Sept. 5, 1939. J. C. VIEHMANN 2,171,772

TABLE WITH DRAWER

Filed April 6, 1938 2 Sheets-Sheet 1

Fig. 1.

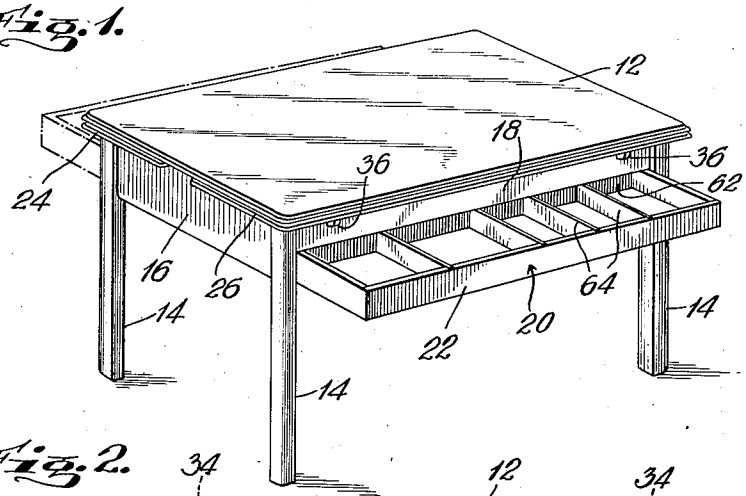
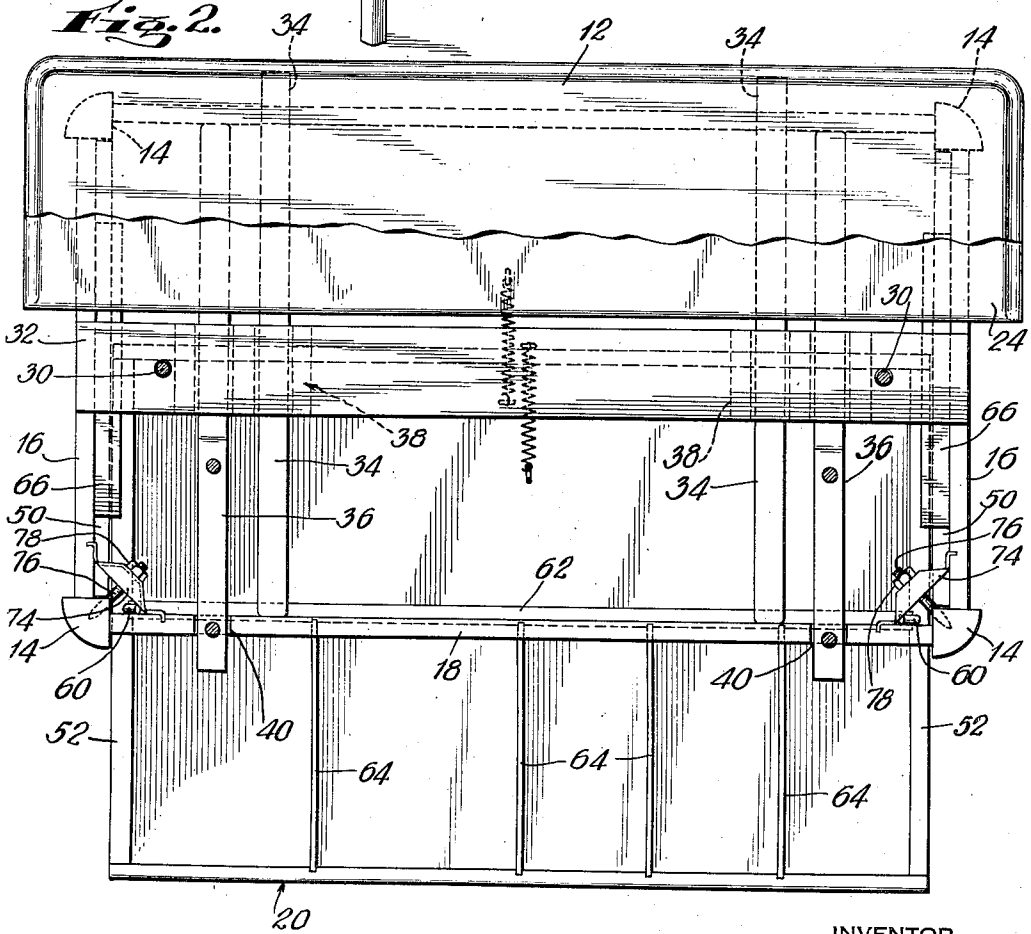


Fig. 2.



