R. Moxley.

Spinning-Machine.

No. 73371 Patented Jan. 14, 1868.

Fig. 1.

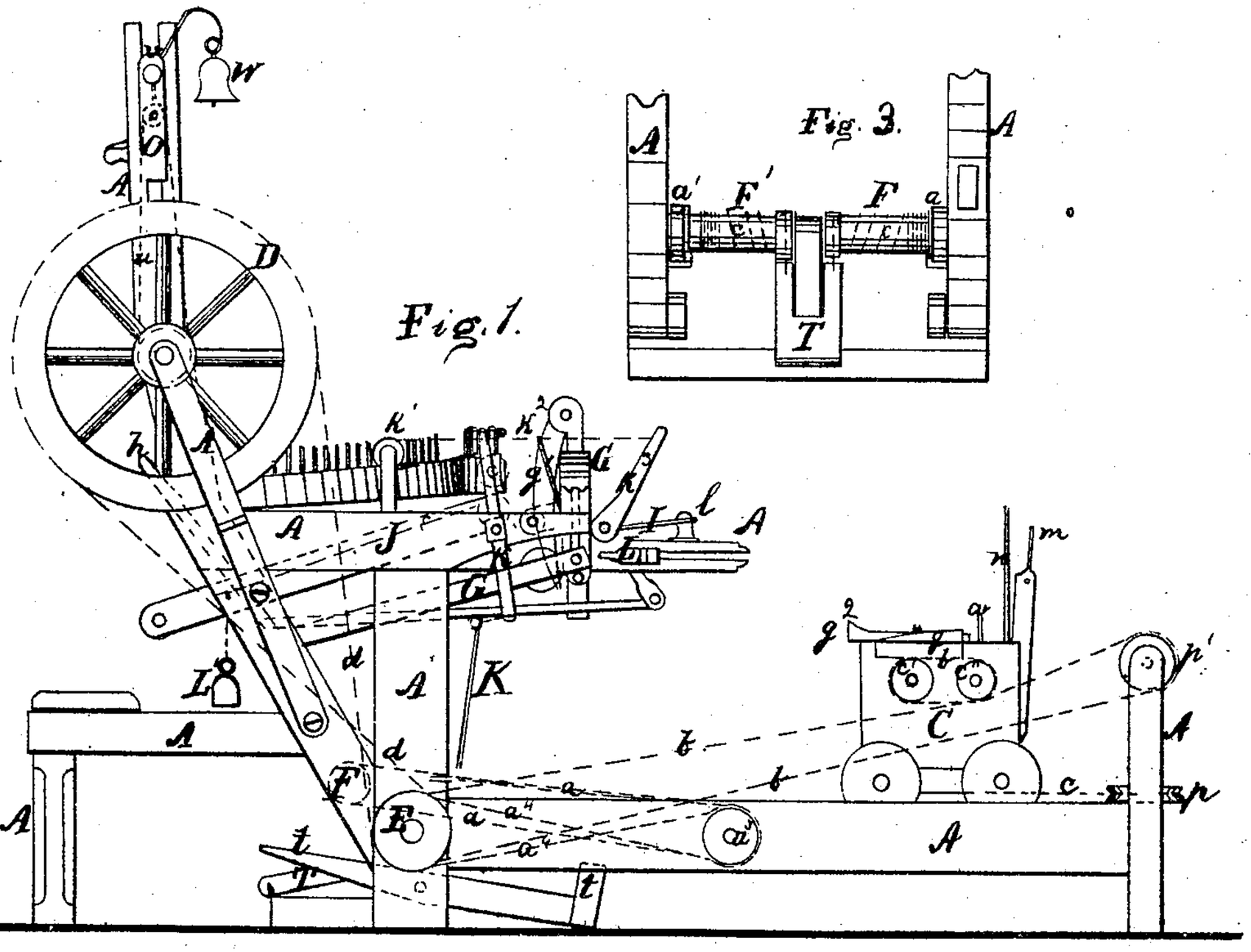


Fig. 3.

Fig. 2.

