

No. 656,227.

Patented Aug. 21, 1900.

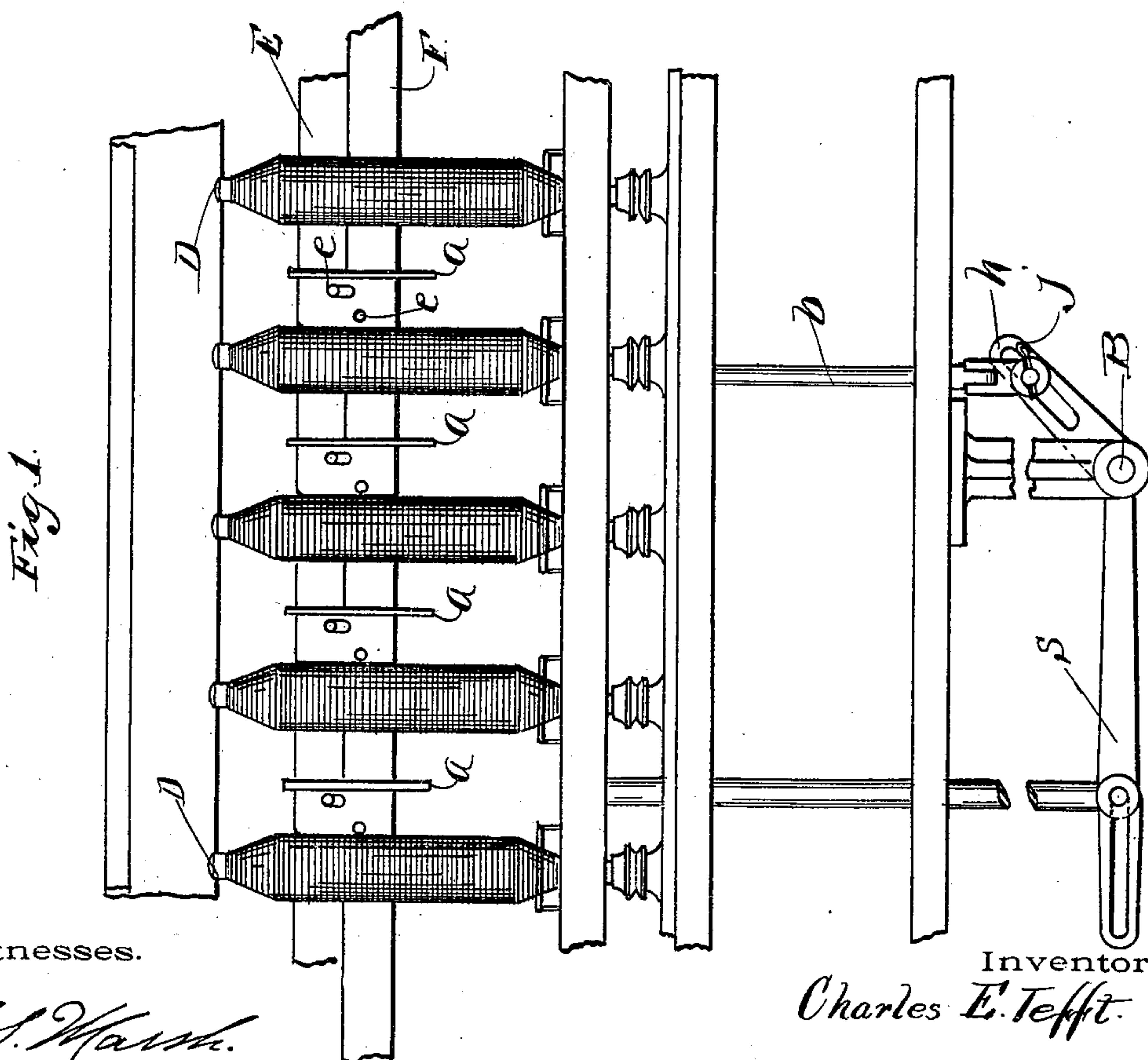
