

March 8, 1966

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3,239,298

COMBINATION DRAWER PULL AND LATCH ASSEMBLY

Filed July 23, 1964

3 Sheets-Sheet 1

FIG. 1.

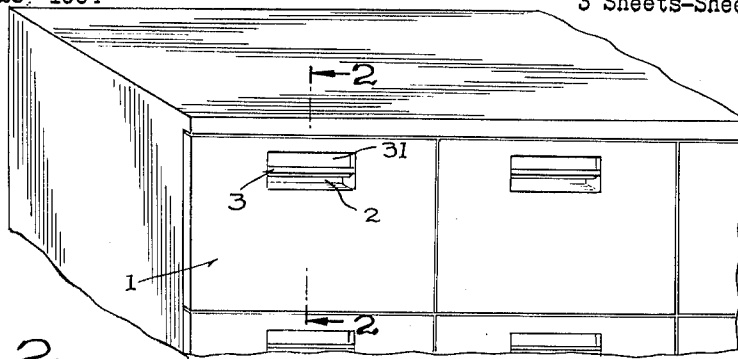


FIG. 2.

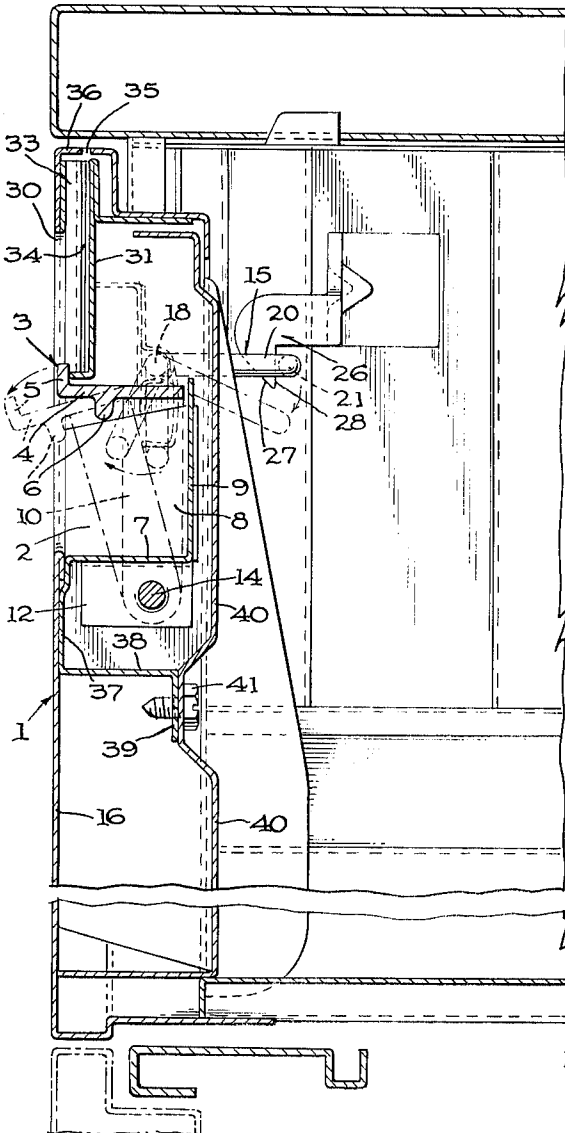
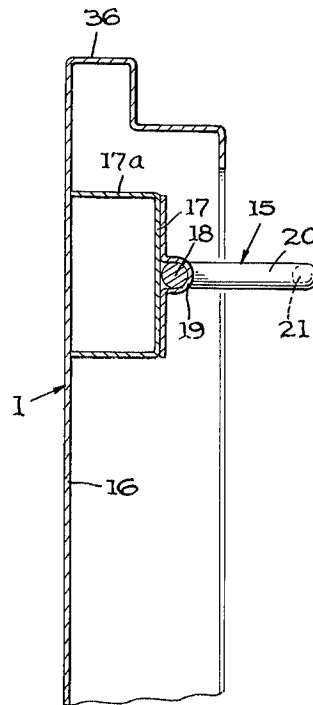


FIG. 8.



