March 31, 1931. D. H. CHASON 1,798,786

TABLE LEAF SUPPORT

Filed Nov. 19, 1927 2 Sheets-Sheet 1

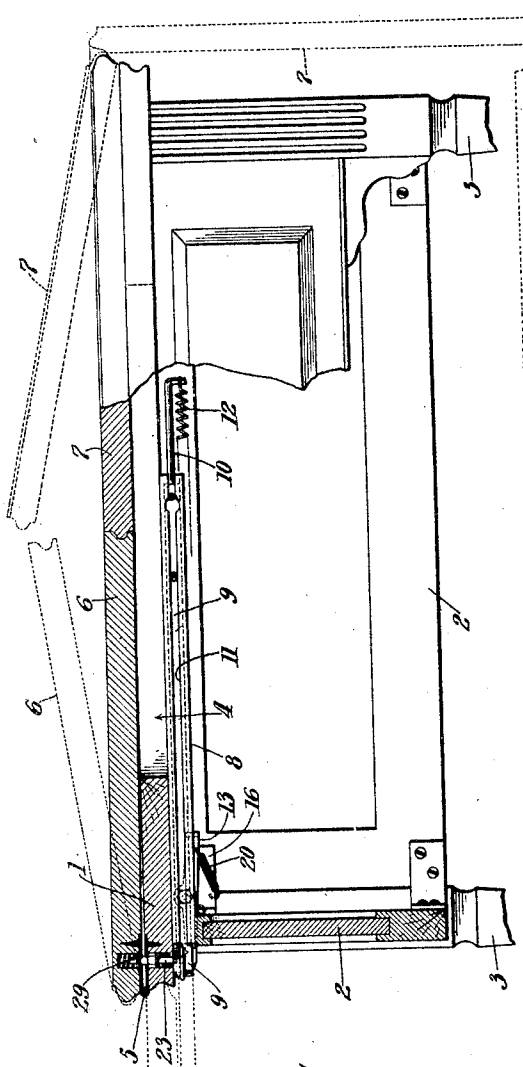


Fig. 1.

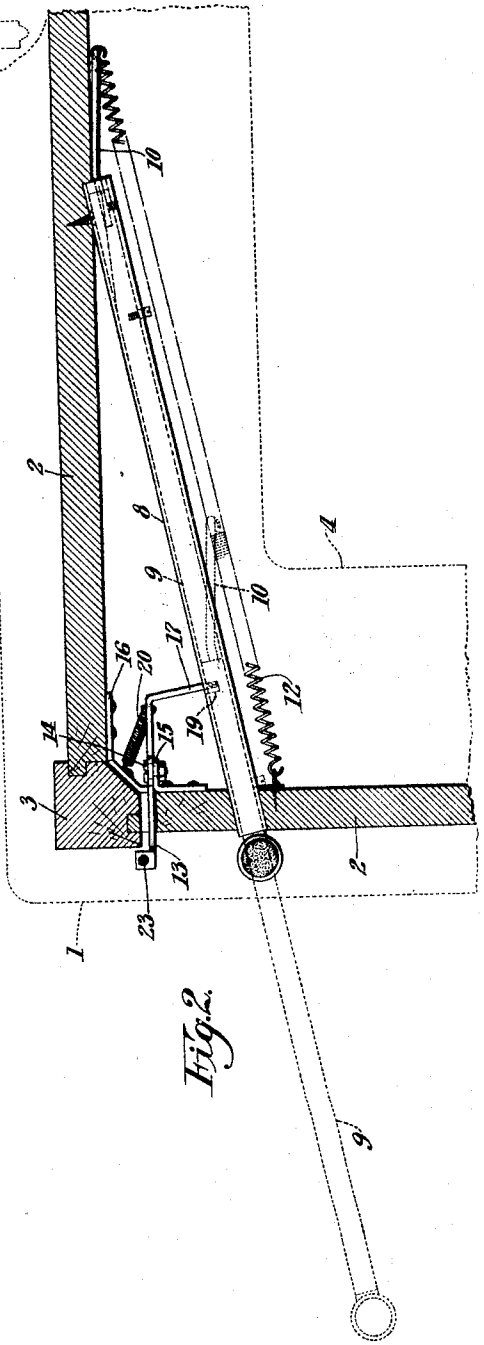


Fig. 2.

