

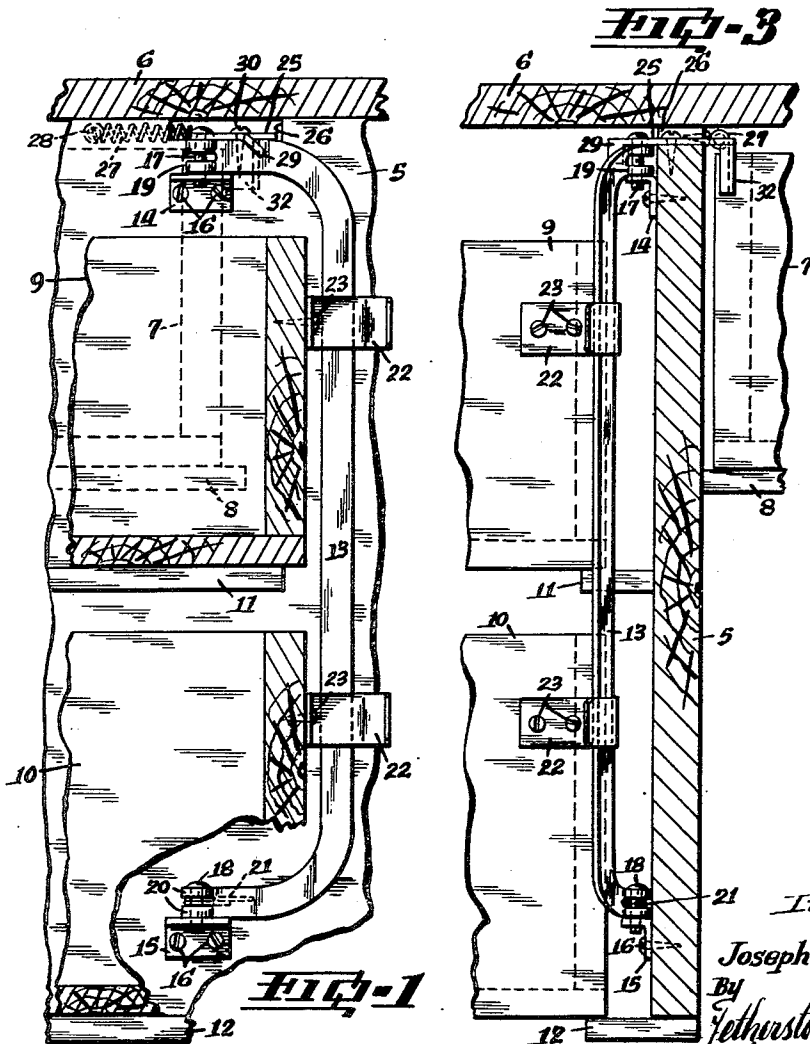
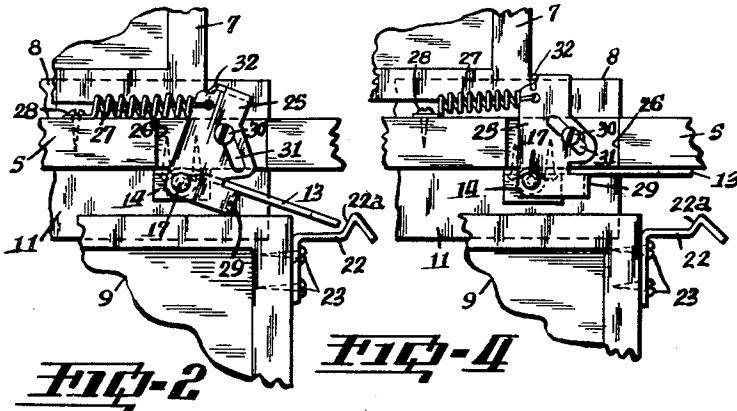
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DESK DRAWER STOP

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## DESK DRAWER STOP

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1 Claim. (Cl. 312—221)

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This invention relates to improvements in locking mechanisms for desks and cabinet drawers of the type which locks the side drawers when the centre drawer is locked.

A particular object of the invention is to provide a spring actuated locking mechanism which is pivotally arranged for swinging movement to and from a drawer locking position, said mechanism being normally biased to a disengaging position relative to the side drawers and being actuated against the biasing by a centre drawer to a side drawer locking position.

Another object is to provide means for maintaining the centre drawer in a neutral position which will permit disengaging of the locking mechanism with respect to the side drawers when the centre drawer is unlocked.

A salient feature of this invention resides in the provision of a locking mechanism which is suitable for drawers of all heights without specification as to size or number of drawers. This made feasible by the provision of a vertically disposed pivotal locking bar which may be engaged by any number of catches arranged on the drawers at any position along the length of the locking bar.

Another feature resides in the provision of a silent resiliently biased actuating mechanism which moves the locking bar to and from a drawer locking position.

A further feature resides in the provision of independent catches for each drawer which, in cooperation with the locking bar, permit closing and locking of any one drawer after the centre drawer has been locked and the locking bar has been moved to its side drawer locking position.

The above and other objects and characteristic features of this invention will be more readily understood from the following detailed description taken in connection with the accompanying drawings, in which:

Fig. 1 is a view in vertical section showing a portion of a desk at one side of a partition wall.

Fig. 2 is a plan view of that portion of the desk shown in Fig. 1 below the desk top.

