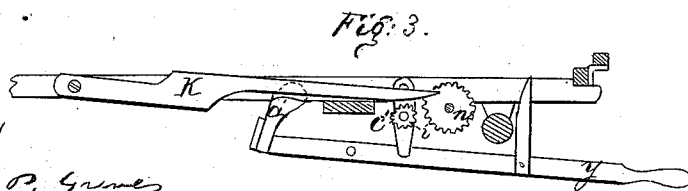
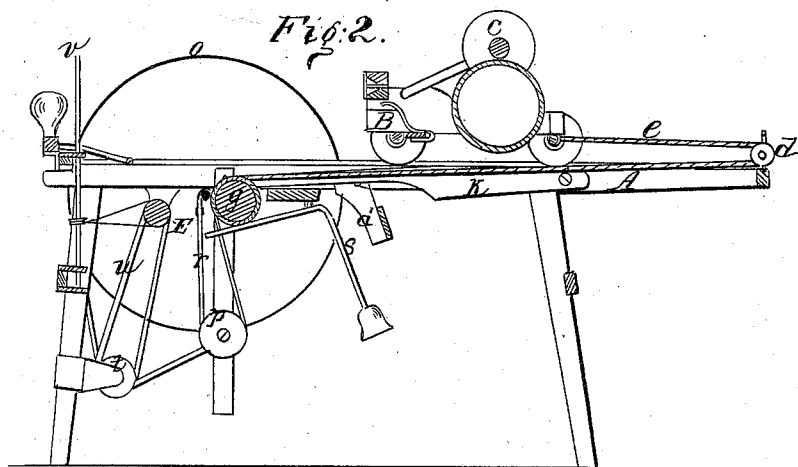
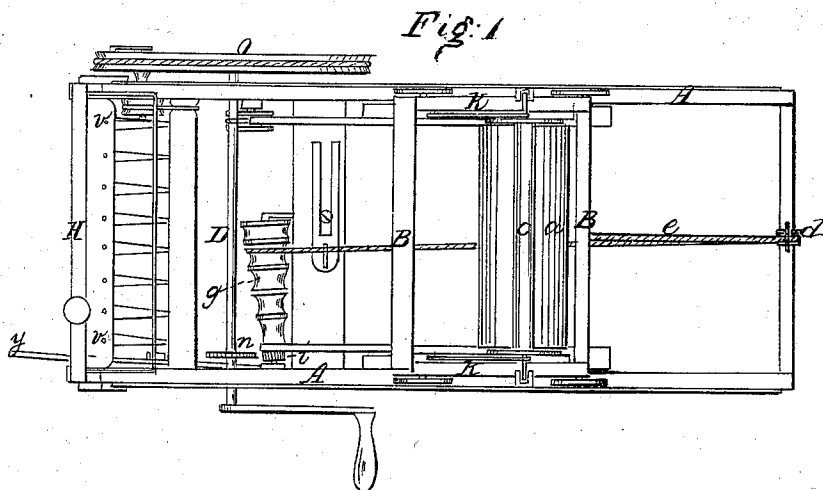


B. A. Grant,
Spinning Machine.
No. 82,984. Patented May 11. 1869.



Witnesses

James O. Graves
Barth S. Allen

Inventor

Belville A. Grant,
Chapman Hasbrouck & Co
attorneys

United States Patent Office.

BELVILLE A. GRANT, OF LOCKPORT, ILLINOIS.

Letters Patent No. 89,984, dated May 11, 1869.

IMPROVEMENT IN HAND-SPINNING MACHINE.

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, BELVILLE A. GRANT, of Lockport, in the county of Will, and State of Illinois, have invented a new and valuable Improvement in Spinning, Doubling and Twisting-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my device.

Figure 2 is a longitudinal section of the same.

Figure 3 is a detail.

My invention relates to spinning-machines; and

It consists mainly in constructing improvements upon the device of B. A. Grant and J. P. Ooate, patented August, 1866, said improvements consisting in novel means for throwing the windlass in gear and opening the clamp that holds the rolls; in improved means for holding the clamp open, and in stopping the carriage at any desired point.

The letter A of the drawings represents a quadrangular frame, the upper longitudinal bars of which are arranged to serve as a track or carriage-way for the carriage hereinafter mentioned.

The letter B represents a carriage, constructed to run back and forth upon the top of the frame A, as shown.

Upon this carriage I adjust the cylinder and guide for holding the rolls, in the manner represented, the cylinder being marked *a*, and the guide-roller *c*.

The letter *d* represents a pulley adjusted on the cross-bar, at the rear end of the frame, and letter *e* represents a rope passing over said pulley, and having its front end fastened to the windlass *g*. The windlass *g* is constructed in the form and arranged in the frame in the manner represented.

The letter *i* represents a small cogged wheel, by which the windlass is operated, as hereinafter mentioned.

The letter D represents a shaft operated by a crank, as shown, and upon which I attach the pinion *n*. This pinion meshes into and operates with the cogged wheel on the windlass, when thrown in gear therewith, as hereinafter stated.

The letter *o* represents a band-wheel, attached to the end of shaft D, as shown.

Letter *p* represents a pulley, attached to a side leg of the frame, and operated by a band, or cord *r*, passing over the shaft D. I make a knot on this pulley-cord, to aid in ringing the bell, as hereinafter mentioned.

The letter *s* represents a bell-handle, bent in the manner shown, and pivoted to the lower side of a

cross-bar of the frame. The rear end of this handle is made in the form of a crotch, holding the cord *r* between its crotch, and allowing it to move therein. Whenever the knot on the cord is moved around to the crotch of the bell-handle, it presses the same downward, and thereby causes the bell to ring.

The letter *t* represents a pulley, affixed as shown, and letter *u*, a band, or cord, connecting it with the shaft E.

Letters *v* represent the spindles, operated by cords passing over the shaft E, in the usual manner.

The letter H represents the hinged guide, which aids in guiding the yarn on the bobbins, in the ordinary way.

The letters K represent feed-bars, hung on the inside of the frame, by pivots at their rear ends, respectively, and resting upon the swinging frame *a'*. I attach a small wire, or pin, to the side of one or both of these feed-bars, which, when the bars are raised, is made to catch against a dog, or stop upon the lower side of the carriage, and prevents a further backward movement of said carriage.

The letter Y represents a sliding bar, arranged for throwing the windlass in and out of gear, its rear end being attached to the frame *a'*, and its front end extending forward of the spindles, as represented. On the inner side of this bar is a pin, which, when the bar is drawn forward, is brought against the lower end of the pivoted bar *c*, in which the right-hand journal of the windlass rests, and draws the same forward until the teeth of a pinion thereon mesh and work with the teeth of the pinion *n*.

To place the windlass in gear, I draw the bar *y* forward.

The spindles are actuated by a band passing around the band-wheel *o* and pulley *t*, which said pulley and band-wheel, being connected with the shaft E, in the manner set forth, serve to give it motion. This motion is communicated to the spindles by means of the bands connecting them with said shaft, as above stated.

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

The combination and arrangement of the sliding bar Y, swinging frame *a'*, feeding-bar K, pinions *i* and *n*, and the pivoted bar *c*, all constructed and operating substantially as and for the purposes specified.

In testimony that I claim the above, I have hereunto subscribed my name, in the presence of two witnesses.

BELVILLE A. GRANT.

Witnesses:

DR. W. BRADLEY,
HARRY G. VANDERVORT.