Witnesses:
Joseph Peine
John Hetenis

Inventor
Daniel H. Chason
By Henry J. Miller Attorney

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TABLE LEAF SUPPORT

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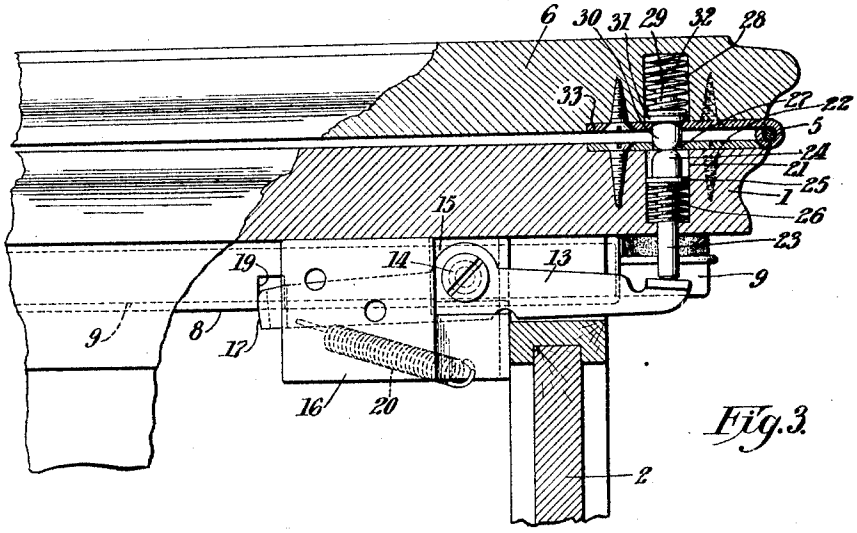


Fig. 3.



Fig. 5.

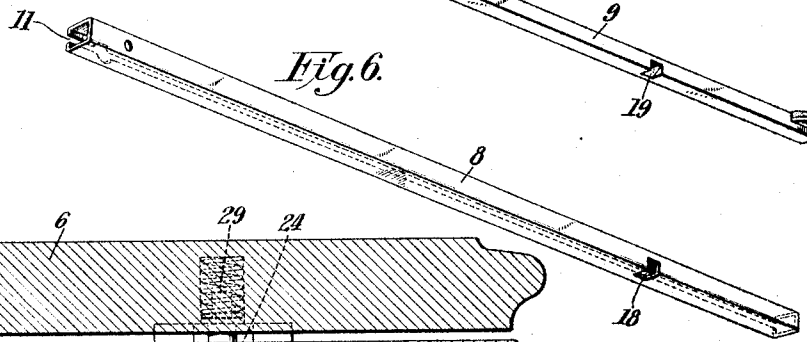


Fig. 6.

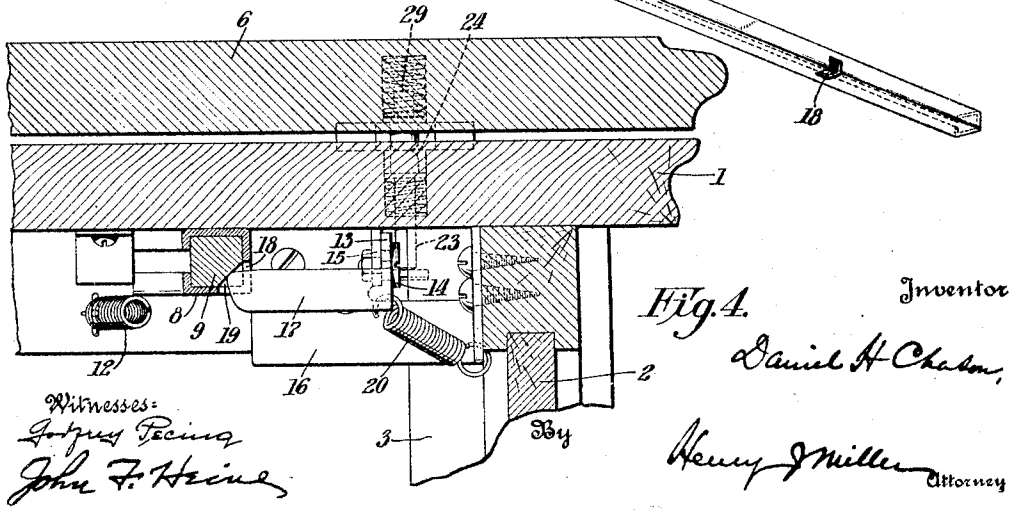


Fig. 4.

