Dec. 29, 1936. W. A. SMITH 2,066,017

SEWING MACHINE SUPPORT

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Fig. 1.

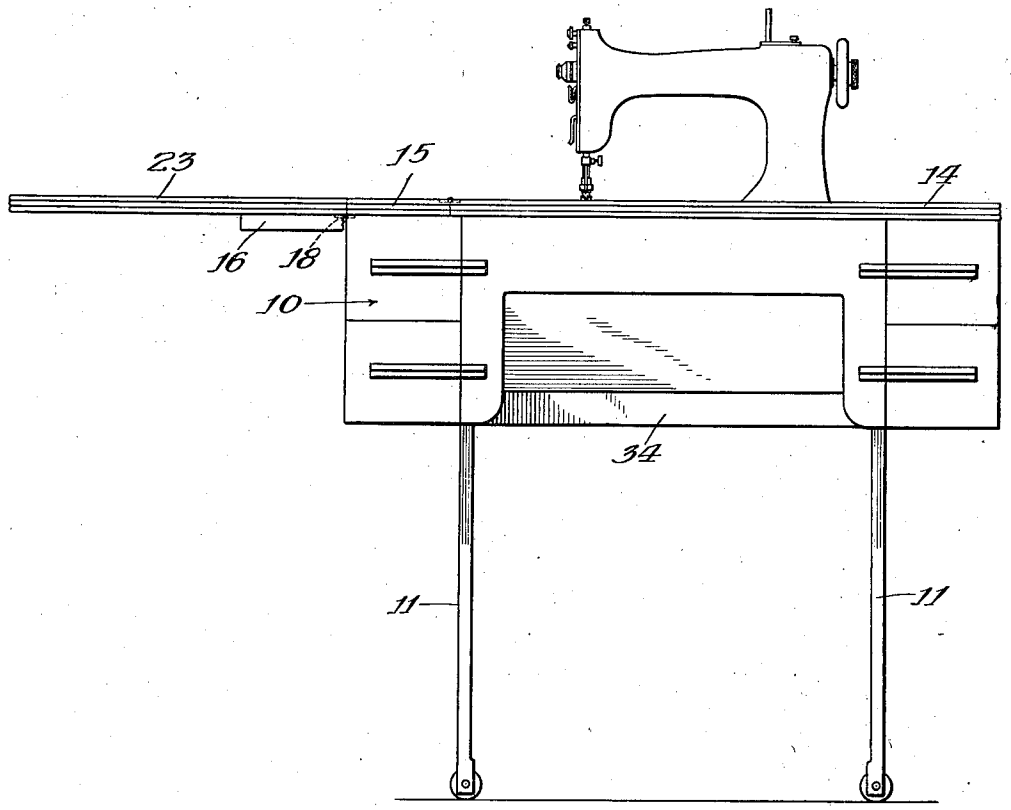

Fig. 2.

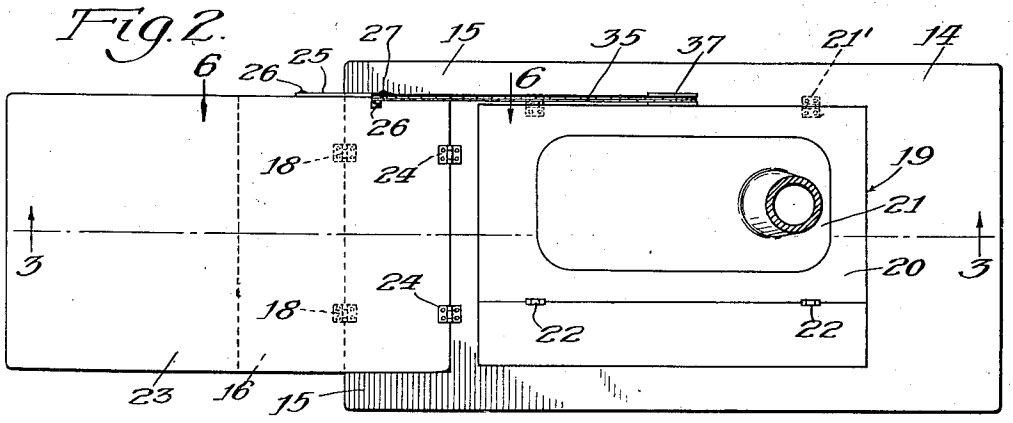

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Fig. 3.

