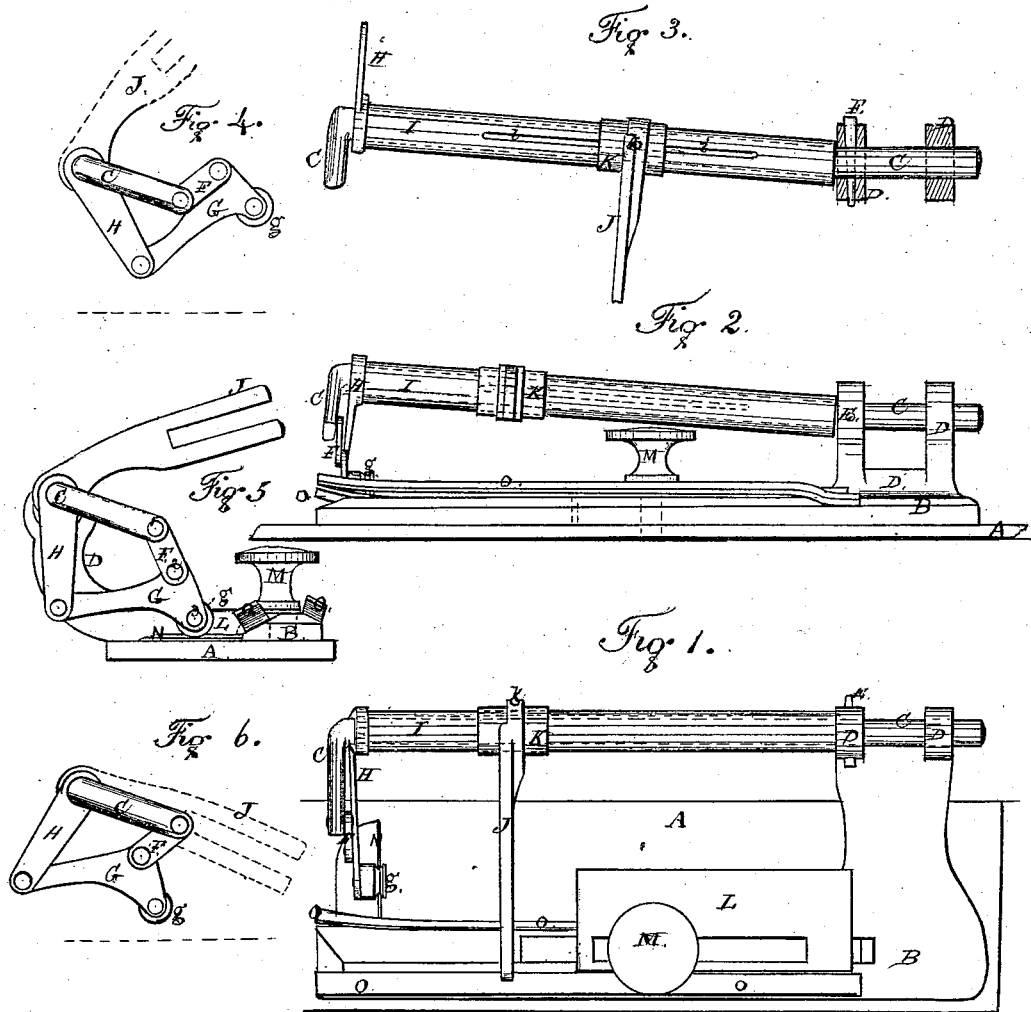


J. A. DAVIS.

Creasing Attachment for Sewing Machines.

No. 106,789.

Patented Aug. 30, 1870.



Witnesses
John F. Halsted.
J. P. Beale.

Inventor
Job. A. Davis
by Corby, Halsted & Gould
his atty.

UNITED STATES PATENT OFFICE.

JOB A. DAVIS, OF WATERTOWN, NEW YORK.

IMPROVEMENT IN CREASING ATTACHMENT FOR SEWING-MACHINE.

Specification forming part of Letters Patent No. **106,789**, dated August 30, 1870; antedated August 26, 1870.

To all whom it may concern:

Be it known that I, JOB A. DAVIS, of Watertown, in the county of Jefferson and State of New York, have invented certain Improvements in Cloth-Creasing Attachments for Sewing-Machines; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My improvements relate to that class of sewing-machine cloth-creasers in which the rising and falling of the needle-bar arm actuates the working parts; and they consist in combining with the stationary creasing-edge an upper creasing wheel or device, to which is imparted an advancing and retreating movement, during which it exerts positive pressure upon the cloth lying on the stationary edge, and which creaser is also positively lifted from the cloth both at its forward and backward movement.