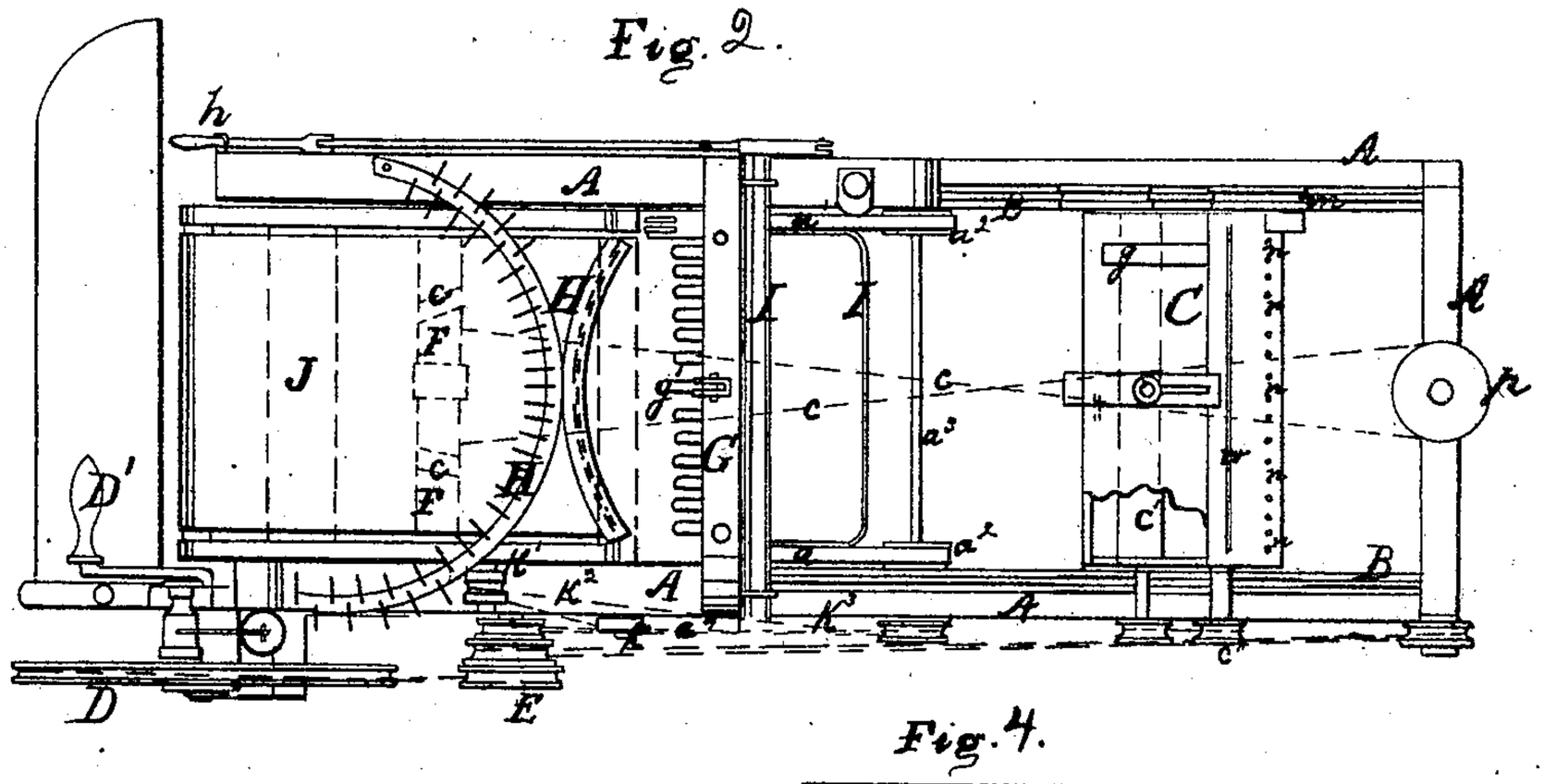
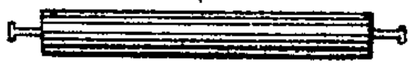


Fig. 4.



Witnesses.
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ROBERT MOXLEY, OF MUSCATINE, IOWA.

Letters Patent No. 73,371, *dated January* 14, 1868.

IMPROVEMENT IN 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, ROBERT MOXLEY, of Muscatine, in the county of Muscatine, and State of Iowa, have invented a new and improved Spinning-Machine; 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, forming part of this specification, and in which—

Figure 1 is a side elevation of my invention.

Figure 2 is a top view of the same.

Figure 3 is a detached view of the shafts F F′, and

Figure 4 is a detached view of the roller.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists of a new and more simple, compact, and convenient arrangement of the parts of a spinning-machine, by which labor is saved, and the machine more easily operated than heretofore.

In the drawings, A A represent the different parts of the frame of my machine. B B are the ways, and C the carriage running back and forth upon them. D is the main working-wheel, to which power is applied at the crank D′, and which sets in motion the different parts of the machine, through the medium of a set of pulleys, E, which it operates by a crossed belt, *d*. The carriage is run back and forth by a cord, *c*, attached to it, passing round a pulley, *p*, behind it, and having its ends wound around and fastened to two grooved shafts, F F′, shown clearly in fig. 3, in such a manner that, when one of the shafts is in motion, it will run the carriage back, and when the other is in motion it will bring it forward, only one of the shafts being allowed to operate at once. Each of the shafts is operated by a separate belt, *a a′*, running loosely over a pulley, *a″*, upon a shaft, *a‴*, which in its turn is put in motion by another belt, *a⁗*, connecting it with the pulleys E, before described. The belts *a a′* run so loosely as not to rotate the shafts F F′, except when tightened by the treadles *t t′*, which can be pressed up against either of them by the foot of the operator. T is a brake, which stops or retards the motion of the shafts at pleasure.

