

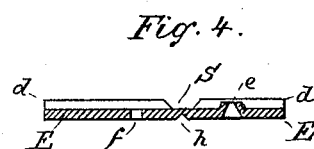
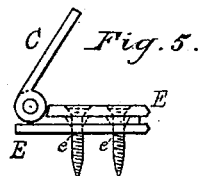
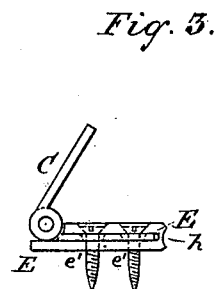
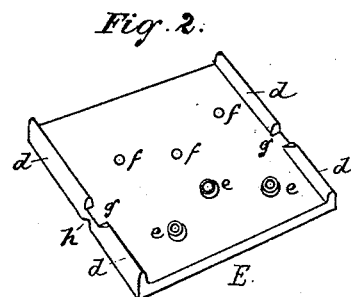
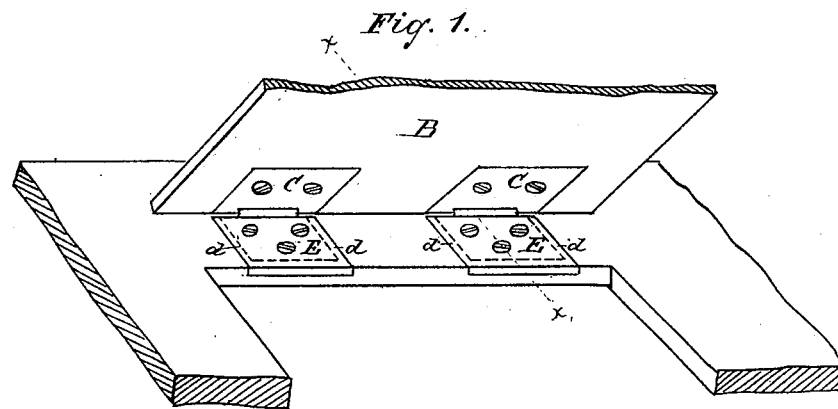
(Model.)

J. B. HAIN.

MUFFLING THE SOUND OF SEWING MACHINES.

No. 266,591.

Patented Oct. 24, 1882.



Witnesses:

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UNITED STATES PATENT OFFICE.

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MUFFLING THE SOUND OF SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 266,591, dated October 24, 1882.

Application filed June 10, 1882. (Model.)

To all whom it may concern:

Be it known that I, JOHN B. HAIN, of Newark, Licking county, in the State of Ohio, have invented a new and useful Improvement for Muffling the Sound of Sewing-Machines, and for other like purposes, of which the following is a specification.

A very common way of mounting sewing-machines upon tables or stands is by means of a hinge attachment, the hinge preferably used being the common metallic hinge used for doors, having flat leaves or flanges to hold the hinge in place by means of screws, rivets, or nails passing through the flange of the hinge and into the object to which the hinge is to be attached. The hinge thus described having been firmly attached to one side of the bed-plate of the sewing-machine, the free part of the hinge is then brought in contact with the desired point or place in the table or stand for its attachment, and there fastened with screws, nails, or rivets firmly to the table. The object of securing the machine to the table by means of hinges is to enable one readily to raise the free side of the bed-plate of the machine from the table by turning it up on the hinged side or edge for the purpose of cleaning, oiling, or repairing the works underneath or on the under side of the bed-plate. The bed-plate thus hinged usually rests the opposite side from the hinge upon cushioned or muffled rests; but by reason of the metallic-hinge attachment to the table, which is usually of some hard board or other like substance, the noisy vibrations of the machine are transferred or conveyed through the medium of the hinge and screw or rivet attaching the same to the table, and the noise thereby greatly augmented, the present mode of the hinge attachment not only transmitting sound, but, in connection with the table, creates sound, so that the table or stand becomes a sounding-board. I remedy this evil and make the machine comparatively noiseless by muffling the hinge attachment. I take a flat piece of rubber, or other suitable yielding substance which is a non-conductor of sound, of sufficient size and shape to completely cover both sides of the free side or flange of the hinge which is to be attached to the table or stand, and having holes therein corresponding in position to the screw or rivet holes in the

hinge; and this portion of the hinge is completely enveloped in said muffler, so that when the hinge is screwed or riveted upon the table in its place the bottom or under side rests entirely upon the rubber, which is turned up and over the upper or in side of the flange of the said hinge, so as to completely envelop the lower half or leaf of the hinge and prevent the screws or rivets which pass through the muffler and the hinge into the table or stand for holding the hinge in place from coming in contact with any portion of the hinge, and thereby cause sharp vibrations and consequent noise.

