No. 618,233. Patented Jan. 24, 1899.

H. A. OWEN.

SPINNING MACHINE.

(Application filed June 8, 1898.)

(No Model.)

Fig. 1.

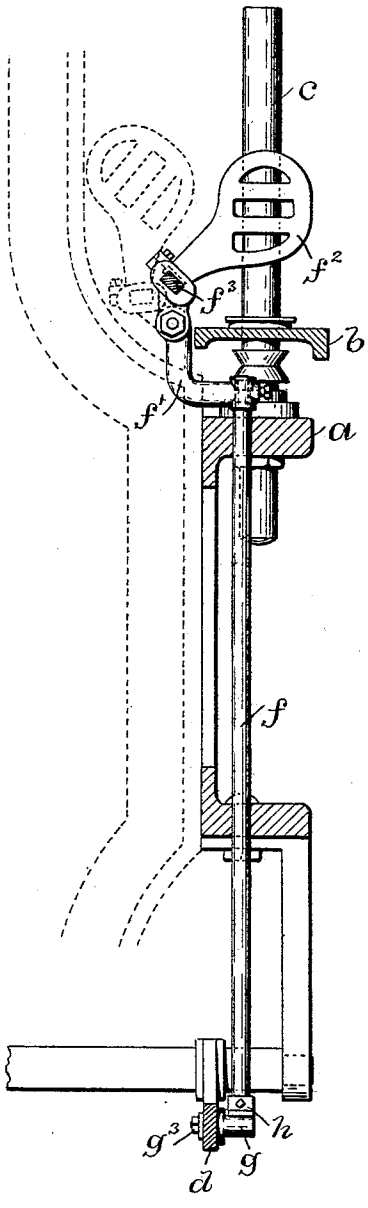


Fig. 2.

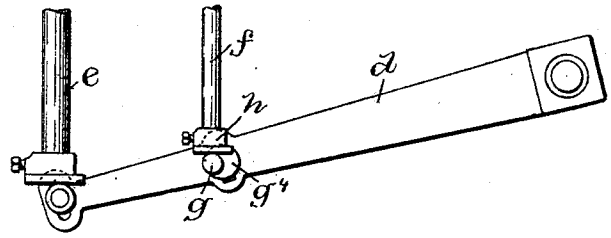


Fig. 3.

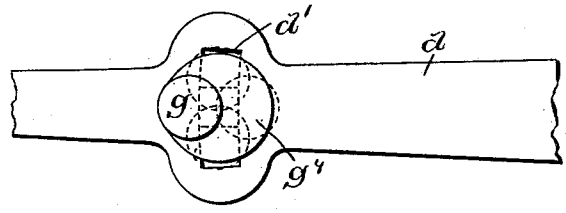


Fig. 4.

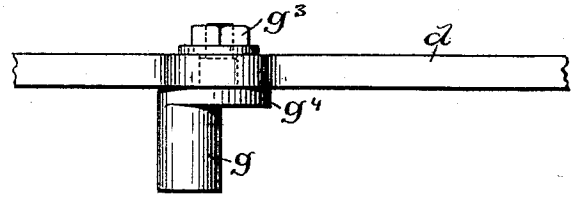


Fig. 5.

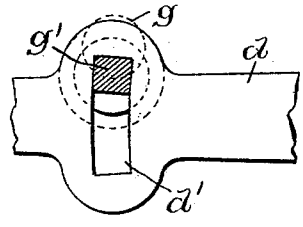
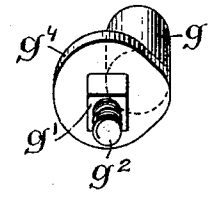


Fig. 6.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY A. OWEN, OF WHITINSVILLE, MASSACHUSETTS, ASSIGNOR TO THE WHITIN MACHINE WORKS, OF SAME PLACE.

SPINNING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 618,233, dated January 24, 1899.

Application filed June 8, 1898. Serial No. 682,919. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. OWEN, of Whitinsville, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Spinning-Machines; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in the lifting mechanism for the separators of spinning-machines; and it consists in the peculiar and novel construction of an adjustable support for the lifter-rods of the separators, whereby the same may be readily adjusted to operate separators having different forms or sizes of separator-plates.

