No. 830,215. PATENTED SEPT. 4, 1906.

E. DIXON.

ADJUSTABLE FULCRUM FOR THE WEIGHT LEVERS OF SPINNING FRAMES.

APPLICATION FILED JUNE 23, 1905.

Fig. 1.

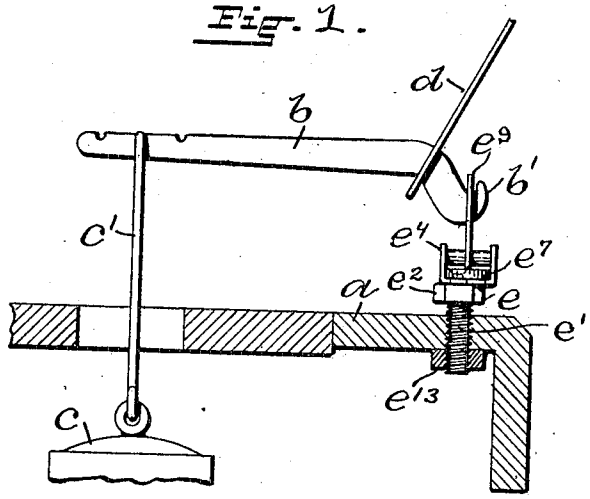


Fig. 2.

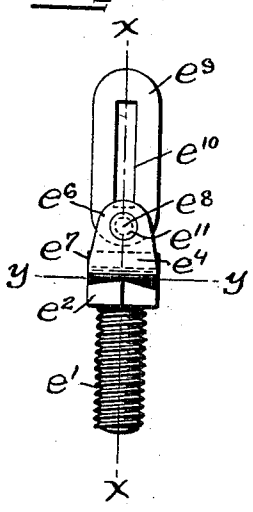


Fig. 3.

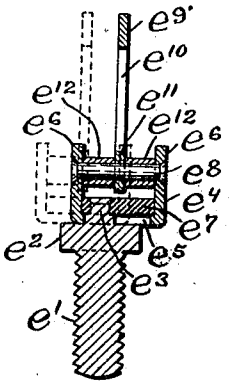
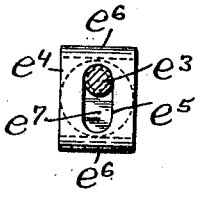


Fig. 4.



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ADJUSTABLE FULCRUM FOR THE WEIGHT-LEVERS OF SPINNING-FRAMES.

No. 830,215. Specification of Letters Patent. Patented Sept. 4, 1906.

Application filed June 23, 1905. Serial No. 266,568.

To all whom it may concern:

Be it known that I, EZRA DIXON, a citizen of the United States, residing at Bristol, in the county of Bristol and State of Rhode Island, have invented a new and useful Improvement in Adjustable Fulcrums for the Weight-Levers of Spinning-Machines, of which the following is a specification.

This invention has reference to an improvement in drawing-roll weight-lever mechanisms of spinning-frames, and more particularly to an improvement in the construction of adjustable fulcrums for the drawing-roll weight-levers.

The object of my invention is to improve the construction of an adjustable fulcrum for drawing-roll weight-levers, whereby the weights are adjusted vertically, the stirrup-straps forwardly or rearwardly, and the fulcrum locked in its adjusted position.

My invention consists in the peculiar and novel construction of an adjustable fulcrum for the drawing-roll weight-levers of spinning-machines, said fulcrum comprising a screw-threaded stem adapted to screw through the front rail of a spinning-frame and having a polygonal head on which is a central stud, a yoke having a slot in its base for the stud, a disk secured off center to the stud and acting as a cam in the yoke, a cross-pin extending through the arms of the yoke, a link pivotally secured to the cross-pin, and a lock-nut on the stem engaging with the front rail of the spinning-frame, whereby a drawing-roll weight is adjusted vertically, a stirrup-strap adjusted forwardly or rearwardly between the drawing-rolls, and the fulcrum locked in its adjusted position, as will be more fully set forth hereinafter.

Figure 1 is a sectional view of part of a spinning-frame provided with my improved adjustable weight-lever fulcrum. Fig. 2 is an enlarged front view of my improved adjustable fulcrum removed from the front rail of the spinning-frame. Fig. 3 is a vertical sectional view of the fulcrum, taken on line X X of Fig. 2, showing the yoke and link in the extreme forward position in full lines and in the extreme rearward position in broken lines; and Fig. 4 is a transverse sectional view taken on line *y y* of Fig. 2 looking at the under side of the yoke.

