

Sheet 1-2, Sheets.

I. Welham.
Ring Spinning.

N^o 88,996.

Patented Apr. 13, 1869.

Fig. 2.

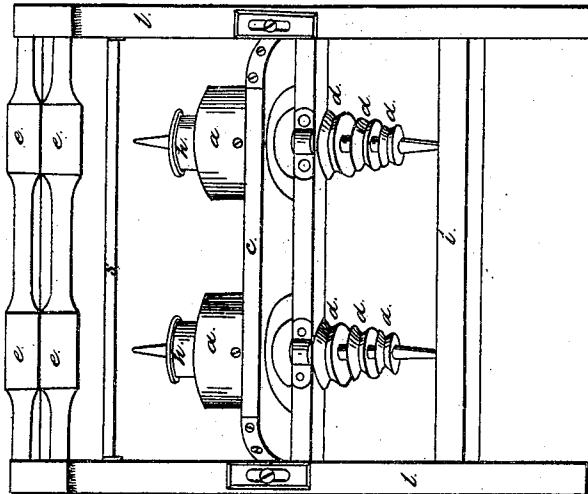
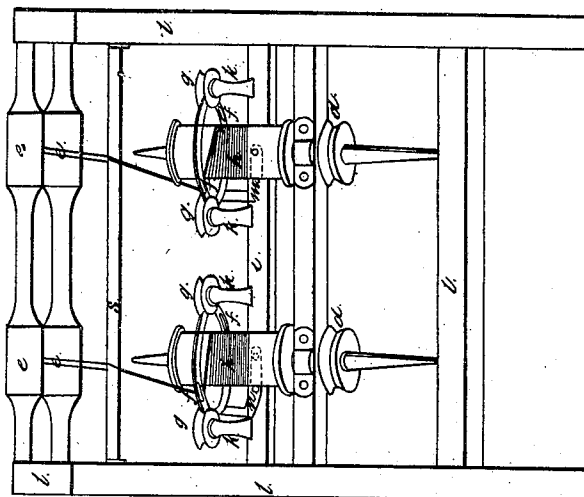


Fig. 1.



WITNESSES:

E. Chabot.
E. H. Grant.

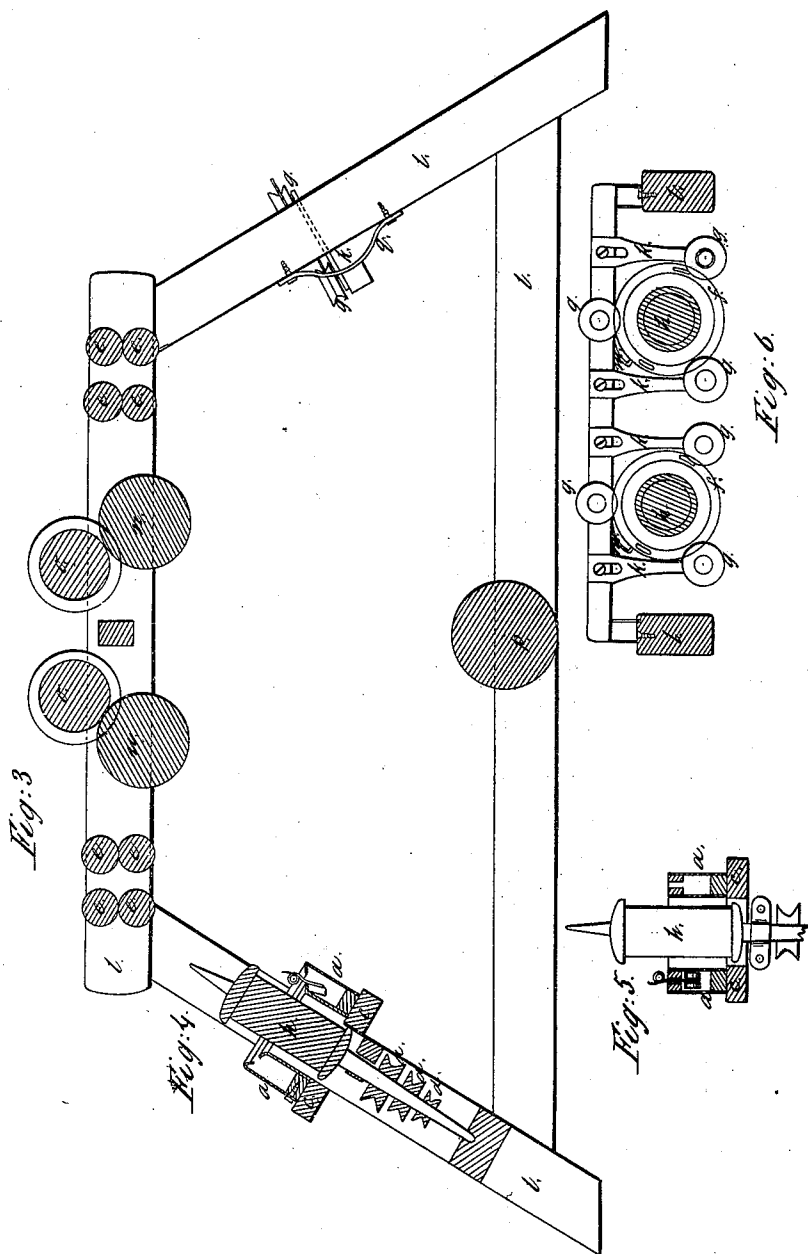
INVENTOR:

I. Welham.

T. Welham.
Ring Spinning.

N^o 88,996.

