No. 650,515. Patented May 29, 1900.

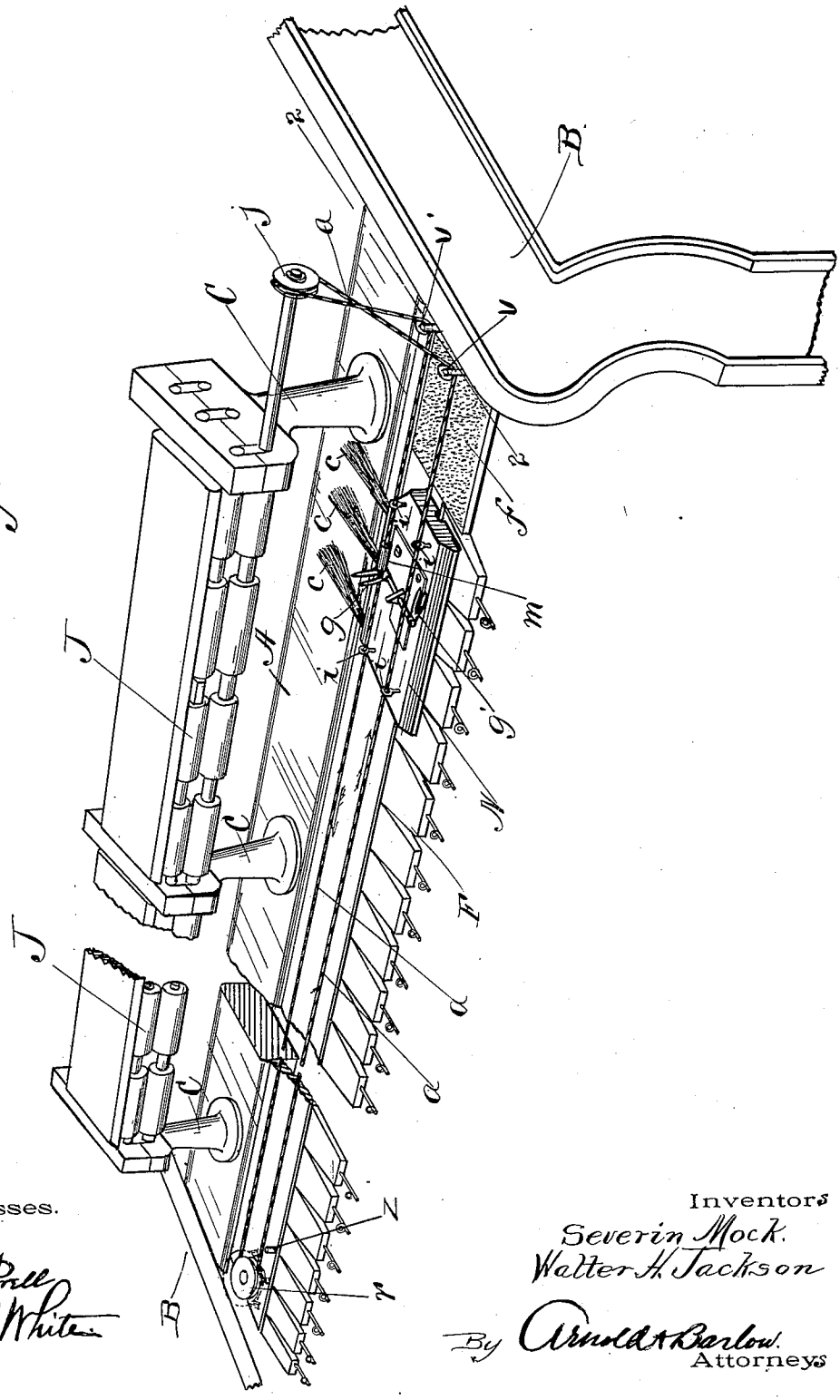
S. MOCK & W. H. JACKSON.

CLEANER FOR SPINNING MACHINES.

(Application filed Sept. 28, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.



Witnesses.

Wm. Pell

B. C. White

Inventors

Severin Mock.

