June 14, 1949. C. P. BOYD 2,473,239

WALL CABINET HAVING A VERTICALLY SWINGABLE SECTION

Filed Aug. 16, 1946

2 Sheets-Sheet 1

FIG. 1

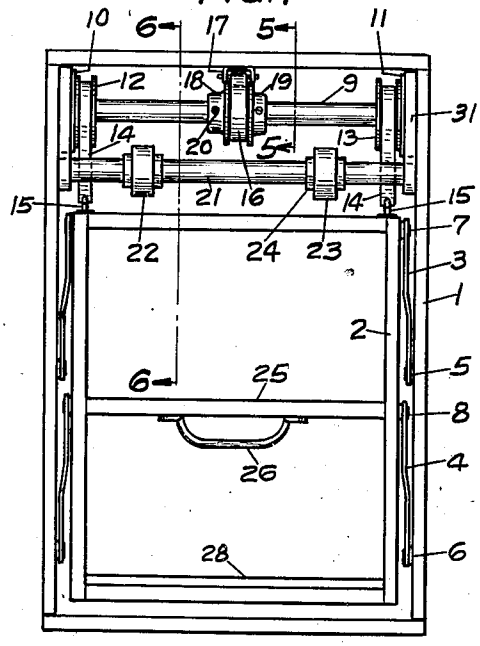


FIG. 2

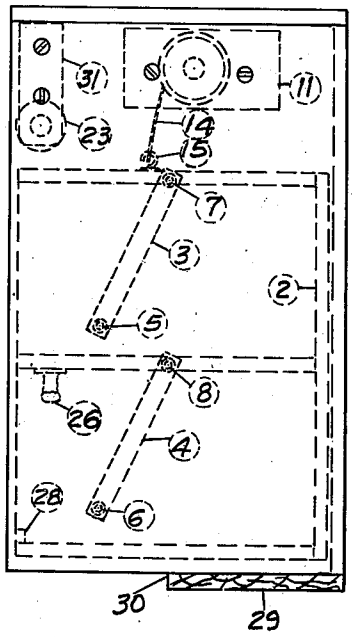


FIG. 5

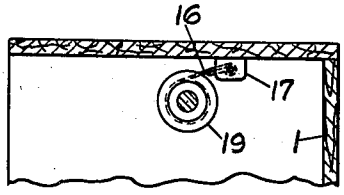
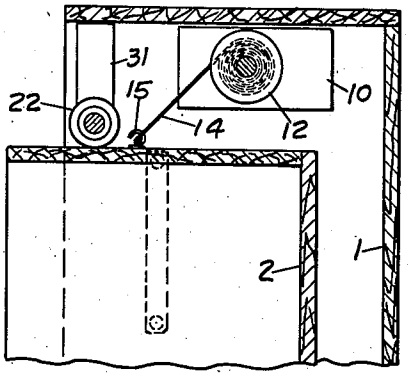


FIG. 6



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2 Sheets-Sheet 2

FIG. 3

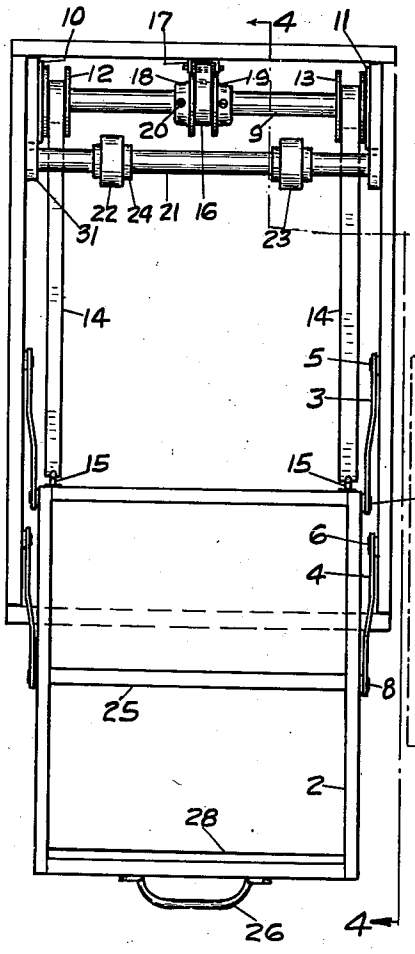
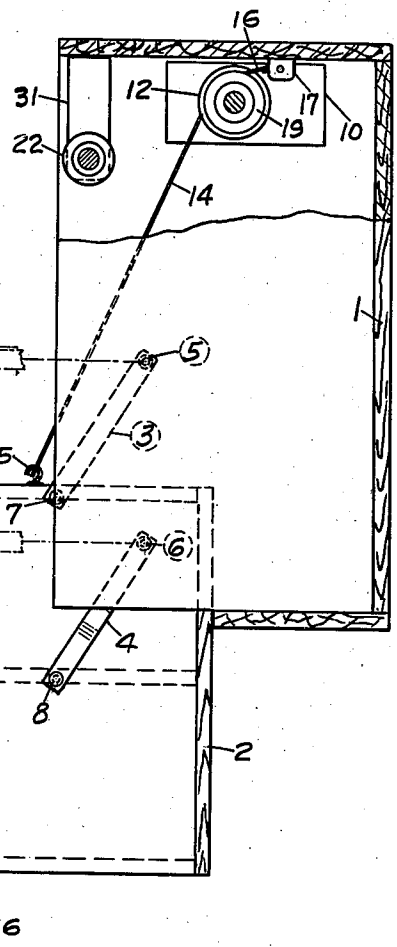