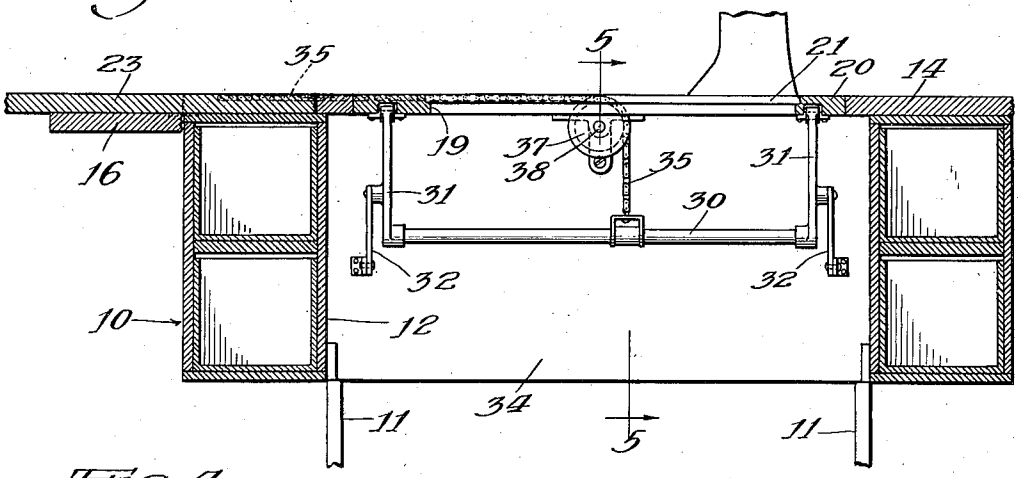

Fig. 4.

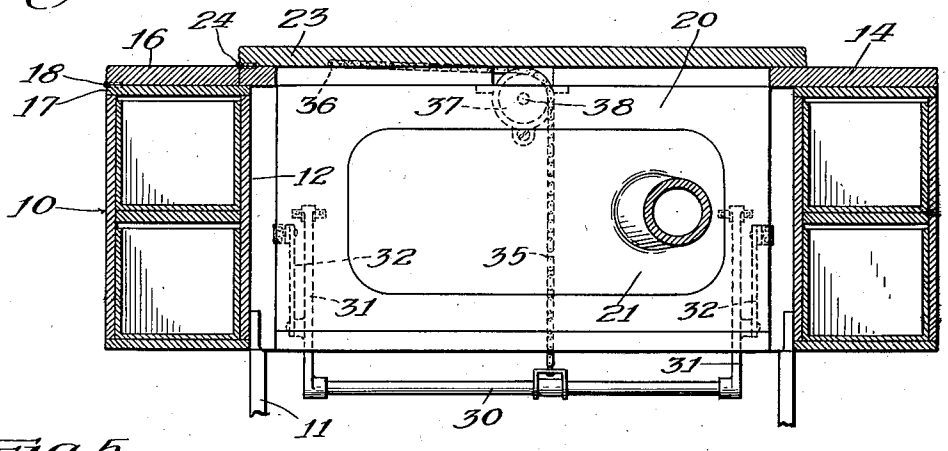

Fig. 5.

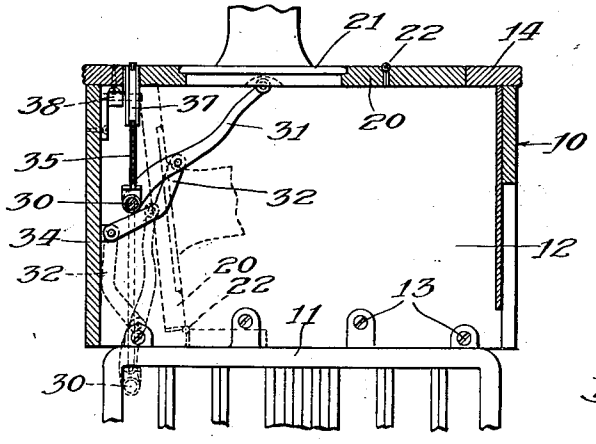

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Fig. 6.