Walter H. Jackson

By Arnold & Barlow.

Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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Fig. 2.

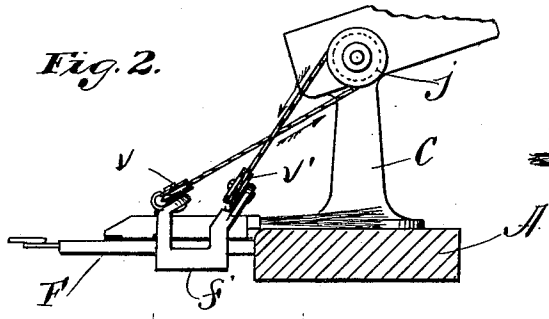


Fig. 6.

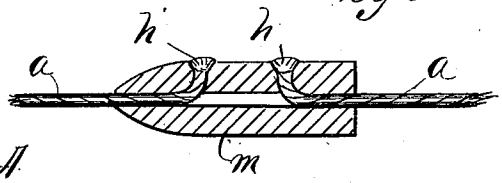


Fig. 3.

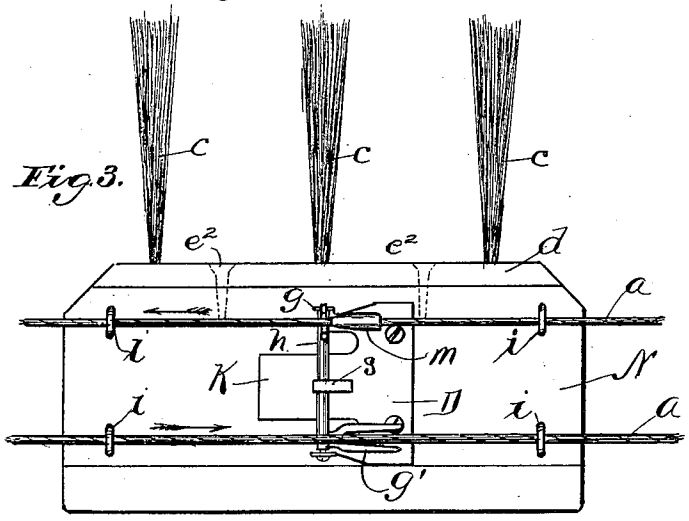
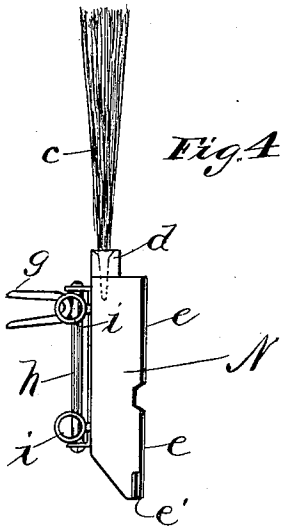


Fig. 4.



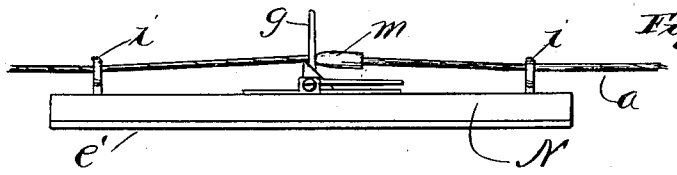


Fig. 5.

Fig. 7.

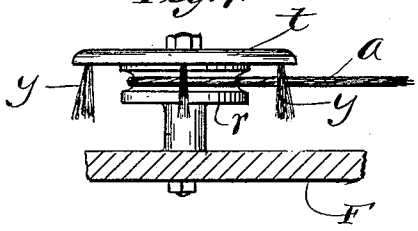
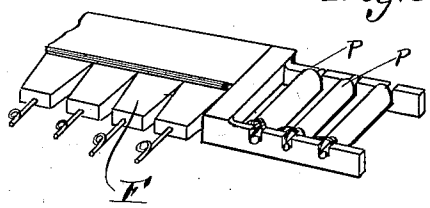


Fig. 8.



Witnesses.

Wm. Pell

W D Bentell

Inventors

Severin Mock.

