

A. S. DICKINSON.
Stop Pulley.

No. 224,662.

Patented Feb. 17, 1880.

Fig. 1.

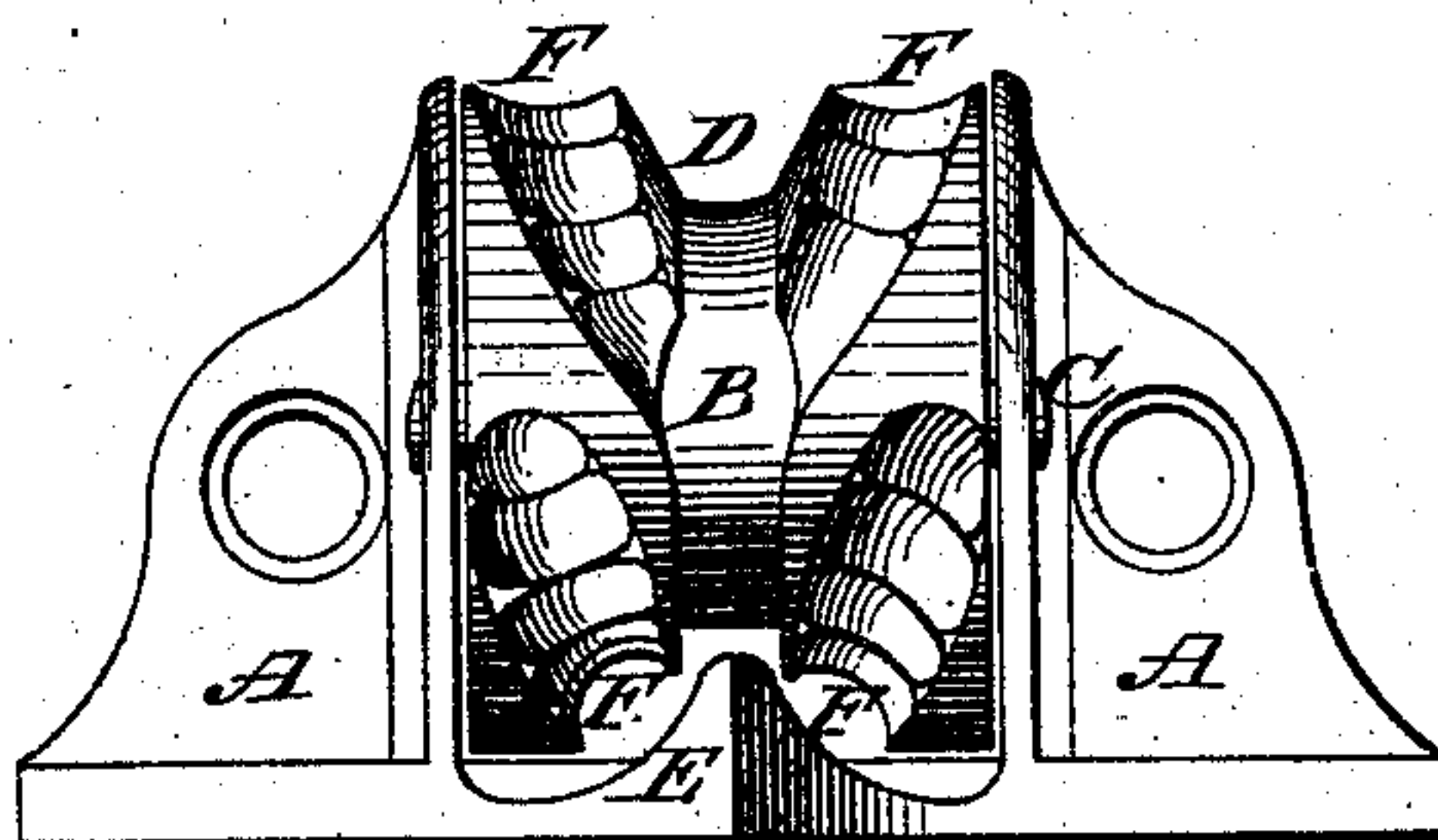


Fig. 2.

