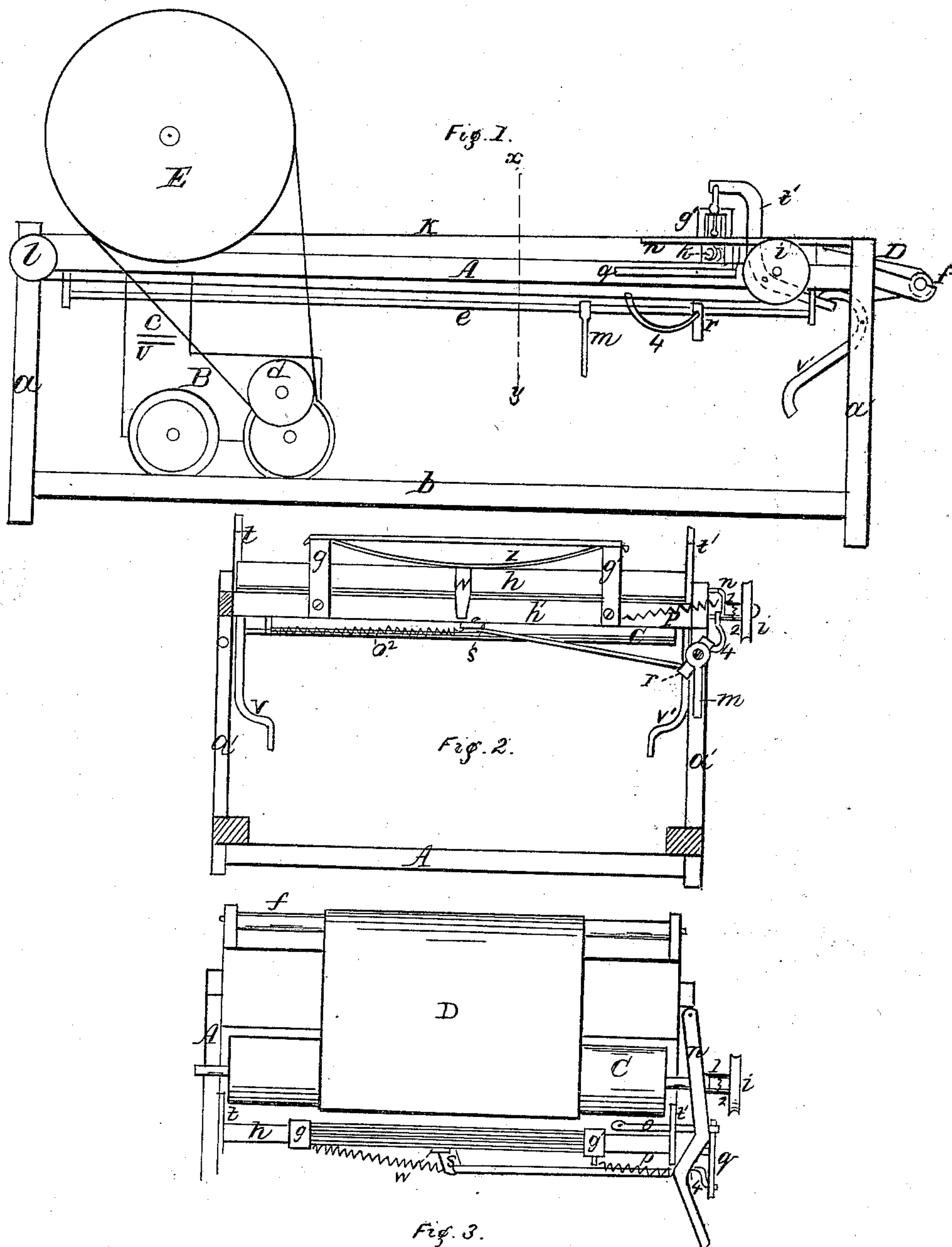


W. A. Stevenson, Spinning Machine.

No. 80,572.

Patented Aug. 4, 1868.



Witnesses

Wm. L. Ruggles

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W. A. STEVENSON, OF ATHENS, MISSOURI.

Letters Patent No. 80,572, dated August 4, 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, W. A. STEVENSON, of Athens, Clarke county, and State of Missouri, have invented a new and useful Improved Spinning-Machine, of which the following is a full, clear, and exact description, reference being had to the annexed drawing, making a part of this specification, in which—

Figure 1 represents a side elevation of my invention.

Figure 2 represents a transverse section of same at $x y$.

Figure 3 represents a top view of one end.

Similar letters indicate like parts.

This machine is adapted more particularly for family use in spinning yarn.

It consists of a wooden frame, A, figs. 1, 2, 3, of any desired dimensions, raised to a convenient height, on four standards, $a a'$, fig. 1, and $a' a''$, fig. 2. The lower part of the frame $b b'$ (b only being shown in fig. 1) serves as a track for the carriage B to travel on. This carriage is made in the common way, with spindles in the part represented by c , and the spindles are connected by bands with the shaft of the wheel d , which extends across the carriage from side to side, the wheel d being connected by a band with the driving-wheel E, which is attached by suitable bearings to the carriage B.

