

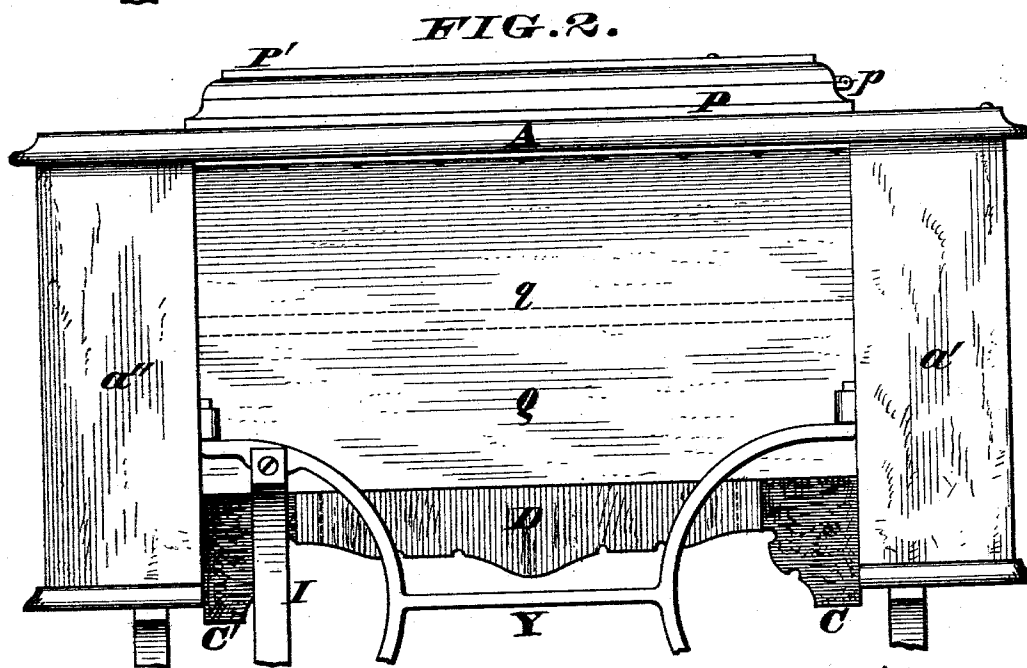
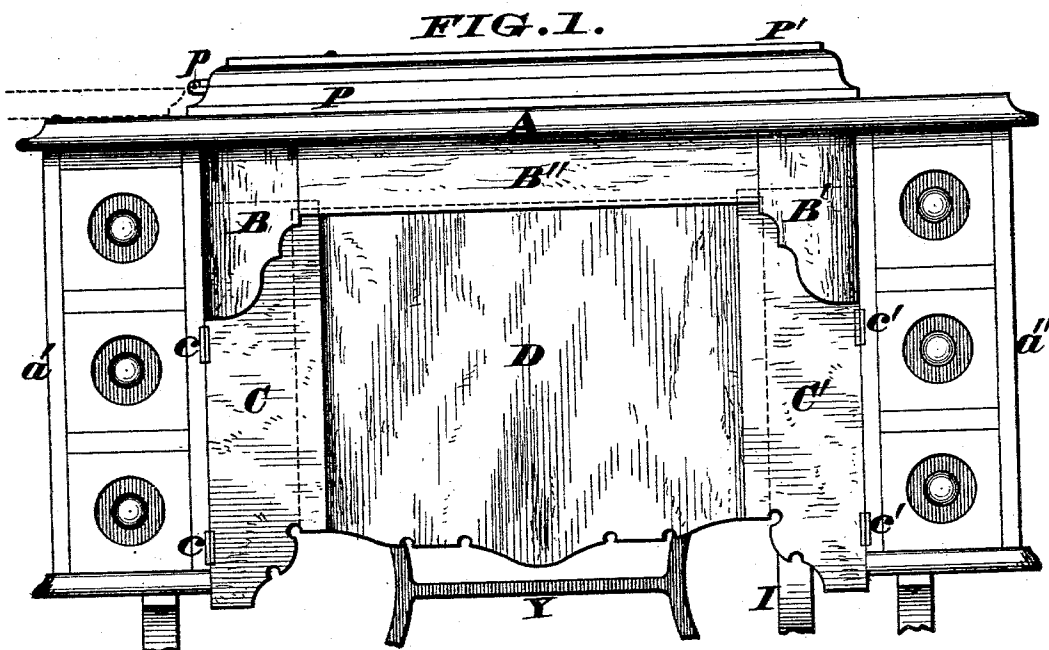
(No Model.)