Whenever it is necessary for the carriage to be run back, the operator tightens the belt *a* by means of its treadle. When he desires to reverse the operation of the carriage, he removes his foot from that treadle and places it on the opposite one. When he wishes to stop the carriage, and hold it at any point while the other parts are in operation, he removes his foot from the treadles and presses it upon the brake T, which operates upon both shafts at once, as shown in fig. 3.

Another belt, *b*, runs from the pulley E to a fixed pulley, *p′*, at the rear end of the frame, passing around two pulleys, *c′ c″*, in the end of the carriage, in such a manner that, by the revolution of the belt and the motion of the carriage, the two pulleys *c′ c″* shall be rotated with great velocity.

Having thus described the application of the power, and the means for operating and controlling the carriage, it remains now to describe the remaining parts of my invention and their operation. It is not necessary to enter into a particular description of these parts, as they are all the same as have been always used on similar machines. My invention, so far as it pertains to them, lies in the arrangement of them to secure their effective co-operation, and to enable the operator to adjust and control them to the best advantage.

H indicates the twister-frame; I, the faller, operated by a handle, *h*, connected with it by a pitman and crank; G is the vertically-sliding gate or jaw, which determines the length of the rolls to be delivered, being raised by the carriage C, as it moves forward through the operation of the inclines *g g*, which run under the gate and lift it until a trigger, *g′*, catches and holds it up, and being dropped again by the action of an arm, *g″*, projecting from the carriage, which strikes the trigger as the carriage runs back, and throws it from its support; J is the endless-apron feeder; K is a spring, which holds the warper in place when not actuated by the handle *h*, being connected with it by the lever *k*, pulley *k′*, cord *k″*, and arm *k‴*; L is a notched slide, operating horizontally in an arm of the frame A, and having a cord attached to it, passing over the roller *e*, which bears the forward end of the apron J, and terminating with a weight, L′. A set-screw, *l*, is used to regulate the distance to which the slide L can be moved back and forth in the grooved arm of the frame, and in that manner to regulate the length of the rolls to be made by the machine. The slide L is operated by an arm, *m*, on the side of the carriage, which strikes against the slide as the carriage moves back and forth. *n n n* are the

spindles, bearing the bobbins, and operated by a set of belts inside of the carriage, to which motion is communicated from the shaft *c'*. Upon a high post, which rises above the main wheel D, is a slide, O, carrying a pulley, *o*, which is run by a belt, *u*, passing over the main shaft inside of the wheel D. A knot, *o'*, on the belt, operates, at every revolution, against a lever, *v*, which rings a bell, W, and indicates the number of revolutions of the main wheel, and consequently the amount of twist given to the yarn. The belt *u* can be lengthened and shortened, by moving the slide O up or down, and in this way the bell can be made to ring at any desired interval, according to the twist required.

This completes the description of my machine. It is only now necessary to describe its practical operation.

By placing the foot on the right-hand treadle, and tightening the belt *a*, and turning the wheel D by means of the crank D', the carriage runs back and makes the "draw;" then, by pressing upon the brake T and releasing the treadle, the carriage stops, and the roll is twisted. The operator throws the threads down on the bobbins until they strike the wire *w*, by means of the warper I, actuated by the handle *h* at his left hand, and by the same means guide the threads as the carriage is returning. The carriage is drawn back by releasing the brake and tightening the left-hand belt by its treadle, as fully explained above.

By removing the frame H, the machine is ready for spinning. By reversing the belt *b*, as it passes over the pulley *c'*, and replacing the twister-frame, as in fig. 1, it is ready to manufacture stocking-yarn, of two or three threads or strands.

The operation of the whole apparatus is exceedingly simple and effective, being perfectly under the control of the operator at the front of the machine, and working with great dispatch and perfection.

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

1. The combination and arrangement of the shaft *a'''*, belts *a a'*, shafts F F', brake T, treadles for tightening the belts *a a'*, belt *c*, and carriage C, all the said parts being constructed and operating together substantially in the manner and for the purposes specified.

2. The arrangement of the said parts with the belts *b* and *d*, wheel D, apron J, faller I, slide L, set-screw *l*, inclines *g g*, and gate G, the whole constituting a combined hand-roll and twisting-machine, substantially as described.

3. The adjustable apparatus for indicating the twist, consisting of the slide O, belt *u*, knot *o'*, lever *v*, and bell W, all arranged and operating together substantially as and for the purpose set forth.

ROBERT MOXLEY.

Witnesses:
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