Aug. 15, 1939. H. W. ALTORFER 2,169,753

IRONING MACHINE CABINET

Filed July 13, 1936 4 Sheets-Sheet 1

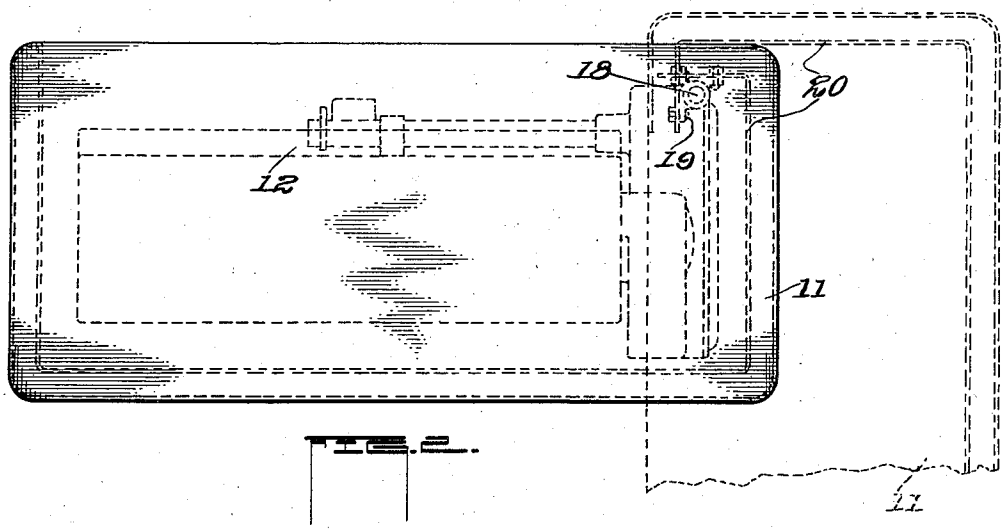

FIG. 2.

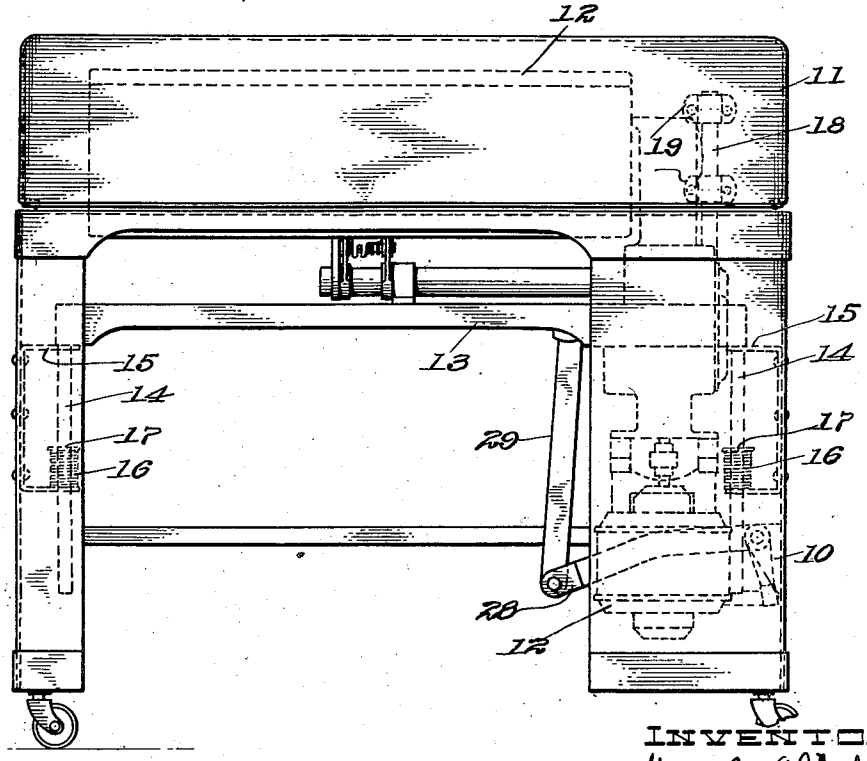

FIG. 1.

