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COMBINATION DROP DOOR AND SLIDING SHELF

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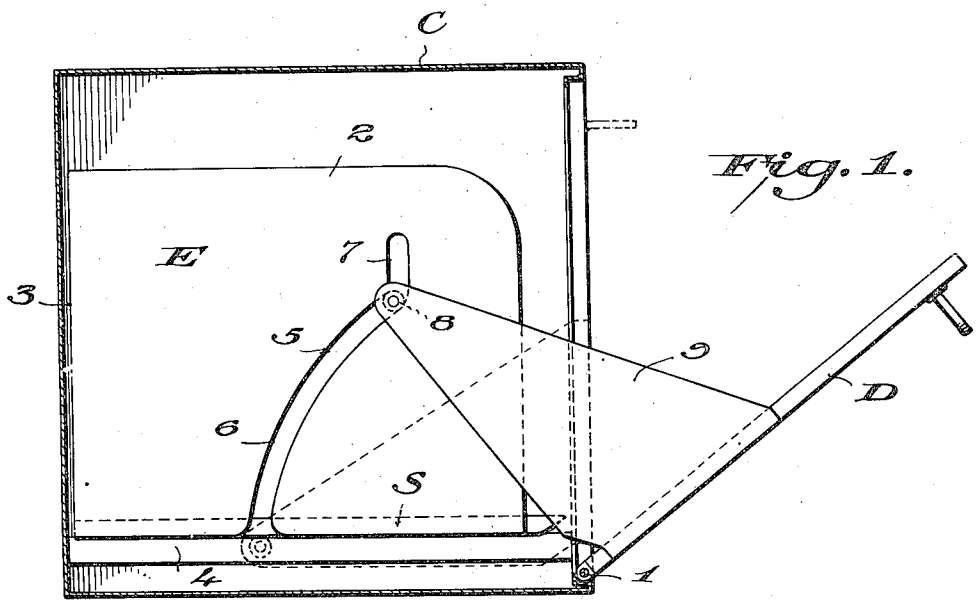


Fig. 1.

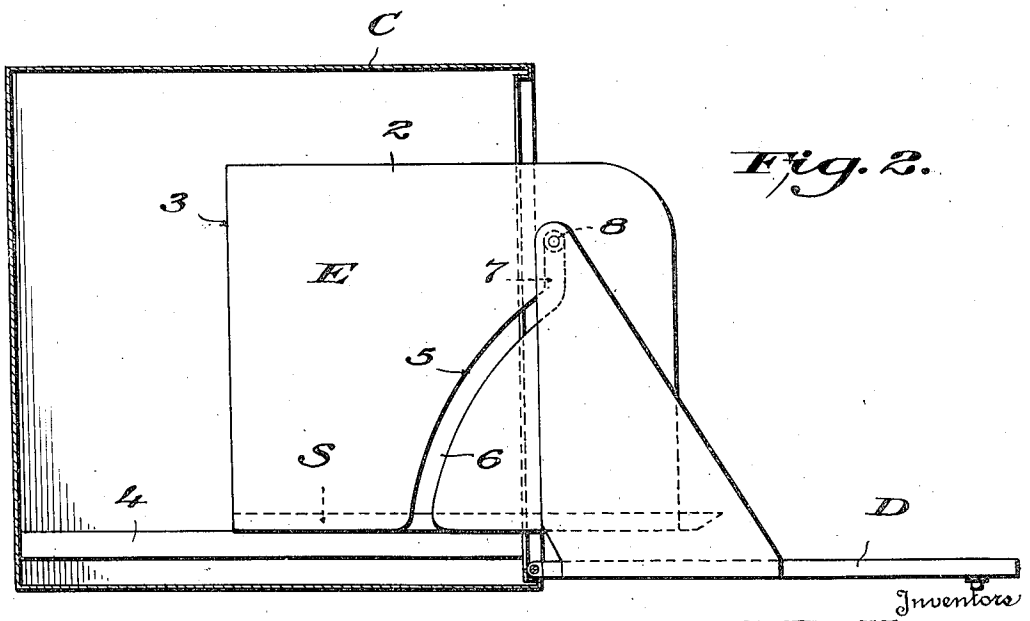


Fig. 2.

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COMBINATION DROP DOOR AND SLIDING SHELF

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1 Claim. (Cl. 312—186)

This invention relates to storage cabinets for various articles used in offices, stores and the like.

