W. D. Huse,

Spinning Mach.

No. 108,356. Patented Oct. 18, 1870.

Fig. 1.

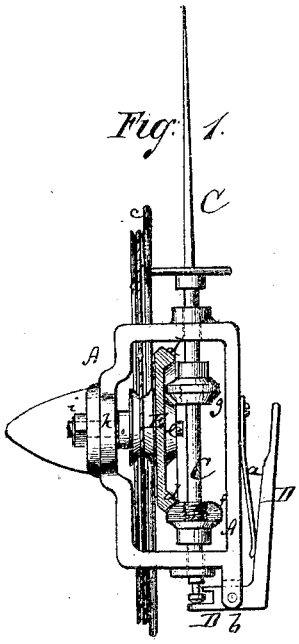
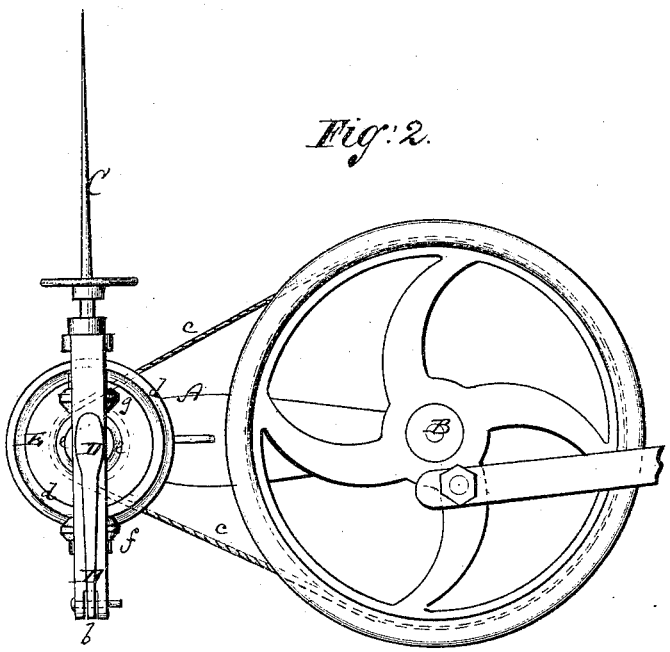


Fig. 2.



Witnesses:

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WARREN D. HUSE, OF GILFORD, NEW HAMPSHIRE.

Letters Patent No. 108,356, dated October 18, 1870.

IMPROVEMENT IN SPINNING-MACHINES.

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, WARREN D. HUSE, of Gilford, in the county of Belknap and State of New Hampshire, have invented a new and improved Friction-Pulley for Spinning; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 represents an end view, partly in section, of my improved friction-pulley for spinning-machines.

Figure 2 is a side view of the same.

Similar letters of reference indicate corresponding parts.

My invention relates to reversible spool-spindles, and consists in certain improvements, which will be first described in connection with all that is necessary to a full understanding thereof, and then clearly specified in the claims.

A in the drawing represents the frame, and

B is the main propelling or crank-shaft of a spinning, spooling, or twisting-machine.

C is the spindle for supporting the bobbin.

The spindle C is fitted vertically into the frame A, and its lower end rests upon an arm, *b*, of a bell-crank, D, that is pivoted to the frame A, as is clearly shown in fig. 1.

A spring, *a*, holds the lever D in such position that the arm *b* will be thrown up to hold the spindle in an elevated position, and, by swinging the lever D on its pivot, the spindle can be slightly lowered.

The shaft B serves to impart rotary motion by a belt or cord, *c*, to a pulley, E, which has two concentric friction surfaces, *d* and *e*.

The outer larger friction surface *d* is in contact with a friction-pulley, *f*, mounted upon the lower part of the spindle, and imparts rotary motion to the same.

Another friction-pulley, *g*, is mounted upon the upper part of the spindle-shank, and will, when the latter is lowered by means of the lever D, be thrown against the friction surface *e* of the pulley E, so that the motion of the spindle will be thereby reversed, the surface *e*, being the smaller, rotates the spindle with reduced velocity.

The friction surfaces of the pulleys *f* and *g* are formed of leather rings, that are screwed upon holders provided for them on the spindle-shank, as shown.

The spinner-head F is, by a bolt, *h*, secured to the frame A, and can be turned on said bolt, so as to reverse the position of the spindle, thereby obtaining either a right or left-hand machine, as may be desired. In either position the bolt is locked by a nut, *i*.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The combination, with the longitudinally-adjustable spindle C, provided with the beveled friction-disks *f g* of the pulley E, provided with correspondingly beveled and concentric driving-surfaces *d e*, all arranged and operating as and for the purpose described.

2. The arrangement, as shown and described, of the frame A, sliding spindle C, and spring lever *a b* D, all constructed as and for the purpose described.

WARREN D. HUSE.

Witnesses:

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