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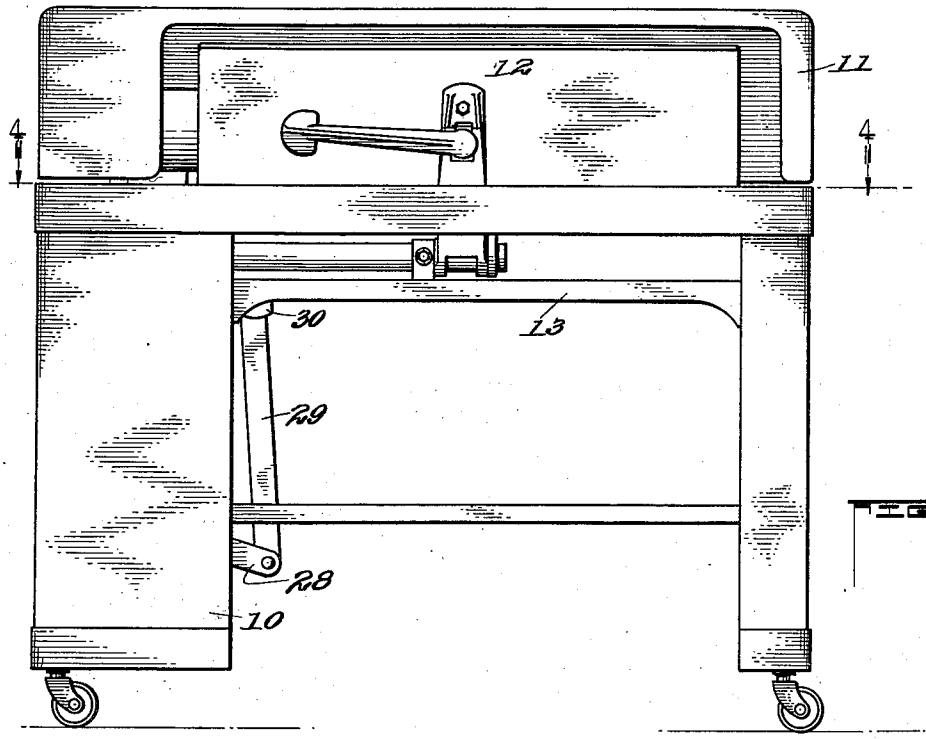

FIG. 3.

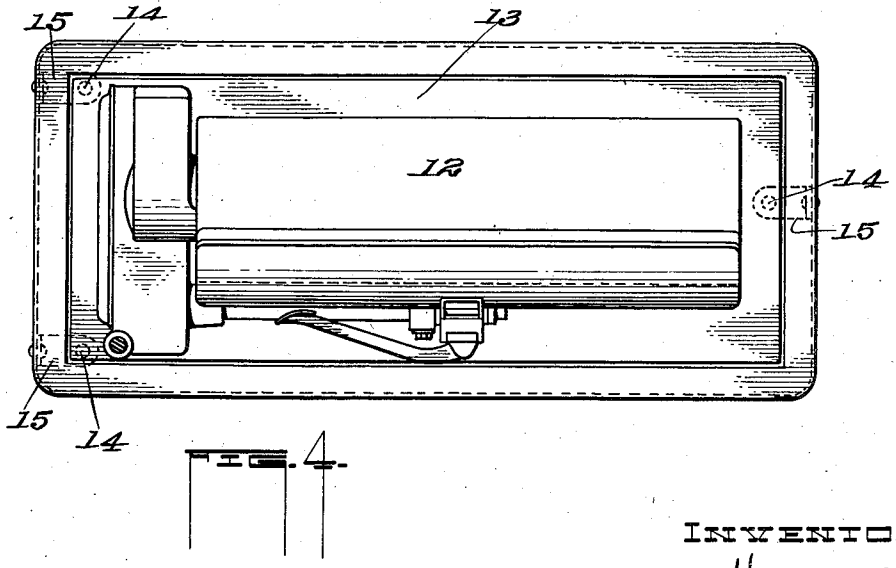

FIG. 4.

