J. W. JACOB.

Sewing-Machine Brake.

No. 110,140. Patented Dec. 13, 1870.

Fig. 1.

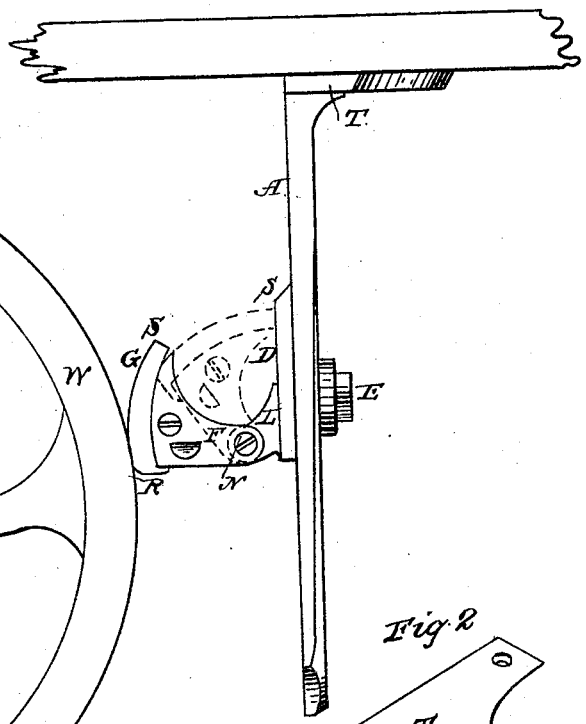


Fig. 2

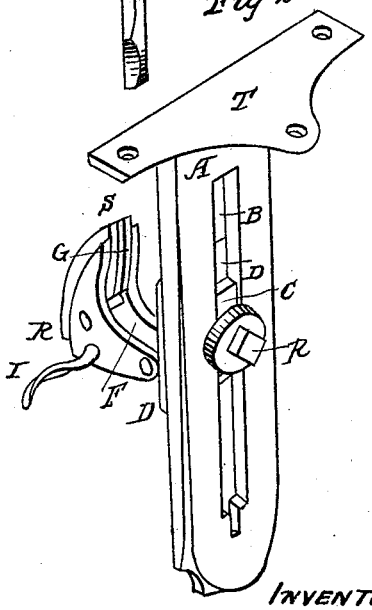


Fig. 3

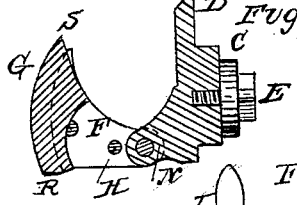
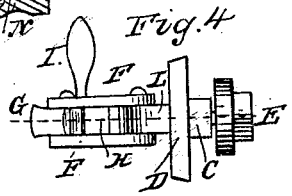


Fig. 4



WITNESSES

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JAMES W. JACOB, OF JEFFERSONVILLE, INDIANA, ASSIGNOR TO HIMSELF AND JOHN J. O'DONNELL, OF SAME PLACE.

Letters Patent No. 110,140, dated December 13, 1870.

IMPROVEMENT IN BRAKES FOR SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES W. JACOB, of Jeffersonville, in the county of Clarke and State of Indiana, have invented a new and useful Improvement in Sewing-Machine Brakes, of which the following is a specification, reference being had to the accompanying drawing.

Nature and Objects of the Invention.

The invention relates to that class of stops or brakes for preventing the retrograde movement of sewing-machines which operate on the eccentric principle, the impinging surface of the brake being at unequal distances from the axle upon which it moves, and so arranged that the surface of the brake comes in contact with the balance-wheel of the machine in such manner that the forward motion of the wheel is not retarded, while the retrograde movement is prevented, by the distance between the impinging surfaces and the axle upon which the brake swings being so rapidly increased, as the retrograde movement begins, that the balance-wheel is stopped almost at the inception of the motion.

The brake is adjustable, being secured in a vertical slot in a vertically-dependent bar opposite the balance-wheel of the machine, and, as it is provided with a set-screw, can be fixed at any desired position. It may also be raised entirely clear of the wheel when not in use.

Description of the Accompanying Drawing.

Figure 1 is a side elevation of the invention, showing the same as applied. The dotted lines indicate the position of the brake when raised.

Figure 2 is a perspective view of the invention, showing the construction of the brake.

Figure 3 is a vertical central section of the brake through the dotted line in fig. 4.

Figure 4 is a view of the under side of the brake.

General Description.

In the accompanying drawing—

Fig. 4 represents the brake, which is constructed as follows:

The plates F, of similar dimensions, are placed directly opposite each other, and are so formed that the distance between the convex edge of the foot and the axle aperture N increases from the heel R to the toe S of the plates, between which a piece or pieces of rubber, leather, or similar material, of the shape shown at fig. 3, is or are firmly secured so that the edge of the material projects beyond the convex edges and adjacent parts of the plates F.

One of the plates is provided with a thumb-piece, by means of which the brake can be raised so as to clear the wheel W, or lowered.

The brake is pivoted to the shoulder L on the sliding plate D, and, when the brake is elevated, the brace H, which connects the plates F, comes in contact with the upper portion of the curved surface of the shoulder, and the brake is thereby retained in the elevated position.

The sliding plate D is provided, on the opposite side to that on which the shoulder L is placed, with a rectangular slide, C, moving in the slot B, wherein it is kept in the desired position by means of a set-screw.

The sliding plate D should be of such length that, when the brake is elevated and the contact of the brace H with the shoulder L is sufficient to keep it in such position, the toe of the brake will be prevented from passing into the slot B; or the plate D may be dispensed with, and when the brake is elevated the toe thereof may enter the slot, and thus the brake be kept in an elevated position by its gravity preponderating in the direction of the hanger A.

The set-screw E in this construction is secured to the reverse side of the shoulder C.

The foot T of the slotted bar or hanger A is rigidly secured to the under side of the table of a sewing-machine, and the brake is adjusted in the slot B so that its frictional surface comes in contact with the periphery of the wheel W.

Operation.

When the foot T is attached to the under side of the table of a sewing-machine in the manner described, the brake may be lowered by means of the thumb-piece I, and the machine started without any obstruction from the brake, since, as the wheel W revolves, and its periphery comes in contact with the frictional surface of the heel of the brake, the distance between the axle N and the point of contact of the wheel and brake is not increased, and consequently there is no pressure upon the wheel and hence its movement is not retarded.

A retrograde movement of the wheel is accompanied with reverse results, as thereby the distance between the impinging surfaces and the axle N is at once increased, and such a pressure is exerted upon the periphery of the wheel that its motion is almost at once checked.

If it be desired to operate the machine without permitting the frictional surface of the brake to come in contact with the wheel, it is only necessary to elevate the brake until the toe thereof comes in contact with the plate D, in which position it will remain.

Claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The friction-brake, constructed substantially as described, in combination with and adjustable on the slotted hanger A, for the uses and purposes set forth.

2. In combination with the above, the thumb-piece I for removing the brake from or bringing it in contact with the fly-wheel W

In testimony that I claim the foregoing improvements in sewing-machine brakes, as above described, I have hereunto set my hand and seal this 20th day of July, 1870.

JAMES W. JACOB. [L. S.]

Witnesses:

WM. B. CARTER,

J. EDGAR THIKSTON.