May 20, 1947. C. S. BEST 2,420,698

SEWING MACHINE SUPPORT

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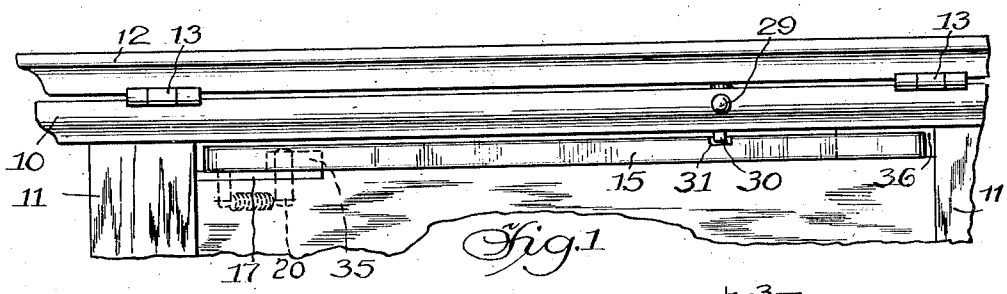


Fig. 1

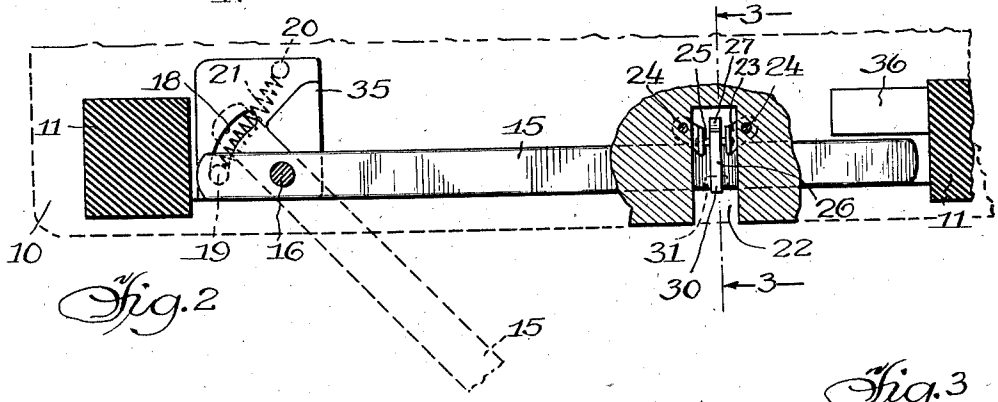


Fig. 2

Fig. 3

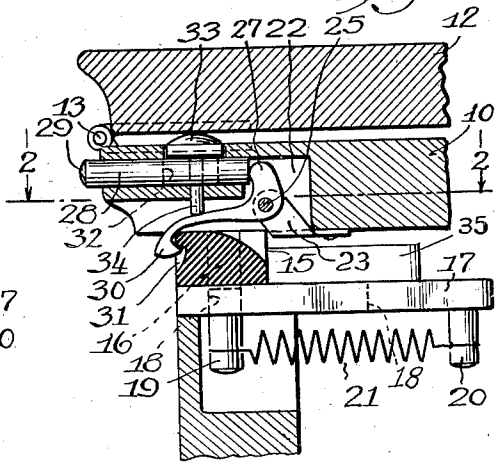
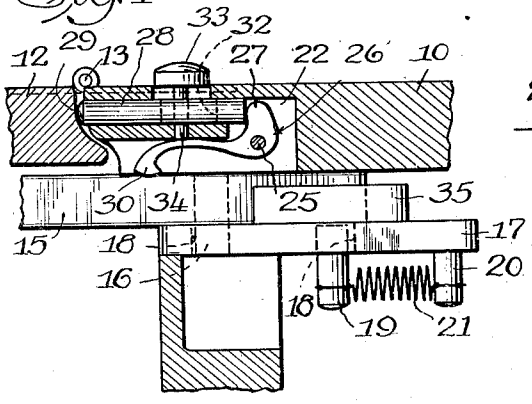


Fig. 4



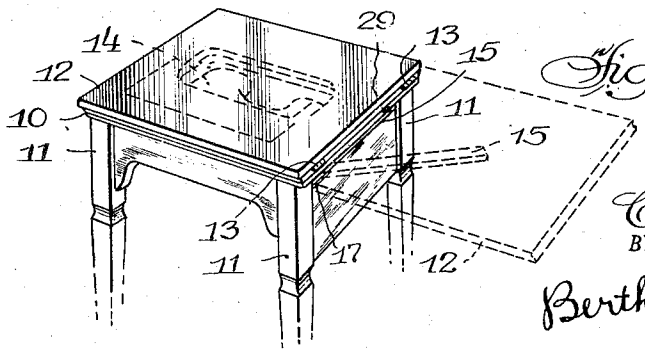


Fig. 5

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SEWING MACHINE SUPPORT

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9 Claims. (Cl. 311—12)

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This invention relates to sewing machine supports, and particularly to supports of the drop head cabinet type provided with a hinged lid for covering the drop head opening in the table top of the support.