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IRONING MACHINE CABINET

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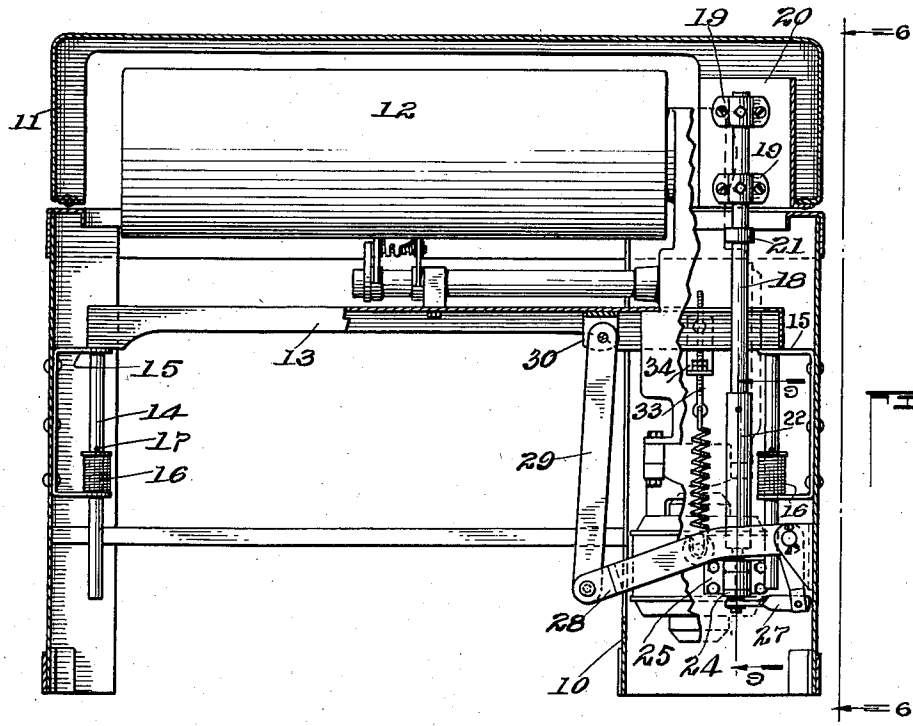

FIG. 5.

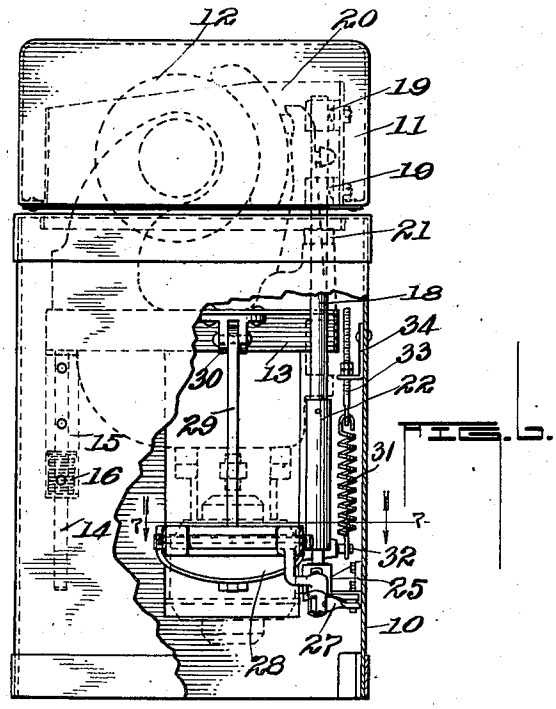

FIG. 6.

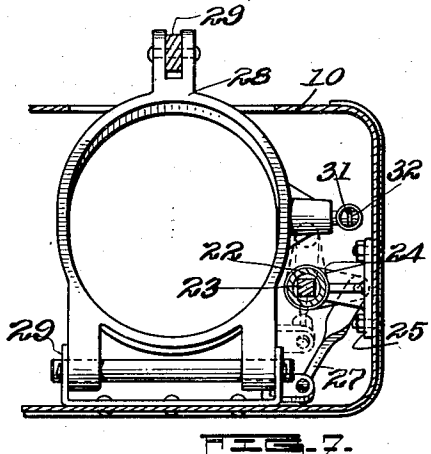

FIG. 7.