Witnesses:
Godfrey Pecina
John F. Heine

Inventor
Daniel H. Chason,
By
Henry J. Miller
Attorney

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UNITED STATES PATENT OFFICE

DANIEL H. CHASON, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO THE SINGER MANUFACTURING COMPANY, OF ELIZABETH, NEW JERSEY, A CORPORATION OF NEW JERSEY

TABLE-LEAF SUPPORT

Application filed November 19, 1927. Serial No. 234,337.

This invention relates to tables and more particularly to drop-head sewing machine tables having an apertured top through which the sewing head is dropped when not in use. Such tables commonly include one or more hinged leaves which, in closed position, overlie the table-top and cover the aperture in the latter.

When the cover leaves are opened preparatory to raising the sewing head to operative position, it is customary to pull out a leaf-supporting slide-rod at one end of the table to support one of the leaves horizontally as an extension of the table-top. If the operator forgets to pull out the leaf-support, there is danger that downward pressure upon the extension leaf will pull the hinges loose and damage the woodwork.

The present invention has for an object to provide for automatically moving the cover-leaf support into active position when the leaf is opened. A further object of the invention is to so construct the mechanism that the leaf-support may be manually returned to inactive or concealed position, without strain on the parts, after the leaf is closed. Still further, the invention has for an object to provide for the movement of the leaf-support to active position early in the opening movement of the cover-leaf, to insure that the support will be fully in its active position by the time the leaf is fully opened.

With the above and other objects in view, as will hereinafter appear, the invention comprises an outwardly spring-biased leaf-supporting member, a latch for holding such member in its inner or inactive position, and a control mechanism extending from the latch into operative relation with the cover-leaf when the latter is in closed position. Preferably, the latch is spring-influenced to release the leaf-support, and the pressure of the cover-leaf in closed position acts through the control mechanism to hold the latch in latching position against the force of its releasing spring. By reason of this provision, the pressure of the cover-leaf on the control mechanism is released and the latch tripped, early in the opening movement of the cover-leaf, to release the support which is projected by its spring into active position, before there has been time for the leaf to reach its full open position, even though it be opened quickly. Automatically positioned support for the extension leaf is thus insured, under all conditions.

In the accompanying drawings, Fig. 1 is a front elevation, partly in section, of a sewing machine table embodying the invention. Fig. 2 is a top plan view of the parts of the mechanism below the table-top. Fig. 3 is a sectional view through the table-top and cover-leaf elements, showing the latch-controlling means. Fig. 4 is a similar view taken at right angles to Fig. 3 and Figs. 5 and 6 are, respectively, perspective views of the slide-rod and guide elements.

The table comprises a top 1, skirt members 2 and legs 3; the top 1 being formed with the sewing head aperture 4. Secured to the table-top 1 by suitable hinge elements, one of which is shown at 5, is the cover leaf 6. Connected to the other end of the table-top by suitable hinge elements is another cover-leaf element 7 which may be opened through an angle of 270° to a pendant position, as shown in Fig. 1. The hinge elements 5 for the cover-leaf 6 are of a nature to permit the opening of the cover-leaf through an angle of 180° only. Hence it is necessary to provide means for supporting such leaf in its open position to prevent undue strain on the hinge elements 5.

Secured to the skirt-members 2 in contact with the under surface of the table-top is the guide-tube 8 for the leaf-supporting slide-rod 9 to the rear end of which is fixed an extension rod 10 disposed at an angle to the slide-rod 9, as shown in Fig. 2, and adapted to work in the slot 11 in one side wall of the guide-tube 8 when the slide-rod is projected to its dotted line position.

Secured to the skirt-member 2 adjacent the guide-tube 8 is one end of the tension spring 12 paralleling the guide-tube 8 and connected at its other end to the extension-rod 10. The spring 12 tends at all times to project the slide-rod outwardly into leaf-supporting position, and hence the slide-rod

9 is a spring-biased leaf-supporting member.

To hold the slide-rod in its non-supporting or concealed position there is provided a latch-lever 13 which is fulcrumed at 14 on an outwardly bent ear 15 of the table-corner brace 16. The latch-lever 13 is formed with an angular extension 17 the free end of which extends into the notch 18 in the guide-tube 8 and into latching engagement with the notch 19 in the slide-rod 9. A spring 20 secured at one end to the latch-lever 13 and at its other end to the corner-brace 16 tends at all times to withdraw the latch-lever from the notch 19 in the slide-rod 9 to release the latter.

