April 21, 1959 W. A. BATSON 2,883,249

COLLAPSIBLE SUPPORT FOR TABLE LEAF

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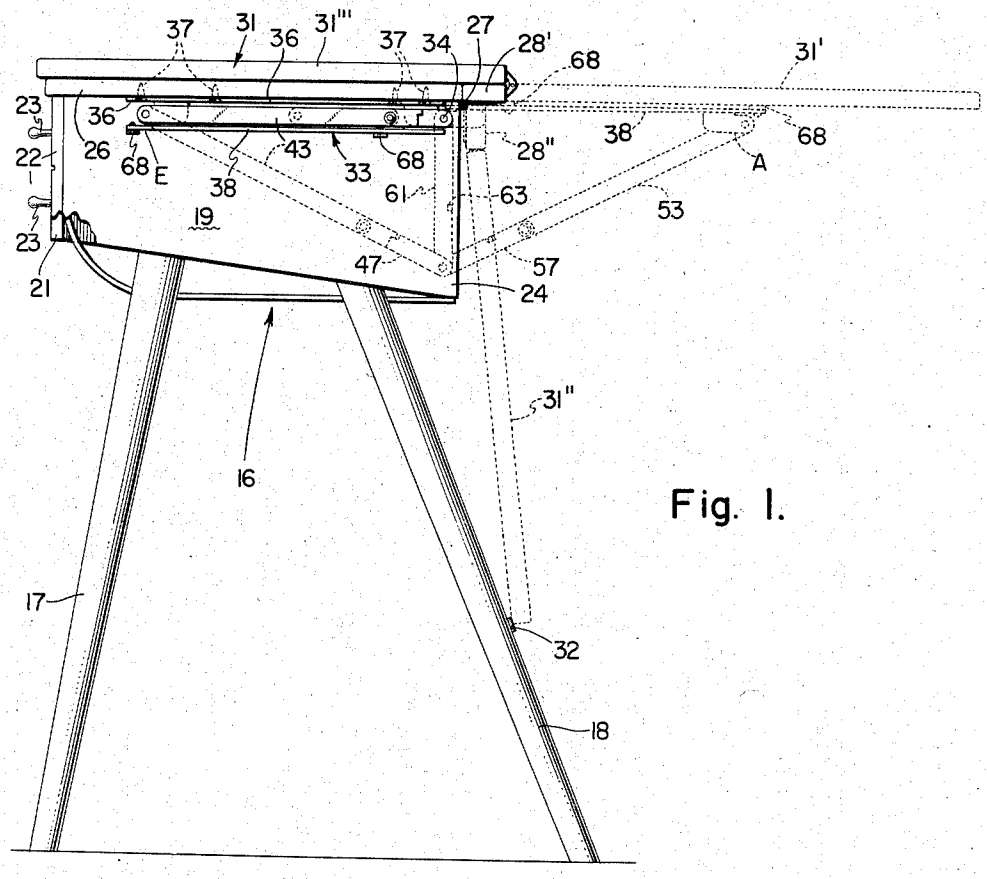

Fig. 1.