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IRONING MACHINE CABINET

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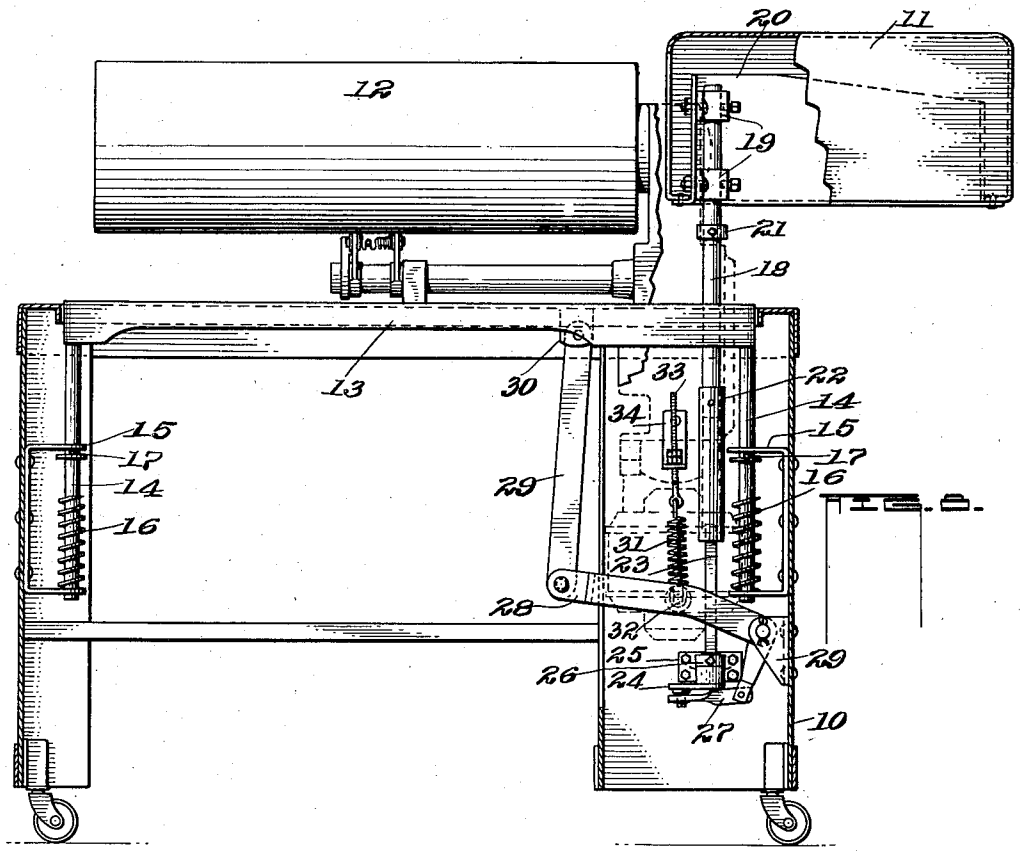

FIG. 8.

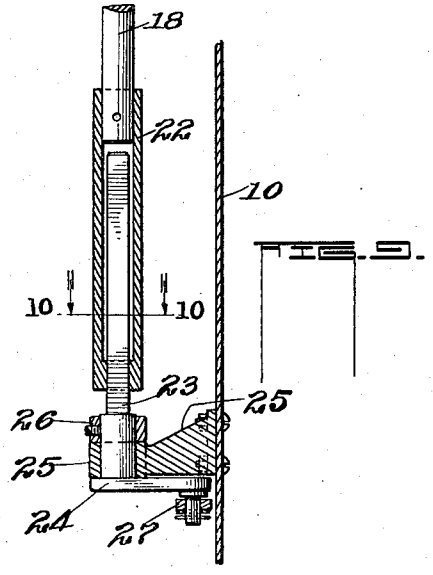

FIG. 9.

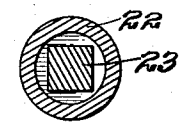

FIG. 10.

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Patented Aug. 15, 1939

2,169,753

UNITED STATES PATENT OFFICE

2,169,753

IRONING MACHINE CABINET

Henry W. Altorfer, Peoria, Ill.

Application July 13, 1936, Serial No. 90,374

8 Claims. (Cl. 312—26)

This invention relates to domestic ironing machines and particularly refers to the design of the enclosure or cabinet for same.

Ironing machines for home use are usually used in the upstairs rooms of the homes as well as stored there when not in use because housewives dislike to iron in the basement. A cabinet or cover for the ironer is almost a necessity to keep the machine clean and free of dust. The ordinary domestic ironing machine as now on the market is awkward to store when not in use because the necessary height of the ironer for operation requires a detachable top or cover much higher than the average table and, therefore, its utility as an occasional table is greatly reduced.

The main object of this invention is to provide a cabinet container for an ironing machine that will be of approximately average table height when the ironer is stored therein, and when opened for use as an ironer will adjust itself to sufficient height to provide ample leg room for the operator and place the roll at the proper height for operation by a seated operator.

Another object is to provide a cabinet top or cover for the ironer which will serve as an occasional table when the ironer is stored and the same cabinet top will be positioned properly for use of the operator as a service shelf when the ironer is in use.

A still further object is to improve the general appearance of the ironer in the closed or storage condition by reducing the height in proportion to the width which gives improved appearance by more symmetrical proportions.

