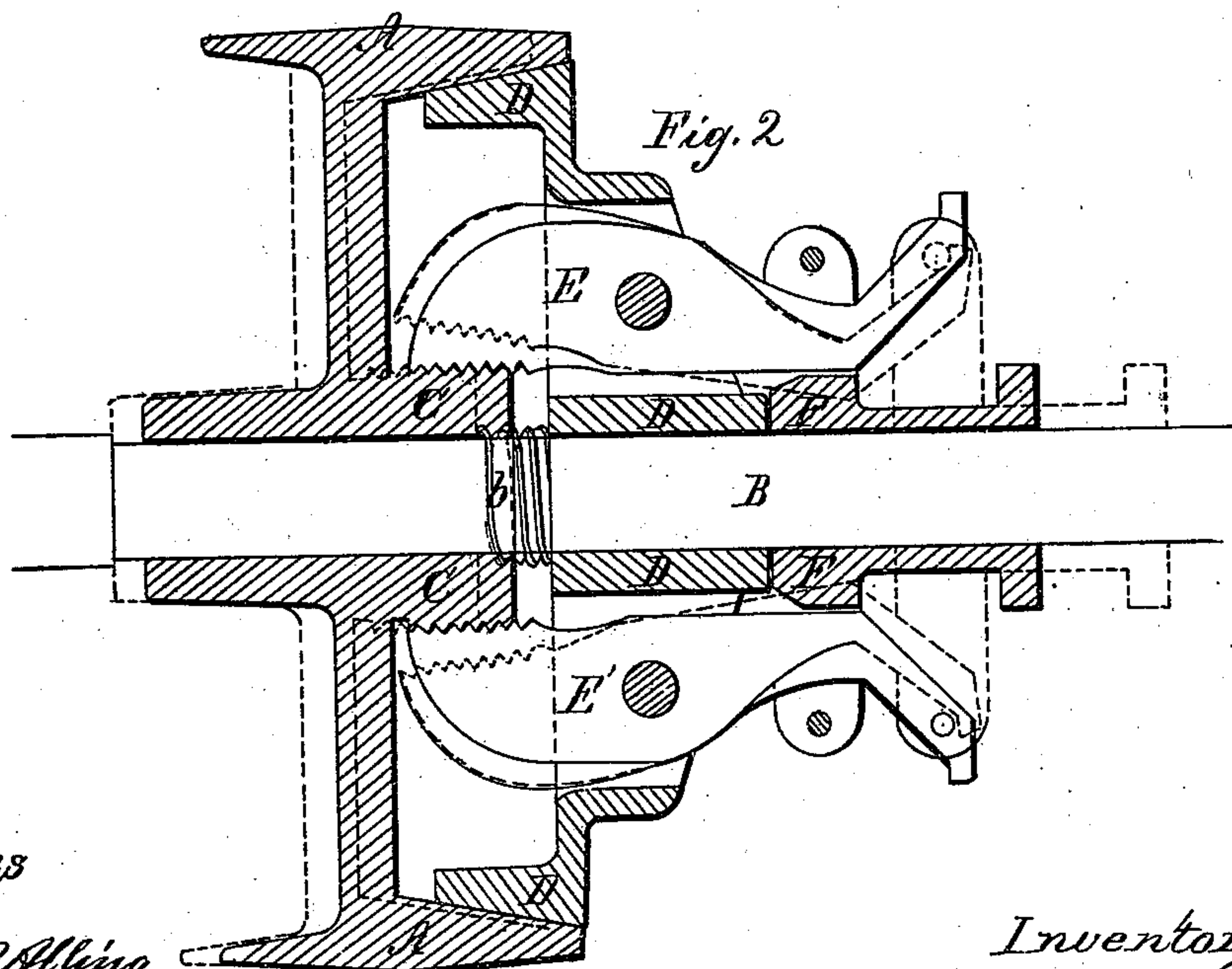
