

J. Marshall,
Spinning Machine.
No. 45,108. Patented Nov. 15, 1884.

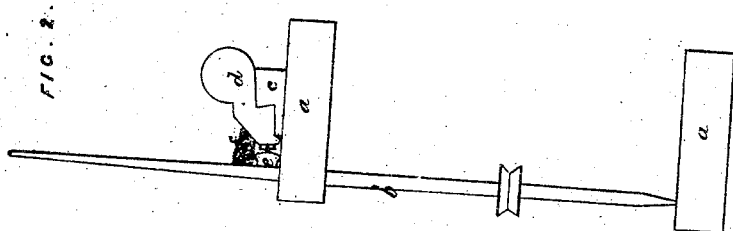


FIG. 4.

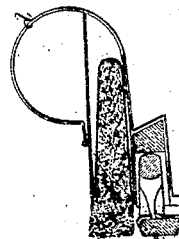


FIG. 5.

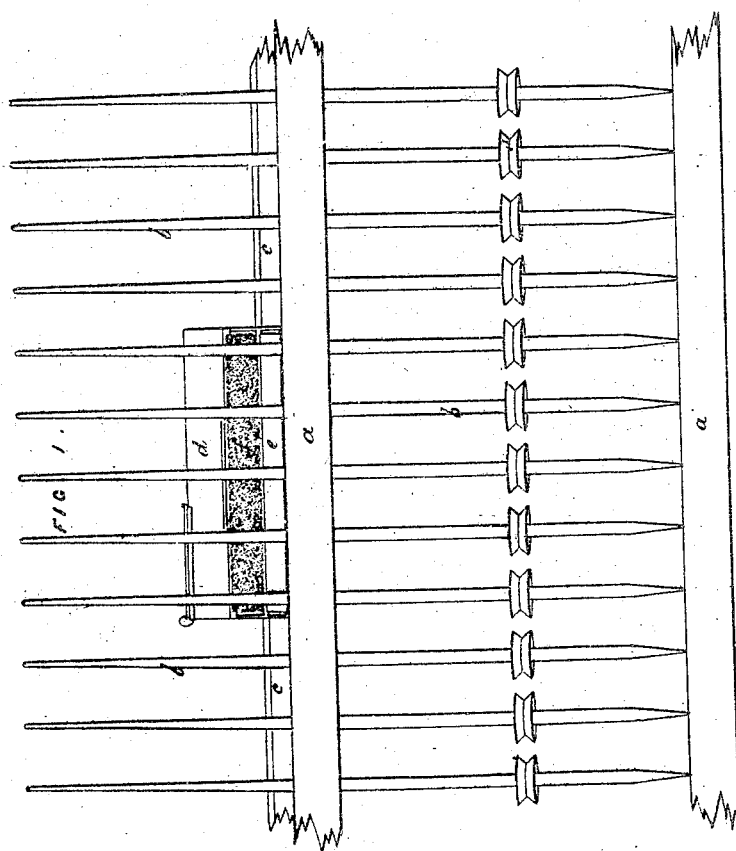
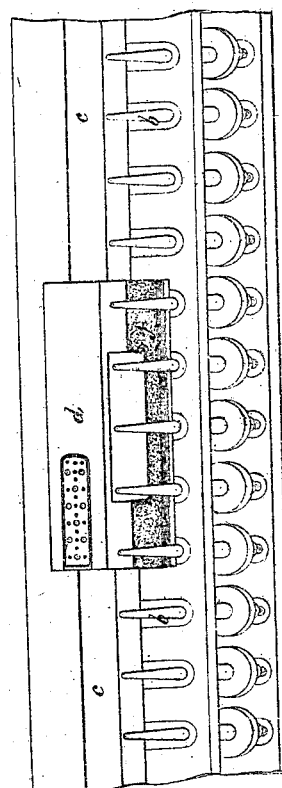


FIG. 3.



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JAMES MARSHALL, OF STOCKPORT, COUNTY OF CHESTER, GREAT BRITAIN.

APPARATUS FOR APPLYING ADHESIVE AND LUBRICATING MATERIAL TO THE SPINDLES OF SPINNING-MACHINES.