Another object is to provide a mechanism for adjusting the ironer to the two positions, for the two utilities as above outlined, that will be simple, quiet and effective with minimum effort on the part of the operator.

Other objects and benefit will be disclosed by the examination of the following drawings and descriptions of which—

Fig. 1 is a front elevational view of an ironing machine cabinet or table shown in its closed or storage position. The ironing machine is shown in its lowermost position in dotted lines;

Fig. 2 is a top plan view of Fig. 1 showing the ironing machine in dotted lines. The swinging cabinet top or cover is shown in dotted lines in the position it will assume when swung around one-quarter turn to uncover and raise the ironing machine to its operating position;

Fig. 3 is a rear elevational view of Fig. 1, showing the open back wall in the cabinet top with the ironing machine shown in its lowered or stored position;

Fig. 4 is a top plan view taken on lines 4—4 of Fig. 3 showing clearance between the slidable ironing machine table and the cabinet frame;

Fig. 5 is a front sectional elevational view showing the mechanism for raising and lowering the ironing machine on the table as it appears in the lowered or inoperative position supported on the guide brackets. This view particularly discloses the manner in which the slidable table is supported by the short bumper springs on the guide rods;

Fig. 6 is an end elevational view taken on line 6—6, Fig. 5, partially broken away in order to show the raising and lowering mechanism with counter-balance spring. The ironing machine proper is shown in dotted lines;

Fig. 7 is an enlarged sectional view in plan taken on line 7—7, Fig. 6, showing crank and link connected to the yoke bell crank for raising and lowering the slidable table. The yoke is necessary to clear the motor which it surrounds in lowered position as shown in Fig. 5;

Fig. 8 is a front sectional elevational view similar to that shown in Fig. 5 with the cover swung around one-quarter turn raising the ironing machine to operating position and raising the cover to a convenient position so that it may be utilized as a service shelf;

Fig. 9 is an enlarged fragmentary sectional view taken on line 9—9, Fig. 5, showing the telescoping sleeve and square shaft which permit vertical movement of the ironing machine table;

Fig. 10 is an enlarged cross sectional view taken on line 10—10, Fig. 9.

The complete lower cabinet I designate as 10. The cabinet top as a whole is designated 11. The ironing machine complete with roll, shoe, gear case and motor, I designate as 12. All of the above major parts are of conventional design and as they are only pertinent to the invention as units no detailed description of them is considered necessary.

The ironer 12 is supported on an interior slidable table 13 with two guide rods 14 on each corner of the mechanism end and one guide rod 14 in the center of the open end.

The guide rods 14 slide in double brackets 15, riveted to the cabinet 10. Bumper springs 16 rest on the lower extensions of brackets 15 and surround the guide rods 14. Cotter keys 17 through the guide rods 14 are positioned to contact washers on the springs 16 to provide a resilient stop for the table 13. These springs also assist as

counter-balance springs and aid in making the operation of the slidable table smooth, easy and quiet.

Now describing the mechanism for telescoping the ironer in the cabinet, the pivot shaft 18 is fastened to the cabinet top 11 by means of the set screw brackets 19 attached to an inner stiffener frame 20 riveted to the cabinet top 11. This pivot bar 18 carrying the cabinet top is supported on a set collar 21 resting on a suitable bearing boss on the gear case of ironer 12.

Riveted on the lower end of the pivot shaft 18 is a telescoping hollow shaft 22 which has a square hole in its lower end that slidably fits on the square shaft 23. (See Fig. 9.) This square shaft 23 is solidly attached to the crank 24 which has a vertical bearing in a bracket 25 bolted to the lower cabinet wall. A set collar 26 attached to the upper extension of the bearing on crank 24 supports the assembly parts and provides a pivotal mounting on the bracket 25.

On the lower throw of the crank 24 is mounted a link 27 which connects to the short end of the yoke bell crank 28 which is pivotally mounted on a bracket 29' riveted to the end of the lower cabinet. The yoked opening of bell crank 28 is necessary to clear the motor on the crank case in its lowered position.

The outer end of the bell crank 28 is pivotally attached to the slidable table 13 by the link 29 and the bracket 30, the counter-balance spring 31 is tensioned to the bell crank 28 on the groove stud 32 and is adjustably attached to the lower cabinet by the I-bolt 33 and bracket 34.

Now having described the parts and their relations I will explain the functional operation of the mechanism. Assuming the ironer closed or in stored condition as in Figs. 1 and 3, the operator rotates the cabinet top 90° as in Fig. 2, dotted position, to open. It will be noted that the cabinet top is cut away in the rear (see Fig. 3) to permit this rotation.