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Filed April 6, 1938 2 Sheets-Sheet 2

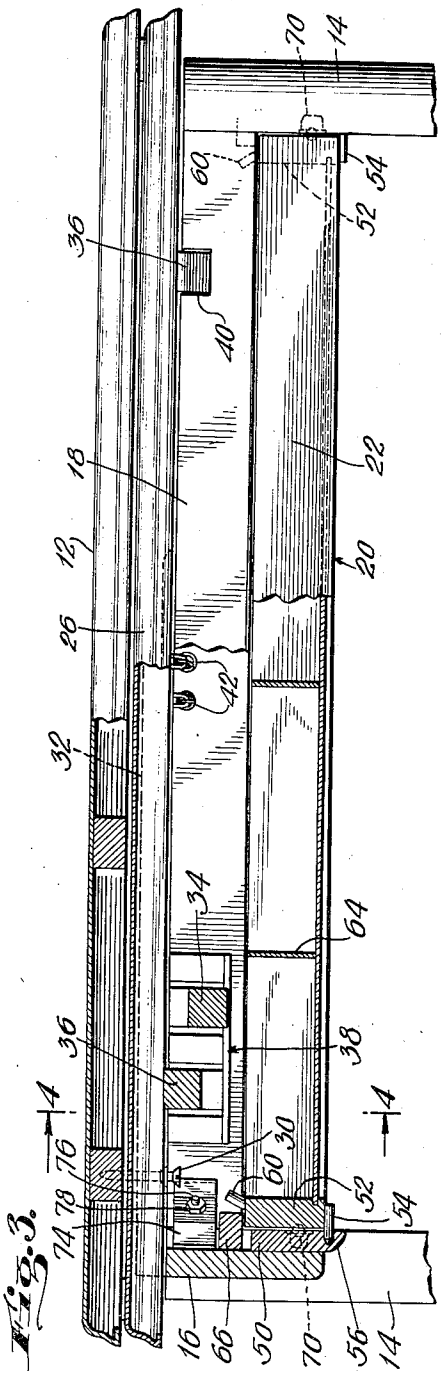


Fig. 3.

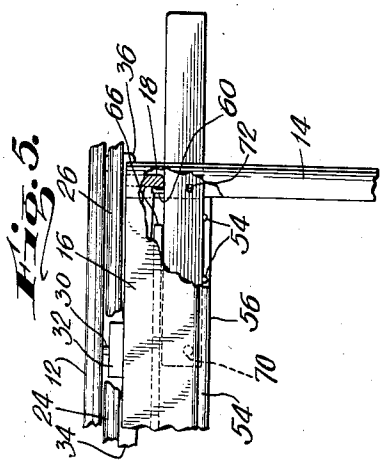


Fig. 5.

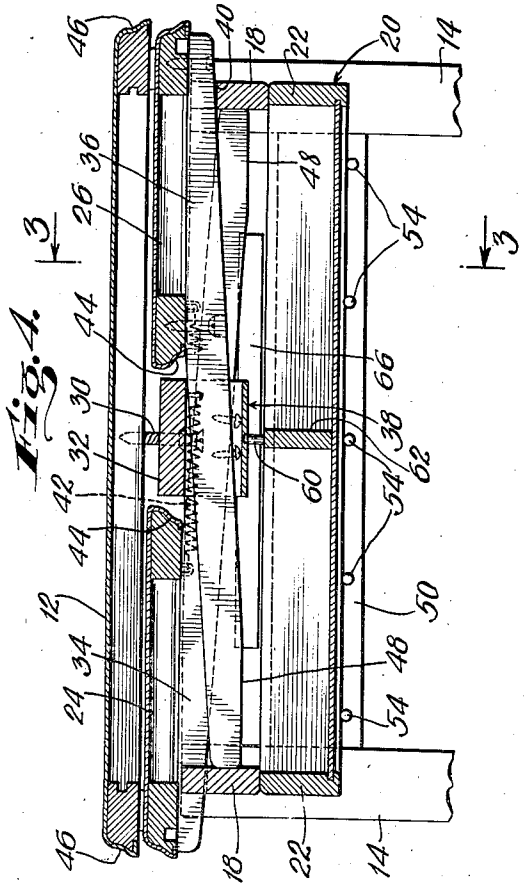


Fig. 4.