3 Sheets—Sheet 1.

J. C. COCHRAN.
SEWING MACHINE TABLE.

No. 571,748.

Patented Nov. 24, 1896.



Attest.

Edw. Steitz
Samuel M. Levine

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By James H. Layman
att'y.

(No Model.)

3 Sheets—Sheet 2.

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FIG. 3.

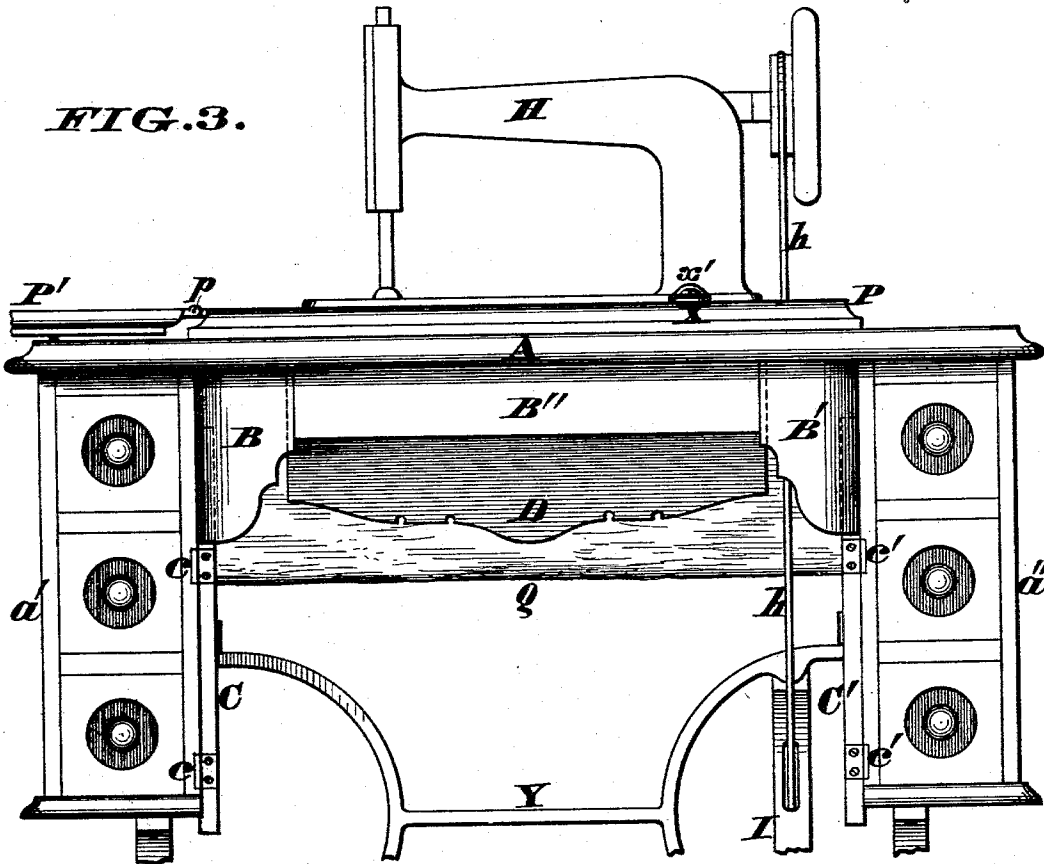
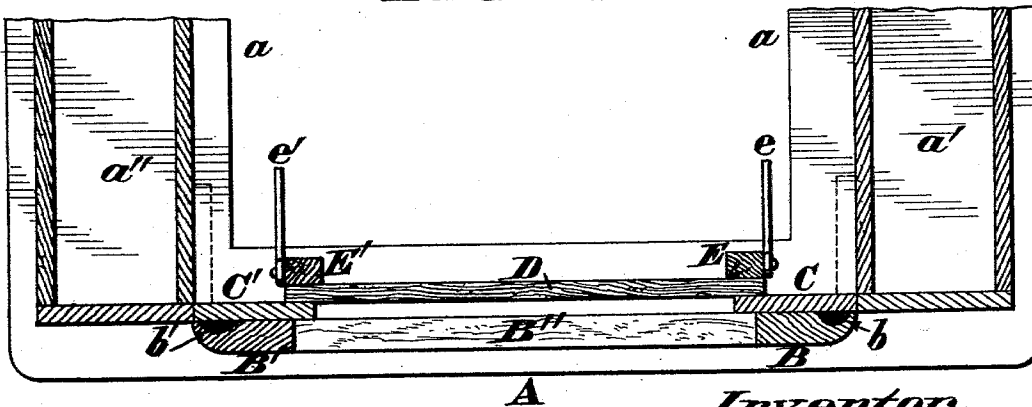


