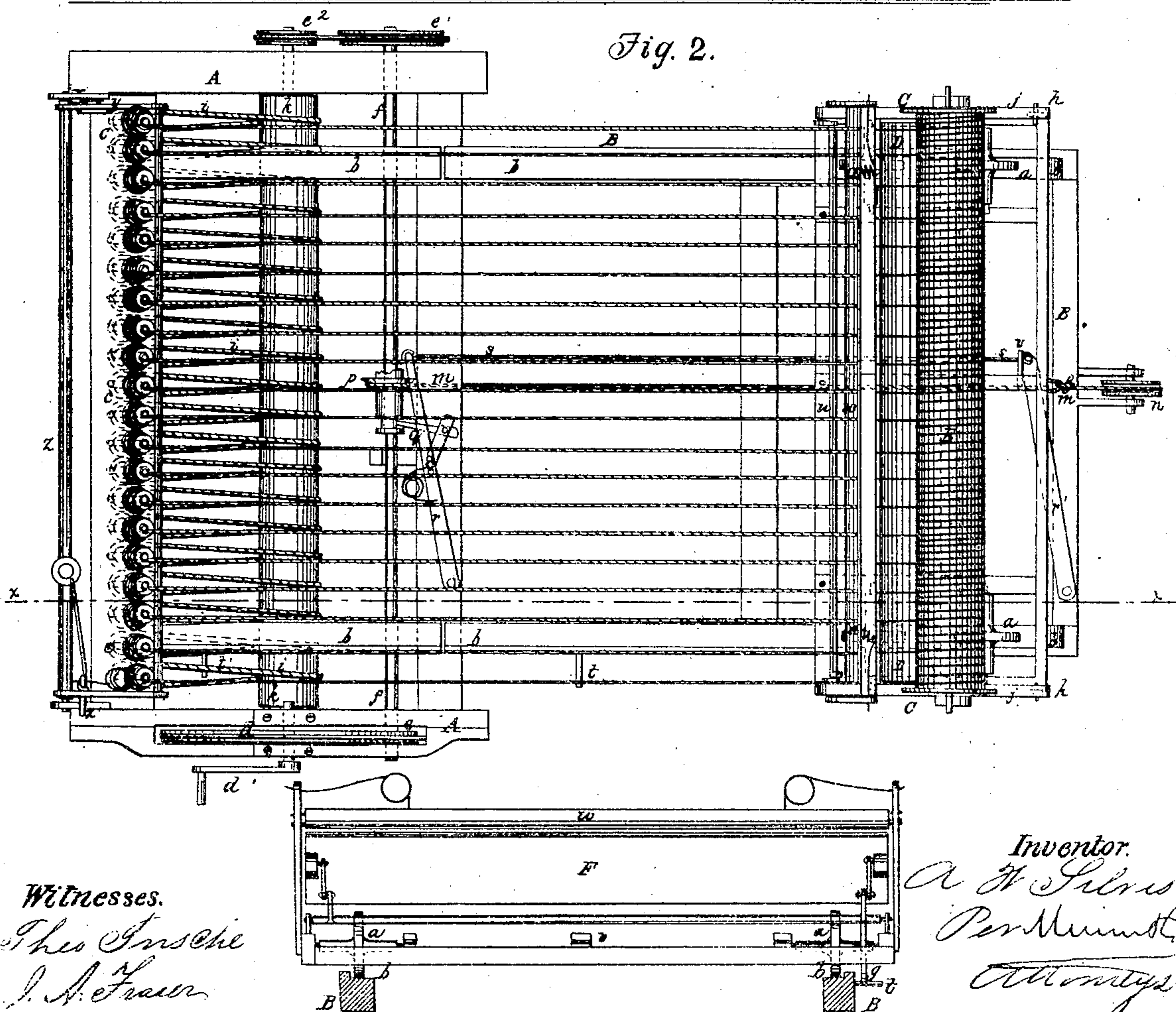