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TABLE WITH DRAWER

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Application April 6, 1938, Serial No. 200,356

5 Claims. (Cl. 312—164)

This invention relates to tables provided with a drawer, and more particularly extension leaf tables.

The primary object of my invention is to provide a table with an exceptionally large amount of drawer space and to make said drawer space conveniently accessible, all without loss of leg room beneath the table. I have increased the amount of drawer space approximately four-fold compared to an ordinary table of the character here described, by providing the table with a single large drawer having an area nearly equal to the area of the table top. The drawer moves sidewardly between the legs of the table at either side. Appropriate motion-limiting stops are preferably provided to limit the outward movement of the drawer to approximately equal half the depth of the drawer. In this way the entire area of the drawer is made readily accessible at the sides of the table without the inconvenience of requiring so much clearance around the table as to permit full opening of the drawer wholly on one side. At the same time complications in the structure which would be needed to hold the drawer against tipping out of its supports are dispensed with, for half the drawer is left in the table when the drawer is open.

Further objects of my invention center about the application of the large drawer feature to an extension leaf table. Such tables are widely used and are popular because of the ease with which the leaves, nested beneath the table top, may be pulled outwardly for use when needed. These extension leaf tables have support arms or slides supporting the leaves and extending inwardly beneath the table and passing through guide boxes. As heretofore constructed, considerable room was needed in a vertical direction for the slide and guide box mechanism. The narrowest table rail heretofore found practical for these extension leaf tables, was approximately four inches in width, it being very slightly more for a porcelain top table, and very slightly less for a wood top table. The large drawer of my invention is disposed beneath the rails of the table, and if disposed beneath rails of ordinary width, would seriously interfere with the necessary leg room beneath the table. The top of the table is limited to a height of, say, thirty inches above the floor, in order not to make it uncomfortable to eat at the table, but at the same time. the leg room cannot be diminished, for otherwise a person eating at the table will not be able to "sit up" to the table. In accordance with the present invention, the extension leaf mechanism is modified to compact the same in a vertical direction, thus making it possible to receive the slides and guide boxes within side rails which are only, say, two and one-half inches in width. The drawer may be made, say, two and one-half inches in width, thus making the total height of the rail and drawer comparable to the narrowest width of rail heretofore used for this purpose. But most extension leaf tables had wider rails, say five or six inches in width, particularly so when provided with even a small area drawer, located between the slides. for example. By practical comparison, therefore, the prior rails exceeded the dimensions which I have made possible in my improved table, although my drawer is so large in area that it operates beneath the slides.

Other objects of my invention are to provide special motion-limiting means for the single large drawer, to limit outward movement, and to stop and locate the drawer in its closed or mid-position.

For convenience and economy in shipment and storage, these extension leaf tables are commonly made in knocked down form, and in accordance with another object of the present invention, the improved table with its single large drawer is also made in knocked down form, the legs being readily removed from or attached to the table, all without interference with the drawer mechanism.

To the accomplishment of the foregoing and such other objects as will hereinafter appear, my invention consists in the extension leaf and table drawer elements and their relation one to the other, as hereinafter are more particularly described in the specification and sought to be defined in the claims. The specification is accompanied by drawings, in which:

Fig. 1 is a perspective view showing a table embodying features of my invention;

Fig. 2 is a plan view of the same with a part of the table top cut away and one of the extension leaves removed;

Fig. 3 is a longitudinal section taken through the table in the plane of the line 3—3 of Fig. 4;

Fig. 4 is a transverse section taken through the table in the plane of the line 4—4 of Fig. 3; and

Fig. 5 is a fragmentary end elevation, a part of which is cut away to disclose some features of the drawer mechanism.