The main object of the invention is to provide automatically operable means for supporting the hinged lid when the lid is in "open" position, that is, when it forms an extension member for the table top of the support.

Another object is to provide automatically operable means for supporting the hinged lid, actuated by the lid itself in the act of being moved to "open" position.

Heretofore the hinges which connect the lid to the support have been relied upon to support the lid in its extended position, or a manually operable pivoted bracket has been employed to aid in supporting the lid in horizontal position, but these devices have proven unsatisfactory because the hinges, per se, are not capable of carrying the weight of the extended lid and, when manually operable pivotally mounted brackets are used, the operator frequently fails to move such brackets into operative position. By employing my automatically operable supporting means for the lid of a sewing machine cabinet, the lid in extended position is positively and dependably supported so that it is capable of functioning as an extension of the work table and to carry the load usually placed upon it in the sewing operation.

In the drawings:

Fig. 1 is an end elevational view of a drop head sewing machine cabinet embodying my invention, showing the hinged lid in closed position and the lid supporting means in retracted position.

Fig. 2 is a horizontal sectional view through that end of the table top shown in Fig. 1, showing the lid supporting arm in retracted position in full lines and the lid supporting position in dotted lines, the section being taken in the plane of the line 2—2 on Fig. 3.

Fig. 3 is a vertical sectional view taken in the plane of the line 3—3 of Fig. 2, looking in the direction indicated by the arrows, showing the lid in closed position and the supporting arm retracted.

Fig. 4 is a view similar to Fig. 3, but showing the position of the parts when the lid is in "open" or extended position and the supporting arm is in lid supporting position.

Fig. 5 is a perspective view of a sewing machine cabinet or support embodying my invention, and also showing the lid and supporting arm

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in dotted lines as they appear in operative positions.

The invention may be applied to any conventional drop head cabinet or sewing machine support provided with a table top 10, legs 11, lid 12 and hinges 13, 13.

In conventional drop head cabinets, the table top 12 is provided with the usual opening and head supporting means indicated as a whole at 14 in Fig. 5, but, obviously, the table top may be solid and be used for supporting a portable sewing machine, or for other purposes.

The automatically operable lid supporting means of my invention comprises an arm 15, pivotally mounted by a pivot pin 16 on a plate 17 rigidly connected to a fixed part of the table or cabinet, sufficiently below the table top 10 to provide room for the arm 15 to move between the plate 17 and under side of the table top 10. The plate 17 is slotted arcuately as indicated at 18 in Fig. 2. The inner end of the arm 15 is provided with a depending stud 19 which extends through the slot 18 and is adapted to travel therein. Depending from the plate 17 is a fixed stud 20, the movable stud 19 and fixed stud 20 being connected together by the coiled spring 21. The contractile tendency of the spring 21 tends to move the stud 19 and inner end of the arm 15 toward the fixed stud 20, resulting in moving the arm 15 into the dotted line position of Fig. 2. However, the arm 15 is retained in retracted position, as shown in full lines in Fig. 2, and in Fig. 3, by latching means.

Said latching means is located in a recess 22 provided in the end of the table top 10, and comprises a pair of straps 23, 23, bent between their ends, one end of each strap 23 being rigidly connected to the under side of the table top 10 by screws or rivets 24 and the other end being apertured to receive a pivot pin 25 for the purpose of mounting a bell crank lever 26 between the straps 23. The arm 27 of the lever 26 contacts the end of a slidable bolt 28 mounted horizontally in the table top above part of said recess 22. The bolt 28 extends into the recess 22 at one end and protrudes at the other end from the edge of the table top 10 as indicated at 29. The other arm 30 of the bell crank lever 26 has a latch end adapted to engage a recess 31 in the side of the arm 15.

The slidable bolt 28 is slotted at 32 between its ends, and the table top 10 is apertured above the slot 32 to receive the head 33 of a pin 34 which extends through the slot 32 in the table

top 10 into the recess 22 with its lower end bearing on the arm 30 of the lever 26.

A bumper 35 is fixed on the plate 17 and a bumper 36 is fastened to a leg 11.

