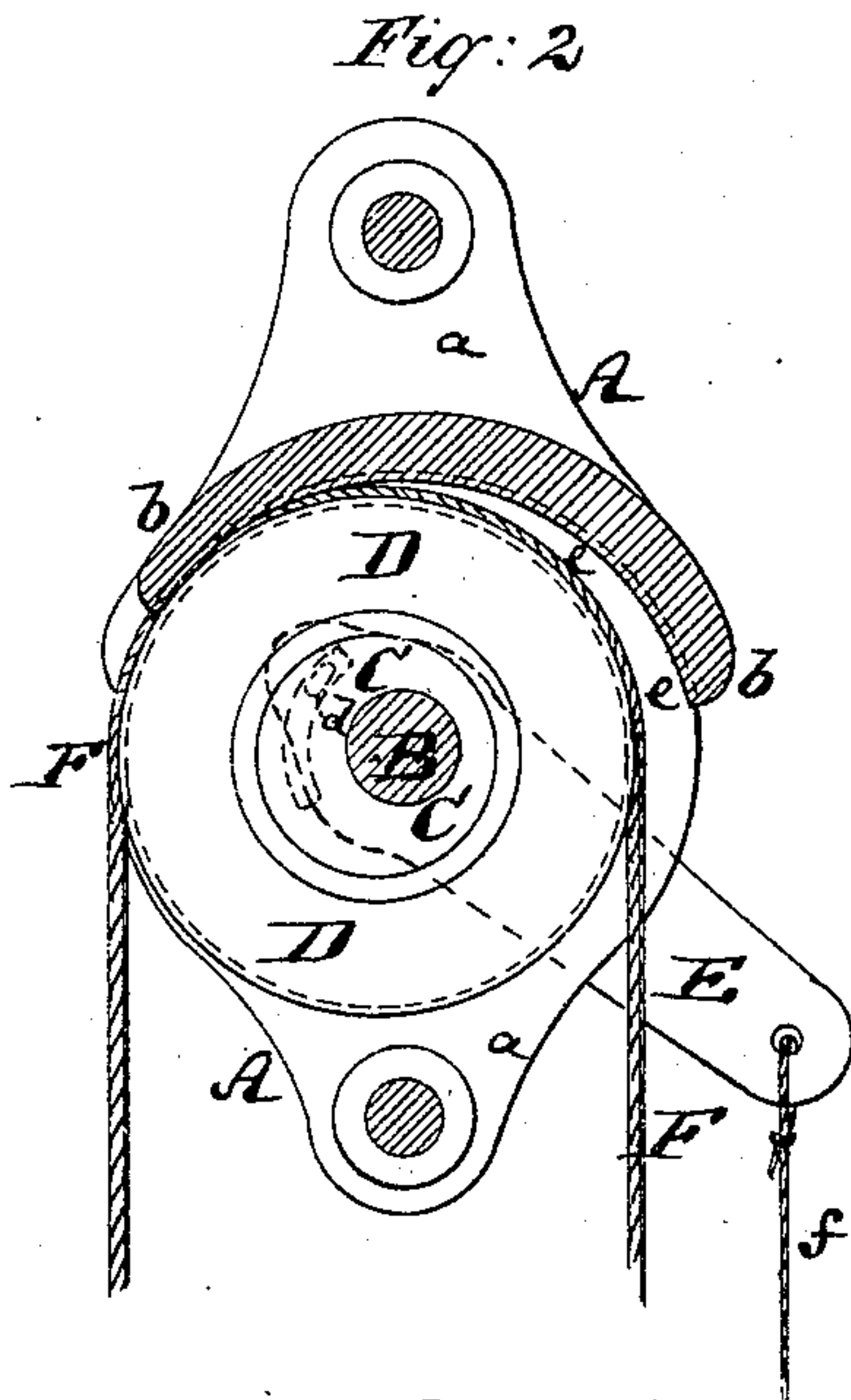
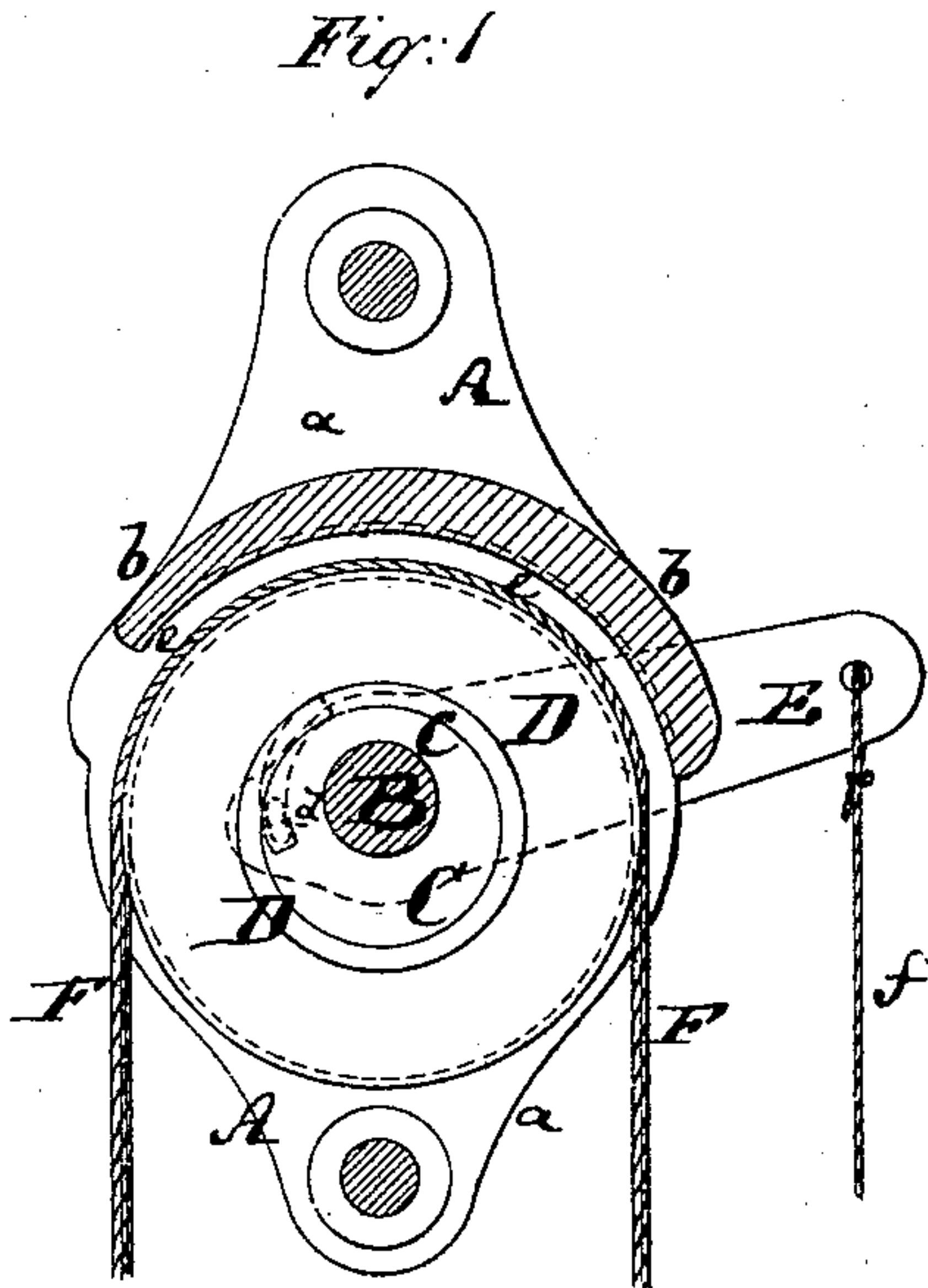
