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3,048,460

SUPPORT MEANS FOR SEWING MACHINES

Filed May 26, 1959

2 Sheets-Sheet 1

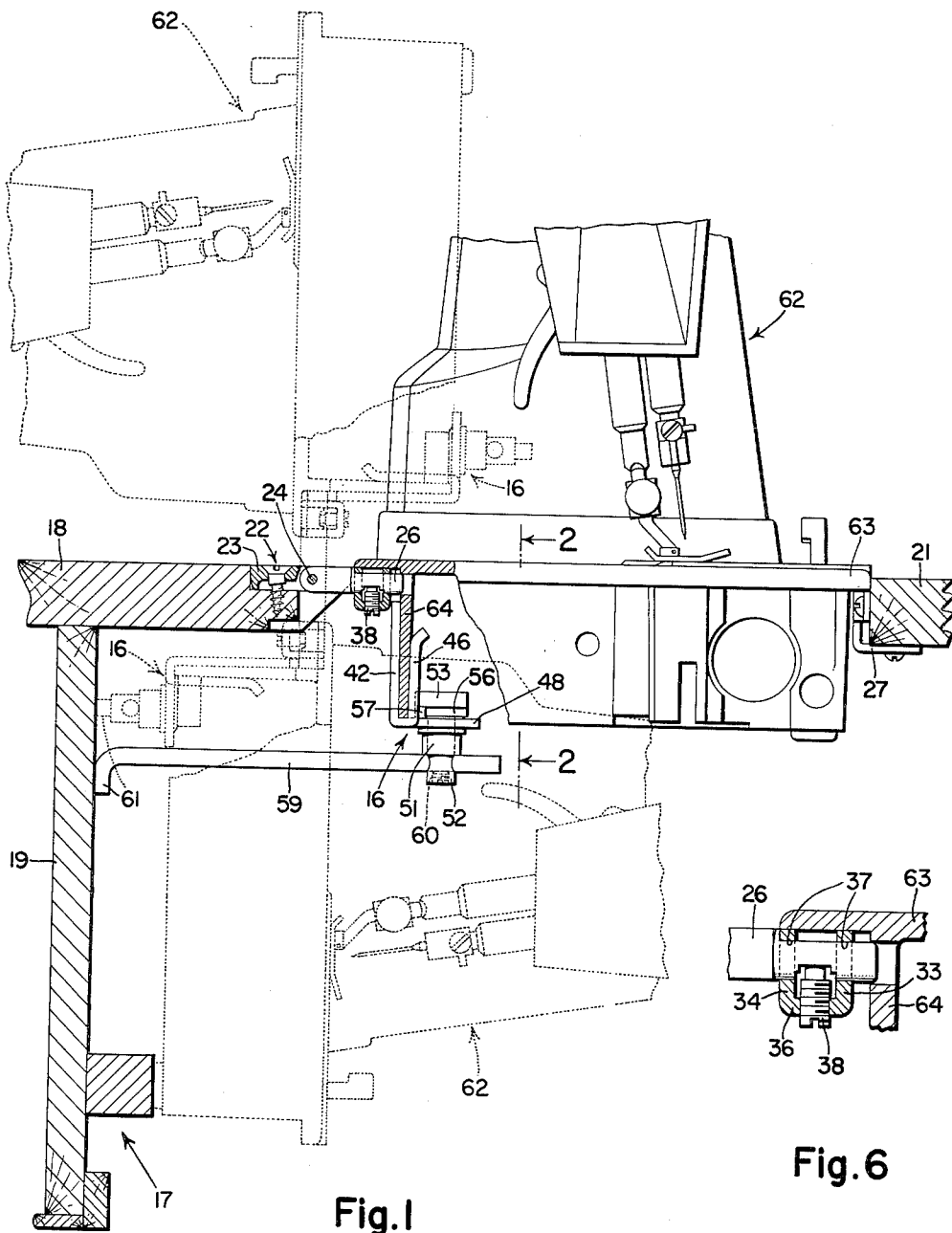


Fig. 1

Fig. 6

WITNESS

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2 Sheets-Sheet 2

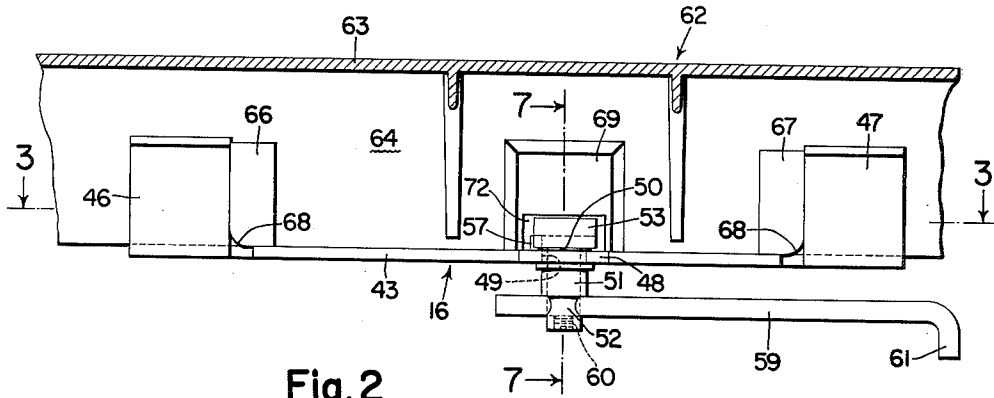


Fig. 2

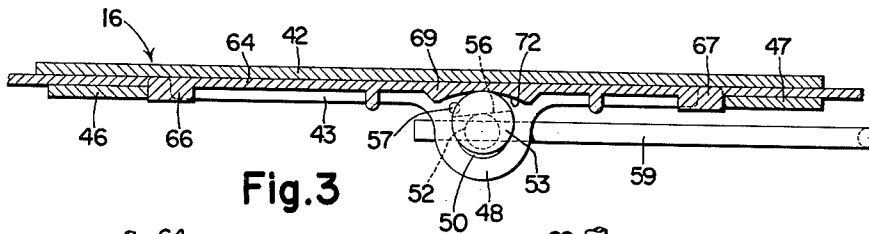


Fig. 3

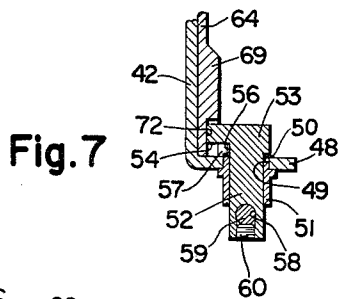


Fig. 7

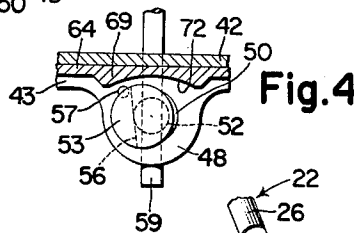


Fig. 4

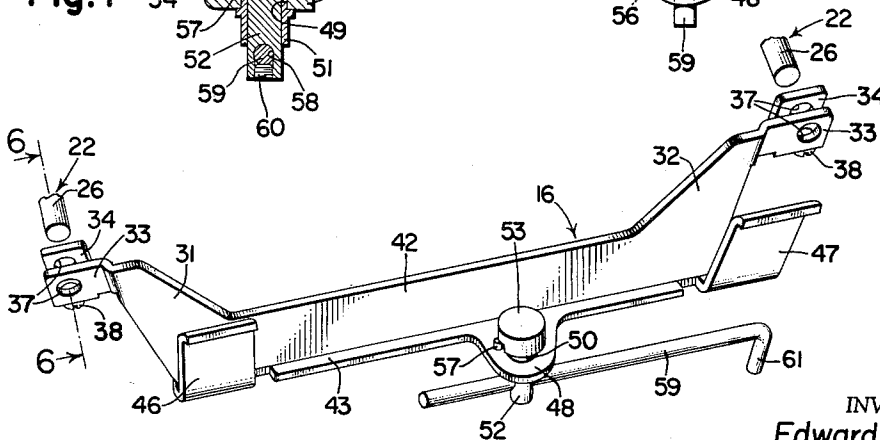


Fig. 5

WITNESS

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3,048,460

SUPPORT MEANS FOR SEWING MACHINES
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5 Claims. (Cl. 312—30)

This invention relates to cradles or other devices for removably supporting a sewing machine in a table or cabinet, and one of the primary objects of the invention is to provide an improved device of this character.

Another object of the invention is to provide a support means or cradle of such a nature that a sewing machine can easily be connected to or detached therefrom.

Still another object of the invention is to provide an improved clamp for a support means or cradle, said clamp being of such a nature as to hold securely the sewing machine to the cradle.

A further object of the invention is to provide a sewing machine cradle which will be supported in a position such that when the clamping means is unlocked to release the sewing machine the latter may be lifted out and then returned to the cradle without attention to the clamping means being required.

A still further object of the invention is to provide a sewing machine receiving cradle having a locking and unlocking handle which when moved to one position will support the cradle.

With the above and other objects in view, as will hereinafter appear, the invention comprises the devices, combinations and arrangements of parts hereinafter set forth and illustrated in the accompanying drawings of a preferred embodiment of the invention, from which the several features of the invention and the advantages attained thereby will be readily understood by those skilled in the art.

