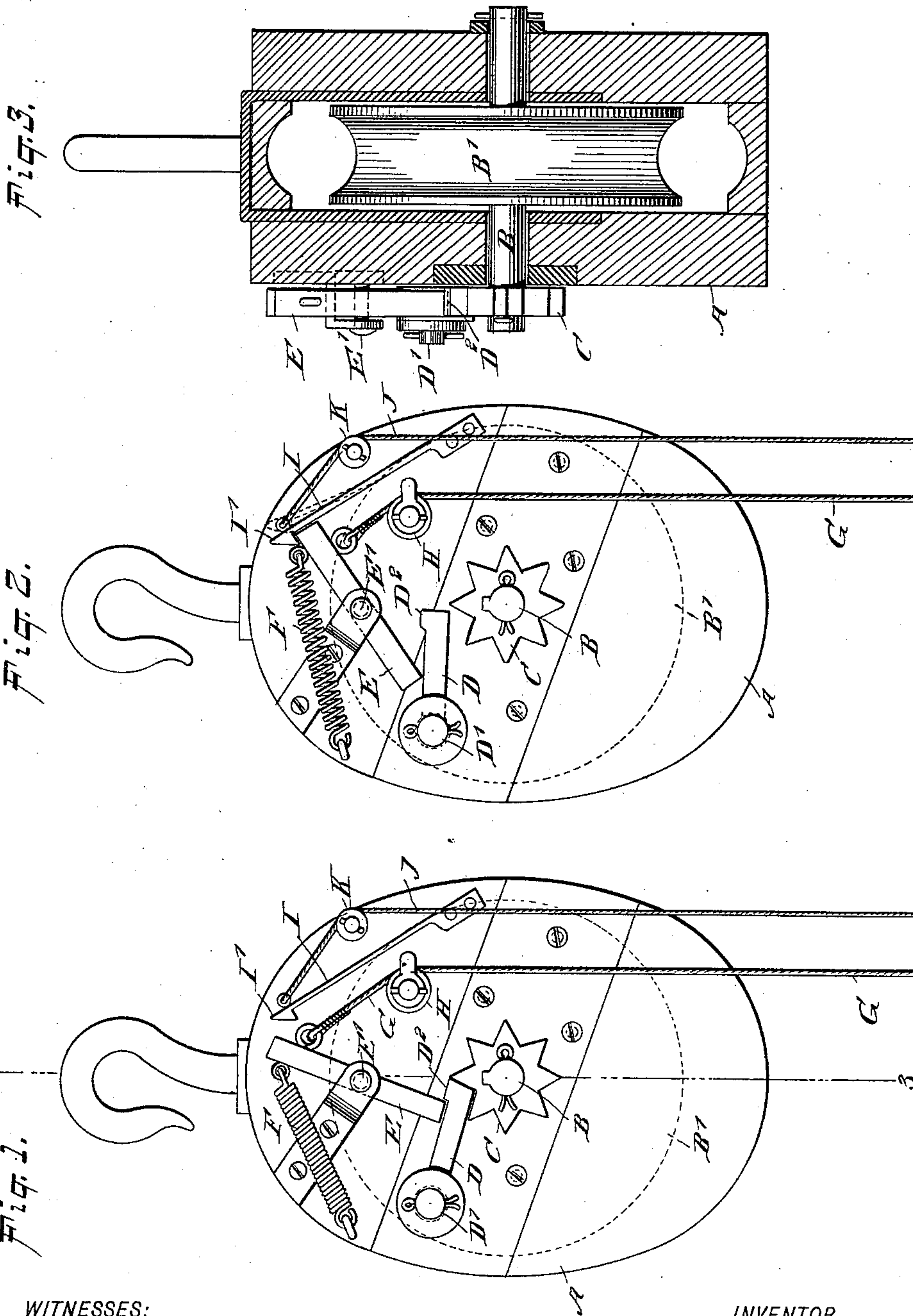


(No Model.)

O. SPITZER.
PULLEY BLOCK.

No. 541,021.

Patented June 11, 1895.



WITNESSES:
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OLIVER SPITZER, OF BROOKLYN, NEW YORK.

PULLEY-BLOCK.

SPECIFICATION forming part of Letters Patent No. 541,021, dated June 11, 1895.

Application filed January 19, 1895. Serial No. 535,544. (No model.)