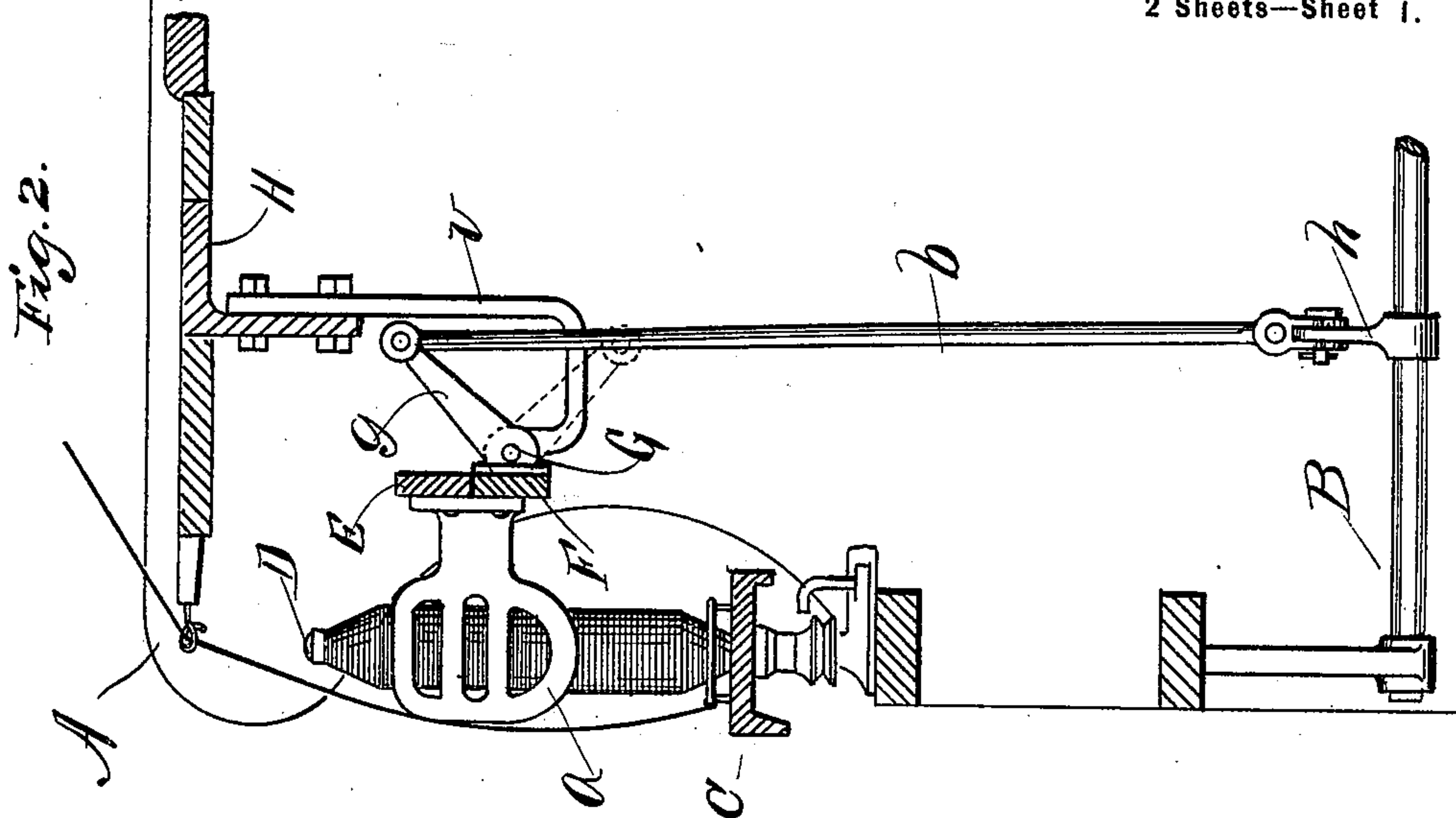
C. E. TEFFT.