The pivot shaft 18 being fixed to the cabinet top 12 rotates with it and by connections through the telescoping tube 22 and square shaft 23 rotates the crank 24 which raises the sliding table 13 through the linkage 27, 28 and 29.

The effort to lift the table 13 carrying the full weight of the ironer 12 is reduced by the balance spring 31 assisted at the start by the bumper springs 16.

As the table 13 rises carrying the ironer 12, it raises the table top 11 with it through the contact of the gear case on the collar 21, the table top is there held for use as a service shelf being supported by the pivot shaft 18.

The reverse rotation of the table top 11 to close the ironer brings into contact the cotter pins and washers 17 on the bumper springs 16 which cushion the weight of the table as it comes into lowered position.

The above description and drawings show an embodiment of my invention. Obviously, the structure may be changed, without departing from the theories involved, but I do not desire to be limited to any particular structure except as specified in the following claims.

I now claim as new:

1. A container for an instrument such as an ironing machine, comprising a frame, a support for the instrument telescopically mounted in said frame, an instrument on said support, lever mechanism for raising and lowering said support relatively to the frame, a cover for the instrument having a vertical pivotal mounting on the frame, and connecting mechanism including an element of the pivotal mounting between the cover and lever mechanism whereby swinging movement of the cover away from the instrument will raise the latter to an operative position and will provide ample leg room for the operator beneath the instrument.

2. A container for an instrument such as an ironing machine, comprising a table, a movable support for the instrument in said table, an instrument on said support, a cover, and mechanism connecting the cover, table and instrument support whereby swinging movement of the cover to uncover or cover the instrument, will be transmitted to the support to move the instrument into or out of operative position over the table.

3. A container for an instrument such as an ironing machine, comprising a relatively low table equipped with a well, a movable instrument support in the well of said table, an instrument on said support, a cover for the instrument having a pivotal mounting on the table, lever mechanism for raising the support to bring the instrument into operative position over the table, and to provide ample leg room for the operator beneath the table and for lowering the instrument to its normally inoperative position in the well of the table, and connecting mechanism including the element of pivotal mounting between the cover and lever mechanism coordinating the raising and lowering movements of the instrument with the pivotal movements of the cover.

4. A container for an instrument such as an ironing machine, comprising a relatively low table equipped with a well, an instrument support disposed for movement to bring an instrument supported thereon to an operative position over said table and thereby provide ample leg room for the operator beneath the table and to cause the instrument to be moved at will to an inoperative position within the said well, a cover pivotally mounted on the table for horizontal pivotal movement over and away from the table, and mechanism for transmitting the movements of the cover to the said support whereby movement of the cover away from the table will cause the instrument support to be raised and vice versa.

5. A container for an instrument comprising a relatively low table having an opening through which the instrument when in inoperative position projects in obstructing relation to leg room for the operator, a vertically movable support for the instrument, a cover for the table disposed for pivotal movement on a vertical axis from a position over the table to a position free thereof, and mechanism including the pivotal element of the cover operatively associating the cover with the support for raising the latter to cause an instrument mounted thereon to become disposed in operative position over the table and out of obstructing relation to said leg room as said cover is swung to its last named position and vice versa.

6. A container for an instrument such as an ironer, comprising a frame, a vertically movable support for the instrument in said frame, an instrument on said support, a cover for the instrument mounted on said frame, and lever mechanism connected to the frame, the cover and the support whereby, when the cover is swung horizontally to uncover the instrument, the support is raised simultaneously to a position of use, and vice versa.

7. In a cabinet for an ironing machine, a relatively low table with an opening therein, a support member movable vertically in said table

opening, an ironer mechanism operable on said support member, a cover mounted on a vertical pivot from said table, and mechanism co-acting with the pivotal movement of the cover to raise the ironer to normal operating position and by reverse movement to lower the ironer within the low table with the cover at approximately normal table height.

8. In a cabinet for an ironing machine, a relatively low table with an opening therein, a support member movable vertically in said table opening, an ironer mechanism operable on said support member, a cover mounted on a vertical pivot on a rearward corner of said table, and mechanism co-acting with the pivotal movement of the cover to raise the ironer into normal operating position or by reverse movement to lower it into covered position whereby the ironer may be used or stored in position with its back adjacent a wall without the necessity of moving the ironer away from the wall.

HENRY W. ALTORFER.