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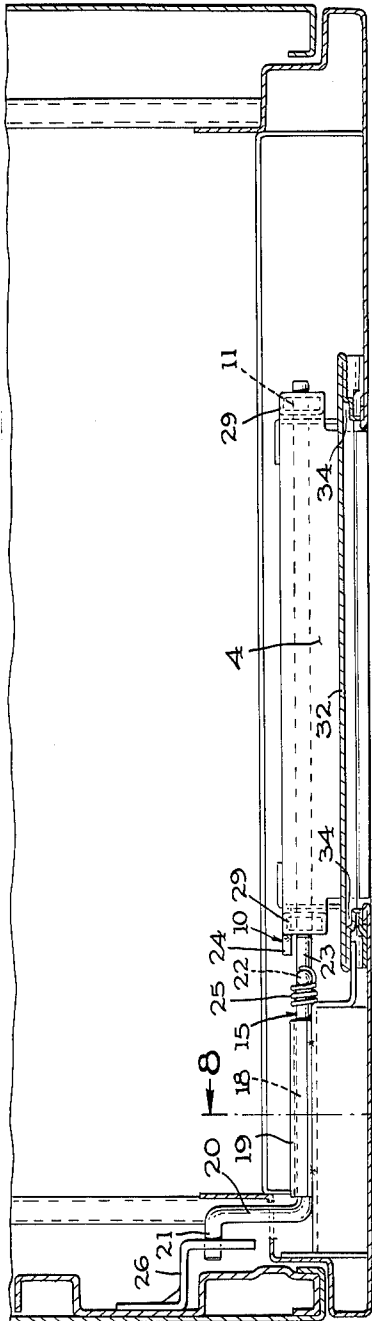


FIG. 3.

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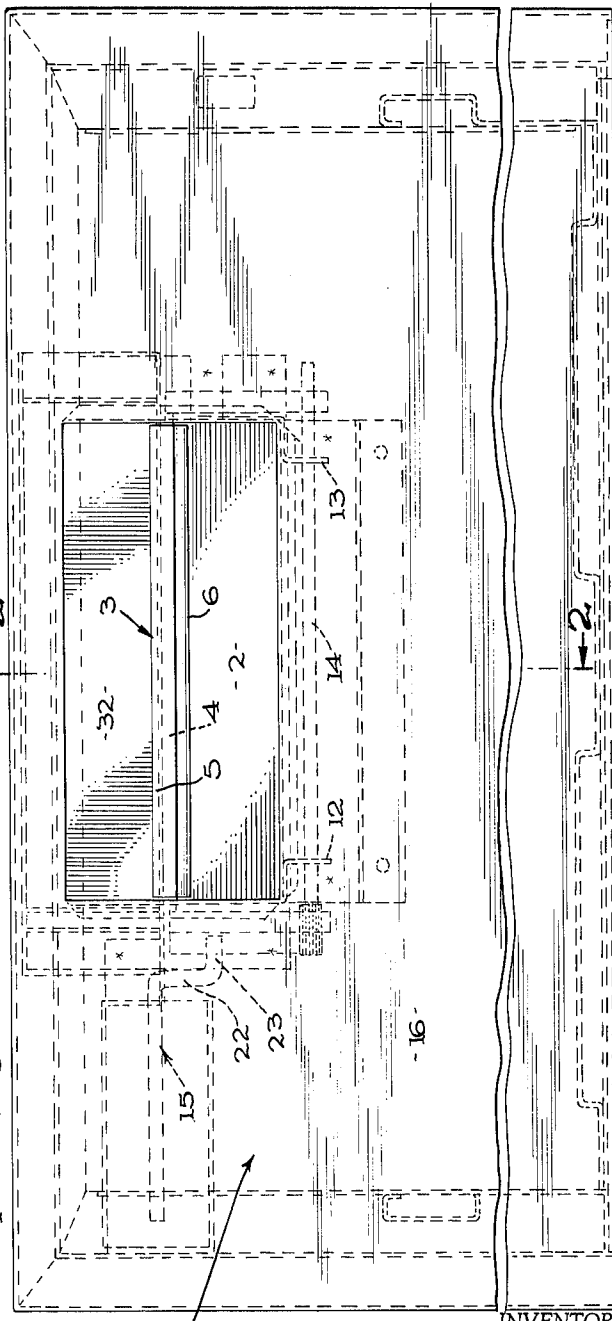


FIG. 4.

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FIG. 6.