SEPARATOR FOR SPINNING FRAMES.

(Application filed May 3, 1900.)

2 Sheets—Sheet 1.

(No Model.)



Witnesses.

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George B. Hussey

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2 Sheets—Sheet 2.

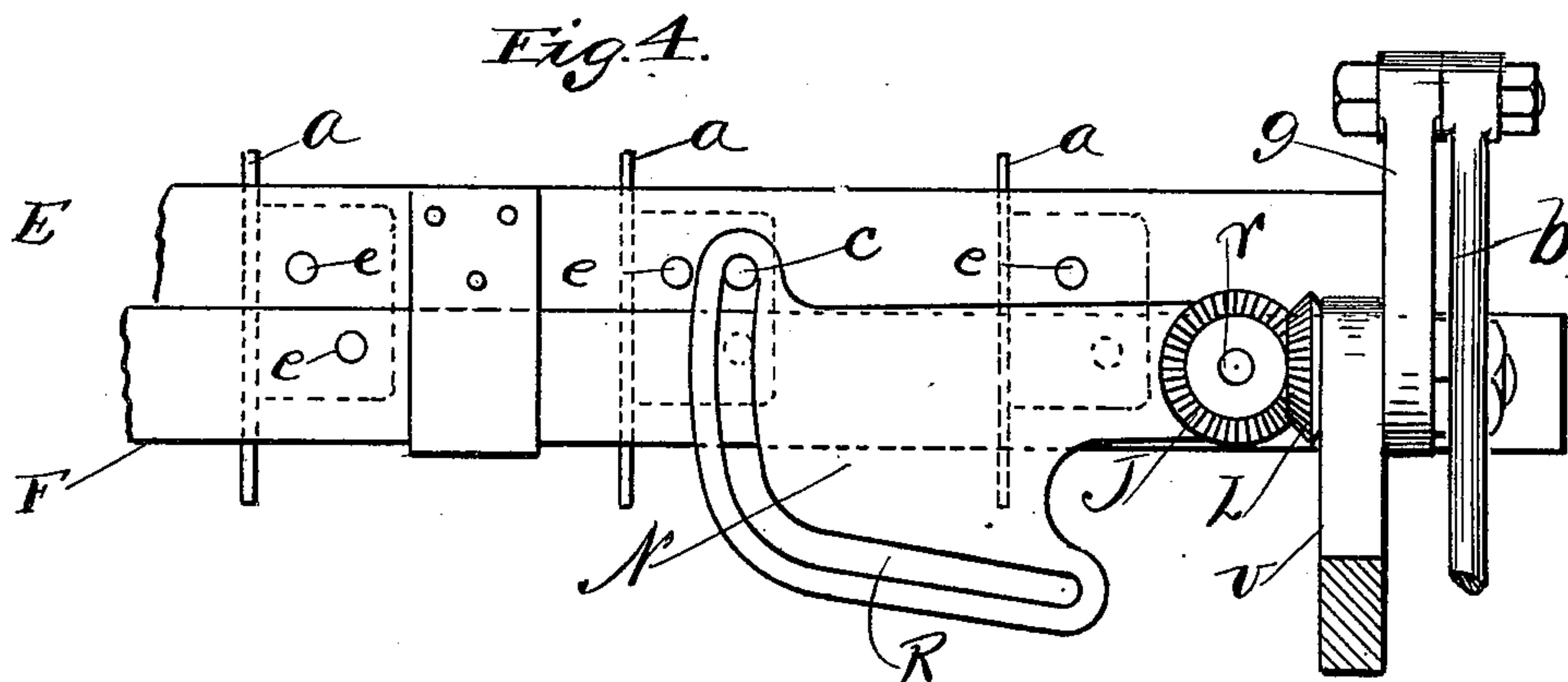
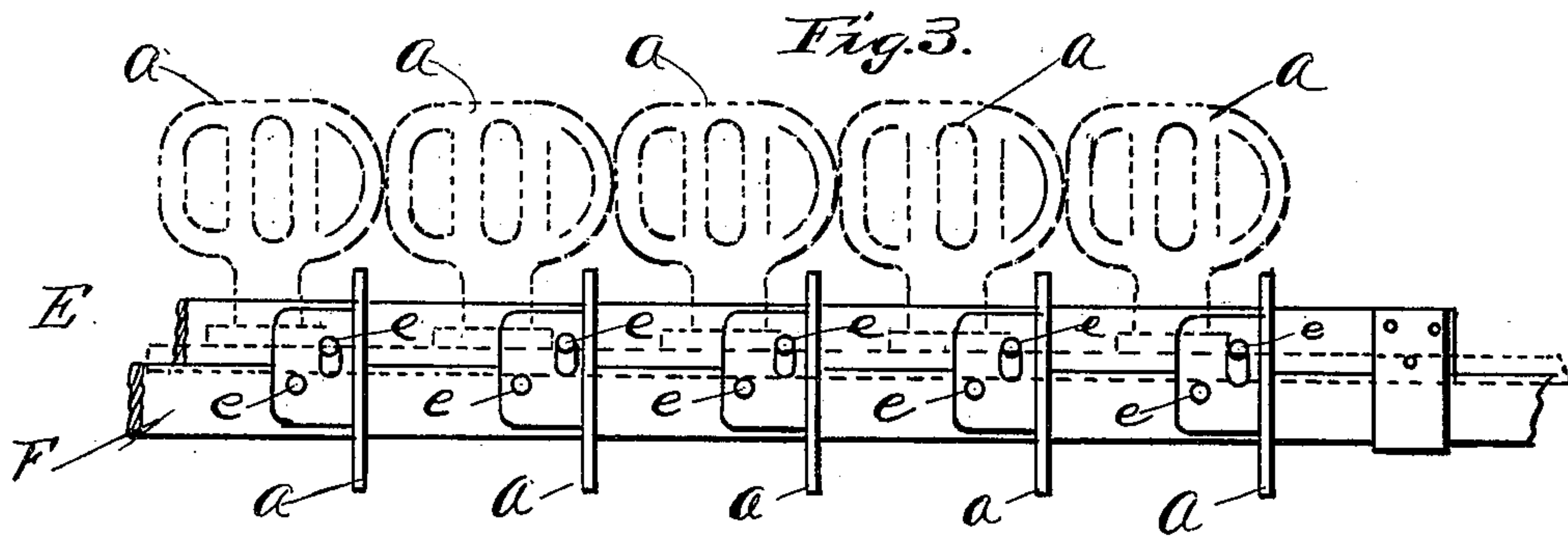