Referring to the drawings, and more particularly to Fig. 1, the table comprises a top 12, legs 14 supporting the same, wide end rails 16 and narrow side rails 18 extending between the legs, and a single large drawer 20 disposed beneath the narrow side rails 18. As will be readily seen from

the drawing, the drawer has a width equal to the long dimension between legs **14**, and the drawer is slidable out of the table toward either side, it being shown open toward the front in the solid line position, and open toward the back in the broken line position. It will also be seen that the drawer is approximately equal in height to the difference in height or width between the wide end rails **16** and the narrow side rails **18**. It may be mentioned (and will be seen by inspection of Fig. 4 of the drawings) that the depth of the drawer is such as to bring the opposite end or front walls **22** of the drawer at a spacing equal to the spacing between the side rails **18**. In other words, the drawer when closed has its front walls **22** flush with the side rails **18**, and rail **18** together with drawer wall **22** form a simulated table rail which is preferably made equal in height to the height of the end rails **16**. This gives the table a perfectly symmetrical and conventional appearance when the drawer is closed. It will also be observed in Fig. 1 that the table is of the extension leaf type, it being provided with extension leaves **24** and **26** which are shown in the closed position nested beneath the table top **12**, but which are readily opened by pulling the same outwardly. The top and extension leaves as here illustrated, are of the porcelain type, but the invention may, of course, be applied to tables in which the top and leaves are made of wood.

Considering the table construction in greater detail and referring to the remaining figures of the drawing, the top **12** is of the floating type, it being located by depending screws **30** passing slidably through a board **32** which extends longitudinally above the end rails **16**, and which is disposed between the inner edges of the extension leaves **24** and **26** when the table is closed. The extension leaves **24** and **26** are respectively mounted on slides **34** and **36**. These slides extend inwardly to the opposite table rail **18**. They pass through guide boxes generally designated **38**, and are additionally guided by notches or recesses **40** at the upper edges of side rails **18**. The extension leaves are normally pulled inwardly by appropriate tension springs **42**. The inner edges **44** of the leaves are so shaped as to mate with the outer edges **46** of the table top so that the parts will nest together when the table is opened.

As so far described, the extension leaf mechanism is generally of conventional construction, but heretofore the dimension, shaping and angularity of the parts, particularly the slides, were such as to occupy, say, four or more inches in height. In accordance with my invention, the individual slides are substantially increased in width and decreased in height, the increased width helping compensate for any loss of strength occasioned by the decreased height. The angularity of the slides is minimized, and in addition, the inner ends of the slides at the lower edges thereof are tapered or cut away, as is clearly shown at **48** in Fig. 4. In this way the height needed for the slide mechanism is reduced so that the slide mechanism is received between side rails **18**, while keeping the latter to a height of, say, only two and one-half inches. In this way the slide mechanism is kept clear of the large drawer **20** which is disposed immediately beneath the side rails **18**.

The large drawer **20** is dimensioned as has already been described and as will be apparent from the drawing, it having an internal depth equal to the distance between the narrow or side rails of the table, a width equal to the distance between the legs of the table, or equal to the length of the side rails of the table. The drawer has a height approximately equal to the height of the side rails, and in any event, the dimensioning of the parts is so selected as to retain adequate leg room or knee clearance beneath the table.

The drawer is guided against sideward movement by the use of drawer guide pieces **50**, one of which is shown in section in Fig. 3. These fill in the space between the wide rail **16** and the side wall **52** of the drawer. The drawer is supported at the bottom by suitable means, here shown as a series of cylindrical metal pins or dowels **54**, these being driven with a force fit into holes extending along the drawer guides **50**, as will be clearly understood from inspection of Figs 3 and 4. Because of the smooth, metallic nature of the pins **54** and because of their rounded configuration, the drawer slides readily thereover with a smooth, free action which feels and sounds as though the drawer were working on roller bearings. It has already been mentioned that no rail is placed beneath the drawer, in order not to take away from the available leg room. The end rails **16** are given a width equal to the sum of the widths of the narrow rail **18** and the drawer wall **22**, so that a uniform width is presented to the eye when looking at the table. It is obvious, however, that the bottom support pins **54** must be located beneath the drawer, and it is for this reason that the drawer guides **50** are disposed with their lower edges **56** somewhat lower than the lower edges of rail **16**, as will be clear from inspection of Figs. 3 and 5. However, the edge **56** is rounded inwardly as shown in Fig. 3, because I find that with this construction, the downward projection of the drawer guide is unnoticeable to the ordinary observer looking at the table from any normal point of view. Naturally, this edge becomes visible if one crouches down to an eye level as low as the table, but otherwise the edge **56** is not visible. Furthermore, the rounding of edge **56** reduces the loss of leg room because when a person "sits up" to the table his thigh is ordinarily higher than his knee, and the upper part of the leg is not horizontal, but slopes downwardly. For this reason a low edge such as the edge **56** presents less interference when located at a greater distance inwardly of the table than it would if it were, for example, located directly at the bottom of rail **16**.