FIG. 4.



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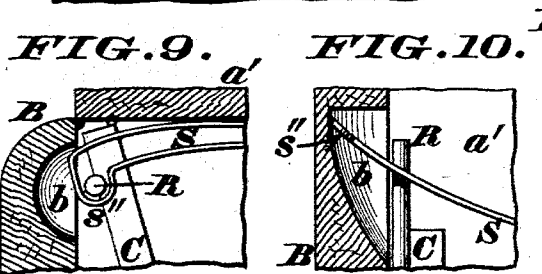
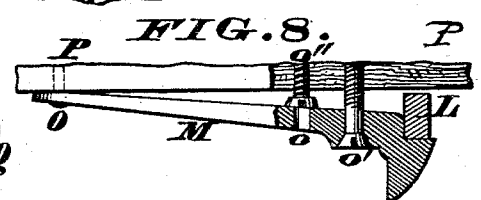
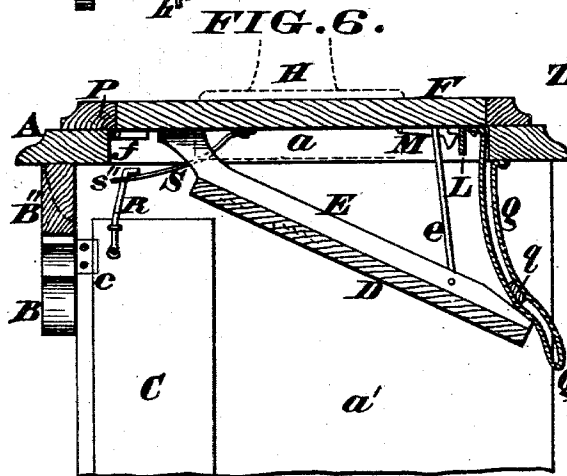
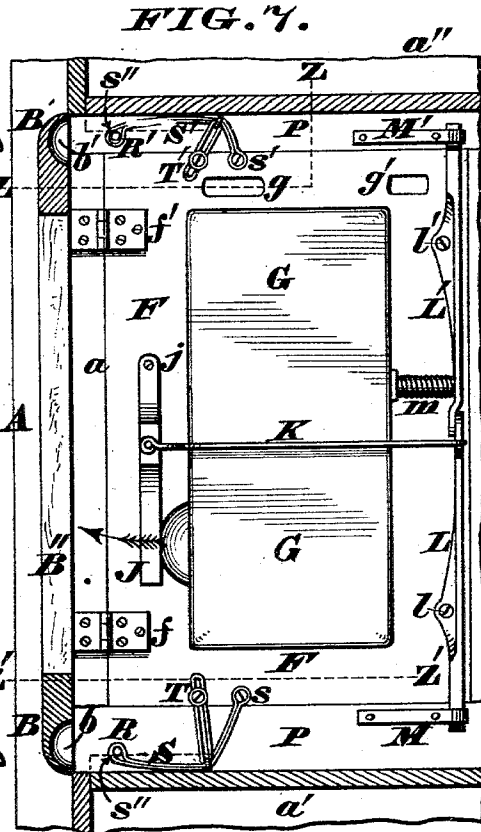
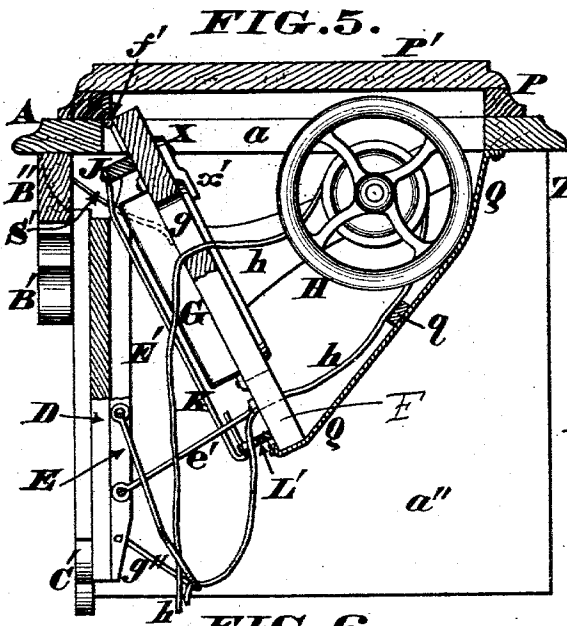
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UNITED STATES PATENT OFFICE.