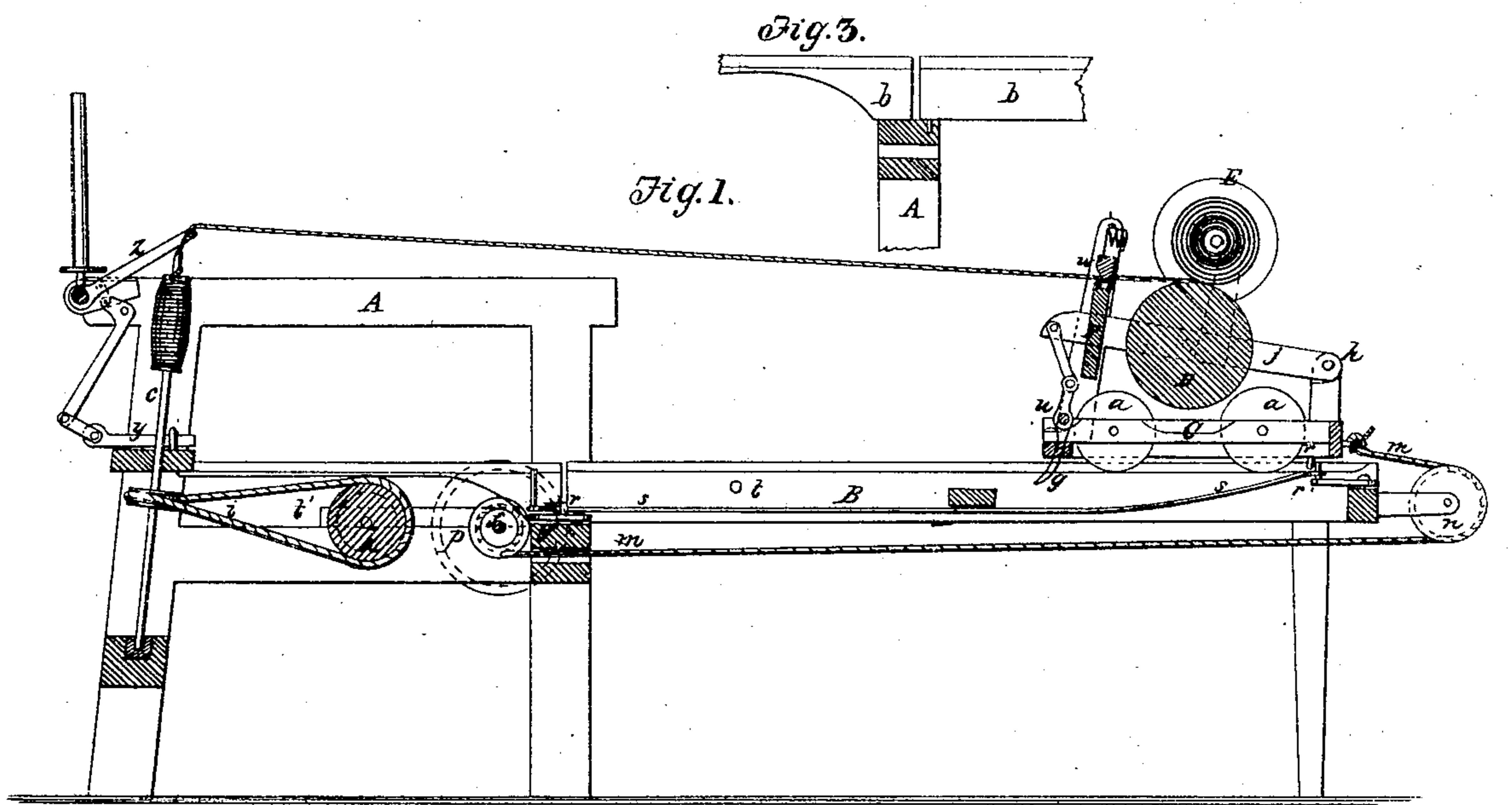