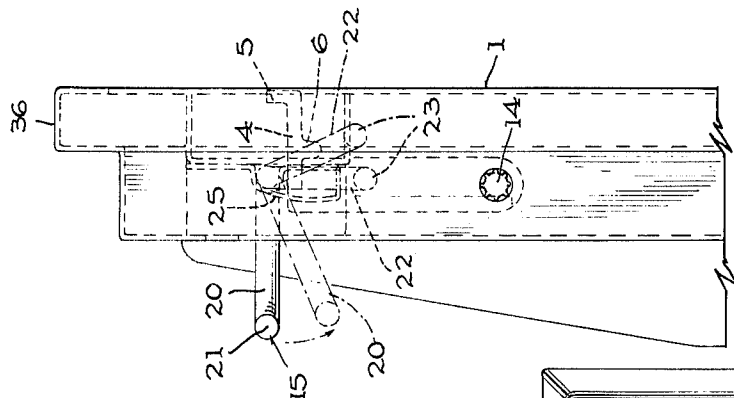


FIG. 5.

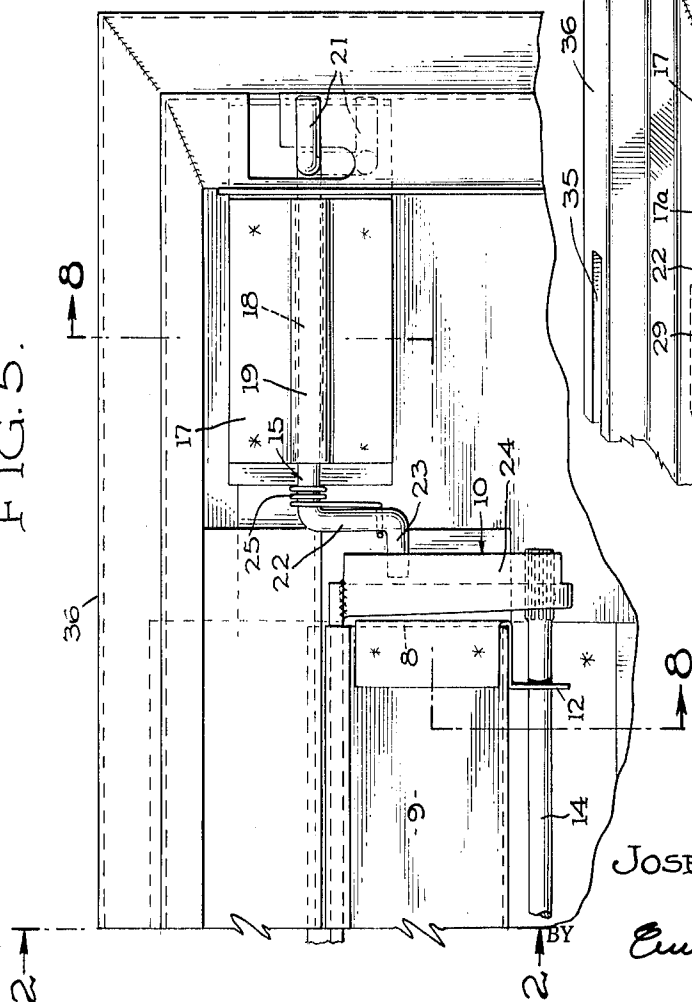
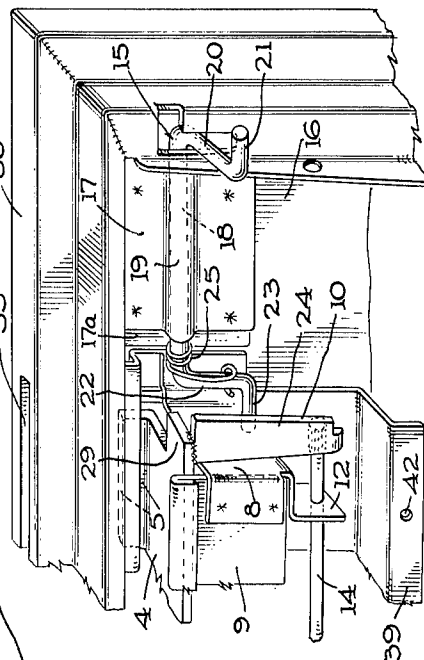


FIG. 7.



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COMBINATION DRAWER PULL AND LATCH ASSEMBLY

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Filed July 23, 1964, Ser. No. 384,601

4 Claims. (Cl. 312—234.3)

This invention relates generally to a drawer pull and latch assembly for use in storage cabinet structure and, more particularly, to a combination drawer pull and latch mechanism adapted to regulate the locking structure provided to secure a file drawer, or the like, within its associated cabinet structure.

Known devices include various arrangements of push buttons, levers, or actuating bars for releasing the latching mechanism utilized to retain a file drawer within its cabinet, which devices must of necessity be actuated before the file drawer may be withdrawn from its cabinet for access thereto. Actuation of said devices is quite often awkward at best since manipulation thereof is required prior to subsequent withdrawal of the file drawer by means of a separate drawer pull or handle usually projecting from the drawer front or head.