At the opposite end of the frame is placed a feeding-drum, C, figs. 2, 3, having a feeding-belt, D, figs. 1, 3, which also passes over a roller, f , figs. 1, 3, supported by a frame, extending a convenient distance from the end of the main frame. In front of C are placed two jaws, $h h'$, fig. 2, extending transversely across the machine, the upper one moving vertically in the inverted U-irons $g g'$, figs. 2, 3, and g' , fig. 1, fastened to the lower jaw, while their upper ends are connected by a rod, as shown.

To the extremity of the shaft of the feeding-drum C is attached a pulley, i , figs. 1, 2, 3, which is connected by a belt, k , fig. 1, with a like pulley, l , on the opposite end of the frame. This belt k is so fastened to the standard, in which the wheel E has its bearings, as to be set in motion as the carriage travels back and forth. A rod, e , fig. 1, extending from one end of the frame to the other, has on it a movable stud, m , figs. 1, 2, which, sliding freely on the rod, may, by means of a set-screw, be fixed at any desired point.

On the inside of the pulley i are placed two ratchet-wheels, 1 2, figs. 2, 3, engaging with one another, the one being attached to the wheel, while the other moves back and forth on the shaft by means of the lever n , figs. 1, 2, 3, which has a stud fitting into a groove in the ratchet 1, in such a way as not to interfere with its revolving. By means of this lever and its connection, the drum and pulley may be thrown in and out of gear at pleasure. A pivoted bar, o , fig. 3, having one extremity free, is so arranged that when the ratchets are made to engage, a shoulder on the bar prevents the lever from being drawn back by the spring p , figs. 2, 3. The other end of o is connected by a link with the lever q , figs. 1, 3, pivoted on the frame.

On the rod e is firmly fixed a lever, r , figs. 1, 2, connected by a rod with the step s , figs. 2, 3, pivoted on the under jaw h' , and connected with a spiral spring, as shown. The lever r has an arm, 4, figs. 1, 2, 3, which engages with q . The upper jaw is connected by levers t' , fig. 1, $t t'$, figs. 2, 3, with levers v' , fig. 1, and $v v'$, fig. 2.

When the machine is to be used, the carriage is pushed against the levers $v v'$, which raise the jaw h until the plate w , figs. 2, 3, rising above the step s , allows the spring o^2 to act and draw the step under it, thus holding the jaw up. When the carriage is pushed against the levers $v v'$, a projection on the standard supporting the wheel E acts upon the lever n , causing the ratchets to engage. The wool is drawn through between the jaws, and is attached to spindles in the usual way, and the carriage is drawn back; the operator at the same time, with one hand, turns the wheel E, while the feeder splices the wool on the feeding-belt as fast as necessary. The belt and drum are made to revolve by the motion of the carriage. The stud m is placed as far from the jaws as is necessary to give a given length of roving, and the cam u , on the carriage, strikes it as the carriage passes out, and causes the rod to make a partial revolution, drawing the step s back, and causing the jaw

to fall and hold the yarn tight, allowing no more to pass through. The same movement of the rod also causes the ratchets to ungear, by raising the lever *q* by the arm 4, which lifts the lever *n*, allowing the spring *p* to act.

The yarn now being held firmly by the jaws, and the feeding-drum no longer revolving, it may be twisted and stretched as much as desired; and then by moving the carriage towards the jaws, the yarn may be wound up, and, and the jaws being again raised and the drum thrown into gear, the operation may be repeated. The jaw may be made heavy enough to fall by its own weight, or be provided with a spring, *z*, fig. 2.

This machine requires but two to work it—one to feed and the other to work the carriage—all its other operations being automatic, by reason of its peculiar arrangement of levers, &c. This obviates the necessity of one of the operators stopping each time to raise and lower the jaw, or throw the feeding-shaft in or out of gear.

I do not claim any novelty in the construction of the carriage or its spindles and belting, nor in the use of the jaws, feeding-drum, belt, and roller described, since these are similar to those ordinarily used in spinning-machines of this kind; but

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

1. The rod *e*, stud *m*, levers *r*, *v v'*, and *t t'*, jaws *h h'*, step *s*, and plate *w* of a spinning-machine, all constructed, arranged, and operating in relation to one another and the other parts of the machine, substantially as and for the purpose specified.

2. The rod *e*, stud *m*, lever *r* and its arm 4, levers *n* and *q*, with its connections, ratchets 1 2 of a spinning-machine, all constructed, arranged, and operating relatively to themselves and the other parts of the machine, as and for the purpose specified.

3. The combination of the parts above mentioned with the frame *A*, carriage *B*, drum *C*, belt *D*, and roller *f* of a spinning-machine, as and for the purpose specified.

W. A. STEVENSON.

Witnesses:

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