Figure 1 is a transverse sectional view of part of a ring-spinning machine, showing a separator-plate and actuating mechanism. Fig. 2 is a front view of a lifter-arm provided with my improved adjustable lifter-pin. Fig. 3 is a front view of the part of the lifter-arm provided with my improved adjustable stud on an enlarged scale. Fig. 4 is a top view of the same. Fig. 5 is a view of the slotted lifter-arm, showing the square post of the adjustable lifter-pin in section; and Fig. 6 is a perspective view of the improved lifter-pin.

Spinning-machines may be readily adapted by the adjustment of the finger-boards or guide-eyes to the use of different lengths of bobbins. If longer bobbins are to be used, the width of the separator-plates requires to be increased and the plates readjusted to the changed condition.

To secure a sufficiently-great range of adjustment to adapt the separator-actuating mechanism for the various sizes and shapes of separator-plates is the object of this invention.

In the drawings, a indicates the bolster-rail of a ring-spinning machine; b, the ring-rail; c, the bobbin; d, the lifter-arm operating the ring-rail and the separator; e, the lifter-rod connected with the ring-rail b; f, the lifter-rod, to the upper end of which the bracket f' is secured, and f^2 one of the separator-plates connected to the bar f^3, pivotally connected with the bracket f'. At the part of the lifter-arm d which coöperates with the lifter-rod f, controlling the reciprocation of the separator-plates, I increase the width of the arm and provide it with the curved slot d', and in this slot I secure the adjustable lifter-pin g. This pin consists of the square post g', fitting the slot d' with a close sliding fit, and the screw-bolt g^2, adapted to receive the nut g^3. The post g' and bolt g^2 project from the base-plate g^4. From the opposite side of the base-plate the lifter-pin g projects, but is offset on one side of the center of the square post.

As shown in the drawings, the offset of the lifter-pin g is sufficient to secure the adjustment required for the ordinary variation in the separator-plates, while maintaining the proper relation of the lifter-pin with the shoe h on the lower end of the lifter-rod f. With a slightly-wider shoe h the lifter-pin g may be offset farther from the square post g', so as to secure a greater range of adjustment or permit of a reduction in the length of the slot d' in the lifter-arm, even to a mere central square hole.

In practice I prefer the construction shown in the drawings, because the lifter-pin in each one of the three essential positions acts more directly in line with the lifter-rod.

By reason of the square post the offset lifter-pin may be placed above the center of the square post, below the center, or on either side of the center, as is indicated in Fig. 3, so that with a square central hole in place of the slot d' three vertically-different points of contact with the shoe may be secured, depending in their range on the distance the lifter-pin is offset from the center of the square post.

The square post g' may be vertically adjusted between the upper and lower ends of the slot d', and when secured by the nut g^3 will be firmly held in any one of the adjusted positions, thereby securing a wide range of adjustment and adapting the parts of the separator to any change in the separator-plates or variation in their position due to variations in the length of the bobbins.

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

1. In a spinning-machine, the combination with the lifter-rod and the lifter-arm actuating the separators, of a lifter-pin having a base-plate provided with a square post pro-

jecting from one side thereof, the axial center of the lifter-pin being beyond the square of the square post, and means for securing the pin in the lifter-arm substantially as described; whereby the point of contact of the lifter-pin with the shoe on the lifter-rod may be varied and the separator adjusted, as described.

2. In a spinning-machine, the combination with the lifter-arm d provided with the slot d', of the base-plate g^4, the pin g projecting from one side of the base-plate, the square post g' projecting from the center of the opposite face of the base-plate, the screw g^2 and the nut g^3; whereby the pin g may be adjusted in the slot and secured in any one of the four positions to adapt the pin for actuating the separators of the spinning-machine under varying conditions, as described.

3. In a spinning-machine, the combination with the lifter-rod f and the separators and the lifter-arm d provided with the slot d', of the square post g', the lifter-pin g, the central axis of the pin being parallel to but on one side of the axis of the post, the base-plate g^4, and means for securing the post in the slot; whereby the point of support of the lifter-rod may be adjusted, as described.

In witness whereof I have hereunto set my hand.

HENRY A. OWEN.

Witnesses:
B. M. SIMMS,
J. A. MILLER, Jr.