FIG. 4



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WALL CABINET HAVING A VERTICALLY SWINGABLE SECTION

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8 Claims. (Cl. 312—153)

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This invention relates to a unitary construction which is especially adapted for use in building up modern type kitchen wall cabinets which usually have a table or counter portion with the cabinets projecting upwardly from the rear portion of the table part or counter. These cabinets have shelves for carrying cooking materials of various kinds. Since these cabinets extend upwardly from the rear part of the table or counter, the top shelves in the cabinet cannot be reached by a great many housewives without the use of a stool or equivalent.

To make these top shelves easily accessible without the use of stools or their equivalent, it is the object of my present invention to provide a construction of a kitchen cabinet unit so that the top shelves thereof may be readily brought within reach without having to resort to a stool, thereby eliminating the hazard of falling.

Another object of my invention is to provide a relatively simple and cheap construction for attaining the main purposes.

Further objects will be discerned from a reading of the following specification taken in connection with the annexed drawings, wherein,

Figure 1 is a front elevational view of a cabinet unit without the closure doors.

Figure 2 is a view of Figure 1 looking from right to left.

Figure 3 is a view similar to Figure 1 but with the movable section of the cabinet withdrawn and moved downwardly to its lowermost position and with the handle mounted in an alternative location on the bottom wall of said section.

Figure 4 is a view on the line 4—4 of Figure 3 partly in section and partly in elevation.

Figure 5 is a fragmentary view on the line 5—5 of Figure 1.

Figure 6 is a view on the line 6—6 of Figure 1 but with the movable section of the unit in one position of its movement.

In the different views wherein like numbers refer to corresponding parts, 1 is a fixed section of the cabinet unit within which is positioned a movable section 2. The section 2 is pivotally carried by the fixed section 1 by two pairs of arms 3 and 4, there being a pair of these arms on each side of the movable section 2. The description of one pair of arms will suffice for the pair on the opposite side of the movable section 2. The arms 3 and 4 are pivoted at 5 and 6 to the side wall of the fixed section 1 while their opposite ends are pivoted at 7 and 8 to the side wall of the movable section 2. When the movable section 2 is in its normal position, i. e., housed within

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a fixed section 1, the arms 3 and 4 are in position approximately as indicated in Figure 2 but when the movable section 2 is withdrawn and moved to its lower-most position, the arms are in the position as indicated in Figure 4.

Positioned in the upper part of the fixed section 1 and toward the rear thereof is a shaft 9 supported for rotation in the bearing members 10 and 11 carried by the side walls of the section 1. Fixed to the shaft 9 at each end thereof adjacent the supports 10 and 11 are two pulleys 12 and 13. Each pulley has fastened thereto the inner end of a strong flexible member 14 which may be of tough rust-proof strip steel. The outer ends of the bands or members 14 are fastened in any satisfactory manner as by hooks 15 to the top part of the movable section 2. Also fixed to the shaft 9 is one end of a strong preferably flat spring 16 one end of which is attached by a fastener 17 to the top part of the fixed section 1. The spring 16 is held in operative position by a pair of hub flanges 18 and 19, these being fastened to the shaft 9 in a satisfactory manner as by set screws 20. Another shaft 21 is rotatably carried in bearings 31 that are fastened to the side walls of the section 1. On the shaft 21 are two rollers 22 and 23 that are free to turn on the shaft 21 and may be held in position by flexible washer 24 that are positioned over the shaft 21. The rollers 22 and 23 may be of flexible material such as rubber, preferably vulcanized to give them some degree of hardness. The rollers or bumpers 22 and 23 are used to assist in withdrawing and returning the section 2 from the section 1 as indicated in Figure 6.

It will be understood that the movable cabinet 2 may have as many shelves as desired, one intermediate shelf 25 being indicated and to the shelf 25 is shown in Fig. 1 a handle attached for the purpose of operating the movable section 2; however, in Figure 2 the handle 26 is shown attached to the lower shelf of the section 2.