The present invention overcomes many of the objections to the prior known devices and includes a single element which when gripped with the tips of the operator's fingers, is pulled outwardly to firstly release the locking mechanism and which subsequently, by continued outward movement, withdraws the filing drawer from the cabinet in a single outward movement.

Another objection to many of the prior known devices has been the unsightly appearance of the drawer handle and attendant latch actuating mechanism which most often project outwardly from the outer face of the drawer front. Smooth, straight lines predominate in the design of the present day office filing equipment, and many efforts have been made to provide drawer fronts having a minimum amount of protruding structure. The present invention provides a fully recessed drawer pull and latch actuating member together with recessed means for displaying appropriate indicia-bearing cards for the identity of the contents of the filing drawer.

Accordingly, one of the primary objects of the present invention is to provide a combination drawer pull and latch assembly requiring but a single outward movement for releasing the latch mechanism and withdrawing the filing drawer from the cabinet.

Another object of the present invention is to provide a combination drawer pull and latch member which is normally flush mounted or fully recessed within the drawer front.

A further object of the present invention is to provide a combination drawer pull and latch assembly including recessed means for supporting and displaying indicia-bearing cards or labels, the entire assembly being flushly mounted with respect to the front face of the drawer.

Still another object of the present invention is to provide a combination drawer pull and latch assembly which may be fully actuated with but a single finger of the operator.

These and other objects of this invention will be readily apparent from a study of the annexed specification together with the drawings in which:

FIGURE 1 is a partial perspective view of a cabinet assembly illustrating the present invention as applied to a plurality of filing drawers;

FIGURE 2 is a partial vertical sectional view of the invention taken along the lines 2—2 of FIGURE 1 and

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illustrating the alternate positions of the drawer pull and latch bar;

FIGURE 3 is a horizontal sectional view taken through the top of a filing cabinet and drawer front incorporating the present invention;

FIGURE 4 is a front elevational view of the structure shown in FIGURE 3;

FIGURE 5 is a partial rear elevational view of the structure shown in FIGURE 4;

FIGURE 6 is a fragmentary end elevational view of the structure shown in FIGURE 5;

FIGURE 7 is a fragmentary perspective view of the structure shown in FIGURE 5; and

FIGURE 8 is a partial vertical sectional view taken along the line 8—8 of FIGURES 3 and 5.

Referring now to the drawings, particularly FIGURES 1, 2, and 3, it will be noted that when in its normally at rest position, the drawer pull and latch actuating member presents a fully recessed and flush appearance with respect to the outer surface of the drawer front. Each drawer front or head 1 is provided with a recessed finger chamber 2 having a drawer pull and latch actuator bar 3 pivotally supported therein. This drawer pull and latch actuator bar comprises a normally horizontally disposed top pull plate 4 having an upturned stop flange 5 disposed along its forwardmost edge and a downwardly projecting finger-grip ledge 6 along its lower surface intermediate the forward and rear limits of the plate 4.

The recess chamber 2 is preferably defined by a bottom wall 7, side walls 8—8 and a vertical back wall 9 which extends upwardly from the bottom wall to a point adjacent the rear edge of the drawer pull and latch actuator bar 3.

As will be most clearly seen in FIGURES 2 and 5, the bar 3 is supported within the chamber 2 by means of a pair of side arms 10 and 11 extending from the top plate 4 downwardly and on the outside of the side walls 8—8 to a point below the bottom chamber wall 7. Mounted beneath the bottom chamber wall 7 and at opposite ends thereof are a pair of depending brackets 12 and 13 each provided with an aperture through which is pivotally mounted a support rod 14. The brackets may conveniently be formed on integral extensions of the side walls 8—8. The opposite end of the support rod 14 extend through the apertured brackets 12 and 13 to engage the lower ends of the side arms 10 and 11. Suitable means such as a splined fit are provided for securing at least one end of the rod 14 to one of the side arms 10 or 11 to prevent axial displacement of the rod 14 from engagement with the side arms when in the assembled relationship as shown in the drawings. From the foregoing description, it will be seen that supporting means are provided for the drawer pull and latch actuator bar 3 to permit pivotal movement of the bar 3 within the limits indicated in FIGURE 2 by the full and dot-dash lines of this portion of the structure.