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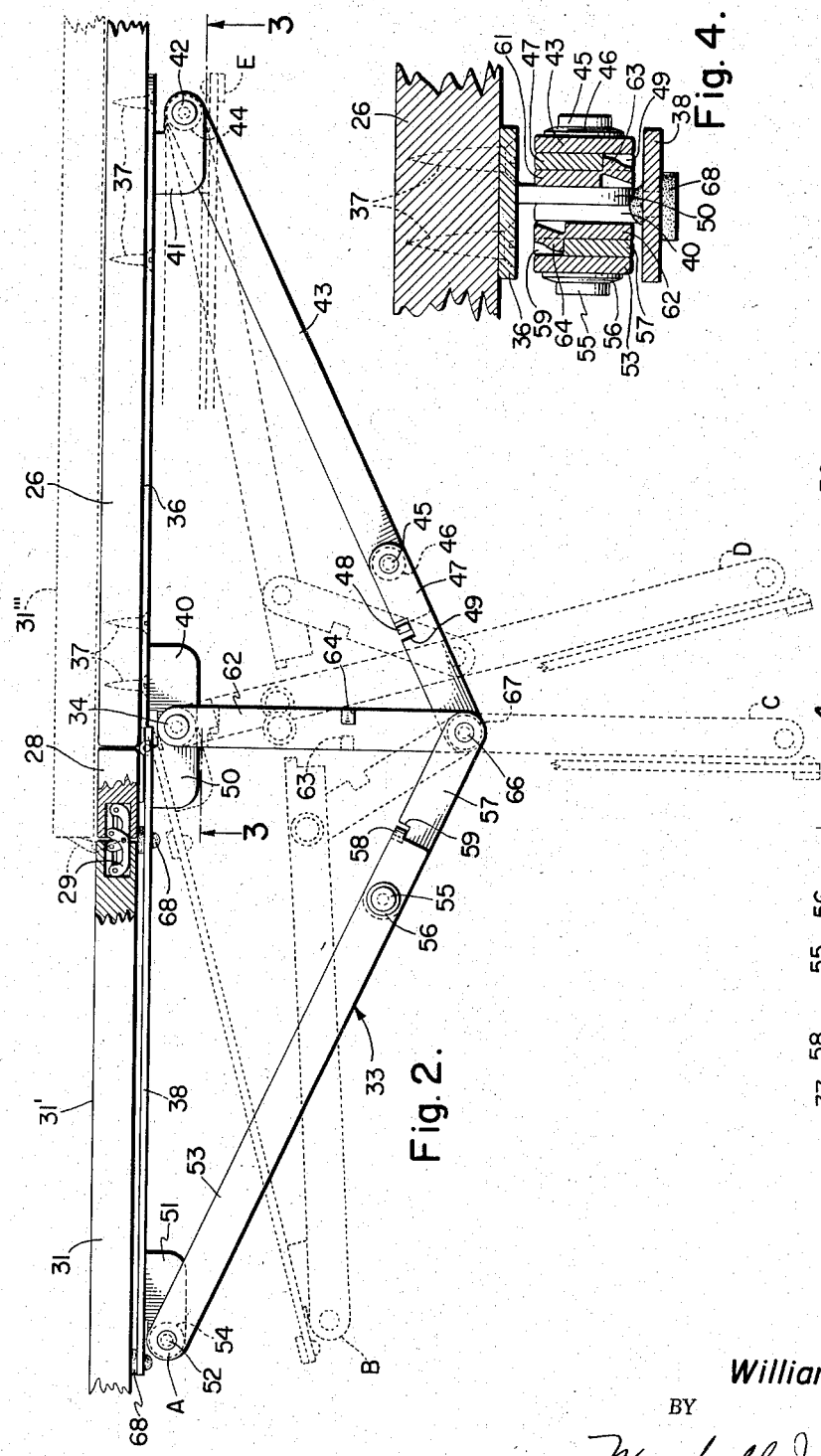

Fig. 2.

Fig. 4.

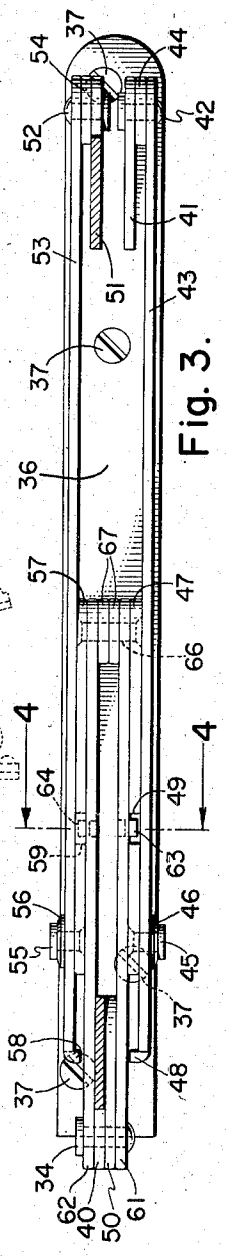

Fig. 3.