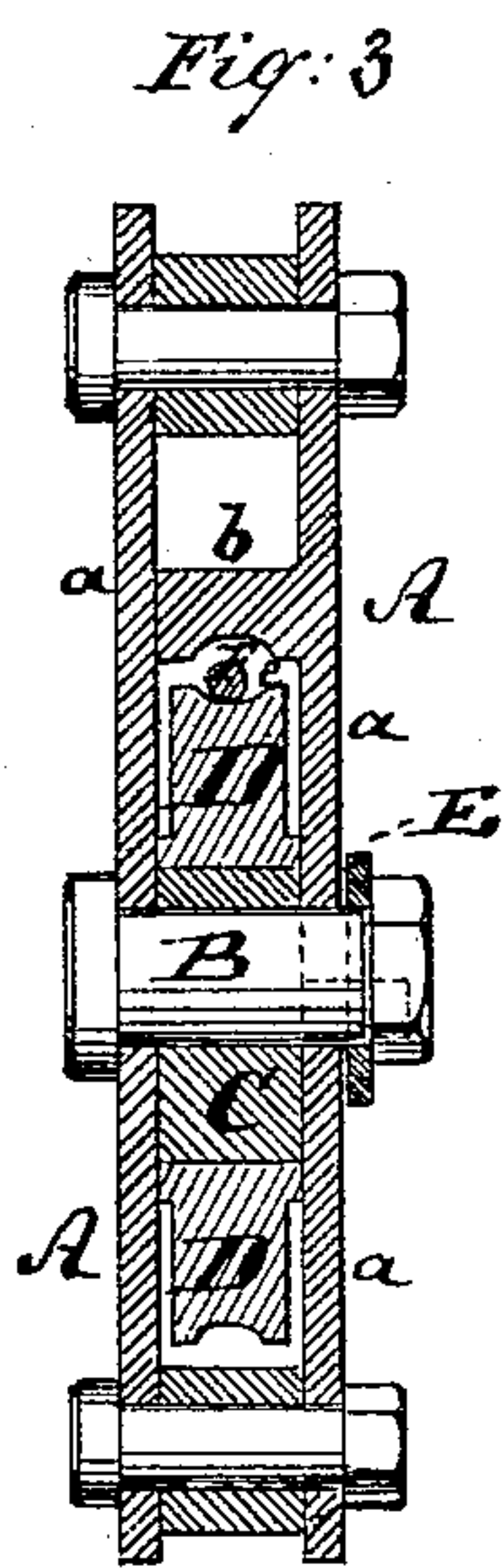