FIGURES 3, 5, and 7 most clearly illustrate the arrangement of the locking mechanism for securing the filing drawer in its closed position within the filing cabinet. A latch rod, generally designated 15, is mounted upon the rear 16 of the drawer front in such manner as to provide for angular or pivotal movement thereof. A support plate 17 secured to a mounting block 17a on the rear surface 16 overlies the intermediate section 18 of the latch rod, and is provided with a longitudinal bearing surface 19 which is formed to permit rotary movement of the latch rod 15 on a horizontal axis while preventing excessive angular displacement thereof. A latch rod connecting section 20 projects rearwardly and at right angle to the outermost end of the intermediate section 18 and is provided at its outermost end with an offset latch

bar 21 lying in a plane parallel to the intermediate section 18. The end of the intermediate section 18 opposite that connected to the section 20 extends inwardly a short distance from the edge of the support plate 17 and mounting block 17a towards the side arm 10 and then projects or extends downwardly to provide a crank section 22 disposed at right angles to the intermediate section 18 and in a plane which is at right angles to the plane of the connecting section 20. An actuating arm 23 then projects inwardly from the lowermost portion of the crank arm 22 as will be most clearly seen in FIGURE 5.

Disposed within the arcuate path of the swinging actuating arm 23 is a bearing flange 24 connected to the rear edge of the side arm 10 in such manner that rearward arcuate movement of the actuating arm 23 will cause this arm to strike the forward surface of the flange 24 thereby pivoting the drawer pull and latch actuating bar 3 about the support rod 14 to its rearwardmost position whereupon the rear edge of the top plate 4 will be in abutment with the back chamber wall 9. In order to maintain the bar 3 in the above described position wherein it will be fully recessed within the chamber 2, suitable spring means such as a coil spring 25 is employed so as to urge the crank arm 22 and its connected actuating arm 23 constantly towards its rearmost position of displacement.

From the foregoing description, it will now become apparent that when one engages the finger grip ledge 6 of the bar 3 and withdraws it from the chamber 2 by pivoting same about the support rod 14, the bearing flange 24 will be consequently moved forwardly from its rearmost position and cause arcuate displacement of the actuating arm 23 of the latch rod 15. This movement will be translated into a corresponding arcuate displacement of the latch bar 21 disposed at the opposite end of the latch rod 15.

Referring now to the cabinet assembly C which may be of any suitable construction, it will be understood that means are provided in the interior thereof for cooperation with the latch bar 21 to retain the filing drawer within the cabinet. FIGURES 2 and 3 illustrate preferred means comprising a latch keeper, generally designated 26, projecting inwardly from the inner wall of the cabinet assembly C. The latch keeper 26 is disposed within the cabinet in both a horizontal and vertical plane selected to intercept the path traveled by the latch bar 21 during the rectilinear movement of the drawer front 1 when the filing drawer is withdrawn and replaced within the cabinet assembly. The forward portion of the latch keeper 26 is provided with a camming surface 27 disposed within the same horizontal plane as the latch bar 21 when in its normal position as shown in full lines in FIGURE 2. The camming surface 27 inclines downwardly from the forward portion of the cabinet assembly towards the rear portion thereof so that as the filing drawer is closed it will be seen that the latch bar 21 will strike the forward portion of the camming surface 27 and be guided or displaced downwardly in the direction of the dotted line portion of FIGURE 2 against the force of the return spring 25 tending to maintain the latch bar 21 in its normal elevated position, whereupon when the drawer has been fully closed within the cabinet the spring 25 will force the latch bar 21 upwardly behind a vertical locking surface 28 formed at the lowermost rear portion of the camming surface 27. Thus it will be seen that the filing drawer is securely locked within the cabinet, and that in order to withdraw the drawer from the cabinet, it is necessary to displace the latch bar 21 from behind the locking surface 28.

The unlocking and opening of a file drawer provided with the combination drawer pull and latch assembly of the present invention is accomplished through a simple single forward movement of the bar 3 by the application

of a pulling force upon the finger grip ledge 6, thereby causing displacement of the latch bar 21 to the dotted-line position of FIGURE 2. This causes unlocking of the latch mechanism, and at the same time, continued pulling upon the bar 3 will withdraw the drawer front 1 and its associated filing drawer from within the cabinet assembly C.

In order to provide positive means for limiting the forward pivotal movement of the bar 3, both ends of the top pull plate 4 are provided adjacent the rear edge thereof, with extensions or limit tabs 29-29 (FIGURES 3 and 7), the forward edge of which will be seen to abut the rear surface of the outer facing panel of the drawer front 1 when the bar is withdrawn from the chamber 2.