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COLLAPSIBLE SUPPORT FOR TABLE LEAF

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Application April 2, 1958, Serial No. 725,994

6 Claims. (Cl. 311—64)

This invention relates to sewing machine tables and more particularly to a collapsible metallic support used with these tables and adapted to hold up one or more folding table-leaves when the said table-leaves are in a raised or extended position, and the principal object of the invention is to provide an improved collapsible support of this nature.

Another object of the invention is to provide a support which can be extended to hold up a table-leaf and which can be collapsed to an inconspicuous stored position.

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 side elevational view of a table to which a pair of identical collapsible supports embodying the present invention have been applied, only one of the supports being shown in Fig. 1, full lines showing the table and leaf extension in folded position and the dashed lines showing the leaf extension in open position;

Fig. 2 is an enlarged view of a portion of the other end of the table shown in Fig. 1, Fig. 2 showing the second support;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2 and showing the support in its fully collapsed position; and

Fig. 4 is a sectional view taken substantially on the line 4—4 of Fig. 3.

The sewing machine table **16** shown in the drawings comprises a pair of front legs, one front leg being shown at **17**; a pair of rear legs, one rear leg being shown at **18**; a pair of end walls, one end wall being shown at **19**; a front wall **21**, a portion of which is formed as a drawer **22** having drawer pulls **23**; and a rear wall **24**. A fixed table-top **26** is supported by and secured to the front, rear and end walls of the table **16** in a known manner. A plurality of ordinary hinges, one hinge being indicated at **27**, movably attach a narrow hinged leaf **28** to the rear edges of the table-top **26**. Also a plurality of special hinges, one special hinge being shown at **29**, movably attach one edge of a wide hinged cover leaf **31** to the free edge of the narrow leaf **28**. Reference to Fig. 1, shows that the narrow leaf **28** can assume two different positions, these two positions being indicated by the numerals **28'** and **28''**. The position **28'**, shown in Fig. 1 by solid lines, is such that the leaf **28** is coextensive with the table-top **26**. The position **28''**, shown in Fig. 1 by dashed lines, is such that the leaf **28** hangs below the table-top **26** at an angle of approximately 90 degrees thereto. Fig. 1 also shows that the wide leaf **31** can assume three different positions, these being indicated by the numerals **31'**, **31''**, and **31'''**. The position **31'''**, shown in Fig. 1 by

solid lines, is such that the leaf **31** is positioned up-side-down and thereby overlies the table-top **26**. One of the positions shown in Fig. 1 by dashed lines and indicated by the numerals **31'**, is such that the leaf **31'** is coextensive with the position **28'** of the narrow leaf **28**, and with the table-top **26**. The other position, shown in Fig. 1 by dashed lines and indicated by the numeral **31''**, is such that the leaf **31** hangs below the table-top **26** and below the position **28''** of the narrow leaf **28**. The lower end of the wide leaf **31** when in the position **31''** engages a pair of bumpers carried by the rear legs **18—18**, one of these bumpers being shown at **32**.

In order to support the narrow leaf **28** in its position **28'** and the wide leaf **31** in its position **31'**, there are provided two collapsible supports indicated generally by the numeral **33**. Each support **33** has a common fixed central pivot-pin **34**, a fixed arm **36** and a movable arm **38**. The fixed arm **36** is secured to the lower surface of the table-top **26** by a plurality of wood screws **37**. A depending fixed central plate **40** (Fig. 2) is secured to the central end of the arm **36**, and a depending fixed terminal plate **41** is secured to the terminal end of the arm **36**. The plate **40** carries the previously mentioned pivot-pin **34** and the plate **41** carries a fixed terminal pivot-pin **42**, which pivotally supports a first toggle leg **43**, the leg **43** (Fig. 3) being spaced horizontally from the plate **41** by a washer **44**. The other end of the toggle leg **43** is, by means of a rivet **45** and a dished spring washer **46**, connected to one end of a second toggle leg **47**. The end of the toggle leg **43** extends beyond the rivet **45** and at the end of the extended portion is provided with a bent lug **48** which when the two toggle legs **43** and **47** are extended so as to be substantially in line (see Fig. 2) enters a notch **49** formed in the second toggle leg **47**.