In the drawings:

FIG. 1 is a transverse vertical sectional view taken through a sewing machine cabinet equipped with a sewing machine support means or cradle embodying the present invention, the cradle and sewing machine being shown in three different positions,

FIG. 2 is a fragmentary elevational view taken on the line 2—2 of FIG. 1, and showing the sewing machine locked to the cradle,

FIG. 3 is a fragmentary sectional view taken on the line 3—3 of FIG. 2, and also showing the sewing machine locked to the cradle,

FIG. 4 is a fragmentary view showing the sewing machine unlocked from the cradle,

FIG. 5 is a reduced scale perspective view of the support means or cradle embodying the present invention,

FIG. 6 is an enlarged sectional view of a portion of the mechanism shown in FIG. 1, and

FIG. 7 is an elevational sectional view taken on the line 7—7 of FIG. 2.

Referring more specifically to the drawings, the present invention is disclosed in a sewing machine cradle indicated generally by the numeral 16, said cradle 16 being installed in a sewing machine cabinet 17 having a table-top 18, a back wall 19 and a hinged front flap 21. Further information regarding the cabinet and known means for mounting a sewing machine in a cabinet may be had by reference to United States Patent No. 2,527,319, dated October 24, 1950.

The table-top 18 is provided with a pair of conventional identical hinges 22. Each hinge 22 has a stationary leaf 23 held to the table-top 18 preferably by a wood screw. A hinge pin 24 carried by the leaf 23 pivotally supports

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a movable leaf 26. The front flap 21 carries a sewing machine rest or bumper 27 which is similar to a bumper more fully described in patent application Serial No. 541,979, filed October 21, 1955, now Patent No. 2,906,576.

The cradle 16 has a pair of out-reaching arms 31 and 32. The upper end of each of the arms 31 and 32 terminates in a U-shaped member having a front finger 33 and a rear finger 34 connected by a lower reach 36 (FIG. 6). The fingers 33 and 34 are provided with aligned holes 37—37 adapted to accommodate the free end of the conventional leaf 26 of the hinge 22. The reach 36 has a threaded hole which receives a set screw 38. Tightening the set screw 38 secures the end of the leaf 26 in holes 37—37 and thus attaches the cradle 16 to the hinges 22 and to the cabinet 17.

Referring to the cradle, the lower ends of the arms 31—32 are formed integral with opposite ends of an angle-shaped bar having a wide flange 42 and a narrow flange 43. Opposite ends of the flange 42 carry a pair of substantially C-shaped yokes 46 and 47, one end of each yoke being integrally attached to the lower edge of the flange 42. The narrow flange 43 is shorter than the flange 42 and at a location substantially centrally between its ends, the flange 43 has an out-reaching lug 48 formed with an aperture 49 (FIG. 7) accommodating the upper end of a flanged apertured bearing bushing 51. The aperture in the bushing 51 turnably receives a shaft 52 having an eccentrically mounted head 53 which is separated from the surface of the lug 48 by a dished spring washer 50. The head 53 is cylindrical in form and has on its lower portion a segmental recess 54 (FIG. 7), which provides a wall 56 adapted to engage a stop pin 57 extending outwardly from the surface of the flange 43. The end of the shaft 52, which is remote from the head 53 and extends below the bushing 51, has a diametrically extending hole 58 adapted to accommodate one end of a handle 59 having an L-shaped free end 61. The handle 59 is held in the hole 58 by a set screw 60.

The cradle 16 is adapted to support a sewing machine 62 having a bed 63 formed with a depending rear skirt 64. The skirt 64 is especially designed for reception by the cradle 16. In pursuance of this, the inner surface of the skirt 64 (FIGS. 2 and 3) is provided with a pair of protruding guides 66 and 67, each of which has an infacing curved lower edge 68. The skirt 64, at a position between the guides 66 and 67, has a lug 69 provided with a curved recess 72.

In operation, the device functions as follows. When the cradle is disposed to receive the sewing machine, the cradle will be held in the position shown in solid lines in FIG. 1 by reason of the handle 59 extending rearwardly until its end 61 engages the inner surface of the back rail 19. This positions the cradle 16 and especially the eccentric head 53 and the yokes 46—47 properly to receive the rear skirt 64 of the sewing machine 62.

When it is desirable to place the sewing machine 62 in the cabinet 17, the skirt 64 is guided to enter the space between the flange 42 and the two yokes 46 and 47. This is assisted by the upper outwardly-bent ends of the yokes 46 and 47 and by reason of the curved edges 68—68 of the guides 66—67. When the sewing machine is seated in the cradle 16, the skirt 64 will be positioned between the flange 42, on one side, and the yokes 46—47 and the eccentric head 53, on the other side. Also, when the skirt 64 is seated in the cradle 16, the sewing machine 62 and the cradle 16 can be turned counter-clockwise (FIG. 1) about the pivot pins 24 (only one pin being shown) until the handle 59 can conveniently be reached by the operator. When this occurs, the handle 59 is turned from the unlocked position shown by solid lines in FIG. 1 to the locked position shown by solid lines in FIGS. 2 and 3.