Fig. 3 is a rear end view of the desk shown in Fig. 1.

Fig. 4 is a view similar to Fig. 2 but showing the locking mechanism in its disengaged position.

Referring more particularly to the drawings, 5 designates a vertical partition wall extending beneath a desk top 6. A centre drawer 7 is slidably supported on suitable guide rails 8 at one side of the partition and a pair of superimposed

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drawers 9 and 10 are slidably supported on guide rails 11 and 12, respectively, at the opposite side of said partition wall.

A locking bar 13 is arranged at the side of the partition nearest the superimposed drawers. Upper and lower angle brackets 14 and 15 are secured to the partition by fastening means generally indicated at 16. The upper and lower ends of locking bar 13 are pivotally secured to brackets 14 and 15 to swing about a vertical axis provided by upper and lower pins 17 and 18 which extend through bar knuckles 19 and 20 and into suitable openings in the projecting arms of said brackets. Pressure spring 21 secured about pin 18 normally biases the locking bar 13 to its drawer locking position, shown in Figs. 1, 2 and 3. Locking bar catches 22 are fastened to the rear panel of drawers 9 and 10 by fastening elements 23. Catches 22 are arranged so that, when said superimposed drawers are in their closed position, as shown in Figs. 1, 2 and 3, and the locking bar 13 is swung to its locking position, the bend 22a of catches 22 overlaps the outer edge of bar 13 to prevent sliding movement of the drawers to their open position.

A plate 25, pivotally mounted at one corner on locking bar pin 17, extends through a slot 26 in the upper end of vertical partition wall 5. The forward corner of plate 25 on the side wall 5 remote from pin 17 is connected to one end of a tension spring 27 having its other end secured by fastening elements 28 to said wall 5. The plate has a lug 29 which engages locking bar 13 to rotate it to an inoperative position, shown in Fig. 4, when the plate is rotated about its pivotal axis through the biasing of tension spring 27. The tension of spring 27 is sufficient to overcome the counter-biasing which is applied to bar 13 through the medium of spring 21. A fastening element 30 arranged in a slot 31 in plate 25 and secured to the upper surface of the slot 26 in partition wall 5, tends to stabilize plate 25 and to limit its rotation in opposite directions. Plate 25 is also provided with an actuating arm 32 which is positioned in the path of centre drawer 7.

When it is desired to lock the desk drawers the end corner of drawer 7 is pushed to its closed position against actuating arm 32 to rotate plate 25 against the biasing of spring 27. Locking bar 13 is thereby caused to rotate through the biasing of spring 21 to its locking position of the drawers 9 and 10. If the drawers 9 and 10 are closed the bar will intercept the path of the bend 22a of catches 22 to prevent opening of the drawers. If any of the drawers 9 or 10 are

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open when the centre drawer is closed, they may be closed by causing the catch 22 to ride over the surface of bar 13 until the bar falls into its locking position with respect to the catch. It will be noted that the marginal extension 22b of catch 22 is directed away from the path of the bar 13. The plate 25 which is limited as to rotation by the fastening element 30 in slot 31, in turn limits the rotation of bar 13 so that it will be in a position to engage the bend portion 22a but will not rotate beyond a point which will permit the catch to ride over the surface of bar 13 when the side drawers are being closed.

To open the drawers the centre drawer 7 is unlocked. The tension of spring 27 on plate 25 is sufficient to cause the actuating arm 32 to push the centre drawer outwardly. When plate 25 rotates through the biasing of spring 27 lug 29 rotates locking bar 13 against the biasing of spring 21 to its disengaging position, as shown in Fig. 4. The rotation of plate 25 through the biasing of spring 27 only pushes centre drawer 7 forward about  $\frac{1}{2}$  to  $\frac{3}{4}$  inches.

It will be appreciated that with my invention all of the component parts except the actuating plate 25 equally may be adapted to left as well as right hand drawers. Also the invention is readily adaptable for any number of side drawers since any number of catches may be arranged to engage the locking bar at any desired point along its length.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

A drawer locking mechanism for a desk including a vertical partition, a drawer slidably supported at one side of said partition and a plurality of superimposed drawers slidably supported at the opposite side of said partition, said locking mechanism comprising a substantially U-shaped locking bar including arms disposed in vertically spaced horizontal planes and a vertically extending bight portion, said arms having their terminal portions pivoted to said partition for

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swinging movement of the bight portion of said bar about a vertical axis into and out of the path of travel of said superimposed drawers and with said bight portion disposed on the side of said pivotal axis remote from the forward end of the drawers, bar engaging catches carried by said superimposed drawers and arranged so that, when said superimposed drawers are in their closed position and the bight portion of said bar projects into the path of travel of said drawers, said catches will engage the rearward edge of said bar bight portion, means normally biasing said bar to swing into the path of travel of said superimposed drawers, a bar actuating element comprising a plate member extending through said partition, said plate being superimposed on the upper arm of said locking bar to freely rotate about the pivotal axis of said locking bar, a lug carried by said plate and extending into the path of movement of said locking bar on one side thereof to exert swinging pressure against said bar to thereby move said bar against its normal biasing out of the path of movement of said superimposed drawers in response to rotation of said plate in one direction, said plate projecting beyond the side of the partition remote from the axis of the plate into the path of travel of said first mentioned drawer for counterrotation of said plate during closing movement of the first mentioned drawer to thereby release said swinging pressure of the plate against said bar.

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