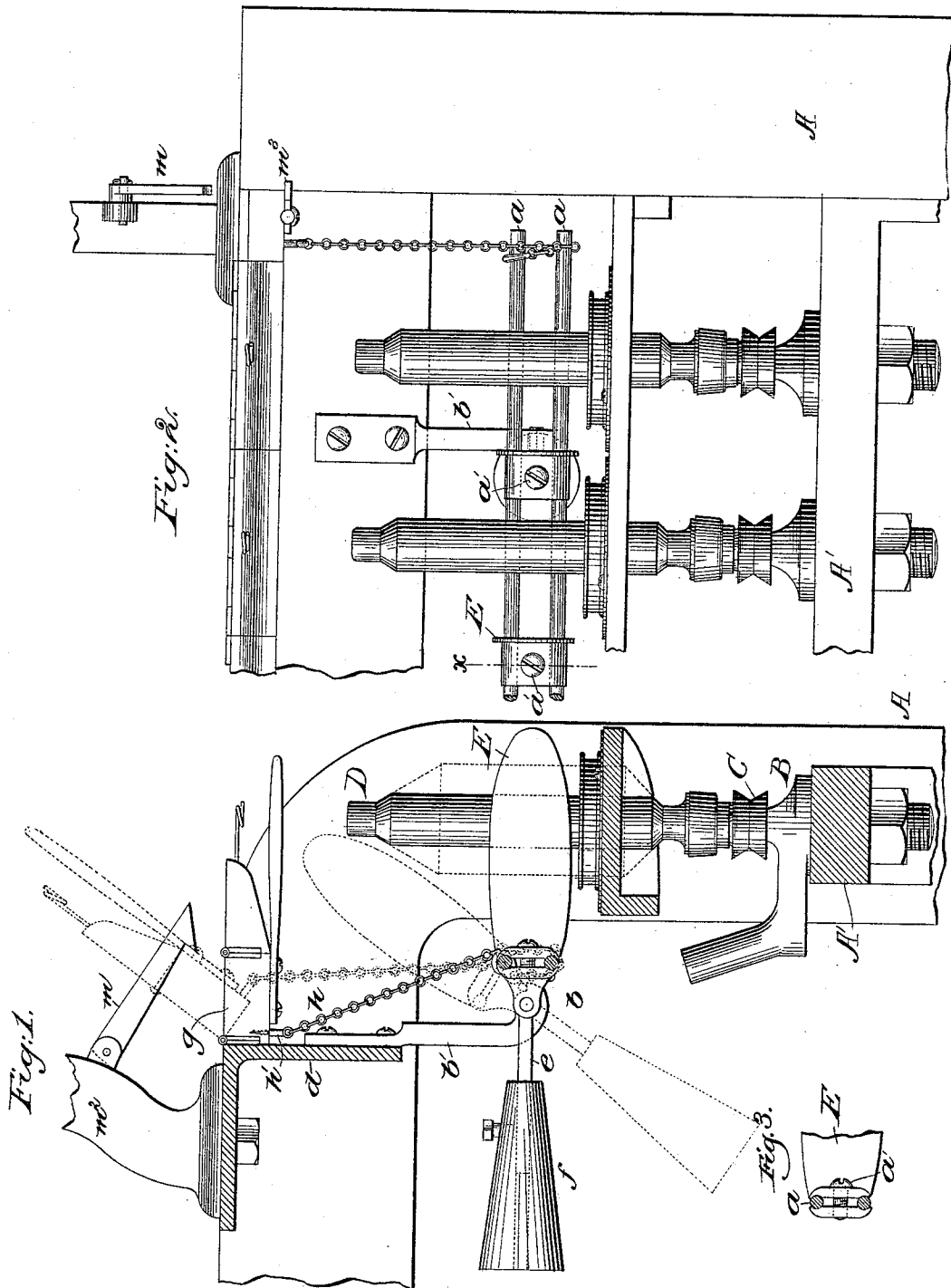


(No Model.)

D. J. GREEN.
SEPARATOR FOR RING SPINNING FRAMES.
No. 459,894.
Patented Sept. 22, 1891.



Witnesses.
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UNITED STATES PATENT OFFICE.