When this is done, the eccentric head 53 is turned from the unlocked position shown in FIG. 4 to the locked position shown in FIG. 3. This results in the eccentric head 53 clamping the skirt 64 and especially clamping the curved recess portion of the lug 69 against the flange 42 of the cradle 16. Turning motion of the eccentric head 53 is limited by the stop pin 57 which is engaged in two different positions (FIGS. 3 and 4) by the wall 56. This prevents the eccentric head 53 from clamping the skirt 64 with too much force and also assures that the head 53 will be clear of the skirt 64 when the eccentric head 53 is in the unlocked position. In addition the pin 57 and the wall 56 properly position the handle 59 when the said handle 59 is in the cradle supporting position shown in FIGS. 1 and 4.

When the sewing machine 62 is clamped to the cradle 16 by the head 53, the sewing machine and the cradle can be swung as a unit from the horizontal operation position shown in solid lines in FIG. 1 to either the elevated position suitable for oiling shown in dash-dash lines in the upper portion of FIG. 1, or to the lowered stored position shown in dash-dash lines in the lower portion of FIG. 1.

The hereinbefore described invention has the following advantages:

(a) The cradle 16 is inexpensive to manufacture.
 (b) The handle 59 not only locks and unlocks the eccentric head 53 against the recess 72, but it also supports the cradle 16 in the machine loading position shown in solid lines in FIG. 1.

(c) The construction is such that when the eccentric head 53 is unlocked, the cradle 16 will be in a position for removing or installing the sewing machine 62 in the cradle 16.

(d) When the sewing machine 62 is locked to the cradle 16, the machine 62 can be moved from the working position to a raised position for oiling or to a lowered position for storage within the cabinet 17.

Having thus described the nature of the invention, what we claim herein is:

1. A cradle adapted to support a sewing machine in a cabinet, said cradle comprising a bar, means for hinging said bar to said cabinet, a locking member carried on said cradle, said locking member being operable to secure said sewing machine to said bar, and a lock actuating handle located below said bar and having one end secured to said locking member and the other end constructed and arranged as to engage a portion of said cabinet and thereby support said cradle when said locking means is in unlocked position.

2. In combination, a sewing machine cabinet and cradle adapted to support said sewing machine in said cabinet, means for hinging said cradle in said cabinet, turnable means for securing said sewing machine to said cradle, and a handle carried by and positioned below said turnable means, said handle being turnable from a position

securing said sewing machine to said cradle to a position releasing said sewing machine therefrom, and said handle in one of its positions engaging a portion of said cabinet and thus supporting said cradle.

3. A cradle adapted to support in a cabinet a sewing machine having a bed formed with a depending skirt extending along at least one side of said bed, said cradle comprising a bar extending longitudinally of said cradle, a pair of hinges hingedly connecting said bar to said cabinet, a pair of spaced elements forming part of said bar, said elements forming with said bar a pocket adapted to receive the skirt of said sewing machine, and a sewing machine locking device carried by said bar, said locking device being adapted to engage said skirt to forceably press said skirt against said bar and thereby hold said sewing machine to said cradle.

4. A cradle adapted to support in a cabinet a sewing machine having a bed formed with a depending skirt extending along at least one side of said bed, said cradle comprising a body portion having a flange extending longitudinally of said body portion, two yokes carried by said body portion and spaced longitudinally thereof and each of said yokes being spaced laterally from the line of said flange to thereby form a pocket adapted to receive the skirt of said sewing machine, and a sewing machine locking device carried by said body portion and spaced laterally from said flange, said locking device being adapted to engage said skirt to forceably press said skirt against said flange and thereby hold said sewing machine to said cradle.

5. A cradle adapted to support in a cabinet a sewing machine having a bed formed with a depending skirt extending along at least one side of said bed, said cradle comprising a body portion having a flange extending longitudinally of said cradle, two upstanding yokes carried by said body portion and spaced longitudinally thereof and each of said yokes being spaced laterally from the line of said flange to thereby form a pocket adapted to receive the skirt of said sewing machine, and a sewing machine locking device carried by said cradle at a location longitudinally between said yokes and spaced laterally from said flange, said locking device being adapted to engage the inside surface of said skirt and to forceably press the outside surface of said skirt against said flange and thereby hold said sewing machine to said cradle.

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