Fig. 5.

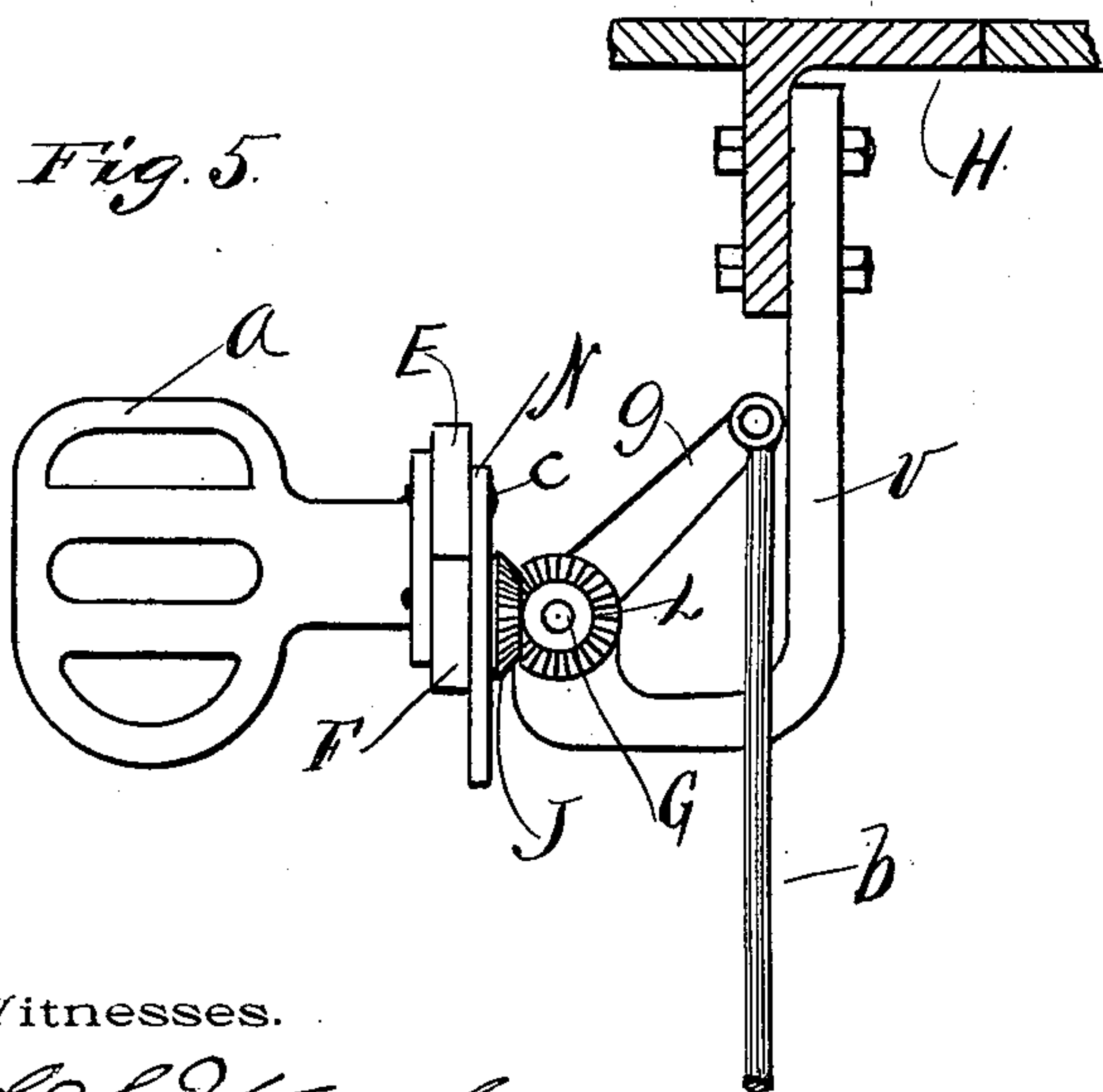