J. BIRD.

Self-Binding Pulley-Blocks

No. 152,270.

Patented June 23, 1874.



Witnesses:

*Chas. Raettig.
Edw. Webb,*

Inventor:

*James Bird
by his attorney
A. W. Briesen*

UNITED STATES PATENT OFFICE.

JAMES BIRD, OF NAUGATUCK, CONNECTICUT.

IMPROVEMENT IN SELF-BINDING PULLEY-BLOCKS.

Specification forming part of Letters Patent No. **152,270**, dated June 23, 1874; application filed May 26, 1874.

To all whom it may concern:

Be it known that I, JAMES BIRD, of Naugatuck, in the county of New Haven and State of Connecticut, have invented a new and Improved Self-Binding Pulley-Block, of which the following is a specification:

Figure 1 is a sectional face view of my improved pulley-block, one cheek of the shell being cut away to display the sheave and channel. Fig. 2 is a similar view of the apparatus, showing the sheave raised against one end of the channel. Fig. 3 is a central cross-section of the apparatus.

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

The object of this invention is to produce a pulley-block with a sheave capable of an eccentric movement, so that by means of the sheave the rope can be clamped in any desired position, leaving the weight on the rope suspended at the desired height for a suitable length of time. The invention consists in hanging an annular sheave loosely upon a coak or bushing, which is fitted eccentrically upon the pintle, and capable of turning around the latter. The coak or bushing is connected with a lever pivoted to the pintle, so that it can be turned by means of said lever to bring the edge of the sheave concentric to or eccentric with the concave edge of the cam. The rope will be free to play on and with the sheave as long as the same is concentric to said cam; but when it is desired to bind the rope, the lever is swung to carry the sheave near one end of the cam, and there bind the rope and hold it secure.

On the accompanying drawing, the letter A represents the shell of the pulley-block, composed of two cheeks, *a a*, and of a cam, *b*, between said cheeks. The cam is firmly secured in the shell and the cheeks are held together by means of bolts, straps, rope, or otherwise. B is the pintle, having its bearings in the cheeks of the shell, and, by preference, secured so it cannot revolve. C is the coak or bushing, hung upon the pintle between the cheeks *a a*, and capable of turning loose on the said pintle. This coak or bushing is of cylindrical form, but bored eccentric, so that its periphery is eccentric to the axis of the pintle. D is the

sheave or wheel, made of annular form, its inner periphery corresponding in diameter to the outer periphery of the bushing C. E is a lever, pivoted to the pintle outside of the shell, and connected with a pin, *d*, that projects from one face of the bushing through a curved slot in one of the cheeks *a*, said slot being indicated by dotted lines in Figs. 1 and 2.

While the parts are in the position indicated in Fig. 1—that is say, while the sheave is concentric to the concave edge of the cam *b* the channel *e* for the rope F will be free, and the rope consequently free, to be drawn in either direction on and over the sheave, which will roll on the bushing.

When it is desired to hold the weight on the rope F suspended at a certain height, the lever E is swung by means of a hand-line, *f*, or otherwise, to turn the bushing C and bring the sheave into the position shown in Fig. 2. In this position the sheave will bear against one end of the cam *b*, as shown, and will thus bind and firmly secure the rope F in position.

It is evident that this invention will also apply where the pintle B is dispensed with, and a projecting bearing on the bushing eccentric to its circumference used instead; also when, in place of the lever E, a cord is used, connecting with the pin *d*, and passing over a friction-roller that may be hung to the shell.

As to the cam *b*, it is not imperatively necessary that it have the concave form shown, as long as one end of it is in the position indicated, to aid in binding the rope.

I claim as my invention and desire to secure by Letters Patent—

1. The annular sheave D, fitted upon an eccentric coak or bushing, C, so that it may serve for binding the rope, as described.

2. The combination of the lever E with the eccentric bushing C and annular sheave D of a pulley-block, and with the cam *b* of the shell, as specified.

The above description of my invention signed by me this 25th day of May, 1874.

JAMES BIRD.

Witnesses:

A. V. BRIESEN,
F. V. BRIESEN.