

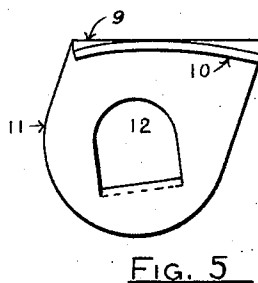
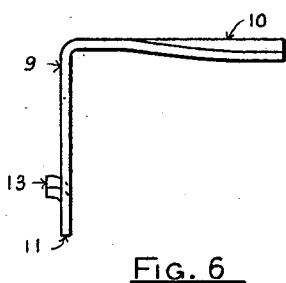
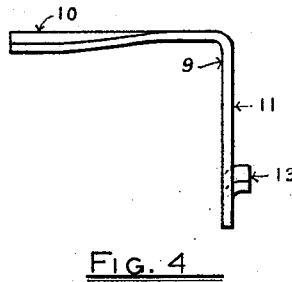
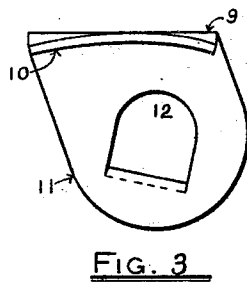
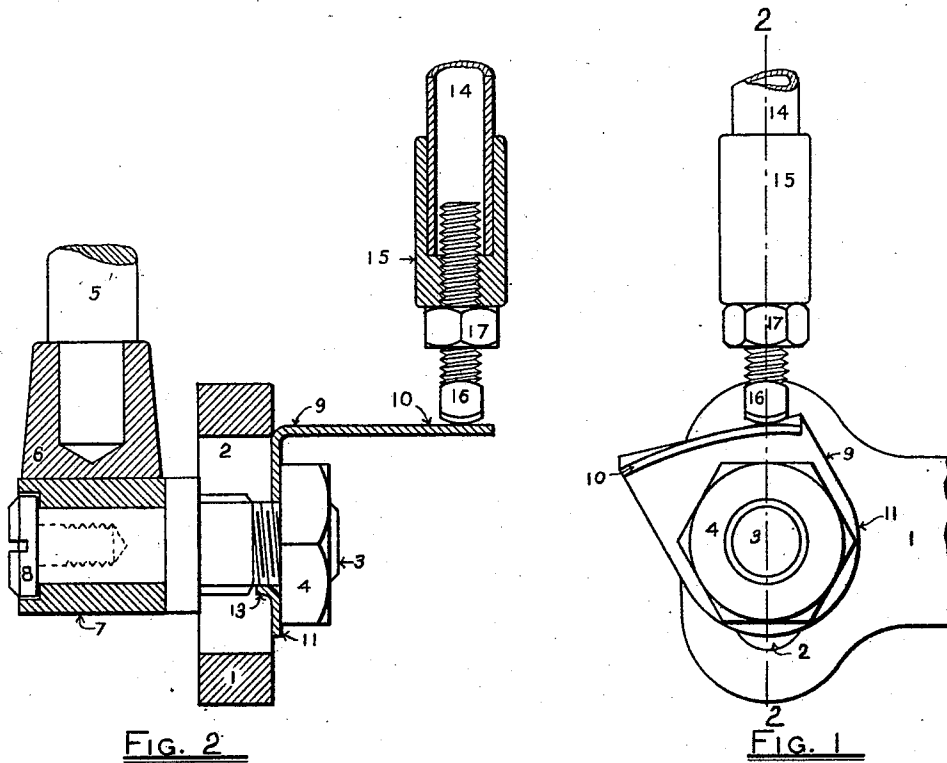
(No Model.)

C. L. HILDRETH.

SEPARATOR MECHANISM FOR RING SPINNING FRAMES.

No. 498,266.

Patented May 30, 1893.



WITNESSES.

Channing Whitaker.

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CHARLES L. HILDRETH, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO THE
LOWELL MACHINE SHOP, OF SAME PLACE.

SEPARATOR MECHANISM FOR RING-SPINNING FRAMES.

SPECIFICATION forming part of Letters Patent No. 498,266, dated May 30, 1893.

Application filed February 10, 1893. Serial No. 461,728. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. HILDRETH, a citizen of the United States, residing at Lowell, in the county of Middlesex and State

5 of Massachusetts, have invented certain new and useful Improvements in Separator Mechanisms for Ring-Spinning Frames, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention is designed as an improvement upon separator-mechanisms of the type of that which is represented in United States Letters Patent No. 476,731, granted June 7, 1892, to A. D. Chandler, and it consists in a

15 novel construction and combination of devices, of simple and inexpensive character, for transmitting movement from the cross-shaft arm to the separator-rod at the top of which are supported the separator-rail or

20 shaft and separators.

The invention first will be described with reference to the accompanying drawings, and then will be particularly pointed out and clearly defined in the claims at the close of

25 this specification.

In the drawings, Figure 1 is a view in side elevation of the free end of the cross-shaft arm, and the lower end of the separator-rod, and the intermediate or transmitting devices

30 embodying my invention. Fig. 2 is a view in vertical section on the line 2—2 of Fig. 1, it showing also the lower end of the lifting-rod, at the top of which is supported the ring-rail, and the means whereby movement is

35 transmitted to the lifting-rod from the cross-shaft arm, these parts not being visible in Fig. 1. Figs. 3 and 5 represent oppositely taken side views of the part which is referred to hereinafter as the tongued collar. Figs.

40 4 and 6 represent oppositely taken edge views of the said collar.

Reference may be had to the patent hereinbefore mentioned for general information respecting the general features of the separator-mechanism.

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In the accompanying drawings I have shown only the features of my present invention and those parts which are most closely associated therewith.