JOHN C. COCHRAN, OF RIPLEY, OHIO.

SEWING-MACHINE TABLE.

SPECIFICATION forming part of Letters Patent No. 571,748, dated November 24, 1896.

Application filed August 17, 1896. Serial No. 602,938. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. COCHRAN, a citizen of the United States, residing at Ripley, in the county of Brown and State of Ohio, have invented certain new and useful Improvements in Sewing-Machine Tables; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form a part of this specification.

My invention comprises a number of novel features in the construction of those tables or stands which have drop leaves or platforms for supporting sewing-machines, type-writing machines, &c., the details of said improvements being hereinafter more fully described and then pointed out in the claims.

In the annexed drawings, Figure 1 is a front elevation of my improved drop-leaf table arranged for the support of a sewing-machine, the table being shown in its closed position. Fig. 2 is a rear elevation of the same. Fig. 3 is a front elevation showing said table in its open position and the sewing-machine exposed. Fig. 4 is a horizontal section through the upper part of the closed table. Fig. 5 is a vertical section of the closed table, taken at the line Z Z of Fig. 7. Fig. 6 is a similar section of said table, taken at the line Z' Z' of Fig. 7. Fig. 7 is a plan of the under side of the table, a false front thereof being omitted and portions of the framework sectioned. Fig. 8 is an enlarged vertical section of one of a pair of adjustable keepers secured to the under side of a frame attached to the table. Fig. 9 is an enlarged horizontal section of one of a pair of recessed brackets secured to the table-front. Fig. 10 is a vertical section of said bracket. Fig. 11 is a plan of a portion of the above-mentioned frame, to which a peculiarly-constructed turn-button is to be applied, the position of said button being indicated by dotted lines. Fig. 12 is a vertical section through said button.

My stand or table proper, A, is of any desired size, shape, and material and has an opening *a*, as seen in Figs. 4, 5, and 6, to permit a free swing of a drop-leaf, and in addition to this opening said table has a pair of end pieces or cabinets *a' a''* for containing sliding drawers or other similar conveniences. Secured to this table and rigidly connected

to said end pieces *a' a''* are brackets B B', having recesses *b b'* on their inner sides, as more clearly seen in Fig. 7, the recesses being concaved horizontally, as represented in Fig. 9. Furthermore, said recesses slope outwardly from bottom to top, as shown in Fig. 10, for a purpose that will soon appear.