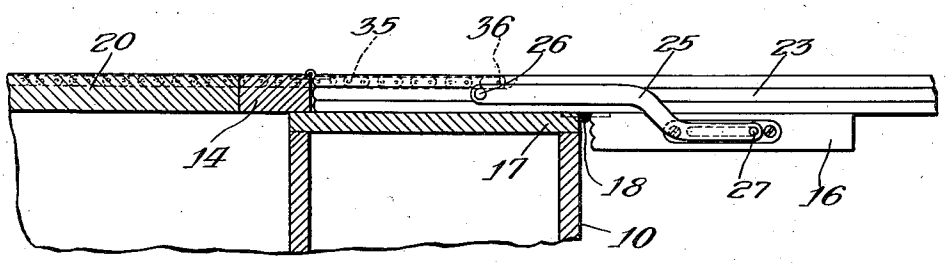


Fig. 7.

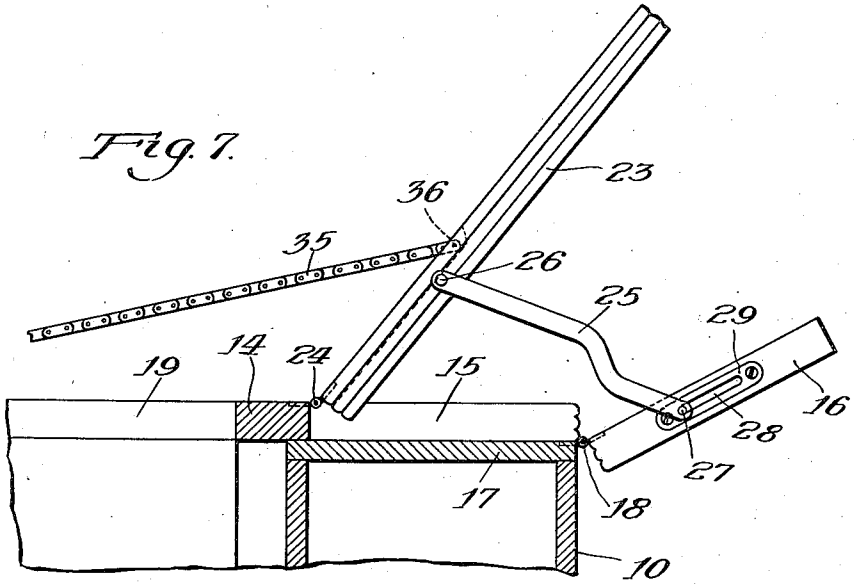
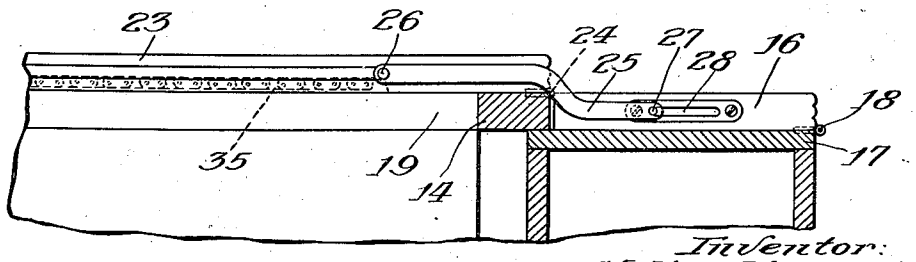


Fig. 8.



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2,066,017

UNITED STATES PATENT OFFICE

2,066,017

SEWING MACHINE SUPPORT

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Application December 9, 1935, Serial No. 53,513

7 Claims. (Cl. 312—23)

This invention relates to sewing machines, and more particularly to table top constructions for drop head sewing machines.

My invention is shown herein as embodied in an "automatic lift" type machine, i. e. one in which the head frame is connected with the lid in such manner that the manual moving of the lid automatically raises the head frame into operative position or lowers it into the drop head cabinet. However, the invention may be embodied in drop head sewing machines without the automatic lift feature.