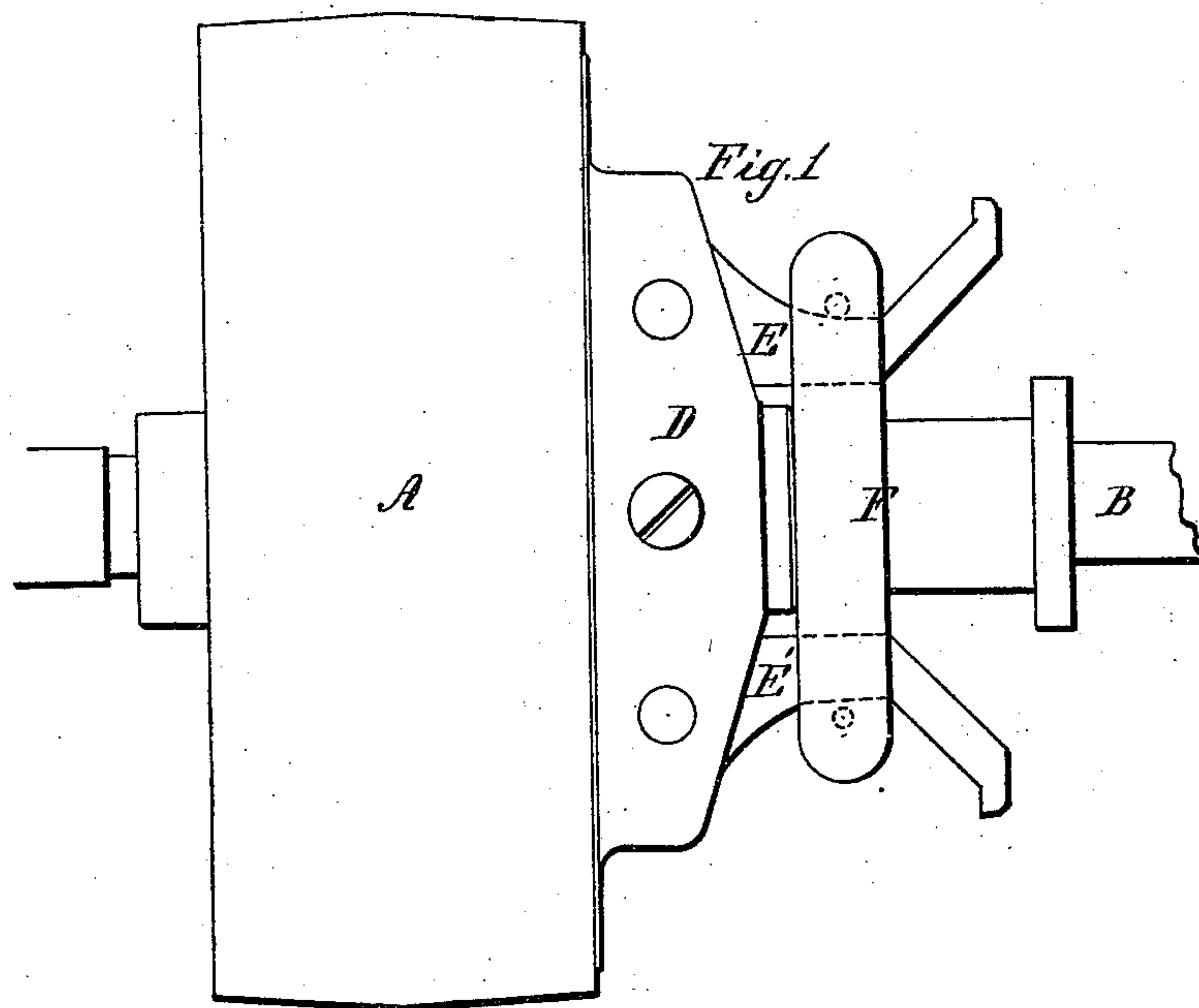