B'' is a transom-strip rigidly secured both to the table A and brackets B B' and serving to conceal certain operative parts of the table as soon as it is opened.

C C' are side wings hinged at *c c'* to the end pieces *a' a''* and extending up slightly above the lower edge of transom B'', as indicated by dotted lines in Fig. 1.

D is a false front somewhat wider than the opening between the closed wings C C' and reaching from the transom B'' down as far as may be necessary to conceal the drop-leaf and its attachments.

E E' are cleats secured to the ends of this front D, the foremost portions of said cleats being rigidly attached to the under side of a drop-leaf F, which leaf is hinged to the table-frame at *f f'*, as seen in Fig. 7, and is adapted to swing up and down through the opening *a* of said table.

e e' are rods so connected to the cleats E E' and drop-leaf F as to cause the members D F of the table to preserve their proper angular position with reference to each other, the angle being more clearly seen in Fig. 6.

The exact inclination at which the front D is rigidly applied to the hinged leaf F is immaterial, provided the angle is such as to render said front substantially vertical when said leaf is swung down far enough to conceal the head of a sewing-machine underneath the table-lid. (See Fig. 5.) Again, this inclination must be such as to cause said front to remain about at the angle seen in Fig. 6 when leaf F is swung up to a horizontal position.

Secured to the under side of drop-leaf F is a pan G to catch oil or other drippings from any machine carried by said leaf. In the present case, however, a sewing-machine head H is mounted upon said leaf and is driven by a band *h*, passing around a pulley of said head and communicating with a fly-wheel housed within a guard or shield, a portion of which is shown at I in Figs. 1, 2, and 3.

g g' in Fig. 7 are slots in the leaf F to permit a free passage of the driving-band, and g'' in Fig. 5 is a bent wire loop that retains said band in the position shown when the head II is dropped down out of sight. The ends of this loop are attached to the cleat E'.

Pivoted at j to the under side of the leaf F is a lever J, from which a rod K extends rearward and engages with a catch L, pivoted to said leaf at l .

M is a keeper (see Figs. 6 and 8) secured to the under side of the table-frame P and adapted to have the catch L automatically engage therewith.

L' is another catch pivoted to the leaf at l' and capable of automatic engagement with a keeper M'.

m is a pushing-spring that insures a prompt and simultaneous engagement of said catches with their respective keepers, the peculiar construction of the latter being seen in Fig. 8. Reference to this illustration shows that the front end of the keeper is fastened to the table-frame P at O, is perforated vertically at o , and has a screw o' passed through another hole and then engaged with said frame.

o'' is an adjusting-screw in line with the perforation o and engaged with said frame. The head of this screw o'' is larger in diameter than said perforation and bears against the upper side of the keeper. Consequently, by passing a small tool up through the hole o and then turning the screw o'' , the keeper M can be so adjusted with reference to the frame as to permit a ready engagement of the catch L with said keeper, and thereby bring the upper surface of the drop-leaf flush with the top of said frame. After this adjustment has been effected the screw o' is tightened, so as to retain the keeper in its proper position, but enabling it to be reset at any time in case the wear and tear of the machine should cause the upper surface of the leaf F to settle down below the level of the table-frame. This frame P is secured upon the table and surrounds the drop-leaf F when it is swung up to a horizontal position, one end of said frame having hinged to it at p an extension-top p' , capable of being opened to the position seen in Fig. 3 previous to using any machine mounted upon said leaf.

Q is a flexible screen whose upper edge is secured to the under side of the table A, while its lower margin is attached to the rear of leaf F, the screen being sufficiently long to reach from one end piece a' to the other piece a'' , and thus close the entire rear space between said pieces $a' a''$, as seen in Fig. 2.

R R' are rods projecting from the upper portions of wings C C' and adapted to be operated by "workers" S S'. These wing-workers are usually made of double wires having their fixed ends secured to the leaf F, as at $s s'$, while their front or free ends are formed into loops s'' , as more clearly seen in Figs. 7, 9, and 10.