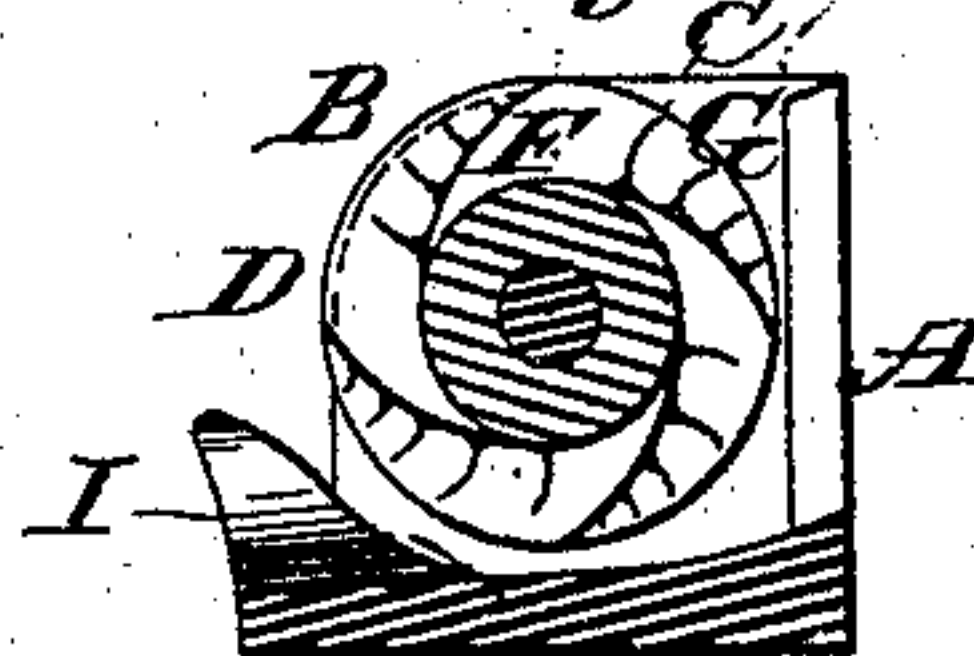


Fig. 3.