The opening movement of the drawer is preferably limited by suitable end stops. In the present case I provide two metal pins **60** which project upwardly from the drawer at the middle thereof. These pins may be driven into the center partition **62** if a heavy partition is used, or may be driven into the side walls **52**, but in the latter case, they are preferably sloped inwardly for a reason subsequently described. When the drawer is opened, the upwardly projecting pins reach and strike the inside of side rail **18**, as is clearly shown in Figs. 2 and 5 of the drawings. This limits the opening movement of the drawer to an amount approximating half the depth of the drawer. For access to the other side of the drawer, the drawer is opened from the opposite side of the table. One side of the drawer may be partitioned as indicated at **64** in Fig. 2, thus adapting the same for use for table silver, kitchen cutlery, and the like. Some or all of these compartments may be lined with plush or like fabric to protect table silver placed therein. The other

side of the drawer may be left without partitions and may be used for table linen.

The drawer support mechanism is inherently simplified and the drawer is stabilized by reason of the fact that it is never open to more than half its depth. The inner half remains in the table and counterbalances the outer half. However, I prefer to additionally guard against undesired upward displacement of the inner half of the drawer by the provision of suitable top drawer supports, and in the present case these consist merely of small rails or sticks of wood **66**, which are secured to the wide rail **16** at a height such as to just overlie the upper edges of the sides **52** of the drawer. It will be manifest that upward movement at the inner end of the drawer is prevented by the top supports **66** despite the application of pressure on the outer end of the drawer when the drawer is opened. It will also be understood that if the drawer guides **50** extend upwardly as far as the top supports **66**, the latter may be secured to the drawer guides instead of to the rails **16**. The end stops **60** come inside the top supports **66**, and outside the slides **36**.

For the sake of appearance it is desirable to keep the drawer accurately in position when the drawer is closed. With this object in view, I prefer to provide the drawer guides **50** with yieldable or spring-pressed center stops **70**. These may be of known character sometimes used for keeping the door of a piece of furniture in closed condition, and include rounded spring-pressed members which are urged inwardly against the sides **52** of the drawer. The latter are preferably provided with appropriate recesses or sockets **72** best shown in Fig. 5 for receiving the spring-pressed stops **70** when the drawer is in mid-position. In this way the drawer is held in proper position, yet there is no substantial resistance to movement when the drawer is intentionally pulled to open the same.

The legs of the table may be removed so that the table may be "knocked down" for shipment or storage. More specifically, the rails **16** and **18** terminate at the legs **14** without any mortise and tenon construction, or the like. Instead, the rails are provided with corner irons **74** which may be conventional in character, and which are best shown in Figs. 2 and 3 of the drawing. In the present case the corner irons are elevated so as to center the same with respect to the narrow rails **18**, and these irons clear the drawer **20**. The legs **14** are provided with lag screws or lag bolts **76**, and to assemble the table, it is merely necessary to pass the screws **76** through the angle iron **74** and to thereupon apply and tighten the nuts **78**. I have found that an adequately stiff and rigid leg mounting is obtained despite the reduction in width of the side rails **18**. Moreover, the large table drawer **20** extending over the entire bottom of the table does not interfere with the application of the legs to the table, for the drawer is moved to one side while attaching the legs at the other side of the table, and the drawer is then moved to the opposite side while attaching the remaining legs. In each case half the space beneath the table is cleared for free access to and work upon the screws and nuts **76**, **78**.