T T' are braces fastened to said leaf and

capable of being so adjusted as to regulate the forward and backward movements of the wings C C' and keep the workers S S' in line with the rods R R' of said wings. Each brace is composed of a piece of wire so bent as to afford a slot through which is passed a screw that fastens said wire to the leaf, the ends of the braces nearest the pieces $a' a''$ of the table being secured to the wing-workers S S'.

U in Figs. 11 and 12 is a groove in the frame P, and V V' are the side wires of a spring inserted within said groove, the free end of said spring being formed into an upward bend or arch v . The fixed ends of these wires are bent down and driven into the frame P on opposite sides of a screw W, that serves as a pivot for a turn-button X. This button can be swung around, either to the right or left, and has on its under side a countersink x , wherewith is normally engaged the arch v , above referred to.

x' is a lip projecting laterally from said turn-button and adapted to engage over the bed-plate of any machine applied to the drop-leaf F. (See Fig. 5.)

Y is part of a low-down metal frame forming the bottom portion of the support for the stand or table and its cabinets or other end pieces.

q is a slat extending from end to end of the screen Q for the purpose of distending it and causing a snug fit against the inner sides of the end pieces or cabinet-frames $a' a''$.

The normal positions of the various parts of my drop-leaf table are seen in Figs. 1, 2, and 5, reference to which illustrations shows that the extension-top P' is now closed upon the frame P, and thus serves as a cover for concealing the machine-head II and all attachments of the same. Again, the wings C C' are now shut up snugly against the rear of brackets B B', which brackets stop and rigidly hold said wings in the position seen in Fig. 4. Consequently these wings form a rigid stop or bearing for the false front D, drop-leaf F, and the machine carried by said leaf, the front being vertical and closed against the wings on account of it being rigidly secured to said leaf by the cleats E E' and connecting-rods $e e'$. In this position of the parts the weight of the machine II is transferred to the front D by means of the rods $e e'$, that connect said front to the drop-leaf. Furthermore, the free or effective ends of the wing-workers S S' are now run up to the top of recesses $b b'$, as seen in Fig. 10, the rods R R' being loosely confined between the double wires constituting each worker and the screen Q being down, so as to close the entire rear space extending from one end piece, a' , to the other piece, a'' . Consequently all the drop appliances and the drop attachments are now concealed and protected, and the table can be used as an ordinary stand; but when it is desired to operate the sewing-machine the extension-top P' is first swung over to the left, as seen in Fig. 3.

The operator's hand is then passed down through the frame P and opening α , and the arm of the machine is grasped and pulled up, the result being to swing the drop-leaf F on its hinges, and thus raise said leaf until its upper surface is flush with the top of said frame, at which moment the catches L L' automatically engage with their respective keepers M M'. Hence it is evident the leaf is stopped by the catches L L' and by them and their keepers is automatically locked in the horizontal position seen in Fig. 6.

During the first part of the upward swing of the leaf F the looped ends s'' of the wing-workers travel down the inclined sides of the recesses $b b'$, but do not operate the wings C C' because the openings between the double wires S S' are directly in line with the rods R R' of said wings; but as soon as the leaf has been raised high enough to bring these loops s'' in contact with the rods the pull against the latter becomes positive and throws the wings C C' wide open, as seen in Figs. 3 and 6, and causes said wings to bear against the inner sides of the end pieces $a' a''$ of the table. (See dotted lines in Figs. 4 and 7.) In this open position of the table unobstructed access is afforded to the treadle and other parts of the driving mechanism of the sewing-machine because the front D is raised quite high and its lower edge is so far back as not to interfere with the knees of the operator. Again, the screen Q is now doubled back on itself and hangs but a very limited distance below the rear edge of said front. Therefore my table or stand is especially adapted for those sewing-machines which require access to their operative parts under a table while said machines are raised on their drop-leaves.

