

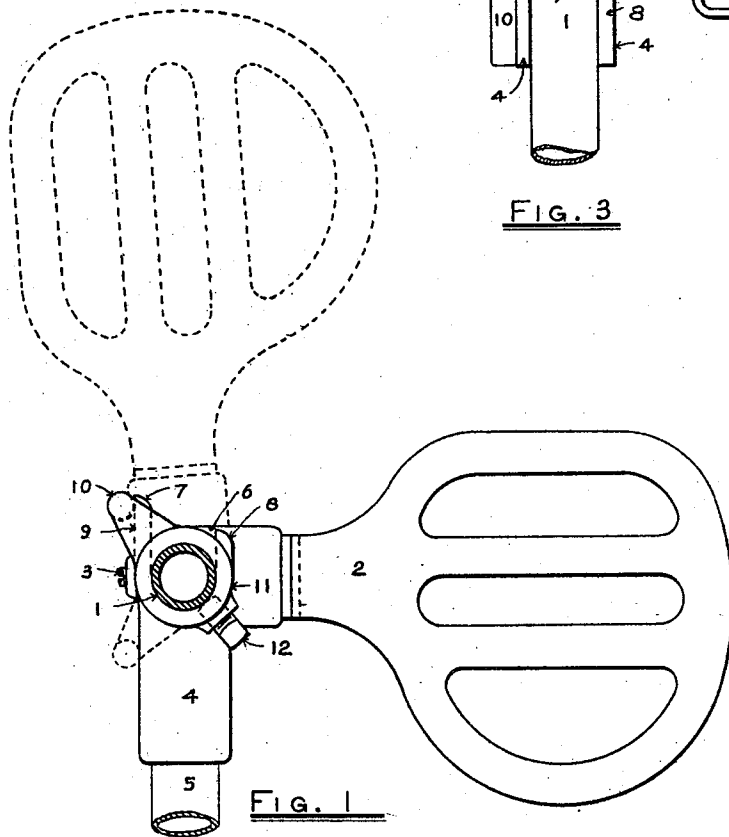
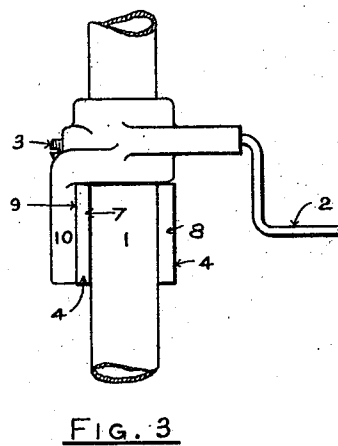
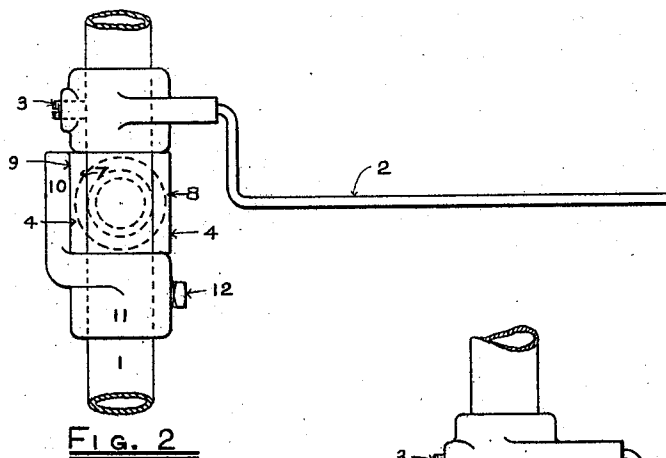
(No Model.)

C. F. RANDALL.

SEPARATOR MECHANISM FOR RING SPINNING FRAMES.

No. 498,305.

Patented May 30, 1893.



WITNESSES.

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SEPARATOR MECHANISM FOR RING-SPINNING FRAMES.

SPECIFICATION forming part of Letters Patent No. 498,305, dated May 30, 1893.

Application filed February 10, 1893. Serial No. 461,736. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. RANDALL, a citizen of the United States, residing at Washington, in the District of Columbia, have
5 invented a certain new and useful Improvement in Separator Mechanisms for Ring-Spinning Frames, of which the following is a specification, reference being had therein to the accompanying drawings.