A primary object of the invention is to provide a combination drop door and sliding shelf construction wherein the door and shelf are inter-connected in such a way that the opening and closing of the door causes the shelf or platform to advance and retreat thereby alternately to bring the articles supported on the shelf into view or position them for easy access, and then return them to storage.

A further object of the invention is to provide a novel arrangement for connecting the door and the shelf or platform whereby sliding movement of the latter is readily and easily attained by the movement of the door through a part of its movement in proceeding from a closed to an open position or vice versa.

With the above and other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in a novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawing in which:

Figure 1 is a vertical sectional view showing the shelf within the cabinet, and the door at the point where it initially starts to pull the shelf downwardly.

Figure 2 is a view similar to Figure 1 showing the door in its fully opened horizontal position and the shelf advanced downwardly out of the cabinet.

Similar reference characters designate corresponding parts throughout the several figures of the drawing.

As will be observed from the drawing, the invention includes in its organization a suitable housing or cabinet, designated generally as C, and including top, side, rear, and bottom walls providing a compartment to which access is obtained by a door D, appropriately hinged, as indicated at 1. It will, of course, be understood that the drawing merely shows a unit of construction and that these units may be duplicated horizontally or vertically after the fashion of an ordinary filing cabinet or stack of drawers containing as many doors and compartments as desired.

The article supporting or storage member, designated generally as E, essentially includes a shelf or platform S which may be provided with the upstanding side walls 2 and rear wall 3. The said shelf S is slidably supported in any appropriate manner within the cabinet. For example, the said shelf S may be mounted on the rails or supports 4, secured to the inner face of the cabinet.

The side walls 2—2 are preferably provided with cam means in the form of a compound slot 5, which includes an arcuate portion 6 and an upper rectilinear and substantially vertical portion 7. Each slot is intended to receive an abutment in the form of a stud or roller 8 carried by the rearwardly extending lever 9 rigidly mounted at each side of the door D. As shown, the lower end of the arcuate portion 6 of the slot flares outwardly so as to readily guide the roller 8 into the same when the door D is first tilted outwardly.

Referring now more particularly to Figure 1, wherein the door is shown in its closed position, it will be observed that the abutment or roller 8 rests below the bottom end of the arcuate slot 6. When the door D is pulled open on its hinge 1, the roller 8 will travel in the slot 6 and the movement of the door relative to the storage member E will be idle. In other words, the storage member will not move out of the cabinet up to the point where the door D reaches the outwardly tilted position, shown in Figure 1. However, as soon as the abutment 8 reaches the vertical portion 7 of the slot 5, further movement of the door D toward fully open horizontal position will cause the roller to move upwardly in 7 and, at the same time, propel or advance the member E outwardly and thus cause the front edge of the shelf S to be advanced beyond the face of the cabinet, as shown in Figure 2. With the parts disposed, as shown in the latter figure, it will be apparent that ready access may be had to the contents of the storage member E.

When it is desired to return the member E into the cabinet, it is only necessary to lift the door D whereupon the abutments 8 of the arms 9 will travel downwardly in the vertical portions 7 of the slots and push the entire member rearwardly into the cabinet until the rollers 8 reach the arcuate portions 6 of the slots. From this point, the continued movement of the door to closing position will have no effect on the storage member E since it has already been returned to fully retracted position.

From the foregoing, it will be seen that the present construction provides a coordinated door and sliding shelf or platform construction affording increased accessability and visibility of

the material placed on the shelf or platform. The movement of the door causes the shelf to be drawn partially out of the storage compartment and it is retained in this position while the door is open. On the other hand, when it is desired to close the compartment, it is only necessary to move the door to closed position by pushing the shelf into the compartment.

We claim:

A storage cabinet comprising a casing having an open front, a shelf mounted for horizontal sliding movement into and from said casing through the open front thereof, a door pivoted at its bottom to a front portion of said cabinet below the path of movement of said shelf for swinging movement between a vertically disposed closed position and a horizontally disposed forwardly extending open position relative to said open front, a side wall on said shelf having therein a compound slot including a lower portion which extends concentrically with respect to the door pivot when the door is closed and a top portion extending upwardly from said concentric lower portion, an arm fixed to and extending inwardly from said door, and a member on said arm disposed in said slot, the said top portion of said slot being disposed vertically and being spaced inwardly from said door when the latter is closed whereby said member cooperates therewith to effect outward and only outward sliding movement of said shelf in response to the final portion of the swinging movement of said door to its horizontally disposed open position and to effect inward and only inward sliding movement of said shelf in response to the initial portion of the swinging movement of said door toward closed position from its horizontally disposed open position.

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