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WITNESSES:
C. Chabot.
C. F. Grant.

INVENTOR:
Thos. Welham



THOMAS WELHAM, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 88,996, dated April 13, 1869.

IMPROVEMENT IN THE RING AND TRAVELLER FOR SPINNING.

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, THOMAS WELHAM, of the city and county of Philadelphia, and State of Pennsylvania, have invented Improvements in Ring-Spinning Machines; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a side view of the spinning-machine with spinning-rings revolving upon pulleys.

Figure 2, a side view of the machine with box-rings with the travellers enclosed.

Figure 3, a sectional elevation of the machine, showing in section a box-ring with bevel-flange and the enclosed pulley-traveller.

Figure 5, section of a box-ring with square flange and pulley-travellers.

Figure 6, a top view of ring and pulley with adjustable arms.

The nature of my invention consists in a peculiar construction of spinning-rings and travellers, and rings revolving on pulleys, upon adjustable arms, all for the purpose of spinning; and also the combination of the same with drawing and paying-out rollers of a spinning-machine.

The devices are intended to be used either with or without drawing and spinning-heads, fixed at any suitable distance between the drawing-rollers and spools, and also in connection with a carding-engine when required, by passing the roping directly from the condensers of a carding-engine to the drawing-rollers of a spinning-machine.

The box-rings are made of hard metal, and constructed of two ferrules with flanges, and one is larger than the other, so as to form a cavity between them. The inner one is fixed fast to the ring-rail, and the outer one is slipped over it, and fits tight at the bottom, so forming a box to hold the oil and the travellers, and is held in its place by set-screws, so as to be adjusted when a new traveller is required.

The letters *a a* indicate the box-spinning ring and pulley-travellers, as shown in figs. 4 and 5

Letter *c* indicates the ring-rail, intended to be operated by any of the usual means.

Letters *d d* represent spindle-pulleys of different sizes, to give more or less twist to the yarn, without altering any other part of the machine.

Letters *e e* indicate drawing-rollers, operated in any usual way.

Letters *f f* are spinning-rings, with an oblong eyelet for the yarn to pass through, instead of hooks as heretofore.

Letters *g g* represent pulleys for the rings to run in. Letters *h h* show the spools and spindles.

Letter *i* represents a rail to carry the adjustable arms and pulleys in which the rings run.

Letters *k k* are adjustable arms with a slot and set-screw, for the purpose of adjusting them so as to set and keep the rings in the proper place, and it is intended that one arm shall have two pulleys on the same axle, so that two rings may run on the same arm if needed.

Letters *l l*, a frame of wood or iron.

Letter *m* indicates a spring to press upon the ring *f*, to give more or less drag on the yarn, as required.

Letters *n n* are paying-out rollers, made and operated as usual.

Letters *o o* indicate spools of slubbing propelled by paying-out rollers, as usual.

p, a driving-cylinder, made and operated as usual.

s, a thin wedge-shaped bar, or section, of any suitable material, and fixed at any distance from the spools, or directly between the drawing-rollers, when doubling and twisting to prevent the twist from running more on one thread than the other.

The object of this invention is to dispense with spinning-jacks, mules, self-actors, &c., and to spin directly from the condensers of a carding-engine.

For this purpose I have invented spinning-rings that will run with less friction, and with greater speed than heretofore, and thereby draw and spin yarn as fast as it comes from the carding-engine with a much less number of spindles.

The object of the different kinds of rings is to suit different kinds of work, as may be required.

The advantage of this box-ring is that the traveller will be kept lubricated, the oil being retained in the box, whereas, with the common ring and traveller, the oil is instantly scattered away when run at a high speed.

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

1. The combination of the slotted rings *f f*, the adjustable arms *k k*, and the pulleys *g* with the springs *m*, substantially as described.

2. The box-ring and pulley-travellers, constructed as herein described, and for the purpose set forth.

3. The combination of the box-rings and pulley-travellers with drawing and paying-out rollers of a spinning-machine.

The above specification of my said invention, signed and witnessed at Philadelphia, this 12th day of December, A. D. 1868.

THOS. WELHAM.

Witnesses:

THOS. DALLAS,
MATTHEW DALLAS.