10 My invention relates to separator-mechanisms of the class in which the separators are applied to a rail, rod, or shaft, having the journals or pivots thereof mounted in bearings provided therefor on supports to which
15 is communicated an up-and-down movement corresponding with that which is communicated to the ring-rail of the ring-spinning frame.

20 More particularly, the invention relates to the bearings for the journals or pivots of the separator-rail, rod, or shaft, and to the stop-devices which are provided for the purpose of determining the limits of the rotation of the separator-rail and separators.

25 The object of the invention is to provide an improved construction of supports and stop-devices whereby the separator-rail and separators shall be conveniently and securely sustained in proper position in the ring-spinning
30 frame to which the devices are applied, and which, while permitting the separators to be moved from their lowered and working or operative position between the spindles to their raised or inoperative position remote from
35 the spindles, when required, also shall permit the separator-rail and separators to be unobstructedly removed directly from the supports at any time before the separators have been
40 turned out of their operative position, and to be taken out of the machine, without it being necessary to provide for the disengagement of the journals or pivots of the rail from their bearings by first turning the separators out
45 of their operative position, as sometimes has been necessary heretofore in order to unlock the rail so that it may be removed.

50 The invention consists in an improved construction, arrangement and combination of parts all as is hereinafter fully set forth, and first will be described with reference to the accompanying drawings, and then will be par-

ticularly pointed out and clearly defined in the claims at the close of this specification.

In the drawings, Figure 1 is a view showing the separator-rail in section and also showing in side elevation a separator applied to
55 said rail, the support for the rail, and the stop-devices, it representing one embodiment of my invention. Fig. 2 is a plan view of the parts that are shown in Fig. 1. Fig. 3 is a
60 similar plan view of a modification.

At 1 is shown the separator-rail, and at 2 a separator mounted upon said rail and secured in position by a clamping screw 3 which passes
65 through a threaded hole in its hub and takes bearing against the exterior of the rail.

At 4 is shown a support for the rail, it being represented as formed by a socket applied to the upper end of a rod 5 which is intended to be mounted in a known manner in
70 guides in the ring-spinning frame, through which guides it shall be moved vertically by operating means similar to what heretofore has been employed in the like connection, the
75 said operating means serving to communicate to rod 5 and the parts carried thereby a reciprocating movement resembling that which is communicated to the lifting-rods
80 which support the ring-rail with its rings. The said socket 4 is provided with an open bearing 6 in which is received the journal of the separator-rail 1, and into which the said
85 journal may be dropped readily in assembling the parts, or from which the said journal may as readily be removed when it is desired to take the separator-rail away, the said
90 journal turning in the said bearing as the separators are shifted from their lowered or operative positions to their raised or idle positions and vice versa.

In the illustrated construction the walls 7 and 8 of the bearing are vertical. The rear wall 7 is prolonged to a sufficient extent from the seat in the bearing in which the journal of the separator-rail rests to enable its rear
95 surface 9 to be utilized for receiving the impact of a stop 10 moving with the separator-rail. The said stop comes in contact with the surface 9 when the separators have reached their operative positions between the spindles,
100 and the movement of the separators forwardly and downwardly thereby is arrested.

The stop acts against the surface 9 at a point in the rear of the seat for the journal of the separator-rail, and as clearly will be apparent from inspection of Fig. 1, the said surface 9 serves as a rest or fulcrum against the rearward side of which the stop takes a bearing while the unbalanced weight of the parts in front of the point of contact operates to bear or impel the journal of the rail to its seat and hold it there, the parts gravitating naturally into their proper position and remaining there.

In the embodiment of my invention illustrated in Figs. 1 and 2 the stop is shown connected with the separator-rail so as to move therewith by being formed as part of a hub or collar 11 which is slipped upon the separator-rail and clamped in place thereon in the desired position of longitudinal and angular adjustment by means of the clamping-screw 12, which is fitted to a threaded hole in the collar or hub and takes bearing at its end against the surface of the separator-rail.

A convenient arrangement of the parts is shown in Fig. 2, wherein the hub of the separator and the hub or collar 11 are mounted on the separator-rail on opposite sides of the socket 4.