The operation of the automatically operable lid supporting means is as follows: When the lid 12 is in the closed position shown in Figs. 1 and 3, the arm 15 will have been moved manually to its retracted position, and the pressure of the lid 12 on the head 33 of the pin 34 will cause the pin 34 to bear on the arm 30 of the lever 26 and hold the arm 27 of the said lever in contact with the bolt 28, thereby forcing the bolt into its outwardly projecting position, with the end 29 protruding from the edge of the table top 10. When the lid 12 is pivotally moved to "open" or extended position, as shown in Fig. 4, the lid 12 will engage the end 29 of the bolt 28 and cause the bolt to be moved inwardly, thereby moving the lever 26 about its fulcrum 25 and causing the latch end 30 to disengage the notch 31 of the arm 15. The pivotal movement of the lever 26, raises the pin 34 and head 33 as shown in Fig. 4. As soon as the arm 15 has been released by the latch 30 of the lever 26, the contractile tendency of the spring 21 will urge the inner end of the arm toward the stud 20 and thereby automatically swing the arm 15 into its lid supporting position under the extended lid, as shown in dotted lines in Figs. 2 and 5.

The bumpers 35 and 36 limit the movement of the arm 15 in opposite directions.

Changes may be made in details and form of construction without departing from the scope of my invention as set forth in the appended claims.

I claim:

1. A sewing machine support comprising a table top, a lid hingedly connected thereto, and lid actuated means for supporting the lid when in extended position, said means comprising a lid supporting arm, a fixed support under the table top on which the arm is pivotally mounted, means on the supporting arm and fixed support for automatically urging the arm to lid supporting position, latching means mounted in the table top adapted to engage the supporting arm in retracted position, and a bolt slidably mounted in the table top, the outer end of the bolt protruding from the edge of the table top when the latching means is in arm-engaging position, moving of the lid to extended position forcing said bolt inwardly and thereby releasing the latching means.

2. The sewing machine support defined by claim 1, in which the latching means comprises a bell crank lever pivotally mounted in the table top, said lever having a bolt-contacted arm and a latching arm, said latching arm being adapted to engage the lid supporting arm in retracted position.

3. The sewing machine support defined by claim 1, which includes means mounted in the table top and depressible by the lid when in closed position for holding the latching means in arm- and bolt-engaging position.

4. The sewing machine support defined by claim 1, which includes means mounted in the table top and depressible by the lid when in closed position for holding the latching means in arm- and bolt-engaging position, comprising a headed pin vertically movable in the table top with the pin portion extending through a slot

in the bolt and bearing on the latching means.

5. The sewing machine support defined by claim 1, in which the means on the supporting arm and fixed support for automatically urging the arm to lid supporting position, comprises a coiled spring connected to the arm and to said fixed support.

6. The sewing machine support defined by claim 1, in which the means on the supporting arm and fixed support for automatically urging the arm to lid supporting position, comprises a stud depending from the arm, a stud on the fixed support, said support being provided with an arcuate slot through which said stud on the arm extends, and a coiled spring having one end attached to the stud on the arm and the other end attached to the stud on the support.

7. A sewing machine support comprising a table top, a lid hingedly connected thereto, and lid actuated means for supporting the lid when in extended position, said means comprising a lid supporting arm, a fixed support under the table top, said arm being pivotally mounted on the fixed support, means between the arm and support for automatically urging the arm to lid supporting position, latching means mounted in the table top, said latching means comprising a bell crank lever pivotally mounted in a recess in the table top, said lever having a latching arm adapted to engage the lid supporting arm in retracted position, a bolt slidably mounted in the table top, said bell crank lever having an arm in contact with the inner end of the bolt, the outer end of the bolt protruding from the edge of the table top when the latching arm of the lever engages the lid supporting arm, and means mounted in the table top and depressible by the lid for holding the bell crank lever in arm- and bolt-engaging position, said lid when in extended position contacting the protruding end of the slidable bolt and moving said bolt inwardly and thereby actuating the lever and releasing the latching means.

8. The sewing machine support defined by claim 7, in which the means between the arm and support for automatically urging the arm to lid supporting position, comprises a stud depending from the arm, a stud on the fixed support, said support being provided with an arcuate slot through which said stud on the arm extends, and a coiled spring having one end attached to the stud on the arm and the other end attached to the stud on the support.

9. The sewing machine support defined by claim 7, in which the means mounted in the table top and depressible by the lid for holding the bell crank lever in arm- and bolt-engaging position, comprises a headed pin vertically movable in the table top with the pin portion extending through a slot in the bolt and bearing on the latching means.

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