Opposite ends of the movable arm **38** carry a depending movable central plate **50** and a depending movable terminal plate **51**. The plate **50** is pivoted on the previously mentioned central pivot-pin **34** and the plate **51** carries a movable terminal pivot-pin **52** which pivotally supports a third toggle leg **53**, the leg **53** (Fig. 3) being spaced horizontally from the plate **51** by a washer **54**. The other end of the toggle leg **53** is, by means of a rivet **55** and a dished spring washer **56**, connected to one end of a fourth toggle leg **57**. The end of the toggle leg **53** extends beyond the rivet **55** and at the end of the extended portion is provided with a bent lug **58** which, when the two toggle legs **43** and **47** are extended so as to be substantially in line (see Fig. 2), enters a notch **59** formed in the toggle leg **57**.

Pivot-pin **34**, in addition to passing through plates **40** and **50**, passes through the upper end and thus pivotally mounts two struts **61** and **62**. Strut **61** carries a raised lug **63** and strut **62** carries a raised lug **64**. The free ends of the struts **61** and **62**, as well as the ends of the toggle legs **47** and **57** remote from the rivets **45** and **55** respectively, are pivotally connected together by a rivet **66**, the ends of the struts **61** and **62** (Fig. 3) being horizontally separated by a pair of washers **67—67** which are also carried by the rivet **66**. The movable arm **38** is drilled and thereby carries two upstanding resilient bumpers **68—68**. Reference to Fig. 2 shows that the table-top **26**, the narrow leaf **28** and the wide leaf **31** are the same thickness, and that when the two leaves **28** and **31** are extended horizontally that the three elements **26**, **28** and **31** are coextensive. It should also be noted that the upper surface of the movable arm **38**, when in the solid line position shown in Fig. 2, is slightly below the upper surface of the fixed arm **36**. This difference in elevation is compensated for by the bumpers **68—68**. The bumpers **68—68** prevent marring of the surface of the leaves **28** and **31**.

It will be understood that both of the supports **33** may assume two positions, viz., the stored position shown in Fig. 1 by solid lines and the extended or leaf-supporting position shown in Fig. 2 by solid lines. When the movable arm **38** of the support **33** is moved from the extended position (Fig. 2) to the stored position (Fig. 1) parts of support **33** move through a plurality of intermediate positions. The fully extended position is indicated in Fig. **2** by the letter "A" and the successive intermediate positions are indicated by the letters "B," "C," and "D," with the final stored position being indicated by the letter "E." When it becomes desirable to collapse the support **33** the toggle legs **53—57** are first bent to the position "B" and finally to the position "C." This movement is ended when the lug **64** engages the bottom of the notch **59** formed on the leg **57**. Next the toggle legs **43—47** are bent from the straight position, shown in solid lines in Fig. 2, to the bent position "D" shown in Fig. 2. Moving the arm **38** from position "C" to position "D" causes the struts **61** and **62** to pivot about the pin **34** and thereby gradually move toward the stored position "E" shown by dashed lines in Fig. 2 and by solid lines in Fig. 1. Also as the arm **38** is moved from position "D" to position "E," the legs **53, 57, 43** and **47**, and the struts **61—62** also move to the stored position "E" until the lug **63** engages the bottom of the notch **49**. The arm **38** and other parts of the support **33** are moved from the stored to the extended or supporting position by reversing the above described movements. When the arm **38** is in the fully extended position, the toggle legs **53—57** and **43—47** will be straight and the bent lugs **48** and **58** will engage the bottoms of the notches **49** and **59** respectively.

Because of the above the wide leaf **31** can be placed in the position **31'''** on top of the table-top **26**, or in the extended position **31'**, or in the dropped position **31''**. Also the narrow leaf **28** can be placed in the extended position **28'** or in the dropped position **28''**.

