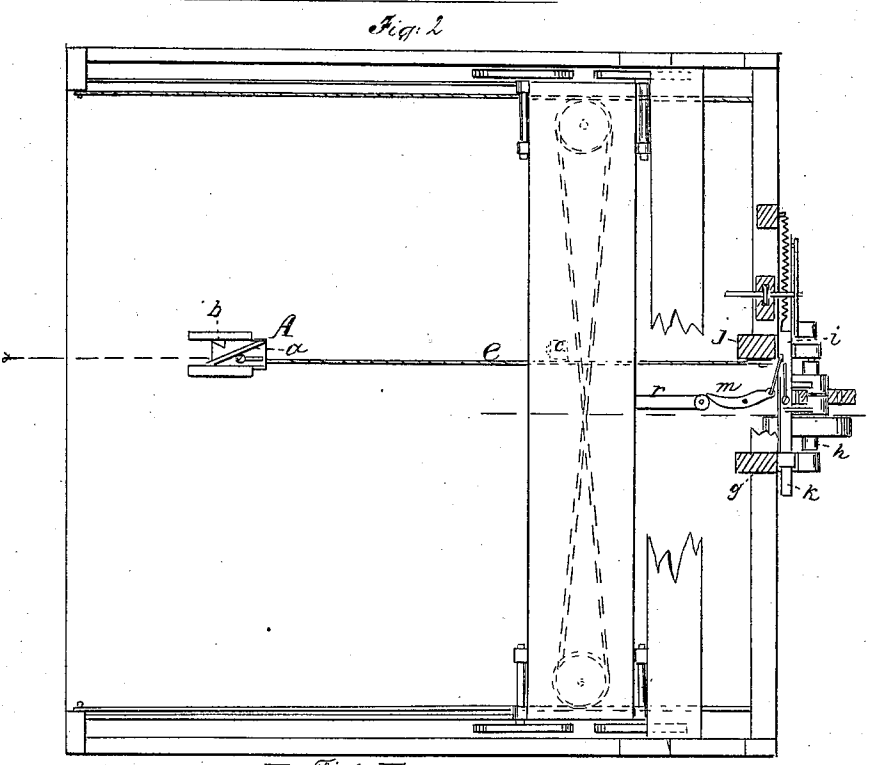
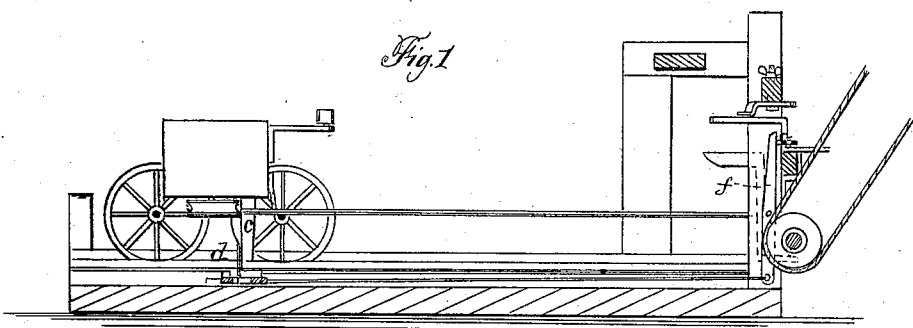


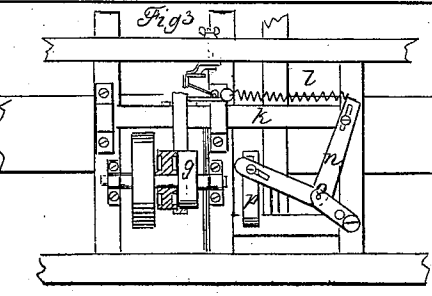
*J. Sands,  
Jack.*

*No. 84,218.*

*Patented Nov. 17, 1868.*



*Witnesses.*  
*Wm. A. ...*  
*C. S. ...*



*Inventor.*  
*Jacob Sands*  
*per Wm. A. ...*  
*attorney*

# United States Patent Office.

JACOB SANDS, OF WATERLOO, NEW YORK.

Letters Patent No. 84,218, dated November 17, 1868.

## IMPROVEMENT IN SPINNING-JACK.

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, JACOB SANDS, of Waterloo, in the county of Seneca, and State of New York, have invented a new and useful Improvement in Spinning-Jacks; 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.

This invention relates to improvements in spinning-jacks, the object of which is to provide a more efficient and reliable friction-device for the carriage.

It consists in an arrangement of mechanism for automatically changing the friction-belt, whereby the carriage is made to effect the said changes, as will be hereinafter described.

Figure 1 represents a longitudinal sectional elevation of a jack having my improvements applied to it, the line *x x* of fig. 2 showing the plane of the section;

Figure 2 represents a plan view of the same; and

Figure 3 represents an elevation of a portion of the head of the machine.

Similar letters of reference indicate like parts.

A represents a block, arranged upon the bed of the machine, to slide a short distance, having an inclined guide, *a*, and a stop-block, *b*, upon its upper face.

C represents an arm projecting downward from the under side of the carriage, from which is suspended a vibrating catch, *d*.

The sliding block A is connected by a cord or rod, *e*, to a trigger, *f*, arranged upon one of the posts *j*, which support the pulley-shaft *h*, and bears against the slotted spring-latch *i*, connected to the belt-shifting bar *k*, by a pin passing through its slot, and connected at its other end to the spring *l*. It is also connected by a link to the lever *m*.

N represents a bell-crank, pivoted at *o* to the frame, and connected at one end to the belt-shifting bar *k*, while it supports, at the other end, a weight, *p*, adjustable thereon.

When the twisting has been accomplished, and the

belt shifted in backing off, to wind up the yarn, the vibrating catch *d* will fall behind the square end of the stop-block *b* on the sliding block A, which will be moved backward a short distance by the said catch, thereby moving the trigger *f*, to throw the spring-catch *i* off from its connection behind the post *j*, allowing the spring *l* to draw the belt-shifter, so as to throw the belt sufficiently on to the fast pulley *g* to produce the necessary amount of friction. The weight *p*, to some extent, counteracts the action of the spring, and is intended to be used to vary the amount of friction, by adjusting it on the arm of the lever *n*, to or from the pivot *o*, and thereby vary the capacity of the spring *l*, and consequently the amount it will force the belt on to the said fast pulley.

When the carriage is run back, the arm *r*, carrying at its end a friction-bowl, will strike the curved end of the lever *m*, and cause it to draw the spring-catch *i* back, to lock behind the post *j* again, when the weighted arm *n* will throw the belt-shifting slide back, so as to cause the belt to run back on to the loose pulley, thereby relieving the carriage from the friction.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The combination, with the sliding block A, trigger *f*, spring-catch *i*, and belt-shifter *k*, of the vibrating catch *d*, on the carriage, when arranged substantially as and for the purpose described.

2. The combination, with the spring-latch *i* and belt-shifter *k*, of the weighted lever *n*, when arranged substantially as and for the purpose described.

3. The combination, with the sliding catch *i* and belt-shifting slide *k*, of the lever *m* and the projection *r* on the carriage, when arranged substantially as and for the purpose described.

JACOB SANDS.

Witnesses:

TOM FILLINGHAM,  
ASA D. BAKER.