Walter H. Jackson.

By Arnold & Barlow,

Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SEVERIN MOCK AND WALTER H. JACKSON, OF PAWTUCKET, RHODE ISLAND; SAID JACKSON ASSIGNOR TO THE JACKSON PATENT SHELL ROLL COMPANY, OF SAME PLACE.

CLEANER FOR SPINNING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 650,515, dated May 29, 1900.

Application filed September 28, 1899. Serial No. 731,955. (No model.)

To all whom it may concern:

Be it known that we, SEVERIN MOCK and WALTER H. JACKSON, of No. 47 Bagley street, Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Cleaners for Spinning-Machines; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to mechanism devised for the purpose of automatically cleaning parts of the spinning-machine of the lint and dust that are deposited on it by the cotton in passing through the drawing-rolls. It is fully explained and illustrated in this specification and the accompanying drawings.

Figure 1 represents in perspective parts of a spinning-machine or "ring-frame," as it is called, with the cleaning attachment in position for use. Fig. 2 shows a vertical cross-section of the parts of the spinning-frame on line 2 2 in Fig. 1 just inside the end frame. Fig. 3 is a top view of the brush-traveler with part of the cord that carries it and the manner of catching the traveler by the cord and releasing it. Fig. 4 shows an edge view of the traveler. Fig. 5 is an enlarged end view of the brush-traveler. Fig. 6 is a section of the driver on the carrier-cord, showing the mode of attaching the cord and of tightening it when loose. Fig. 7 shows a front view of the cord-brush attached to one of the end pulleys. Fig. 8 is a representation of a modification of the clearer to move the debris that the traveler collects from the thread-board.

The object of this invention is to provide an arrangement of devices to clean the top of the roller-beam and the thread-board of spinning-frames, also the stirrups and levers that weight the top rollers.

It consists of a traveling brush with means for moving it from one end of the machine to the other and an auxiliary brush to clean the cord that moves the main brush, which we may call the "traveler," and also of a clearer to remove the dirt that the traveler gathers from the thread-board.

In Fig. 1, B B ard parts of the end frames.

A is the roller-beam.

C represents the roller-stands, and J the rolls.

N is the brush board or traveler, arranged to move back and forth on the thread-board F and brush over the top of the beam A by means of the bunches of bristles *c c* and also to clean off the stirrups and levers that are used to weight down the top rolls. By referring to the end view of the traveler N in Fig. 4 a coating of felt *e e* will be seen that is put on the under side of the traveler to clean off the thread-board F. A recess *e'* is made in the outer edge of the traveler to allow the felt to be doubled over at the edge and accommodate the accumulation of dirt and prevent it from dropping off the front edge of the thread-board onto the yarn. Fig. 4 also shows how the bunches of bristles *c* are set in a removable strip *d*, which can be taken off by taking out the screws 2 when the bristles become worn and replaced with the new ones. This traveler N is moved back and forth by means of a cord *a*, that runs along to the left over the inner edge of the thread-board F to the end of the frame and around a pulley *r*, held on a stud fast in the thread-board. The cord *a* then passes back to the right about over the middle of the thread-board to a pulley *v*, which guides it to the lower side of a pulley *j*, fast on the end of the fluted rolls. After passing around the pulley *j*, that drives it, it goes around the pulley *v'*, which guides it toward the left end again. The cord *a* passes through eyes *i i* in the corners of the traveler (see Fig. 3) to keep it in place, and a tripping-dog D is held to swing in bearings fast in the middle of the top of the traveler. The tripping-dog D consists of a short shaft *h*, held in bearings across the top of the traveler, and two forked arms *g g'*, projecting from the shaft, so that when one arm is down flat on the traveler the other arm will be turned upright to receive the cord *a*. A check-block *s* is made fast on the shaft *h* and a spring *k* is placed under it to keep the dog over which ever way it may be turned. A driver *m* is made fast on the cord *a* to catch in the forks *g* and carry it along until it brings up against