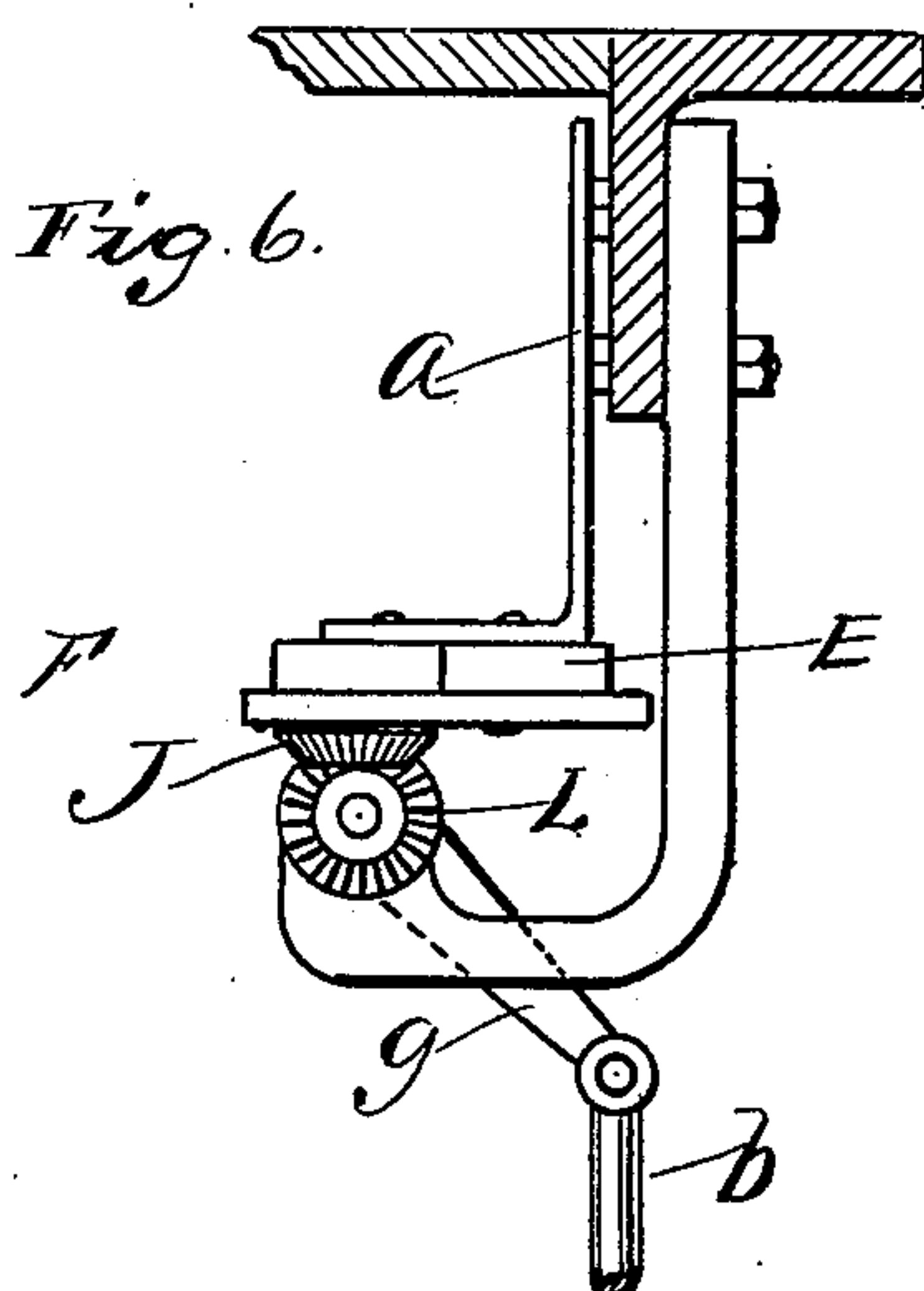