Specification forming part of Letters Patent No. 45,108, dated November 15, 1864.

To all whom it may concern:

Be it known that I, JAMES MARSHALL, of Stockport, in the county of Chester, United Kingdom of Great Britain and Ireland, cotton-spinner, have invented certain Improvements in Apparatus for Applying Adhesive Substances to Spindles Employed in Spinning Cotton and other Fibrous Materials, and for the Lubrication Thereof, of which the following is a specification.

The invention relates to a description or apparatus now employed for the purpose of applying adhesive substance to the spindles upon which cops are formed, in order to cause the threads to adhere together and to retain their position when removed from the spindle, and thus to form a solid bottom to the cop, which diminishes the waste. The adhesive substance has in some instances been applied by means of a brush supplied from a box or receptacle, which is caused to traverse from one end of the spindle-carriage to the other when commencing a cop in front of the spindles by means of an endless band actuated by mechanism.

My improvements consist, first, in causing the traverse of such box or receptacle behind the spindles, which is more convenient, and in effecting the traverse by means of the friction of the spindle, for which purpose I employ a piece or "pad" of leather, india-rubber, or other suitable material, secured to the front of the box, which pad is in contact with the spindles, their revolution effecting the movement of the box.

Secondly, the invention consists in the novel employment and use of a receptacle containing oil or lubricating material in the same position, and actuated in a similar manner to that before described, and supplying the lubricant to the bush of the spindles in its traverse either by means of a brush or sponge, in which case the sponge is below the pad.

In order that the invention may be better understood and explained in detail, I have hereunto attached a sheet of drawings, made upon a scale of about six inches to the foot, similar letters of reference being marked thereon.

Figures 1 and 2 represent, respectively, a front and end view of that part of the spindle-

carriage to which is applied the apparatus for supplying adhesive substance to the spindles, and which traverses from end to end of the carriage, and in its course supplies the spindles with the material at the commencement of forming of the cops. Fig. 3 is a plan view of the same. Fig. 4 is an end sectional view of the receptacle for the adhesive substance, in which is seen the cavity or chamber containing the same, and the brush, sponge, or other absorbent equivalent, which is employed to convey the material on to the spindles. This view also exhibits the india-rubber, leather, or friction pad, which presses on the spindles to create the driving-friction, which is shown detached from the box in Fig. 5.

In Figs. 1 and 2, *a a* represent the spindle-carriage of a "mule," *b b* the spindles; and *c* is a rib of wood or metal, having an inward bevel or recess, and extending as a guide-rail the entire length of the carriage. The exterior of the box *d* is so formed as to fit or correspond with the bevel of the rib *c* to prevent it leaving the rib, and the interior is divided longitudinally by a partition, the upper cavity or chamber forming a receptacle for paste or adhesive substance, the lower cavity being for the reception of the friction-pad *e*, composed of india-rubber, leather, gutta-percha, or other slightly elastic material, mounted on a piece of metal loosely fitting the aperture which adapts itself to the varying angle of the spindles; it may also, if required, be rendered adjustable, so as to increase or decrease the friction on the spindles, as by increasing or decreasing such friction the length of the traverse of the box on the rail is regulated. The aperture of the upper chamber is closed by means of a brush, sponge, or other absorbent material, *f*, through which the paste exudes and is supplied to the spindles by means of the said sponge, which is in contact therewith, or, to economize space, the sponge may be inclosed in perforated zinc, and simply dipped in the adhesive substance and placed in the box. I would remark that when it is required to lubricate the bushes of the spindles this arrangement is to be reversed, and the chamber containing oil or lubricant is to be the lowest and the friction-pad above, the apparatus being otherwise the same.

Having now described the nature of the said invention, together with the method of carrying the same into practical effect, I wish it to be distinctly understood that I claim—

1. The application of the friction created between the revolving spindles and a part or parts of the paste or oil receptacle for the purpose of effecting the traverse of the same along the spindle-carriage behind the spindles in mules.

2. The receptacle or box for containing ad-

hesive substances or lubricants and for applying the same to spindles, constructed and arranged substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES MARSHALL.

Witnesses: -

JOHN L. DAVIS,

THOMAS WRIGLEY.