a stop Z at the end of its route, when the dog D will turn over and release the driver *m*, and after it has passed around the pulley *r* the driver will catch in the other fork *g'*, which turned up in position when the fork *g* was turned down. The eyes *i* are placed down close to traveler N, so as to draw the cord well down in the fork of the arms *g* to give the driver *m* a good hold on the arms. The manner of making the cord *a* fast to the driver *m* is shown in Fig. 5. The cord is threaded in one end of the center hole and up through the hole *h*, and a knot is made in that end and drawn into the countersink. The other end of the cord *a* is then threaded in at the other end of the center hole and up through the hole *h'* and a knot tied in it and drawn down again into the countersink. When the cord gets stretched in use so as to be too slack, it is thrown off of one of the pulleys and one of the ends drawn up in its hole *h* and a new knot tied in it, which is drawn down into the countersink again and the end is trimmed off.

To remove the dust and lint that catch on the cord *a*, a circular brush *t* is put on the top of the pulley *r*, (see Fig. 7,) with bristles *y* projecting down so as to brush off the cord *a* as it passes around the pulley, and a clearer *f* is removably held on the bars *f'*, (see Fig. 2,) that project out at the end of the thread-board to hold the pulleys *v v'*, and covered on its upper side with card-cloth or other material adapted to catch and hold the lint and dust on the felt of the traveler when it moves out over it. The clearer can be taken up from time to time and the dirt collected on it removed.

A modification of the clearer *f* is shown in Fig. 8, which consists of rolls *p p*, held in slots in the place where the clearer *f* is held at the end of the thread-board F. The rolls *p* are to be covered with the same material as the clearer *f* and held by pawls or otherwise, so they will go with the traveler in one direction and wind up the lint on the felt and will not turn back when the traveler reverses its motion, but will scrape the under side as it passes over it. The rolls *f* can be taken out of the bearings and relieved of the accumulations as often as may be found necessary.

The operation of this invention is as follows: When the spinning-frame is started, the turning of the fluted roll R and pulley *j*, fast on it, will cause the endless cord *a* to pass down on the inside and carry the traveler N by the driver *m* to the left end of the frame, sweeping off the top of the beam A and the stirrups and levers that weight down the top rolls by the means of bristles *c c* and rubbing off the top of the thread-board F by means of the felt *e e* on the under side of the traveler until it comes in contact with the stop Z. Then as the cord *a* continues to travel the driver *m* will tip over the dog D and release the driver from the fork *g*. The cord will continue on and carry the driver *m* around the pulley *r* and back in front, catching in the front fork *g'* of the dog D, which was raised when the fork *g* was turned down. The driver *m* will then carry the traveler up to the other end of the thread-board out over the clearer *f* until it is stopped by the bracket or bars *f'*, that hold the pulleys *v v'*, when the fork *g'* of the dog will be turned down and the driver *m* released to pass up around the pulley *j* and down around the pulley *v'* to engage the back fork *g*, as at first.

Having thus described our improvements, we claim as our invention and desire to secure by Letters Patent—

1. The combination of the roller-beam and thread-board, an endless cord and means for driving it, a traveling brush arranged to slide on said thread-board and having a layer of felt or like material on its under side to clean said thread-board, and rolls for taking up the lint collected underneath the traveling brush while in operation, substantially as described.

2. The combination in a ring-spinning-frame cleaner of an endless cord, means for carrying and driving the cord, a traveling brush, a tripping-dog held on said brush, consisting of a short shaft held in bearings on said brush, forked arms projecting from said shaft at right angles to each other, a check-block fast on said shaft, a spring under said block to hold it, a driver fast on the cord to engage the forked arms, substantially as described.

3. In a cleaner for spinning-frames, the combination of an endless cord with means for operating it, a traveling brush having its bristles set in a separate strip attached to said brush to facilitate repairs of the brush, a layer of felt secured to the under side of said brush, a rabbeted recess on the outer edge of the brush to receive the folded edge of the felt, substantially as described.

In testimony whereof we have hereunto set our hands this 25th day of September, A. D. 1899.

SEVERIN MOCK.
WALTER H. JACKSON.

In presence of—
BENJ. ARNOLD,
H. E. BARLOW.