Fig. 6.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES E. TEFFT, OF PAWTUCKET, RHODE ISLAND.

SEPARATOR FOR SPINNING-FRAMES.

SPECIFICATION forming part of Letters Patent No. 656,227, dated August 21, 1900.

Application filed May 3, 1900. Serial No. 15,339. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. TEFFT, of Pawtucket, in the county of Providence and State of Rhode Island, have invented certain
5 new and useful Improvements in Separators for Spinning-Frames; and I 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 of
10 reference marked thereon, which form a part of this specification.

This invention refers to the separators used on spinning-frames for the purpose of keeping the yarns properly separated; and the object of it is to provide mechanism to operate
15 the separator automatically, raising it with the rise of the ring-rail and turning it out of the way, at the same time providing for a disconnection of the separator for the purpose of doffing when necessary.

Figure 1 represents a front elevation of a portion of a spinning-frame with the improved mechanism for operating the separator. Fig. 2 is a vertical section showing a
25 side view of the separator and its connection with the rock-shaft that raises the ring-rail. Fig. 3 is a front view of a part of the bars that support the separator-blades, shown in full lines when down and in dotted lines when clear up. Fig. 4 is a back view of a part of
30 the separator-bars, showing the mechanism for sliding the top bar on the other bar to turn the blades parallel with the bars. Fig. 5 represents the position of the separator-plates when the ring-rail is clear down. Fig. 6 shows
35 the position of the plates when the ring-rail is up.

My invention consists in providing blades or plates to pass between the spindles and
40 keep the yarns from ballooning, so as to interfere with each other. This takes place mainly when the ring-rail is down, when the distance between the traveler and the guide above is at its greatest, and as the ring-rail
45 rises it is necessary for the separator-plates to rise out of the way. This I provide mechanism for, and also means for giving the separator-blades a quarter-turn, so that they
50 will lie flat against the front beam and be more out of the way when they are not needed between the spindles.

The construction and operation are as follows:

In the drawings, A is the end frame of the machine, and C the ring-rail. 55

D D are some of the spindles.