In keeping with the desire to provide a completely flush facing panel upon the drawer front, additional means are provided for housing suitable indicia-bearing cards or labels which are adapted to be displayed immediately above the bar 3. The opening in the drawer front 1 for the chamber 2 extends upwardly from the stop flange 5 a substantial distance to provide a label window 30. Behind this window 30, a label housing, generally designated 31, is defined by means of a rear wall 32 and side walls 33. The side walls 33 are preferably provided with suitable recesses 34 for receiving and containing indicia-bearing cards or labels therein. As shown in FIGURE 3, the rear wall, side walls, and recesses may be formed from a single piece of material by bending same prior to assembling to the rear surface of the drawer front 1. The cards or labels are inserted into the housing 31 through a slot or opening 35 disposed in the top wall 36 of the drawer front and vertically aligned with the recesses 34 so that as a card or label is inserted downwardly through the slot 35 it will be automatically guided into said recesses for proper positioning within the housing 31. To further facilitate this alignment, the rear wall and side walls forming the housing 31 extend upwardly above the top edge of the label window 30 to a point just beneath the top wall 36 of the drawer front.

The rear chamber wall 9 and bottom wall 7 are preferably of integral construction and include a downwardly projecting forward attaching wall 37 suitably secured to the inner surface 16 of the drawer front 1 as will be seen in FIGURE 2. The attaching wall 37 extends downwardly a suitable distance to provide ample clearance beneath the lower surface of the support brackets 12, 13 at which point this member projects rearwardly as a horizontal surface 38.

The member is then formed with a vertical mounting surface 39 disposed in a plane parallel to the outer facing panel 1. A rear cover panel 40 adapted to enclose all of the actuating mechanism as seen in FIGURES 5 and 7 except for the connecting section 20 and its latch bar 21, is removably secured to the mounting surface 39 by means of suitable fasteners 41 registering with openings 42 formed in the mounting surface 39.

It is to be understood that the invention is not limited to the specific features shown, but that the means of construction herein disclosed comprise the preferred form of several modes of putting the invention into effect and the invention is therefore plain in any of its forms or modifications within the legitimate and valid scope of the appended claims.

I claim:

1. In a drawer adapted to be slidably moved into and out of a cabinet assembly, the combination, comprising, a drawer head having a coplanar outer surface provided with an exposed opening therein, a fixed recessed chamber disposed immediately behind said opening in said outer surface, a pull and latch actuator bar normally disposed within said chamber, at least one side arm connected to said bar, means pivotally supporting said arm behind said outer surface and outside of said surface to permit arcuate movement of said bar into and out of said chamber, a latch rod horizontally mounted for angular displacement

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upon the rear of said outer surface, a latch bar projecting from the other end of said rod, a keeper member within said cabinet assembly and adapted to engage said latch bar, means normally urging said latch bar into engagement with said keeper member, and an actuating arm on the inner end of said rod disposed within the pivotal path of said side arm to pivotally displace said latch bar away from said keeper member against said urging means when said actuator bar is pivotally moved from said chamber.

2. A drawer pull and latch actuator assembly, comprising, in combination, a cabinet having at least one drawer slidably mounted therein, a drawer head on said drawer having a recessed chamber in the outer face thereof, said chamber including bottom, back, and side walls, a pull and latch actuator bar normally disposed within said chamber, said bar having a pair of elongated side arms disposed outside of said side walls, a support rod pivotally mounted outside said chamber, said side arms attached to said rod whereby said bar may be pivotally moved into and out of said chamber, a latch rod pivotally supported upon said head and including at one end an offset actuating arm disposed for angular displacement in the path of one of said side arms, means normally urging said actuating arm against one of said side arms to maintain said bar within said chamber, a latch bar offset on the other end of said rod, and keeper means within said cabinet engageable with said latch bar when said drawer is closed within said cabinet, whereby, outward

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pivotal movement of said actuator bar angularly displaces said actuating arm to disengage said latch bar from said keeper means.

3. The combination according to claim 2, wherein, said chamber is disposed behind an opening in said drawer head outer face and said actuator bar is within the lower portion of said opening, the upper portion of said opening above said actuator bar defining a label window and housing means mounted behind said label window to enclose and display a label therethrough.

4. The structure according to claim 3, wherein, said head includes a horizontal top wall having a slot therein, said housing means provided with rear and side walls extending upward substantially to said top wall, said side walls having recesses adjacent said rear wall, whereby a label inserted through said slot will be guided into said recesses.

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