It is believed that the construction and method of use, as well as the many advantages of my improved extension leaf table, will be apparent from the foregoing detailed description thereof. In tables of this character, it has heretofore been necessary to use a rail approximately five inches in width, and the drawer has been only about sixteen to eighteen inches in width, and about the same or less in depth. The drawer has also been made very small in vertical dimension because of the large amount of room needed for the extension leaf slide mechanism. In the present case, the drawer area is increased about four-fold, for the drawer is practically twice the width and depth of a conventional drawer, and it is also greater in height. The table may be of conventional dimension, say forty inches by twenty-five inches, and its height is kept down to the usual value, say, thirty inches, without, however, decreasing the leg room beneath the table. The drawer, despite its size, is convenient in use because it may be slid out of the table toward either side. The mounting of the drawer is inexpensive and provides for a free, smooth drawer action. Appropriate end stops are provided to limit the movement of the drawer, and yieldable middle stops are provided to locate the drawer in mid-position. The appearance of the table is kept symmetrical, harmonious and in keeping with conventional practice. Features such as convenient extension leaf mechanism and detachable or "knock down" leg construction are retained despite the reorganization of the table for reception of the large drawer.

It will be apparent that while I have shown and described my invention in a preferred form, many changes and modifications may be made in the structure disclosed, without departing from the spirit of the invention defined in the following claims.

I claim:

1. An extension leaf table comprising a top, extension leaves therebeneath, legs, wide rails extending betwen said legs at the ends of the table, and narrow rails extending between said legs at the sides of the table, a single large drawer, the depth of said drawer being approximately equal to the distance between the side rails, and the width of said drawer being approximately equal to the long distance between the legs, said drawer being located beneath the narrow rails and having a height approximately equal to the difference in height between the narrow and wide rails, slides and guide boxes for said extension leaves, the bottom surface at the inner ends of said slides being cut away in such fashion that the over-all height of the slide mechanism comes within the height of the narrow rails and above the large drawer, whereby said large drawer may be used without decreasing the leg clearance of the table, and means guiding and supporting said drawer for movement toward either side.

2. A table comprising a table top, legs supporting the same, wide rails extending between the legs at the ends of the table, narrow rails extending between the legs at the sides of the table, a single large drawer slidable toward either side of the table beneath the narrow rails, said drawer having a depth approximately equal to the distance between the narrow rails, and having a width approximately equal to the long distance between the legs of the table, means adjacent the lower edge of the side rails for guiding and supporting the drawer for movement toward either side, and end stops projecting upwardly from the middle of the drawer to limit the movement toward either side to half the depth of the drawer, said end stops bearing against the narrow rails when the drawer is opened half way, and yield-

able stops for frictionally holding the drawer in mid-position.

3. A table comprising a table top, legs supporting the same, wide rails extending between the legs at the ends of the table, narrow rails extending between the legs at the sides of the table, a single large drawer slidable toward either side of the table beneath the narrow rails, said drawer having a depth approximately equal to the distance between the narrow rails, and having a width approximately equal to the long distance between the legs of the table, drawer guide pieces secured on the inner sides of the wide rails for filling in the space between the rails and the drawer, a series of pins or dowels secured along the bottom edge of said guide pieces for supporting the bottom of the drawer during its movement, and end stops projecting upwardly from the middle of the drawer to limit the movement toward either side to half the depth of the drawer, said end stops bearing against the narrow rails when the drawer is opened half-way.

4. A table comprising a table top, legs supporting the same, wide rails extending between the legs at the ends of the table, narrow rails extending between the legs at the sides of the table, a single large drawer slidable toward either side of the table beneath the narrow rails, said drawer having a depth approximately equal to the distance between the narrow rails, and having a width approximately equal to the long distance between the legs of the table, drawer guide pieces secured on the inner sides of the wide rails for filling in the space between the rails and the drawer, a series of pins or dowels secured along the bottom edge of said guide pieces for supporting the bottom of the drawer during its movement, and top drawer supports located above the sides of the drawer to support the inner end of the drawer against upward movement when pressure is placed on the outer end of the drawer when opened.

5. A table comprising a top, legs for supporting the same, wide rails extending between the legs at the ends of the table, narrow rails extending between the legs at the sides of the table, a single large drawer slidable toward either side of the table beneath the narrow rails, said drawer having a depth approximately equal to the distance between the narrow rails and having a width approximately equal to the long distance between the legs of the table, and having a height approximately equal to the difference in height between the narrow and wide rails, drawer guide pieces secured inside the wide rails for guiding the sides of the drawer, a series of round metal pins or dowels projecting inwardly from said guide pieces for supporting the bottom of the drawer during its movement, end stops projecting upwardly from the middle of the drawer to limit the movement toward either side by bearing against the narrow rails, and top drawer supports located above the sides of the drawer to support the inner end of the drawer against upward movement when the drawer is opened.

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