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

1. A collapsible support for a sewing machine table having a table-top and a movable leaf hinged to said table-top, said support comprising a first member pivotally attached to the under side of said table-top and being capable of movement to two positions, one of said positions being a stored position below said table-top, a second member also pivotally attached to the under side of said table-top and being capable of movement to two positions, one of said positions being a stored position below said table-top and the other position being an extended position below said movable leaf, when said movable leaf is in an extended position, and means associated with said first member when said first member is in its second position for supporting said second member in its extended position and thereby causing said second member to support said hinged leaf.

2. A collapsible support for a sewing machine table having a table-top and a movable leaf hinged to said table-top, said support comprising a first toggle leg pivoted to said table-top, a second toggle leg pivotally connected to the free end of said first toggle leg, a movable arm pivoted to said table-top, a third toggle leg pivotally tied to said movable arm, a fourth toggle leg pivotally connected to the free end of said third toggle leg, and a member pivotally connecting the free ends of said second and fourth toggle legs.

3. A collapsible support for a sewing machine table having a table-top and a movable leaf hinged to said table-top, said support comprising a fixed arm secured to the lower surface of said table-top, a first toggle leg pivoted on said fixed arm, a second toggle leg pivotally

connected to the free end of said first toggle leg, a movable arm pivotally mounted on said fixed arm, a third toggle leg pivoted on said movable arm, a fourth toggle leg pivotally connected to the free end of said third toggle leg, and a means pivotally connecting the free ends of said second and fourth toggle legs.

4. A collapsible support for a sewing machine table having a table-top and a movable leaf hinged to said table-top, said support comprising a fixed arm secured to the lower surface of said table-top, a first toggle leg pivoted on said fixed arm, a second toggle leg pivotally connected to the free end of said first toggle leg, a movable arm pivotally mounted on said fixed arm, a third toggle leg pivoted on said movable arm, a fourth toggle leg pivotally connected to the free end of said third toggle leg, means pivotally connecting the free ends of said second and fourth toggle legs, and means pivotally connecting said last named means to said fixed arm.

5. A collapsible support for a sewing machine table having a table-top and a movable leaf hinged to said table-top, said support comprising a fixed arm secured to the lower surface of said table-top, a fixed central plate secured to and depending from one end of said fixed arm, a fixed terminal plate secured to and depending from the other end of said fixed arm, a first toggle leg pivoted on said fixed terminal plate, a second toggle leg pivotally connected to the free end of said first toggle leg, a movable arm, a movable central plate secured to and depending from one end of said movable arm, said movable central plate being pivotally mounted on said fixed central plate, a movable terminal plate secured to and depending from the other end of said movable arm, a third toggle leg pivoted on said movable terminal plate, a fourth toggle leg pivotally connected to the free end of said third toggle leg, means pivotally connecting the free ends of said second and fourth toggle legs, and means pivotally connecting said last named means to said fixed central plate.

6. A collapsible support for a sewing machine table having a table-top and a movable leaf hinged to said table-top, said support comprising a fixed arm secured to the lower surface of said table-top, a fixed central plate secured to and depending from one end of said fixed arm, a fixed central pivot-pin carried by said fixed central plate, a fixed terminal plate secured to and depending from the other end of said fixed arm, a fixed terminal pivot-pin carried by said fixed terminal plate, a first toggle leg pivoted on said fixed terminal pivot-pin, a second toggle leg pivotally connected to the free end of said first toggle leg, a movable arm, a movable central plate secured to and depending from one end of said movable arm, said movable central plate being pivotally mounted on said fixed central pivot-pin, a movable terminal plate secured to and depending from the other end of said movable arm, a movable terminal pivot-pin carried by said movable terminal plate, a third toggle leg pivoted on said movable terminal pivot-pin, a fourth toggle leg pivotally connected to the free end of said third toggle leg, a rivet pivotally connecting the free ends of said second and fourth toggle legs, and at least one strut connecting said fixed central pivot-pin to said rivet.

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