

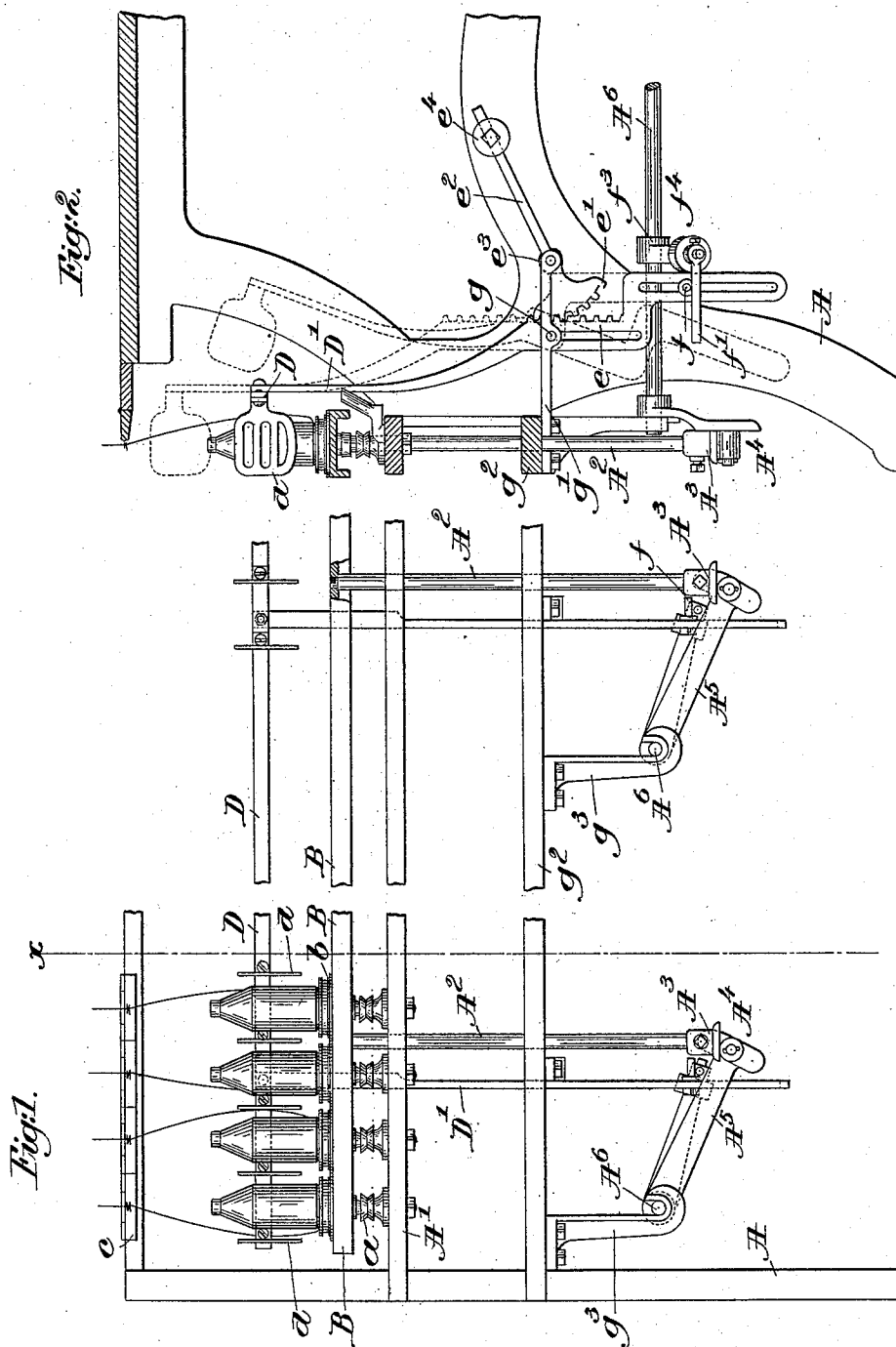
(No Model.)

W. H. McDAVITT.

SEPARATOR FOR SPINNING AND TWISTING MACHINES.

No. 533,730.

Patented Feb. 5, 1895.



Witnesses.

Fred S. Grundle.
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UNITED STATES PATENT OFFICE.

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SEPARATOR FOR SPINNING AND TWISTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 533,730, dated February 5, 1895.