50 At 1 in Figs. 1 and 2 is shown the usual

cross-shaft arm for transmitting movement to the lifting-rod, and the ring-rail, with its rings, which is supported by the said lifting rod.

At 2 is a vertical or transverse slot in the free end of the cross-shaft arm 1, and at 3 is the stud which serves for the transmission of movement to the lifting-rod. The said stud has a threaded end which is passed through the slot 2 and also a collar 31 which takes bearing against one side of the cross-shaft arm, the stud being secured in the desired position of adjustment in the said slot by the nut 4 which is fitted upon the said threaded end on the side of the arm 1 which is opposite to that on which the collar 31 is located.

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At 5 is shown the lifting-rod, and at 6 is shown the shoe or foot at the lower end of the said rod which is acted against by the projecting end of the stud 3, or by the roller 7 which is mounted on the said end and held in place thereon by the thin-headed screw 8, the threaded end of which enters a threaded hole in the end of the stud.

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The construction and mode of operation of the parts which have been described are as usual.

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At 9 is shown what I term a tongued collar, the same being separately represented in Figs. 3, 4, 5 and 6, and it being formed with a horizontal tongue 10, a vertical web or body 11, a hole 12 through such vertical web or body, and a turned-over laterally-projecting flange 13 preferably at the lower side of such hole. The said collar is secured against the side of arm 1 in the position in which it is represented in Figs. 1 and 2, the threaded end of stud 3 being passed through the hole 12 before the nut 4 is fitted into the said end. The nut, when turned up tightly to its seat, clamps the collar in place. The flange 13 enters the slot 2 in the arm 1 and serves to prevent rotation of the collar around the stud 3 as a result of pressure applied to the upper surface of the tongue 10. The said tongue supports the separator-rod 14, and it is curved about an axis parallel to the axis of the cross-shaft in order that the movement of the separator-rod may conform to the movement of the end of the cross-shaft arm more perfectly

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than would be the case if the tongue were flat and parallel to the longitudinal axis of the cross-shaft arm.

To the lower end of the separator-rod 14 is applied the socket or cap 15 having in the end thereof a threaded hole in which is fitted the adjusting-screw 16, the lower end of which rests on the tongue 10. A check-nut 17 on the adjusting-screw below the socket or cap 15 prevents the said adjusting-screw from getting out of adjustment. The said screw may be turned in or out of the socket or cap for the purpose of effecting any desired vertical shift or translation of the traverse of the separator-rod, and the separator-rail and separators carried thereby, without causing any variation whatever in the extent of such traverse; and it also may be adjusted in like manner as much as may be required in order to compensate for vertical adjustment of the stud 3 in the slot 2 such as is made when it is desired to shift vertically the path traversed by the ring-rail and rings, the compensating adjustment of the screw 16 avoiding any change in the vertical position of the path traversed by the separator-rail and separators.

I claim as my invention—

1. The combination with the cross-shaft arm, the lifting-rod, its actuating-stud, means for securing the said stud in place on the said arm, and the separator-rod, of the tongued collar supporting by its tongue the said separator-rod and held to the arm by the said securing means for the stud, substantially as described.

2. The combination with the cross-shaft arm, the lifting-rod, its actuating stud, the nut on the threaded end of the said stud, and the separator-rod, of the tongued collar supporting by its tongue the said separator-rod and having an opening in its body-portion through which the threaded end of the said stud is passed to enable the collar to be secured in place by the nut aforesaid, substantially as described.

3. The combination with the cross-shaft arm, the lifting-rod, its actuating-stud, the nut on the threaded end of the said stud, and the separator-rod, of the tongued collar, supporting by its tongue the said separator-rod, having an opening in its body-portion through which the threaded end of the stud is passed, to enable the collar to be secured in place by the nut aforesaid, and also having a turned-over flange to prevent rotation, substantially as described.

4. The combination with the cross-shaft arm

formed with a transverse slot, the lifting-rod, its actuating stud passed through the said slot, the nut on the threaded end of the said stud, and the separator-rod, of the tongued collar, supporting by its tongue the said separator-rod, having an opening in its body-portion through which the threaded end of the stud is passed to enable the collar to be secured in place by the nut aforesaid, and also having a turned-over flange which enters the slot to prevent rotation, substantially as described.

5. The combination with the cross-shaft arm having a lateral projection, of a separator-rod having an adjusting-screw fitted to a threaded portion at the lower end thereof, the said screw resting by its end on the said projection, substantially as described.

6. The combination with the cross-shaft arm having a lateral projection, of a separator-rod having an adjusting screw fitted to a threaded portion at the lower end thereof, the said screw resting by its end on the said projection, and a lock-nut applied to the said screw, substantially as described.

7. The combination with the cross-shaft arm formed with a transverse slot, the lifting-rod, its actuating stud passed through the said slot, the nut on the threaded end of the said stud, the separator-rod, and the adjusting-screw fitted to a threaded portion at the lower end of the separator-rod, of the collar having a tongue on which the end of the said adjusting-screw rests, and an opening in its body-portion through which the threaded end of the stud is passed to enable the collar to be secured in place by the nut aforesaid, substantially as described.

8. The combination with the cross-shaft arm formed with a transverse slot, the lifting-rod, its actuating stud passed through the said slot, the nut on the threaded end of the said stud, the separator-rod, and the adjusting-screw fitted to a threaded portion at the lower end of the separator rod, of a collar having a tongue on which the end of the said adjusting screw rests, an opening in its body-portion through which the threaded end of the stud is passed to enable the collar to be secured in place by the nut aforesaid, and a turned-over flange which enters the slot to prevent rotation, substantially as described.

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

CHAS. L. HILDRETH.

Witnesses:

CHANNING WHITAKER,
SAML. G. STEPHENS.