A W Silvis
Spinning Machine
No 75063 *Patented March 3. 1868*



Witnesses.
Thos. Insche
J. A. Frazer

Inventor.
A W Silvis
Perkin & Co.
Attorneys

United States Patent Office.

ANTHONY W. SILVIS, OF BIRMINGHAM, IOWA, ASSIGNOR TO HIMSELF
AND SAMUEL B. SHOTT, OF THE SAME PLACE.

Letters Patent No. 75,063, dated March 3, 1868.

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, ANTHONY W. SILVIS, of Birmingham, in the county of Van Buren, and State of Iowa, have invented a new and useful Improvement in a Hand-Spinning Machine; 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 drawings, forming part of this specification.

Figure 1 is a vertical longitudinal section of my improved hand-spinning machine, taken in the line *x x*, fig. 2.

Figure 2 is a plan or top view of the same.

Figure 3 is a detached front view of the carriage C.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and useful improvement in the construction of a machine for spinning a number of threads at a time by hand-power. On the frame of the machine is mounted a carriage, provided with feed-rolls, and this carriage traverses back and forth to and from a series of spindles arranged across the front end of the frame, and it is operated by a hand-crank. With this machine a person can spin a much greater quantity of yarn than with the ordinary spinning-wheel.

A is a stationary rectangular frame, and B a movable frame, that may be folded up out of the way, connected with it in the rear for operation, and extending back any desired distance, on which is mounted a carriage, C, having four wheels, *a a*, two on each side, to travel upon ways *b b*, that run along the top of the frame B, and extend over the frame A, to allow the carriage C to come close up to the spindles *c c*, placed in a line across the front part of the frame A. On one side of the frame A is hung a pulley, *d*, operated by a hand-crank, *d'*, and banded to a smaller pulley, *e*, on a driving-shaft, *f*, that lies across the back part of the frame A, and on its opposite end carries a pulley, *e'*, that is banded to a small pulley, *e''*, fixed on the end of a drum-pulley, *k*, that extends across the frame A, and carries the bands *i i*, which give motion to the spindles *c c*, respectively, in the ordinary way. A feed-roll, D, is mounted on the carriage C in side pieces *j j*, that are hinged or pivoted at *h h*, so that the feed-roll D may rest upon the carriage-wheels *a a*, and receive motion from them as they travel in one direction to unwind the sliver on it, or be raised up so as not to touch the wheels, and thus remain still when the carriage moves up to the spindles to wind up the yarn on the bobbins. The spool E, containing the roping, is placed as usual on the roll D. The carriage is operated by means of a cord, *m*, fastened at the rear end, which cord passes over a sheave, *n*, on the back part of the frame B, and thence to a drum or winch, *p*, placed loosely on the driving-shaft *f*. The drum *p* is provided with a clutch, which is shifted by a finger, *q*, connected with a lever, *r*, pivoted on the frame A. The lever *r* is connected by a rod, *s*, with a corresponding lever, *r'*, pivoted on the rear part of the frame B.

When the machine is prepared for spinning, by having the roping on the spool E connected with the spindles, as usual, and the carriage C is in position over the frame A, then, by turning the crank *d'*, motion is given to the machine through the driving-shaft *f*, and the pulley-connections before described. The cord *m* is then wound up on the drum *p*, and draws the carriage C back over the frame B, the clutch on the drum being then engaged with the shaft *f*. As the carriage C travels back on the frame B, the feed-roll D rests upon the wheels *a a*, and takes motion therefrom to feed the roping off of the spool E, that rests loosely upon it in the ordinary way, but when the carriage reaches a certain point far enough back for the delivery of the roping to cease, a catch, *g*, then strikes a pin, *t*, on the side of the frame B, which catch turns a rock-bar, *u*, extending across the carriage, and by its connection with the hinged side-pieces *j j*, raises them up at one end and lifts the feed-roll D clear of the wheels *a a*, to stop its motion, and at the same moment elevates a sliding guide-rail, F, so that it pinches the roping against a top rail, *w*, and thus holds the roping for the subsequent operations of twisting, drawing, and winding the yarn. So soon as the carriage C runs back to the rear end of the frame B, the free end of the lever *r'* is struck by a catch-pin, *v*, on the under side of the carriage, and by means of the rod *s*, connecting the lever *r'* with the lever *r*, and the finger *q* operated thereby, disengages the clutch on the drum *p*. The carriage C is then free to return to the front of the machine to wind up the yarn, which draws it for-

ward in the operation of winding on the bobbins in the usual way. As the carriage C comes up to the front of the machine on the frame A, it strikes a slide-piece, *y*, at one side, and raises the drop *z* to throw it back from the spindles in the usual way. The drop *z* fastens itself by a spring-bolt, *z'*, which catches on the side of the frame when the drop rises. When the carriage C reaches the front of the machine, the catch *g* strikes the pin *t'*, and thus drops the feed-roll D and the guide-rail F to release the roping, and allow it to feed again, while at the same time the catch-pin *v* strikes the free end of the lever *r*, and engages the clutch on the drum *p*, to allow the carriage C to be drawn back and repeat the operation before described. Thus the work of spinning a number of threads at a time is accomplished by hand-power with great expedition, by which means a great economy is effected in domestic manufactures.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The carriage C, in combination with the feed-roll D, guide-rail F, spool E, catch *g*, and pin *t'*, all operating as described, whereby, as the catch *g* strikes the pin *t'*, the feed-roll D is dropped upon the wheel *a* of the carriage, and the guide-rail F releases the roping to be fed to the spindles, as herein shown and described.
2. The combination of the carriage C, having the operating-mechanism, the cord *m*, sheave *n*, rods *s*, shaft *f*, clutch-pulley *p*, levers *r* *r'*, and finger *q'*, as herein described for the purpose specified.
3. The slide *y*, connected with the drop *z*, and operated by the carriage C, as and for the purpose specified.

ANTHONY W. SILVIS.

Witnesses:

ERASTUS PITKIN,
PHILIP S. STONE.