In Fig. 3 the stop is shown carried by one of the separators.

The construction of the parts is such as to permit the separator-rail and separators to be removed directly from the support at any time, before the separators have been turned out of their operative positions, and to be taken away from the machine, without it being necessary to provide for the disengagement of the rail from its supports by first turning the separators out of their operative positions shown by full lines in Fig. 1 into the inoperative positions shown by the dotted lines in Fig. 1, as has been the case heretofore. The arrangement of the stop and rest or fulcrum shown in the drawings is such as to permit the front wall of the bearing to be made very low. In fact, in the construction illustrated, the front wall is necessary only for the purpose of holding the separator-rail from dropping forward out of the open bearing when the separators have been raised and the pressure of the stop against the rest has been lessened or relieved. When raised into the dotted line position indicated in Fig. 1 the separators may rest against the front of the roller-beam, or other fixed part of the machine. I have, however, so disposed the parts as that the stop 10 may come in contact with the rear side of the socket 4 when the separators have been raised, thereby to arrest and support them.

Important features of the invention are the open bearing from which the rail-journal may be removed directly, and the rest or fulcrum without obstruction to interfere with the stop while the rail is being removed.

It is obvious that the form, construction, and arrangement represented in the draw-

ings may be varied in various slight respects without involving a departure from the spirit of my invention.

I claim as my invention—

1. The combination with the separators, the separator-rail, and a stop moving in unison with the separators and separator-rail, of the support constructed to permit the separator-rail to be unobstructedly removed therefrom before the separators have been turned out of their operative positions, it having the open bearing from which the rail-journal may be removed directly, and also the rest without obstruction to interfere with the stop while the rail is being removed, substantially as described.

2. The combination with the separators, the separator-rail, and a stop moving in unison with the separators and separator-rail, of the support provided with an open bearing for the rail-journal and in which the said journal turns as the separators are shifted into their working and idle positions, and also with a rest the rear side whereof constitutes a fulcrum for the stop and enables the unbalanced weight to bear the journal to its seat, substantially as described.

3. The combination with the separators, the separator-rail, and a stop moving in unison with the separators and separator-rail, of the support constructed to permit the separator-rail to be removed therefrom unobstructedly before the separators have been turned out of their operative positions, it having the open bearing from which the rail-journal may be removed directly and also the rest at the rear side thereof without obstruction to interfere with the stop while the rail is being removed, substantially as described.

4. The combination with the separators, the separator-rail, and a stop moving in unison with the separators and separator-rail, of the support with which the said stop engages to determine the opposite positions of the separators, the same being constructed to permit the separator-rail to be unobstructedly removed therefrom before the separators have been turned out of their operative positions, it having the open bearing from which the rail-journal may be removed directly and also the rest without obstruction to interfere with the stop while the rail is being removed, substantially as described.

5. The combination with the separators, the separator-rail, and a stop moving in unison with the separators and separator-rail, of the support with which the said stop engages to determine the opposite positions of the separators, the same being constructed to permit the separator-rail to be removed therefrom unobstructedly before the separators have been turned out of their operative positions, it having the open bearing from which the rail-journal may be removed directly and also the rest at the rear thereof without obstruction to interfere with the stop while the rail is being removed, substantially as described.

6. The combination with the separators, the separator-rail, and the collar mounted on the said rail and provided with a stop, of the support constructed to permit the separator-rail
5 to be unobstructedly removed therefrom before the separators have been turned out of their operative positions, it having the open bearing from which the rail-journal may be removed directly, and also the rest without
10 obstruction to interfere with the stop while the rail is being removed, substantially as described.

7. The combination with the separators, the separator-rail, and the collar mounted on the
15 said rail and provided with a stop, of the support with which the said stop engages to de-

termine the opposite positions of the separators, the same being constructed to permit the separator-rail to be unobstructedly removed before the separators have been turned out
20 of their operative positions, it having the open bearing from which the rail-journal may be removed directly and also the rest without obstruction to interfere with the stop while the rail is being removed, substantially as
25 described.

In testimony whereof I affix my signature in the presence of two witnesses.

CHAS. F. RANDALL.

Witnesses:

MARY CAVERLY,
CHANNING WHITAKER.