They further consist in special construction of parts for effecting this object, and in an adjustable actuating-lever, combined with a rocking sleeve and a rod for supporting the same.

Figure 1 is a top view, and Fig. 2 a front view, of my improved apparatus. Fig. 3 is a detached view of the supporting-rod, rocking sleeve and its arm, and the shifting or adjustable lever, through which the needle bar or arm of a sewing-machine imparts motion to the creasing device. Figs. 4, 5, and 6 show different positions of the movable creasing device relatively to the plane of the table and fixed creasing-edge.

A represents a part of a table of a sewing-machine. B is the bed-plate or base of my apparatus. C is the supporting-rod, fastened securely at one end in the upright part D of the bed-plate. It is shown as held fixedly by a pin, E; but any mode of fastening will answer which will prevent the round rod from turning loosely in its bearings, and it should be so hung that its free end may be at liberty to yield a little against the downward pressure of the movable creaser upon the stationary creasing-edge.

The rod C, at its free end, is bent nearly at

right angles, as shown, and supports a short link, F, which is pivoted thereto, the other end of said link having pivoted to it a piece or arm, G, which carries a creasing-roller, *g*, (or other creasing device;) and to the rear end of arm G is pivoted an arm, H, projecting from the sleeve I on rod C. This sleeve, with its arm H, rocks loosely and freely upon the rod, such rocking movement being imparted by the rising-and-falling motion of the slotted lever J, derived from the needle-bar of a sewing-machine through a pin or by a strap-connection, as customary.

The sleeve has a longitudinal slot, *i*, to receive a pin, *k*, which, while permitting the sleeve K of the lever to be shifted at will along the sleeve I, at the same time prevents the lever from turning round upon said sleeve.

L is an ordinary adjustable straight-edged guide, having a slot therein for the purpose of adjustment. The bed-plate, also, has a long longitudinal slot to admit of its adjustment; and a thumb-screw, M, adapted to fasten the whole apparatus to the table of a sewing-machine, by being loosened, permits these adjustments to be readily made.

It will be seen from the above description that the shortness of the link F, in connection with the rocking arm H and piece G, allows a prompt and sudden lift of the roller from the cloth and stationary edge N, both at its forward and backward movements, so as to positively and entirely clear the cloth for any kind of feed, whether top feed, bottom feed, needle-feed, or otherwise. While the roller, if unobstructed in its normal path by the stationary edge N, or the table, would move in a curved path, the lowest point of which would be in a plane beneath the bed-plate of sewing-machine, yet the action of the parts as constructed is such that, notwithstanding the three points 1 2 3 are about in the same line, and consequently exerting about the greatest downward pressure on the cloth when and during the period that the roller is passing over the stationary edge, yet, by reason of the before-named yield of the free end of the rod C, the roller is not only carried over the stationary edge, but gives the greatest pressure just where it is most wanted, its action being the same, also, both in going and returning.

It will be observed, also, that this greatest pressure is exerted and the creasing is taking place only during the middle part of the movement of the needle bar or arm, and not when the latter is at its highest or lowest points; for at these two points the creaser is lifted from the cloth, and comparatively no strain is thrown by it upon the needle-bar or its motor.

The advantage of constructing and applying the arm H so that it may slide as well as rock is, that it may be shifted so as to be attachable to any kind of needle-bar, and to prevent its sometimes rocking in the way of the thumb-screw M.

The bed-plate A, it will be seen, is beveled longitudinally on both its upper edges, the inner side having the greatest bevel, thus leaving a high central ridge. Parallel with these bevels are affixed straight guides or smoothers O, in such manner as to leave sufficient space beneath each for the thickest cloth to be sewed to pass, and yet to insure that the highest part of the bed-plate shall bend the cloth upward, thus causing friction, and the guides O, acting both as smoothers and guides, and keeping the cloth parallel with and directing it in the line of the stitching. These guides need not have any yielding quality at all, but should

occupy a position parallel with the bed-plate; and while placed far enough apart therefrom to permit the passage of the thickest material, it is found that by the arrangement shown of the guides and the central elevated part of the plate there is no need of any adjustment of or lessening of the space between the guides and plate in operating upon the thinnest material.

I claim—

1. In combination with the stationary edge, the upper creasing-roller, or its equivalent, having a positive ascending and descending movement, to come in contact with and leave the cloth at each forward and backward movement, and also a down-bearing pressure on the fabric, substantially as shown and described.

2. Also, the combination, with the upper creasing device, of the short arm or link F, rod C, rocking arm H, sleeve I, and operating-lever J.

3. Also, the adjustable actuating-lever, in combination with the rocking sleeve I and supporting-rod C.

JOB A. DAVIS.

Witnesses:

JOHN J. HALSTED,
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