In the drawings, *a* indicates the front rail of a spinning-frame; *b*, a weight-lever having the hook-shaped fulcrum end *b'*; *c*, the upper portion of a weight connected to the weight-lever *b* by the wire *c'*; *d*, a stirrup-strap connecting the lever *b* with a saddle on the top rolls, (not shown,) and *e* my improved adjustable fulcrum for the weight-lever *b*, as shown in Fig. 1.

The adjustable fulcrum *e* consists of a screw-threaded stem *e'*, having the polygonal head e^2, on which is the central stud e^3, a yoke e^4, having the slot e^5 in its base for the stud e^3 and the upwardly-extending arms e^6 e^6, a cam-disk e^7, secured off center to the stud e^3 in the yoke e^4 by riveting the end of the stud through a hole in the disk, a cross-pin e^8, extending through the arms e^6 e^6 of the yoke and secured by riveting the ends of the pin in the arms, a link e^9, having the slot e^{10} for the fulcrum end *b'* of the weight-lever *b* and the hole e^{11} in its lower end by which the link is pivotally secured to the pin e^8, and the sleeves e^{12} e^{12} on the pin e^8 intermediate the arms e^6 e^6 and the link e^9 for holding the link e^9 centrally on the pin e^8, as shown in Fig. 3. A lock-nut e^{13} on the stem *e'* engages with the front rail *a* and locks the fulcrum in its adjusted position, as shown in Fig. 1.

In the use of my improved adjustable fulcrum the stem *e'* is screwed through a hole in the front rail *a* in a position for the hook-shaped end *b'* of the weight-lever *b* to enter the slot e^{10} in the link e^9 of the fulcrum, as shown in Fig. 1. The weight *c* is adjusted vertically by turning the stem *e'* to raise or lower the stem in the front rail *a*. The stirrup-strap *d* is adjusted forwardly or rearwardly between the drawing-rolls (not shown) by turning the stem *e'* and through the cam-disk e^7, acting on the arms e^6 e^6 of the yoke e^4, moves the yoke e^4 and the link e^9 into the extreme forward position, as shown in full lines in Fig. 3, or into the extreme rearward position, as shown in broken lines in Fig. 3, or into any immediate position and locked in the adjusted position by tightening the lock-nut e^{13}. These movements of the link e^9 move the weight-lever *b* and with it the stirrup-strap *d*. In practice I find that this half-revolution or less of the stem *e'* does not make any appreciable difference in the position of the weight *c*.

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

1. An adjustable fulcrum comprising a screw-threaded stem having a polygonal head on which is a central stud, a yoke having a slot in its base for the stud and up-

wardly-extending arms, a cam-disk secured off center to the stud in the yoke, a cross-pin secured at each end to the arms of the yoke, a link having a slot and pivotally secured at its lower end to the cross-pin, and means for locking the fulcrum in its adjusted position to the front rail of a spinning-frame, as described.

2. An adjustable fulcrum comprising a screw-threaded stem e' having the polygonal head e^2 on which is the central stud e^3, a yoke e^4 having the slot e^5 in its base for the stud e^3 and the upwardly-extending arms e^6 e^6, a cam-disk e^7 secured off center to the stud e^3 in the yoke e^4, a cross-pin e^8 secured at each end to the arms e^6 e^6, a link e^9 having the slot e^{10} and the hole e^{11} in its lower end by which it is pivotally secured to the cross-pin e^8, the cylindrical sleeves e^{12} e^{12} on the cross-pin e^8 intermediate the arms e^6 e^6 and the link e^9, and means for locking the fulcrum in its adjusted position to the front rail of a spinning-frame consisting of the lock-nut e^{13} on the stem e', as described.

3. The combination with the front rail a, the weight-lever b, the weight c, and the stirrup-strap d of a spinning-frame, of an adjustable fulcrum e comprising a screw-threaded stem e', screw-threaded through the front rail a and having a polygonal head e^2 on which is the central stud e^3, a yoke e^4 having the slot e^5 in its base for the stud e^3 and the upwardly-extending arms e^6 e^6, a cam-disk e^7 secured off center to the stud e^3 in the yoke e^4, a cross-pin e^8 secured at each end to the arms e^6 e^6, a link e^9 having the slot e^{10} and the hole e^{11} at its lower end by which the link is pivotally secured to the cross-pin e^8, the cylindrical sleeves e^{12} e^{12} on the cross-pin e^8 intermediate the arms e^6 e^6 and the link e^9, and the locking-nut e^{13} on the stem e', whereby the weight c is adjusted vertically, the stirrup-strap d adjusted forwardly or rearwardly and the fulcrum locked in its adjusted position to the front rail a, as described.

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

EZRA DIXON.

Witnesses:
ADA E. HAGERTY,
JOSEPH A. MILLER, Jr.