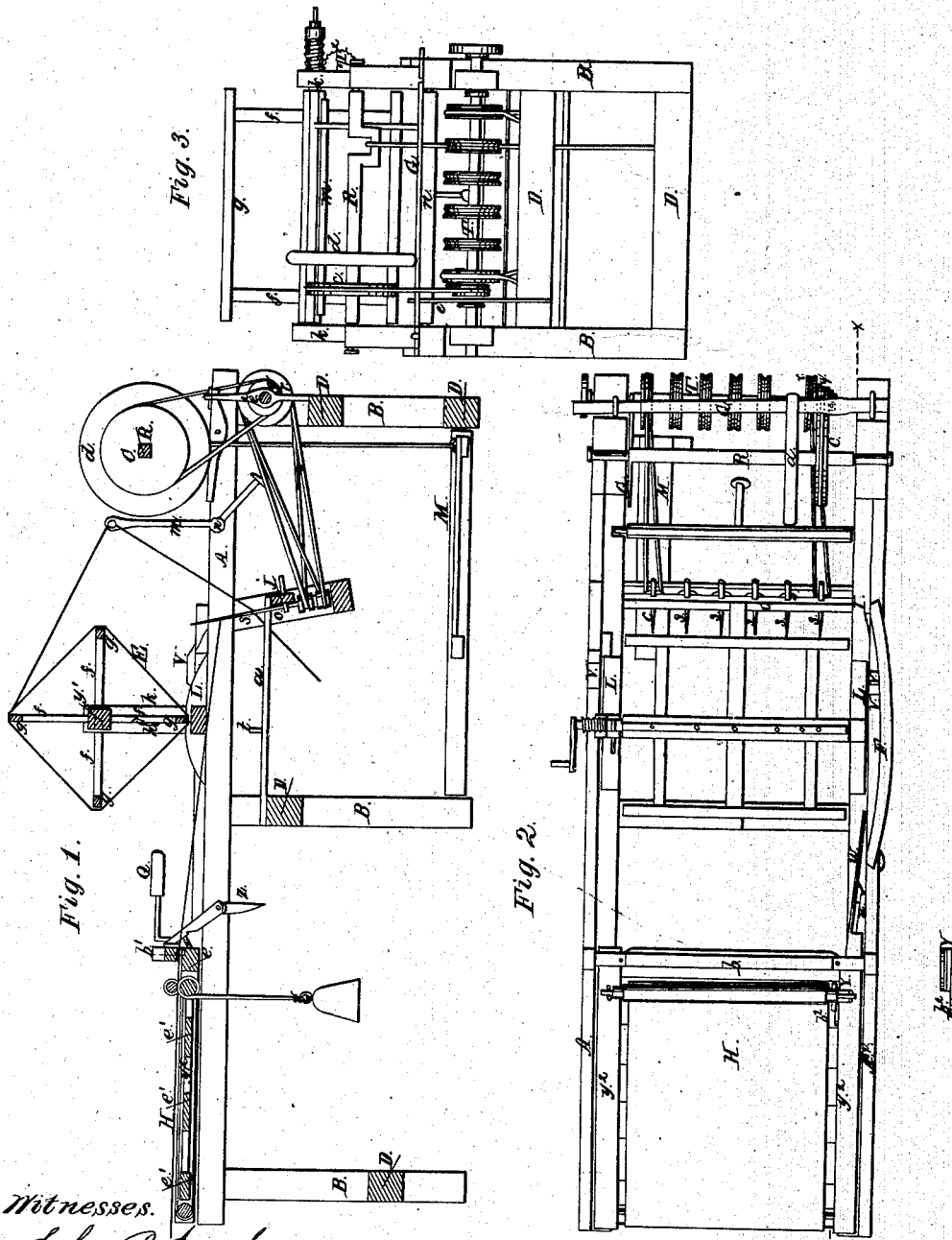


T. EVANS.  
HAND SPINNING MACHINE.

No. 47,285.

Patented Apr. 18, 1865.



Witnesses.

John P. Jacobs  
v. Clayton

Inventor  
T. Evans  
Pr. S. W. Abnerman atty.

*The drawing in this patent  
is not in print.*

# UNITED STATES PATENT OFFICE.

TURNER EVANS, OF PARIS, IOWA.

## IMPROVEMENT IN HAND SPINNING-MACHINES.

Specification-forming part of Letters Patent No. 47,283, dated April 18, 1865.

*To all whom it may concern:*

Be it known that I, TURNER EVANS, of Paris, Linn county, in the State of Iowa, have invented certain new and useful Improvements in Combined Reeling and Spinning Machines; and I hereby declare that the following is a true and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 in the annexed drawings represents a plan view of my machine. Fig. 2 designates a longitudinal vertical section of the same in the line *x x*. Fig. 3 represents an end elevation.

The frame of my machine consists of the side pieces A, which rest on the legs B. (See Fig. 3.) The side pieces A are fastened together by the cross-ties D. On the upper surface and inner side of each side piece A a rabbet is cut for the purpose of guiding the roll-receiver, hereinafter described.

E in Fig. 2 represents the reel, which is placed upon the spinning-frame after the spindles are filled, for the purpose of reeling the yarn from the same.