Application filed October 6, 1894. Serial No. 525,011. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. McDAVITT, of Lawrence, county of Essex, State of Massachusetts, have invented an Improvement in Separators for Spinning and Twisting Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object the production of a novel, efficient, and simple separator mechanism.

The object of this invention is to provide a spinning or twisting frame with a frame having a series of separators which shall travel up and down substantially in unison with the usual ring rail and yet be free to be moved back away from the ring rail for doffing purposes.

20 In accordance with this invention the frame carrying the series of separators is supported by substantially upright levers or standards, adapted to be moved up or down in unison with the ring rail, said levers or standards co-operating with a fulcrum over or with relation to which they may rock when the rail is down and it is desired to doff the bobbin.

25 The upright levers or standards have co-operating with them a counterbalancing device shown as a weighted lever having a toothed segment which engages teeth upon the levers or standards. The levers or standards referred to, derive their vertical or transverse movement in unison with the ring rail by or through the rock shaft which is employed to impart vertical movement to the ring rail.

30 Figure 1, in front elevation partly broken out, shows a sufficient portion of a spinning or twisting frame with my improvement added to enable my invention to be understood; Fig. 2, a section thereof in the line *x*, Fig. 1.

35 The frame work A, spindle rail A', sleeve whirl spindles *a*, ring rail B, provided with rings *b*, the guide boards *c*, the lifting rods A² connected to the ring rail and having at their lower ends shoes A³, acted upon by a roller or other studs A⁴, carried by like arms A⁵, attached to rock shafts A⁶ actuated by or through any usual builder motion mechanism, not shown, are and may be all as common

in spinning or twisting frames, so need not be herein further described.

The bar or frame D, provided with a series of separators *d*, is supported on uprights or standards D', preferably one for each lifting rod, said standards having, as herein shown, teeth at *e* which are represented as engaged each by the toothed part *e'*, of a sector lever *e*², pivoted at *e*³ and provided with a counterbalance *e*⁴.

60 The standards D' are to rise and fall substantially in unison with the ring rail, and to do this, said standards near their lower ends are provided with a suitable stud or projection *f*, preferably made adjustable on the standard, said pin or projection being acted upon by a finger *f'*, projecting from an arm *f*³, fast on the shaft A⁶ employed to determine the up and down motion of the ring rail, said arm preferably having a roll *f*⁴, to act against the rear edge of the standards D', said standards being normally held against said roll by the weight of the separators. These standards must be capable of being pushed back away from the ring rail to thus enable the separators to be removed from between the bobbins when the bobbins are to be removed from the spindles, or doffing is to be performed. To do this readily, at any time, the said standards must have a proper fulcrum about which to be turned. I have accordingly provided each standard with a fulcrum *g*, shown as a pin held in a bracket *g'*, connected to a girth or cross rail *g*², carrying the usual bearing stands *g*³, for the shaft A⁶. In the form in which I have in this instance shown my invention, the standard is slotted to embrace and slide and rock on or with relation to the said fulcrum. It will be seen that the frame or bar carrying the separators may at any position of the said standards vertically be tipped on or with relation to said fulcrum and the counterbalanced sector lever will enable the said frame to be readily kept back. Usually this movement of the separators for doffing purposes will take place when the ring rail is down, as shown by full lines. The fulcrum *g*, of whatever form, also act as guides for the standards in their vertical motions.

Having described my invention, what I 100

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

1. A frame having a series of separators attached to it, and vertically movable standards to sustain said frame, combined with guides for said standards, means to move the said standards with relation to said guides, said guides also acting as fulera to permit the standards to be tipped backwardly away from the ring rail to thereby remove the separators from between the spindles, for doffing purposes, substantially as described.

2. A frame having a series of separators attached to it, and vertically movable standards supporting said frame provided with teeth, and sector levers engaging said teeth and provided with a counterbalance for substantially counterbalancing said standards, combined with guides for said standards said

guides also serving as fulera for said standards when to be tipped away from the ring rail, substantially as described.

3. A frame having an attached series of separators, standards supporting said frame, a guide for said standards in their rising and falling movement, and pins or projections extended from said standards, combined with the rock shafts A^6 , and their attached arms having fingers f' , to operate, substantially as described.

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

WILLIAM H. McDAVITT.

Witnesses:

FRED E. BATCHELLER,
MAURICE F. LEACH.