*A. B. Clemons.*

*Clutch Pulley.*

*N<sup>o</sup> 84,681.*

*Patented Dec. 8, 1868.*



*Witnesses*  
*Henry G. Alling*  
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# United States Patent Office.

ANDREW B. CLEMONS, OF ANSONIA, CONNECTICUT.

Letters Patent No. 84,681. dated December 8, 1868.

## IMPROVED FRICTION-CLUTCH PULLEY.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ANDREW B. CLEMONS, of Ansonia, county of New Haven, and State of Connecticut, have invented a new and useful Improvement in Friction-Clutch Pulleys; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon. Said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of my improved pulley.

Figure 2, a longitudinal central section of the same.

Similar letters of reference, when they occur in the separate views, indicate like parts.

My invention relates to an improvement in friction-clutch pulleys, in which the two parts of the incline are drawn together by the revolution of the pulley itself; and consists in placing two or more levers upon the friction-plate or clutch, said levers being opened and closed by means of a slide, and having their jaws to fit a corresponding screw upon the hub of the pulley, by which means the two parts may be drawn together with great force in pulleys of this description, which are worked, as is commonly the case, by either a simple or compound lever acting directly upon the friction-plate. No oil can be used upon the faces of the incline. The dust and grit soon wear the said incline, and not only damage the pulley, but render it more liable to slip upon the clutch. My invention is calculated to do away, in a great measure, with this wear, by rendering it possible to oil the said incline, and also by making the clutch self-acting. After the two parts have commenced to be drawn together, they will continue to be so drawn, tighter and tighter, until the friction is sufficiently great upon the incline to carry the pulley, and the machinery thereto attached.

To enable others skilled in the art to make and use my invention, I will proceed to describe the construction and operation of the same.

A is the pulley, revolving loosely upon the shaft B, furnished with a hub, C, upon which a screw-thread is cut.

Fastened upon the said shaft B, and revolving with it, is placed the friction-plate or clutch D. The incline upon its face is fitted to a corresponding incline in the pulley A.

Held in and extending through this friction-plate, in which they form bearings, are two levers, E and E', made similar to each other in form, the jaws of both of which are provided with a screw-thread to correspond with the similar thread upon the hub of the pulley.

These jaws are operated, that is, opened and closed upon the hub, by means of a slide, F, which moves

freely upon the shaft, and is connected with the shipper. The portion of the said slide nearest to and around the shaft, is furnished with an incline, to act upon the levers when they are open, and force the said levers out, and close the jaws upon the hub, as shown in black, fig. 2.

Upon this said slide, further from the shaft, and over the levers, pins, *a a*, are placed. The object of these pins is to act upon the upper side of the lever as the slide F is carried back by the shipper, and force open the jaws, as shown in red, fig. 2.

*b* is a spiral spring, placed upon the shaft, between the friction-plate and the hub of the pulley, to carry the said pulley back, when released by the jaw, to the position as shown in red, fig. 2.

This completes the construction of my improvement. The operation is as follows:

When the shaft is in operation, the friction-plate and the pulley A are drawn together, in the position as shown in fig. 1, and in black, fig. 2. If it is desired to stop the motion of the shaft, the slide F is thrown back by means of the shipper. The pins *a a*, in the said slide, come in contact with the arms of the levers and throw them down, which movement opens the jaws of the said levers, and releases them from the thread upon the hub C, as shown in red. The spring *b*, acting upon the hub of the pulley, immediately presses it away from the friction-plate, and carries the said pulley back until it strikes the shoulder upon the shaft, as shown in red, fig. 2. If desired to bring the shaft into operation, the slide F is thrown forward, the incline thereon strikes the arms of the levers, forcing them outward, and, consequently, pressing the jaws down upon the hub C. The screw-thread upon the said hub, in revolving, acts upon the jaws, and the friction-plate or clutch to which they are attached, and draws the two parts of the pulley together until the friction upon the inclines is sufficient to give the required power.

Having thus fully described my invention,

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

1. The screw-threaded levers, E and E', in combination with the friction-plate D and threaded hub C, of the pulley, for the purpose of drawing the two parts together, substantially in the manner and for the purpose specified.

2. The slide F, in combination with the levers, E and E', and pins *a a*, for the purpose of operating the said levers upon the hub C of the pulley, substantially as herein set forth.

ANDREW B. CLEMONS.

Witnesses:

D. K. LEACH,  
JOHN JACKSON.