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SEPARATOR FOR RING-SPINNING FRAMES.

SPECIFICATION forming part of Letters Patent No. 459,894, dated September 22, 1891.

Application filed February 6, 1891. Serial No. 380,492. (No model.)

To all whom it may concern:

Be it known that I, DANIEL J. GREEN, of Fall River, county of Bristol, State of Massachusetts, have invented an Improvement in Separators for Ring-Spinning Frames, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Ring-spinning frames are now commonly provided with separators or blades to stand between adjacent bobbins or spindles above the ring-rail, and various means have been employed for actuating these separators. The separators, as herein shown, are connected to a carrying-bar of usual construction, it having suitable pivots, the bar having co-operating with it suitable backwardly-extended arms, upon which are mounted adjustable counterbalancing-weights, which nearly but not entirely counterbalance the weight of the separator-blades which are extended across the ring-rail, the latter in its upward movement striking the separator-blades and elevating them.

This invention has for its object to provide means whereby the separator-blades may be readily lifted whenever the bobbins are to be doffed, the ring-rail at such time being well down. In accordance with my invention, therefore, I have joined the bar carrying the separator-blades with the usual guide-board by means of a connection, (herein shown as a chain,) so that when the guide-board is lifted it will automatically lift, through the connection, the separator-blades.

Figure 1 in partial section shows a sufficient portion of a ring-spinning frame to enable my invention to be understood. Fig. 2 is a partial front elevation thereof, and Fig. 3 a section in the line *x*.

The frame-work A, the rail A', upon which rests the usual spindle-supports B for the usual sleeve-whirl spindles C, having bobbins D, and the separator-blades E on rods *a*, forming the carrier-bar, to which the said blades are secured by screws *a'*, the backwardly-extended ears *b*, having pivots to rest in bearings on the stands *b'*, depending from

the roller-beam *d*, the arms *e*, shown as connected to the ears *b*, and the counterbalancing-weights *f*, the hinged guide-board *g*, and the stand *m*² are and may be all substantially as common in ring-spinning frames. In accordance with my invention I have added to these old and well-known parts a connection *h*, shown as a chain, the upper end of which is joined with the guide-board *g*, the junction in this instance being shown as made by a hook *h'*, the lower end of the said connection being in turn attached to the separator-carrier bar, or it may be to a separator of whatever construction, the attachment, as represented, being made by a hook, which, after the connection has been passed from above under the lower rod *a*, is hooked over the upper rod *a*, as shown best in full lines in Figs. 1 and 2.

When the bobbins are to be doffed, the operator, by engaging the hand-piece *m* on the guide-board, lifts the said guide-board into the dotted-line position, Fig. 1, until the hook *m'*, pivoted upon the roller-stand *m*², engages a projection *m*³, which hook thus acts to hold up the guide-board. Lifting the guide-board as represented also lifts the rod to which the separators are attached, placing the said separators in the dotted-line position, Fig. 1, so that the bobbins may be doffed without interfering with the separators. The lowering of the guide-board enables the separators, which are slightly heavier than the counterbalancing-weights, (one or more of which may be used, according to number of separator-blades,) to fall into working position.

I claim—

1. In a ring-spinning frame, a ring-rail, a series of spindles, a pivoted or hinged guide-board, and a separator-carrying bar provided with a series of separators, the said bar being located below the guide-board, combined with connections whereby the lifting of the guide-board automatically effects the lifting of the separators preparatory to doffing, substantially as set forth.

2. In a ring-spinning frame, a spindle, a ring-rail, a counterbalanced separator-carrying bar located between the ring-rail and the tops of the spindle or bobbin carried

thereby, and a series of separators, combined
with a hinged or pivoted guide-board and
with a connecting device between the said
guide-bar and the separators, whereby the
5 lifting of the guide-board lifts the separators
and places them in position for doffing, sub-
stantially as described.

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

DANIEL J. GREEN.

Witnesses:

JOHN DEVINE,
GEORGE E. BAMFORD.