B is the rock-shaft that raises the ring-rail, and S the lever that raises it.

F is the lower bar of the separators, and E is the upper sliding bar. To these two bars
60 the separator-plates *a a* are attached by the pivots *e e*.

A bracket *v* is bolted to the front beam H to support the separator-bars F and E and some of the mechanism that operates them. 65

The blades *a a* of the separator are held on the two bars F E. The lower bar is provided with a pivot G, that is held in a bearing in the bracket *v*, and an arm *g* is attached to the bar F, (see Fig. 2,) by which that bar can
70 be turned on the pivot to throw the plates *a a* up out of the way. A rod *b* is held at its upper end on a stud in the inner end of the arm *g*, and its lower end is connected by a

stud to an arm *h* on the rock-shaft B. This
75 arm *g* is placed on the opposite side of the rock-shaft B to the lever G, that raises the ring-rail, so that when the ring-rail rises the arm *g* will draw down on the arm on the separator-bar F and cause that bar to turn up and

80 raise the blades.

The turning of the blades on a vertical axis, as it were, to lay them parallel to the front beam H when up is accomplished by pivoting each blade to both bars F and E, 85

(see Fig. 5,) so that when the bar E, which is arranged to slide on the bar F, is moved end-wise each blade *a* will be swung around on the pivots *e* a quarter-turn and be parallel to the front beam, as in Fig. 6. This quarter-
90 turn of the blades *a a* takes place in the latter part of the rise of the ring-rail and is brought about by means of the following mechanism:

By reference to Fig. 4, which is a rear view
95 of the bars carrying the separator-blades *a a*, there will be seen on the bracket V, that supports the bars F E, a stationary bevel-gear L, and on a plate N, held on the stud *r*, fast in the bar F, there is a bevel-gear J, that en-
100 gages with the gear L, fast on the bracket V. Now as the separator-bars F E are turned up

on the pivot G by the arm *h* on the rock-shaft B drawing down on the rod *b* and arm *g* when the ring-rail rises the stationary gear L will cause the gear J to turn with the plate N on the stud *r* as the bars rise and by means of the slot R and the pin *c* will cause the plate E to slide on the bar F; but as the first or upper half of the slot R is concentric with the gear J the bar will not begin to slide and turn the blades *a* until the bars are half-way up and the blades nearly clear of the spindles. Then the latter part of the slot R will slide the bar E and turn the blades *a* to the position seen in Figs. 3 and 6. As all these connections are positive, when the blades are turned down the bar E will be slid back and they will resume their first position before they enter between the spindles D, as in Fig. 1. The doffing takes place when the ring-rail is down, and as the separator-blades are down at that time it is necessary to raise the blades up out of the way. This is done by releasing the lower end of the rod *b* from the stud *j* in the arm *h* and pushing the rod up to turn the blades up out of the way of the doffing, to be turned down again and the rod *b* again connected after the doffing is completed.

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

1. The combination of two parallel bars

means for sliding one on the other, separator-blades pivoted on both bars, and a bracket pivoted to one of the bars, a gear-wheel fast on said bracket, a plate pivoted on one bar and having a segment of gear at one end engaging with the gear on the bracket, a slot in said plate, a pin in the slot fast in the sliding bar S, substantially as described.

2. In a separator for spinning-frames the combination of two bars, one sliding on the other, blades pivoted to both bars, an arm fast on one bar for turning the two bars up and down, substantially as described.

3. In a separator for spinning-frames the combination of two bars, one sliding on the other, blades pivoted to both bars an arm fast on one bar for turning the two bars "up or down" with means for sliding one bar on the other to give the blades a quarter-turn, substantially as described.

4. In a separator the combination of two bars one arranged to slide on the other, a series of blades pivoted to both bars, with means for sliding one bar on the other to give the blades a quarter-turn, substantially as described.

In testimony whereof I have hereunto set my hand this 14th day of April, A. D. 1900.

CHARLES E. TEFFT.

In presence of—

BENJ. ARNOLD,
EDGAR S. MARSH.