For the more perfectly muffling the hinge, the rubber or other material used for the muffler is preferably formed with a raised border of any desired breadth upon the side coming in contact with the hinge, so that when folded round the flange of the hinge this border will envelop or cover the outer edges of the ends of the hinge, thus preventing the edges of the metallic hinge coming in contact with any part of the wood or other material in the stand to which the hinge is attached; and also those portions of the surface of the muffler coming in contact with the countersink in the hinge, made to receive the heads of the screws or rivets, may be raised so as to fit the countersink, and the reverse side opposite these raised portions correspondingly depressed, so as to receive the heads of the screws or rivets or nails, thus embedding the screw or rivet heads below the surface of the muffler to avoid the possibility of coming in contact with the upper portion of the hinge or the rivet or screw heads holding the hinge to the bed-plate of the machine.

The muffler may be made of two pieces of rubber or other suitable material, as shown in Fig. 5, but is preferably made of one piece; and when made of one piece I form a groove on the outer side along the line where it is to be turned over the edge of the flange of the hinge, so as the more perfectly to fit the hinge and cause the muffler, when brought round in position, to bear evenly and flatly on the flange of the hinge.

The accompanying drawings will serve to explain and illustrate my invention, the same letters in different figures showing corresponding parts.

Figure 1 is a perspective view of a portion of a sewing-machine table, A, with the bed-plate B of the sewing-machine attached by the hinge C, showing the muffler E as applied to the hinge when in use, the dotted lines *d d* showing the raised borders or ribs of the muffler covering the otherwise exposed ends of the part of the hinge C fastened to the table or stand.

Fig. 2 is a perspective plan of one of the mufflers E E detached from the hinge, and showing the raised borders or ribs *d d* at the ends of it to hold the hinge and muffler in their proper relative positions, *e e e* being conical raised surfaces to fit into the countersink of the hinge, with holes through the center for receiving the screws or rivets, and *fff* being corresponding holes in the under or opposite side of the muffler. *g g* are notches formed in the raised border to prevent the border puckering when the muffler is folded or brought round the hinge in position for use.

Fig. 3 is an end elevation of the hinge and the muffler, showing the manner of putting them together and applying the muffler.

Fig. 4 is a transverse sectional elevation of the muffler, showing the conical projection *e*, that fits into the countersink in the hinge for receiving the heads of the screws or rivets, the holes in the hinge being reamed out or formed sufficiently large that when the screw or rivet is driven home the head of the screw or rivet will bear upon this portion of the muffler and

bring it in contact with the opposing part of the same, thus preventing the screw or rivet head coming in contact with the metallic hinge.

Fig. 5 is an end view of the hinge, showing the muffler E in two parts, one part being above the leaf of the hinge, the other part being below the same, and both parts projecting slightly beyond the leaf of the hinge, so as to prevent any possible contact of the hinge with the table or stand.

Fig. 6 is a sectional view along the line *x x*, Fig. 1.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A muffler, E, having raised borders *d d* and conical projections *e e e*, substantially as and for the purposes specified.

2. In combination with the hinge C, a muffler, E, with conical projections *e e e*, substantially as and for the purposes specified.

3. In combination with the hinge C, a muffler, E, with the raised borders *d d* and conical projections *e e*, substantially as and for the purpose herein specified.

4. The muffler E E, provided with raised borders *d d*, having a groove, *h h*, along the line of the bend, and notches *g g* at the bend, substantially as and for the purposes specified.

JOHN B. HAIN.

Witnesses:

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