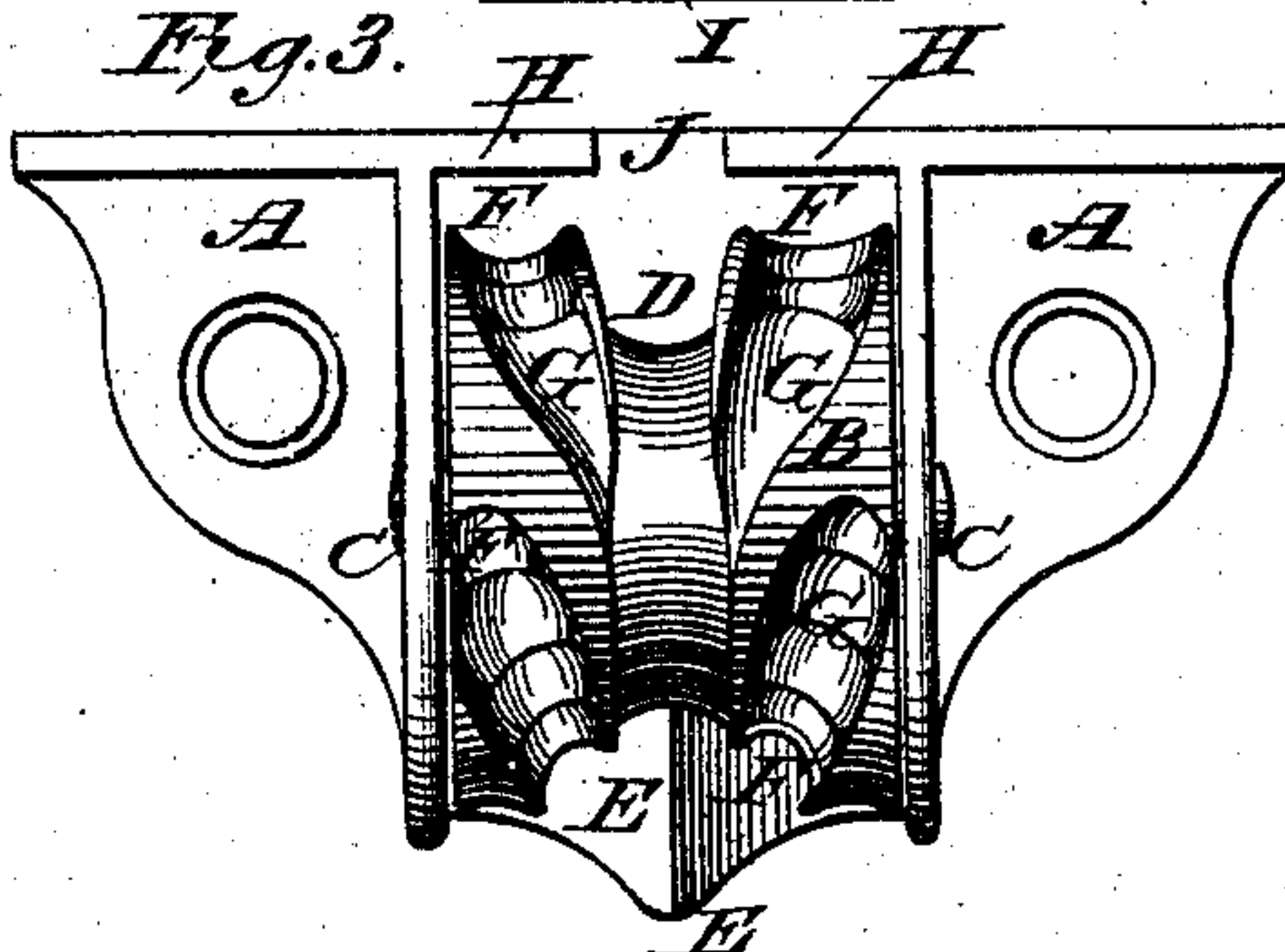
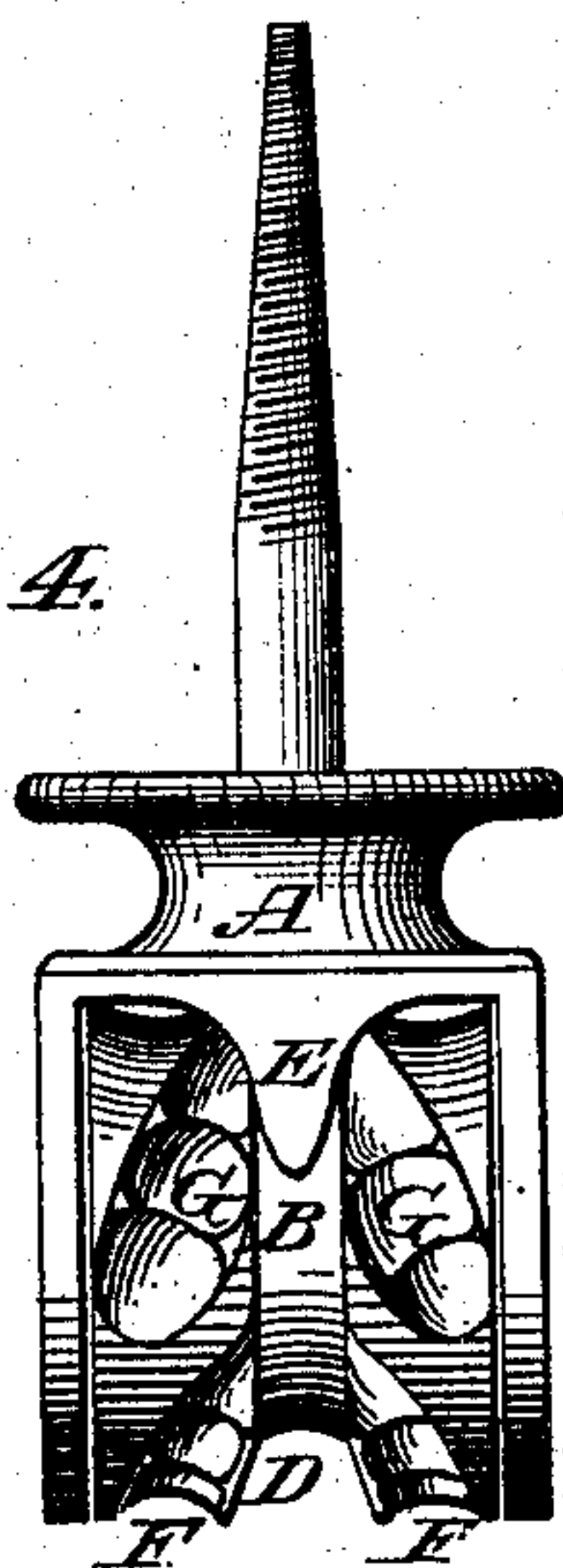


Fig. 4.



Witnesses:

E. O. Tyler
L. N. Dimmick.

Inventor:

Alfred S. Dickinson.

UNITED STATES PATENT OFFICE.

ALFRED S. DICKINSON, OF NEW YORK, N. Y.

STOP-PULLEY.

SPECIFICATION forming part of Letters Patent No. 224,662, dated February 17, 1880.

Application filed July 13, 1877.

To all whom it may concern:

Be it known that I, ALFRED S. DICKINSON, of the city, county, and State of New York, have invented certain Improvements in Tackle or Pulley Blocks for stopping the motion of cords or ropes, of which the following is a specification.

In the matter of tackle or pulley blocks for stopping the motion of cords or ropes, referred to and heretofore used, the grooves in the pulley are made at long intervals apart, with two grooves on each side only, and said grooves are placed unevenly to start from the groove around the pulley, first one groove to the right flange, and then one groove to the left flange, at long distances apart, so that the cord has to be led by the operator to one side or sidewise to cause it to ride upon the groove to the outside flange in order to stop it in the groove and block, and the cord is liable to slip off into the center grooves of the pulley and let the weight run down, as there is nothing at the front of the block and grooves to prevent it, or to prevent the cord from chocking at the rear of the block when drawing back or unreeving the cord through the block.