Coming now to the operation of the structure, when it is desired to reach the material carried by the shelves in the movable section 2, the handle 26 is engaged and a pull applied thereto. This will start the movable section 2 on its withdrawal movement as indicated in Figure 6 whereby the bumpers or rollers 22 and 23 will engage the top part of the section and guide and assist in its withdrawal from the fixed section 2. Continued pull on the handle 26 will move the section 2 to its down position as shown in Figures 3 and 4, one position in this movement being

indicated by the broken line 27 in Figure 4. It will be noted that when the section 2 is in its down position, the arms 3 and 4 are in such a position that they will hold the section 2 in a down position, against the pull of the spring 16. However, when it is desired to return the section 2 back to its normal position, only a slight upward push on the handle 26 is required to allow the spring 16, through the connecting straps 14, to pull the cabinet back to its normal position, where it will be noted that the arms 3 and 4 are as in Figure 4 in a position so that the section 2 will be positively held in either of its fully operative positions. If desired, the forward part of each shelf may be equipped with a ledge 28 to prevent the material on the shelves from sliding off. However, it is to be understood that the arms 3 and 4 move in parallel relationship so as to hold the shelves of the movable section 2 in a perfectly horizontal position. Furthermore, it is to be understood that the spring 16 and its interconnecting members with the section 2 are so co-related that very little force, whether it be push or pull, on the handle 26 is required to operate the movable member 2. It may be mentioned that the bottom 29 of section 1 is cut back as shown at 30 to make room for section 2 when withdrawn to down position as shown in Figure 4. The door or doors, if double doors are used for the section, are not shown as it or they are not necessary to show the improved construction.

It will be apparent that many of the precise details may be varied without departing from the spirit of my invention or the scope of the appended claims. Having thus described my invention,

What I claim is:

1. A kitchen cabinet unit including, a fixed section and a movable section normally positioned within the fixed section and in spaced relation with its walls and pivotally carried thereon by a pair of spaced arms located between the side walls of the two sections, said arms having a length and being located so that they act to hold the movable section in either its normal position or its extended position, coupling means between the two sections comprising; a shaft rotatably mounted within and at the rear top part of the fixed section, a pulley fastened at each end of the shaft and each pulley having a strong flexible member operatively connected at its inner end to its pulley and having its outer end fastened to the top part of the movable section, a tension spring having one end fastened to the shaft and its other end to the top part of the fixed section; and means fastened to a part of the movable section for applying force to the movable section to assist in moving it to either a lower position with respect to the fixed section or to its normal position.

2. A kitchen cabinet unit as set forth in claim 1 further characterized in that means are provided on said shaft for holding said spring always in proper working position.

3. A kitchen cabinet unit as set forth in claim 1 further characterized in that means are provided for engaging the top of the movable section for guiding it and assisting in its initial withdrawal movement as well as on its return movement to normal position.

4. A kitchen cabinet unit as set forth in claim 1 further characterized in that means comprising a shaft extends between the top part of the

sides of the fixed section forwardly of the first-mentioned shaft, and carries a pair of spaced freely rotatable rollers, said rollers acting as guides and bumpers as the movable section is moved out of and into the fixed section.

5. A kitchen cabinet unit including a fixed section and a movable section capable of being positioned wholly within the fixed section or withdrawn out of and downwardly from the fixed section while being anchored thereto; means for bringing about such positioning comprising, a pair of spaced arms located between the side walls of the two sections and pivoted at their corresponding opposite ends to the sections, a shaft rotatably mounted adjacent the rear top part of the fixed section, a pulley fastened at each end of the shaft and each pulley having a strong flexible member connected between it and the top part of the movable section, a tension spring fastened between the shaft and the top part of the fixed section and means fastened to a part of the movable section for applying force thereto to bring about the positioning of the movable section.

6. A kitchen cabinet unit as set forth in claim 5 further characterized in that said arms of each pair are spaced one above the other and pivoted to their respective sections so when the movable section is in either of its two fully operative positions the arms will be off from any dead center whereby the movable section will be held by the arms, against the pull of said tension spring, in a stable position.

7. A kitchen cabinet unit as set forth in claim 5 further characterized in that said arms of each pair are spaced one above the other and pivoted to their respective sections so when the movable section is in either of its two fully operative positions the arms will be off from any dead center whereby the movable section will be held by the arms, against the pull of said tension spring, in a stable position, and further characterized in that bumper and guide means are provided for cooperation with the top of the movable section to assist in its positioning movements.

8. A kitchen cabinet unit including a fixed section normally housing a movable section, the latter being pivoted to the fixed section by a pair of arms on each side of the movable section, the pivots being positioned on the two sections so the arms will move in parallel relation, means for applying a continuous inwardly acting pull on the movable section, including a spring operatively connected to the movable section through the medium of a shaft, supported by the fixed section, the shaft having pulleys at its opposite ends adjacent the inner side walls of the fixed section, the pulleys having strong flexible metallic members fastened thereto and to the top part of the movable section and means attached directly to the movable section for applying force thereto so as to withdraw it from and return it to the fixed section.

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