To all whom it may concern:

Be it known that I, OLIVER SPITZER, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Pulley-Block, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved pulley block, arranged to permit the operator to instantly lock the pulley or sheave with the load suspended therefrom, or to release the pulley whenever it is desired to hoist or lower the load.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement, showing the pawl in a locked position. Fig. 2 is a similar view of the same with parts in a different position and the pawl unlocked, and Fig. 3 is a transverse section of the same on the line 3 3 of Fig. 1.

The improved pulley block is provided with the usual casing or housing A, adapted to be suspended by a hook or other means, and in the said casing or housing is journaled in suitable bearings, the shaft B carrying the pulley or sheave B' over which passes the rope, chain or similar device carrying the load.

On the front outer end of the shaft B is secured a star wheel C, adapted to be engaged by a pawl D, fulcrumed at D' on one face of the housing, the free end of the said pawl being provided on its top with a shoulder or stop D², as is plainly illustrated in the drawings. The pawl D is adapted to be engaged at its upper surface by the lower end of a lever E, adapted to abut against the shoulder or stop D² at the time the free end of the pawl D is firmly engaged between two teeth of the star wheel C, as indicated in Fig. 1.

The lever E is fulcrumed at or near its middle at E' on the face of the housing A, and its free end is pressed on by a spring F attached to the housing, the said spring serving to draw the lower end of the lever E against the pawl D to hold the latter in a locked position, as shown in Fig. 1. The upper end of

the lever E is connected opposite the spring F with one end of a rope G, passing over a pulley H, journaled on the housing A, the rope then extending downward to, or nearly to the ground to be under the control of the operator.

Now, it will be seen that when the several parts are in the position illustrated in Fig. 1, the spring F holds the lever E in engagement with the pawl D, so that the latter locks the star wheel C, and consequently prevents the shaft B and pulley B' from rotating, so that the load suspended on the rope or chain passing over the pulley, is held in a stationary position. Now when it is desired to hoist or lower the load, then the operator pulls on the rope G to impart a swinging motion to the lever E to release the pawl D, and to permit the star wheel C, shaft B and pulley B' to rotate, to hoist or lower the load in the usual manner. Now it will be seen that when the operator pulls on the rope G, the lever E moves into the position shown in Fig. 2, and the pawl D is free to ride over the teeth of the star wheel C, no matter in which direction the latter is rotated. At the same time the spring F is extended, and as soon as the operator releases the pull on the rope G, then the said spring, in pulling on the lever E, causes the latter to engage and press the pawl D downward to cause the free end of the latter to pass between two teeth of the star wheel, so as to lock the latter. It is understood that the lever E then stands approximately at right angles to the pawl D, so that an upward swinging motion of the same is impossible.

In order to lock the lever E in position after releasing the pawl D so as to relieve the operator from pulling constantly on the rope G while hoisting or lowering the load, I provide a spring catch I secured on the housing, and adapted to engage with its free hook end I', the free upper end of the lever E. See Fig. 2. The free end of this spring catch I is connected with a rope J, passing over a pulley K, to then extend downward to be under the control of the operator. Now it will be seen that when the operator pulls on the rope G to release the pawl D as previously described, then the upper end of the lever E swings into engagement with the hook end I' of the spring catch I, so that the latter locks the le-

ver I in this position, and the pulley B', shaft B and star wheel C can rotate freely when hoisting or lowering the load. Now when it is again desired to lock the pulley B' in place, 5 the operator simply pulls the rope J to swing the spring catch I out of engagement with the lever E, and permit the spring F to actuate the lever E to lock the pawl D, as previously described, onto the star wheel.

10 It will be seen that this device is very simple and durable in construction, can be readily applied to any pulley block, and is completely under the control of the operator.

Having thus fully described my invention, 15 I claim as new and desire to secure by Letters Patent—

A pulley block provided with a locking de-

vice comprising a star wheel on the pulley shaft, a pawl adapted for engagement with the star wheel and having one end enlarged 20 to form a shoulder thereon, a spring-pressed lever held to swing longitudinally of the pawl and adapted to abut against the shoulder thereof, said lever being under the control of the operator, and a catch likewise under the 25 control of the operator and adapted to engage the lever when its end is swung out of contact with the shoulder of the pawl to release the latter, substantially as described.

OLIVER SPITZER.

Witnesses:

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