My invention relates to tackle or pulley blocks for stopping the motion of cords or ropes. The improvements herein described and claimed refer to the pulley with a central groove having the spiral grooves or furrows cast on the flanges, starting from the central groove of the pulley directly opposite each other, to receive the cord on either side, and the block having an open guide-slot at the rear and a groove at the bottom for the cord to pass through, (there is a flat surface on each side of the groove, and a V-shaped rib cast on in front of the groove at the front edge of the block in the center;) and the combination of the pulley having the spiral grooves or furrows for receiving the cord in connection with the block with the V-shaped rib and open slot and groove; and when the operator is in the act of raising the weight by the cord through the pulley, and by slacking or dropping the cord it strikes the point of the V-shaped rib and is immediately cast sidewise into one of the furrows of the pulley, and is held fast by the above means, making a self-

leading or automatic cord or rope stop pulley-block.

In the annexed drawings, Figure 1 represents a front view of a double base or plate pulley-block with my improvements. Fig. 2 represents a cross-section of the same; Fig. 3, a top view of the same. Fig. 4 represents a front view of a screw-shank pulley-block with my improvements.

A represents the block, and B the pulley, and C the arbor or pivot secured in the block, upon which the pulley rotates freely, and, according to the application, purpose, and location, said block is provided or formed with a screw-shank or with bases, or with a loop or eye, for the purpose of securing it in position, as the case may be, for operating said block.

The block A has the V-shaped rib E cast upon the front edge, and at the center and rear of the said rib E there is a groove, I, leading to the rear through the cord guide-slot J. This opening keeps the cord from jamming under the rear of the pulley and block when drawing back the cord, and on each side of the groove I there is a flat surface, H, leading forward and tapering on each side of the V-shaped rib to nearly a point at the front of the block.

D represents the ordinary traveling groove in the center of the pulley, between its ends, for the rope or cord, which is made concentric with its pivot C.

At the entrance of the block, where the cord, in passing from the operator between the pulley and block, is arranged, in front of the grooves D and I, is the V-shaped rib E, by means of which the cord or rope is guided to pass sidewise from the groove D between one of the flat surfaces, H, of the block and one of the flanges of the pulley, as soon as the operator drops or slackens the cord or rope.

F represents furrows or grooves in the flanges of the pulley, which are arranged to commence equally, one for each flange, from the base of the groove D, and spreading equally and advancing spirally, one to the right and one to the left of said groove, and gradually and equally rising from said base of the groove on to the outer periphery of the said flanges, and terminating with said outer periphery, as shown, according to the periphery of the pul-

ley. A sufficient number of said furrows are employed on each of said flanges. I make and show four double furrows, one at every quarter-rotation of the pulley, to admit the cord into one of them, either on the left or right hand flange, at every quarter-turn.

Both of the furrows F are made concave at their bottom and with a series of stops, G G, as shown. By means of the said equally-spread furrows, starting from the groove D, (one directly opposite the other,) at every quarter-turn of the pulley, and in connection with the central groove, I, and the open slot J, for guiding the cord from jamming, the rope or cord being rove through the central grooves, D and I, to and through the slot J, with the V-shaped rib E in front of the cord, when in the act of raising the weight by the rope, it being suddenly slackened or dropped by the operator, it is cast sidewise into one of the furrows F immediately, on account of the V-shaped rib E striking and self-leading the cord into one of the furrows. Said cord is forced down or into the outer periphery of the pulley, and there becomes locked against the sides of the rib E and surface H. The said cord cannot render or slip off into the grooves of the pulley and block; neither can it become loose out of its place unless drawn back by hand, on ac-

count of the V-shaped rib wedging the said cord at the sides into the furrows, and by the above means making a self-adjusting and safety-cord stop-pulley or tackle-block.

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

1. The pulley-block A, constructed with the bases or screw-shank, or loop or eye, as the case may be, and having the curved raised rib E upon the front edge, with the groove I, the surfaces H H, and open guide-slot J, substantially as and for the purpose herein mentioned and shown.

2. The pulley-roller B, provided with the concentric groove D, and having four eccentric grooves, F F, on each side, starting simultaneously from groove D and opposite each other, in combination with the curved raised rib E in the block A, with the groove I, the surfaces H H, and open guide-slot J, substantially as and for the purpose herein shown and described.

In witness whereof I hereunto set my hand this 7th day of July, 1877.

ALFRED S. DICKINSON.

In presence of—

E. O. TYLER,

L. N. DRINNOCK.