*m* represents the thread-guide, which is placed immediately in front of reel E. Through the upper bar of *m* small perforations are made corresponding in number and in distance apart with the spindles. The bar *n*, which constitutes the lower part of the thread-guide, has an arm extending obliquely from it, to which a weight is attached, for the purpose of giving the requisite tension to the thread while passing through the bar *m*.

O represents the spindle frame, fastened to the side pieces A between the reel and the thread-guide. The spindles (marked S) rest in a metal plate in the cross-piece, and at a short distance from their base they pass through narrow metal bearings inserted in the cross-tie *j*.

T represents the shaft on which the driving-pulleys are arranged, their number corresponding with the number of the spindles. Small bands passing over these pulleys give motion to the spindles.

R designates the crank-shaft, having on it the pulley C and the balance-wheel *d*.

M represents the treadle, which works between the legs B B immediately under the spindle-frame and at right angles with it.

The treadle M is connected with the crank on shaft R by an iron rod, which hooks over the crank. By the treadle M motion is given to the crank-shaft R, and from pulley C on the crank-shaft motion is imparted to the pulleys on shaft T, and thence communicated to the spindles S. On the upper surface of each side piece A, near its outer edge, is the elevation V, for raising the bar *b'* at the proper time to allow of the delivery of the sliver.

The roll-receiver H is constructed of two side pieces, *y*<sup>2</sup>, bound together by the ties *e'*, and has a roller at each end, around which the endless belt or apron H is made to revolve and feed forward the rolls. Each side piece of the roll-receiver is furnished with two small wheels at bottom to expedite its motion.

*b'* represents a cap piece, resting on the front tie, *e'*, and secured to it by an iron pin at each end, on which it can play with a vertical motion. Hinged to *b* is the jointed pendant *z*. The object of the notch in the upper arm of *z* is to catch upon the projection *v* on *c* after *b'* has been raised by elevations V, so as to keep *b'* up a sufficient time to deliver the roving to be next twisted and wound upon the spindles.

The letter *t* represents a pin in the board *u*, the object of which is, when the lower arm of pendant *z* comes in contact with it, to disengage the notch of pendant *z*, which holds up *b'*, so that the latter will drop and retain the sliver, as before. At the front end of the right-hand side piece of the roll-receiver is the hook *u*, which has a cord passing through it. By this cord and the weight attached to it the hooked bar *u* is held firmly against the end of the side piece of the roll-receiver. This hook *u* is pressed outward by a spring, *w*, and during the forward motion of the roll-receiver and the pressure of this spring the hook *u* is caught in notch I, (see Fig. 1,) and when the roll-receiver is being moved back the cord which is fastened to *u* and passes over the roller will, by virtue of the weight attached to it, cause the apron H to move forward and deliver the sliver.

Y and *b*<sup>2</sup> represent a ratchet and pawl, whose function is to prevent the backward motion of the apron H when the hook *u* is released from notch I, and this release is effected by a pin in the side of the roll-receiver, which acts

on the right-hand end of the curved bar F, which causes its opposite end to press against the hook *u*.

G designates a bar extending across the frame A, near its end, and it is held loosely in position by two staples—one on each side of the frame—and thus admits of a lateral motion.

T represents a shaft upon which the driving-pulleys are placed, the number of pulleys corresponding with the number of spindles. Bands pass around these pulleys and around the spindles to give them motion.

Fastened to shaft G is the steel spring *c*<sup>2</sup>, which embraces shaft T and then descends to tie D, to which it is permanently secured. The design of this spring is to press against the clutch pulley *q* and force the indentations in its inner surface to receive the dowels on the face of, and thus engage with, the tight pulley *r* on shaft T, and so drive the spindles.

To disengage the pulleys and stop the revolution of the spindles, the bar G is moved to one side and held in position by a short lever, G', attached to the side of the frame A, which catches in a notch on the under side of bar G. By the movement of bar G and the action of spring *c*<sup>2</sup> the spindles S can be arrested or set in motion at pleasure.

In working my machine, the operator having first put the rolls on apron H and passed the ends of the rovings under the cap-piece *b'*, which holds them down while being twisted, and then connected them with the threads on

the spindles, takes his seat above the treadle M, places one hand on the handle Q, which is attached to the roll-frame, the other hand being at liberty to operate the bar G. Power is now applied to the treadles, and the slivers just connected to the yarn on the spindles are twisted. The roll-receiver is then moved forward by the right hand, and the yarn just made is wound on the spindles. When the cap *b'* reaches the elevations V, it is raised by them, and is held up by the pendant *z* catching on the projection *v* on *c'*. At the same moment the hook *u* catches in shoulder I, the roll-receiver is moved back until a sufficient length of roving is given out, the pin *x'* on the roll-receiver comes in contact with the bar *h'* and disengages the hook, and as the roll-receiver is run back by the operator the roving is drawn out and the thread twisted, as already specified.

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

The combination of the roll-receiver H, the crank-shaft R, the spindle-frame O, the thread-guide *m*, the shaft T, with pulleys attached, the bar G, the pivoted bar F, and the hook *u*, the whole constructed and operating substantially as and for the purpose herein set forth.

TURNER EVANS.

Witnesses

JOHNSTON ELLIOTT,  
A. J. MCKEAN.