Usually the table tops of drop head sewing machine stands are provided with lids for covering the opening produced by the lowering of the head. Such a lid also functions to support the work when the head is in raised or operative position. Heretofore the lid has been hinged at one end to a side margin of the table top or the top has been provided with a raised member of less length than the top and the lid hinged to a side margin of the said raised member. In the first mentioned construction (with lid hinged to table top edge) in order to be symmetrical when the lid is on the table top, the lid must be as long as the table top. In a full width machine this is objectionable when the machine is in use because of the space the extended top thus occupies, and is further objectionable because of the cost and the lack of support for the lid when extending outwardly from the table top edge. The second type (lid hinged to intermediate raised member) provides better support for the lid than the first, and the lid need not be as long as the table top, but this construction requires the use of a raised member as large as the lid, intermediate the lid and table top when the machine is closed, to which the lid is hinged, the top of the said raised member being flush with the lid when the latter is resting on the table top and extending beyond the same.

The main object of this invention is to obviate the objections herein described and to provide means for hinging a lid directly to the table top but inwardly of the end edge in such manner that the lid will be flush with the table top when the machine is in use and will rest directly on said table top when the machine is not in use.

Other objects and advantages will be apparent from the following specification.

In the drawings:

Fig. 1 is a front elevation of a sewing machine embodying my invention, showing the head in raised position.

Fig. 2 is a plan view of the structure shown in Fig. 1 with part of the sewing machine head broken away.

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a view similar to Fig. 3 but showing the head frame in its lowered position and the lid of the table top closed.

Fig. 5 is a transverse, vertical sectional view taken in the plane of the line 5—5 of Fig. 3.

Fig. 6 is a longitudinal, vertical sectional view, on an enlarged scale, taken in the plane of the line 6—6 of Fig. 2, showing part of the table top and cabinet in section and the rear edge of the lid in elevation.

Fig. 7 is a view similar to Fig. 6 showing the parts in different positions.

Fig. 8 shows the parts illustrated in Figs. 6 and 7 in still another position.

In that embodiment of my invention which I have chosen to illustrate in the drawings, a drop head sewing machine cabinet is indicated as a whole at 10. It is supported by legs 11, secured to the inner walls 12 of the cabinet by screws 13.

The table top is rectangular in shape when the machine is closed as shown in Fig. 4. The top comprises a flat table member 14, fixed to the cabinet 10, and cut away at one end to form a rectangular recess between the parts 15, 15 of the top 14. A top section 16, also rectangular in shape and of a size to occupy said recess when the cabinet is closed, is hinged to the cabinet wall 17 by hinges 18. The plates of the hinges 18 are countersunk in the outer edge of the upper surface of the cabinet wall 17 and lower surface of the top section 16 so that said top member 16 fits properly in the recess of the top 14 when in the positions shown in Figs. 4 and 8. The top 14 is also provided with a centrally located opening 19, rectangular in shape, in which is mounted the head frame 20 supporting the sewing head 21. The head frame 20 is hingedly connected to the top 14 by hinges 21' located on the under surfaces of said parts, so that said frame 20 and head 21 may swing downwardly into the cabinet 10. The frame 20 may be made of two pieces hinged together at 22, as shown in Figs. 2 and 5, to facilitate storing of the frame in the cabinet 10.

A lid 23, rectangular in shape and large enough to cover the opening 19 in the top 14, is hingedly connected to the top, inwardly of its end margin, by hinges 24. Said lid 23 is as wide as the space between the members 15, 15 of the top. The lid 23 is connected to the top member 16 by a link 25, one end of said link 25 being pivotally secured at 26 to the rear edge of the lid 23 and the other end being provided with a pin 27 adapted to be slidably retained in a slot 28 formed in the rear edge of the top member 16. Said slot may be provided by grooving the member 16 and affixing a slotted plate 29 over the grooved portion, with the head of the pin 27 within the slot 28. When the lid 23 is manually moved to "open" position, as in Figs. 1, 2, 3 and 6, the link 25 and top section 16 are actuated

and moved from the position shown in Fig. 8 to that of Fig. 6. Fig. 7 shows an intermediate position. In order to permit the lid **23** to lie in the same plane as the top **14**, the top section **16** is thus moved out of the recess between the parts **15, 15** to a position beneath the lid **23** as shown in Fig. 6, and said recess is occupied by the hinged end of the lid **23**. When the lid is manually moved to "closed" position, the link **25** and top section **16** move with the lid, the pin **27** sliding in slot **28**, to the position shown in Fig. 8.