To hold the latch-lever in latching position and to effect the release of the slide-rod in the opening movement of the cover-leaf 6, there is provided a control mechanism extending from the latch-lever 13 upwardly through the table-top 1 into operative relation with the cover-leaf 6. Mounted in the socket 21 in the table-top 1 below the under leaf 22 of the hinge 5 is the pusher or plunger 23 having a head 24 and a collar 25 between which and the bottom of the socket 21 is disposed a light spring 26 tending at all times to project the head 24 of the plunger upwardly into the aperture 27 in the hinge-leaf 22. The lower end of the plunger 23 is at all times in engagement with the latch-lever 13. Mounted in a socket 28 in the cover-leaf 6, in axial alinement with the pusher 23, is a second pusher or plunger 29 having a head 30 and a collar 31 between which and the end of the socket 28 is interposed a relatively strong spring 32 which yieldingly projects the head 30 through an aperture in the upper leaf members 33 of the hinge 5.

As shown in Fig. 3, the spring 32 is strong enough to overcome the combined forces of the springs 26 and 20, thereby holding the latch-lever 13 in engagement with the notch 19 in the slide-rod 9. When the operator raises the cover-leaf 6, the pressure of the plunger 29 upon the plunger 23 is relieved early in the opening movement of such leaf, whereupon the spring 20 is free to swing the latch-lever 13 to withdraw its extension 17 from the notch 19 in the slide-rod 9 and permit the spring 12 to project the slide-rod outwardly into its leaf-supporting position. When the leaf 6 is folded to closed position the operator pushes the slide-rod to its concealed position where it is retained by action of the latch-lever 13.

It will be seen in Fig. 5 that the slide-rod is formed at its rear end with an inclined surface 34 which is in engagement with the extension 17 of the latch-lever 13 when the slide-rod 9 occupies dotted line position. When the slide-rod is pushed inwardly, the inclined surface 34 depresses the extension 17 of the latch-lever, overcoming the force of the spring 32. When the slide-rod is pushed home to concealed position the spring 32 forces the latch-lever extension 17 into the notch 19 to hold the slide-rod until the cover-leaf 6 is again opened. It will be understood that the provision of the yielding plunger 29 permits the leaf 6 to be fully closed before the slide-rod is returned to its concealed position, without strain on the parts.

Having thus set forth the nature of this invention what I claim herein is:—

1. A table having a top and extension leaf hinged to said top to overlie the latter, a spring-biased leaf-supporting member, a latch for holding said member in its non-supporting position, and latch-tripping means including a control element extending through the table-top into operative relation with said leaf.

2. A table having a top and extension leaf hinged to said top to overlie the latter, a spring-biased leaf-supporting member, a latch for holding said member in its non-supporting position, a spring tending at all times to move said latch to releasing position, and a latch-controlling member extending through the table-top into operative relation with said leaf.

3. A table having a top and extension leaf hinged to said top to overlie the latter, a spring-biased leaf-supporting member, a latch for holding said member in its non-supporting position, and latch-tripping means including a control element extending through the table-top and through a leaf-hinge element into operative relation with said leaf.

4. A table having a top and extension leaf hinged to said top to overlie the latter, a spring-biased leaf-supporting member, a latch for holding said member in its non-supporting position, a spring urging said latch to unlatching position, a pusher engaging said latch and extending through the table-top, and a second spring-pressed pusher carried by said cover-leaf and engaging said first-mentioned pusher with sufficient force to hold the latch in latching position against the force of its unlatching spring.

5. A table having a top and extension leaf hinged to said top to overlie the latter, a spring-biased leaf-supporting member, a latch for holding said member in its non-supporting position, a spring urging said latch to unlatching position, a plunger engaging said latch and extending through the table-top, a second plunger carried by said leaf in end-to-end relation with the first mentioned plunger, and a spring urging said last mentioned plunger downwardly with sufficient force to hold the latch in latching position against the force of its unlatching spring.

6. A table including a top and an extension-leaf hinged to said top and overlapping

the latter when in closed position, a spring-biased leaf-supporting member, a latch for holding said member in its non-supporting position, a spring connected to said latch and tending at all times to move said latch to unlatching position, and means, including a stronger spring reacting against said extension-leaf when the latter is in closed position, to retain said latch in its holding position.

In testimony whereof, I have signed my name to this specification.

DANIEL H. CHASON.