J. W. THOMPSON & F. H. ORR.

Self-Acting Spinning-Jacks.

No. 149,000. Patented March 24, 1874.

Fig. 1.

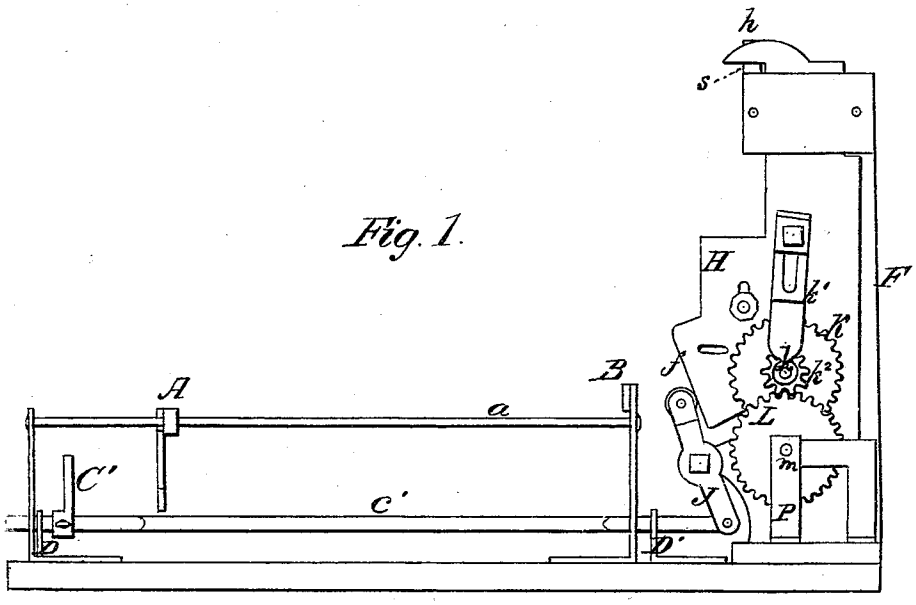

Fig. 3.

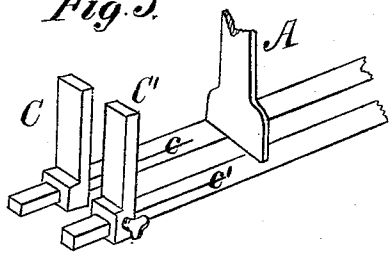

Fig. 2.

WITNESSES

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By

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UNITED STATES PATENT OFFICE.

JOHN W. THOMPSON AND FRANK H. ORR, OF ROCHESTER, NEW HAMPSHIRE.

IMPROVEMENT IN SELF-ACTING SPINNING-JACKS.

Specification forming part of Letters Patent No. **149,000**, dated March 24, 1874; application filed February 21, 1874.

To all whom it may concern:

Be it known that we, JOHN W. THOMPSON and FRANK H. ORR, of Rochester, in the county of Strafford and State of New Hampshire, have invented a new and valuable Improvement in Spinning-Jack Attachments; and we 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.

Figures 1 and 2 are views of opposite sides of our device. Fig. 3 is a detail view of the same.

This invention relates to improvements on the mechanism for drawing in the carriage while the yarn is being twisted at the end of the outward run of the carriage, and which is especially applicable to the spinning-jack of W. H. Brothers, patented August 31, 1869, and which we will now proceed to describe.

In the annexed drawings, A designates a pendent arm from the jack-carriage, which receives a reciprocating motion toward and from the beam B, and is supported and guided by parallel bars *a a*. C C′ are two fingers, which are struck as the carriage terminates its outward run by the pendent A. The fingers C C′ are adjustably secured on two rods, *c c′*, by means of set-screws, which rods are allowed to receive endwise movements in standards D D′. The rod *c*, on which is secured the finger C, is connected by a pivot, *i*, to the short arm of a lever, E, which vibrates on a stud that is fixed to the standard F. The long arm of lever E rises alongside of a spur-wheel, G, which is applied on a stud fixed to the vertically-movable plate H, and at every revolution of wheel G a stud, *e*, which extends out from its face, strikes the upper end of the lever E, and it moves inward the rod *c* and its finger C. The wheel G receives rotation from a pinion, *g*, on a shaft, which is fixed to the standard F. The rod *c′*, which disconnects the running-out mechanism, and on which is the finger C′, is pivoted to the lower end of a lever, J, which is pivoted to the standard F below the inclined edge *f* of the plate H. The upper end of lever J has an anti-friction roller applied to it, which roller impinges against the inclined edge *f* of the plate H, as shown in Fig. 1. On the opposite side of the standard F to that on which the wheel G is applied is a spur-wheel, K, which works the wheel L that drives the running-out mechanism. Wheel K is applied on a short shaft, *k*, which has its bearing in a vertically-adjustable bracket, k^1, rigidly secured to the plate H, and concentrically secured to this wheel K is a pinion, k^2, the teeth of which engage at times with those of the wheel L. This wheel is applied on a horizontal shaft, *m*, which has its bearings in standards P.

The machine is adjusted ready for operation by relieving a hook, *h*, at the upper end of the plate H from a spring, *s*, fixed to standard F. This will allow plate H to drop. The carriage A is at this time at the jack-beam B.

Carriage A is moved up to the two fingers, C C′, and these fingers, with their rods *c c′*, are pressed back far enough to disconnect the running-out scroll by the action of lever J on draft-plate H. At the same time that this movement is made, and wheel k^2 is disengaged from wheel L, wheel G engages with the pinion *g*. After this movement wheel G begins to revolve, and its stud *e* is caused to press against lever E and draw back the rod *c* with its finger C, and the carriage, as far as is necessary, to compensate for the shortening of the yarn while twisting it. When the yarn has received sufficient twist, the carriage A returns to the jack-beam B, when the running-out scroll is again put in operation by the drawing back of the lever J and the falling of the plate H. The same movements are then repeated.

What we claim as new, and desire to secure by Letters Patent, is—

In a spinning-jack, the finger C and sliding rod *c*, in combination with lever J, plate H, wheel G, having stud *e*, the pinion *g*, lever E, and rod *c′*, and its finger C′, substantially as described.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOHN W. THOMPSON.
FRANK H. ORR.

Witnesses:
J. C. LOGAN,
GEORGE W. HUED.