To close the machine, the operator's hand is placed under the table and lever J is grasped and pulled forward, as indicated by the arrow in Fig. 7, which act simultaneously disengages the catches L L' from their keepers M M' and allows the leaf F to be lowered. This lowering or drop movement restores the wings C C', front D, and screen Q to their normal positions and again conceals the head H as soon as the extension-top P' is closed. When leaf F commences its downward swing, the rods R R' occupy the bends s'' of the wing-workers, as seen in Fig. 7, and on this account the wings C C' partake of the closing movement of said leaf, as represented in Fig. 9; but as soon as said wings are completely closed the continued swing of the leaf brings the workers S S' in contact with the beveled sides of the recesses $b b'$, and thereby forces the bends s'' away from the rods R R', thereby stopping their action on the wings. As the leaf swings down still farther the free ends of the workers run up within the recesses, and by the time said leaf has been lowered as far as it can go the loops s'' of the said workers will be at the top of said recesses, as seen in Fig. 10.

From the above description it is evident

the workers S S' grasp the rods R R' only so long as it is necessary to open and close the wings, and for this reason said wings travel but a very limited distance, while the swing of the drop-leaf is relatively much greater.

The turn-button (more clearly seen in Figs. 11 and 12) is another advantage peculiar to my table, as it enables the ready and very secure attachment thereto of the head H or other piece of machinery and facilitates its convenient disengagement.

Normally the bend v of the double spring V V' occupies the countersink x of the button, thereby locking the latter and causing its lip x' to engage over the edge of the bed-plate of the machine. To detach the machine, it is necessary only to exert a slight force against said lip, so as to turn the button either to the right or left, at which time the pressure against the bend v will wedge the spring down within the recess U. The button can then be turned with the greatest facility, but as soon as it is restored to its normal position the automatic upward spring of the wires V V' causes their connecting bend v to again engage with the countersink x and lock said button.

I claim as my invention—

1. The combination of a table or frame; a leaf hinged thereto; a front secured angularly to said leaf; end pieces projecting down from said table; wings hinged to said end pieces; and devices that communicate motion from said leaf to said wings, for the purpose stated.

2. The combination of a table or frame; a leaf hinged thereto; a front secured angularly to said leaf; end pieces projecting down from said table; wings hinged to said end pieces; and wing-workers applied to said leaf, which workers are inoperative when said wings are completely opened and closed, as set forth.

3. The combination of a table or frame; a leaf hinged thereto; a front secured angularly to said leaf; end pieces projecting down from said table; wings C, C', hinged to said end pieces; rods R, R', attached to said wings; workers S s'' , S' s'' , fastened to said leaf, and operating said rods, in the manner described; and recesses b, b' , in the front part of the structure for the object stated.

4. The combination of a table; a frame P, secured thereon; a pair of wings C, C', hinged to end pieces of said table; workers S, S', that operate said wings, in the manner described; and adjustable braces T, T', connected to said workers, for the object stated.

5. The table A, having a frame P, with a drop-leaf F, and keepers M, M', applied to its under side, in combination with catches L, L', rod K, lever J, and a spring that causes said catches to engage with said keepers, in the manner described.

6. The combination of a table or frame; a leaf hinged thereto; end pieces projecting down from said table; and a flexible screen

having its upper margin secured to said table, and its lower edge attached to the rear portion of said leaf, the screen being sufficiently long to extend from one end piece to the other, for the purpose described.

7. A table or frame having a leaf hinged thereto; end pieces projecting down from said table; a flexible screen having its opposite margins secured to said table and leaf; and a slat fastened longitudinally of said screen, for the purpose of keeping it in contact with said end pieces, as set forth.

8. A sewing-machine table having a drop-leaf hinged to it; a front secured angularly to said leaf; and a bent loop g'' , having its ends attached to said front, for the purpose described.

9. The combination of frame P, perforated

keeper M o , secured thereto, with a fastener O, and screw o' ; and a screw o'' , tapped in said frame P, and in line with said perforation o , and bearing against one side of said keeper, for the purpose stated.

10. The frame P, having a groove U, in it; a spring V $V'v$, fitted within said groove, and a turn-button X, pivoted to said frame, and having a countersink x , wherewith is engaged the bend v , of said spring, for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN C. COCHRAN.

Witnesses:

H. V. YOUNG,
FLORENCE YOUNG.