In the preferred embodiment of my invention shown in the drawings, the head frame **21** and lifting brace **30**, the latter connected through pivoted arms **31, 31** and **32, 32**, to the frame **21** and back wall **34**, respectively, are connected through a chain **35** or other suitable means with the lid **23** at **36**. The chain **35** is trained over a pulley **37** on a stub shaft **38** fixed to the rear wall **34**. When the lid is moved from "closed" position the head frame **20** and lifting brace **30** are automatically lifted from the position shown in Fig. 4 to that shown in Figs. 3 and 5. The moving of the lid to "closed" position permits the chain **35** to move downwardly over the pulley **37** and the head frame **20** and associated parts to drop into the cabinet **10**.

By the construction disclosed, the lid **23** is properly supported when in "open" position by resting at one end on the cabinet **10**, without having an intermediate or raised portion between the top **14** and lid **23**.

Changes may be made in details of construction without departing from the scope of my invention and I do not intend to be limited to the exact form shown and described, except as set forth in the appended claims.

I claim:

1. A sewing machine support comprising a fixed table top, the said top being recessed at one end, a movable top member equal in area to said end recess and hingedly connected to the support at the outer edge of the recess, a lid hingedly connected to the table top at the inner edge of said recess, and a link pivotally connected to the lid and said movable top member whereby the actuation of the lid automatically moves said movable top member into or out of said recess in the table top.

2. A drop head sewing machine comprising a support having a fixed table top, the said top being recessed at one end and provided with an opening approximately in its center, a head frame hingedly connected with the table top and located in said opening, a movable top member equal in area to said end recess and hingedly connected to the support at the outer edge of the recess, a lid hingedly connected to the table top at the inner edge of said recess, and a link pivotally connected to the lid and said movable top member whereby the actuation of the lid automatically moves said movable top member into or out of said recess in the table top.

3. A drop head sewing machine comprising a support having a fixed table top, the said top being recessed at one end and provided with an opening approximately in the center, a head frame hingedly connected with the table top and located in said opening, a movable top member equal in area to said end recess and hingedly connected to the support at the outer edge of the recess, a lid hingedly connected to the table top at the inner edge of said recess, means connecting the lid and the head frame for automatically raising and lowering the head frame when the lid is actuated, and a link pivotally connected to the lid and said movable top member whereby the actuation of the lid automatically moves said movable top member into or out of said recess in the table top.

4. A sewing machine support comprising a fixed table top, a movable top member and a lid each less in width than the fixed top, said fixed top being recessed at one end to receive the movable top and the lid being pivotally connected to the fixed top at its recessed edge and movable into said recess, flush with the top, the movable top member being hingedly connected to the support at the outer edge of the recess, and means connecting the lid and movable top member whereby the said top member is moved into the recess when the lid is resting on the table top and out of the recess and into a plane beneath the table top and lid when the lid is flush with the table top.

5. A sewing machine support comprising a fixed table top, the said top being recessed at one end, a movable top member equal in area to said end recess and hingedly connected to the support at the outer edge of the recess, a lid hingedly connected to the table top at the inner edge of said recess, a slotted plate secured to the rear edge of the movable top member, and a link pivotally secured at one end to the lid and having a pin on its other end slidably retained in said slotted plate on the movable top member whereby the actuation of the lid automatically moves said movable top member into or out of said recess in the table top.

6. A drop head sewing machine comprising a support having a fixed table top, the said top being recessed at one end and provided with an opening approximately in its center, a head frame hingedly connected with the table top and located in said opening, a movable top member equal in area to said end recess and hingedly connected to the support at the outer edge of the recess, a lid hingedly connected to the table top at the inner edge of said recess, a slotted plate secured to the rear edge of the movable top member, and a link pivotally secured at one end to the lid and having a pin on its other end slidably retained in said slotted plate on the movable top member whereby the actuation of the lid automatically moves said movable top member into or out of said recess in the table top.

7. A sewing machine support comprising a fixed table top, a movable top member and a lid each less in width than the fixed top, said fixed top being recessed at one end to receive the movable top and the lid being pivotally connected to the fixed top at its recessed edge and movable into said recess, flush with the top, the movable top member being hingedly connected to the support at the outer edge of the recess, a slotted plate secured to the rear edge of the movable top member, and a link pivotally secured at one end to the lid and having a pin on its other end slidably retained in said slotted plate on the movable top member whereby the actuation of the lid automatically moves said movable top member into or out of said recess in the table top.

WALTER ADAM SMITH.