Sept. 5, 1967 R. C. BENCENE ETAL 3,339,956

CABINET COVER LATCH

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Fig. 1.

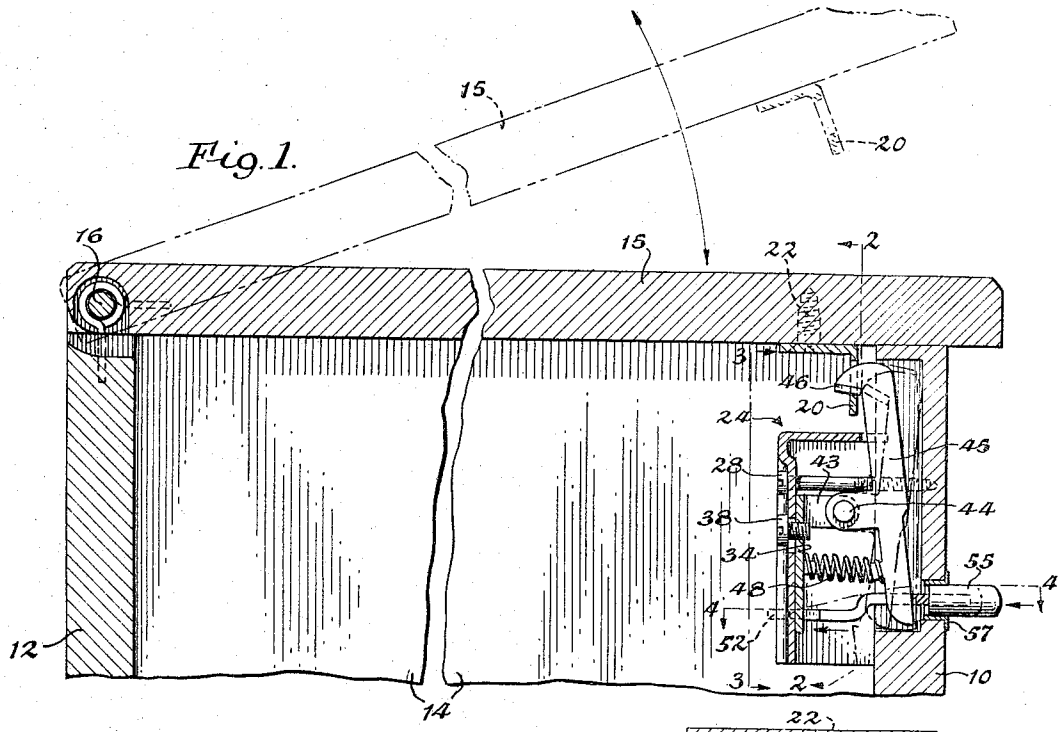


Fig. 2.

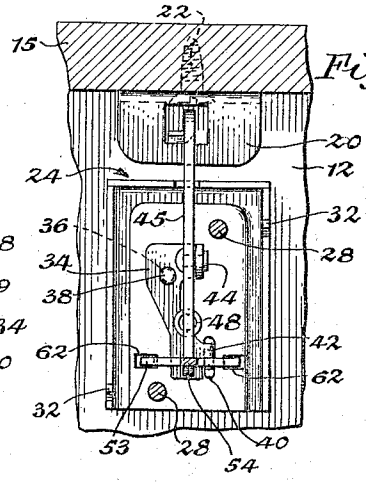


Fig. 3.

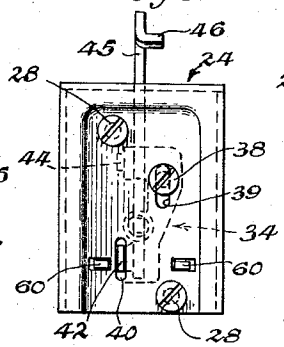
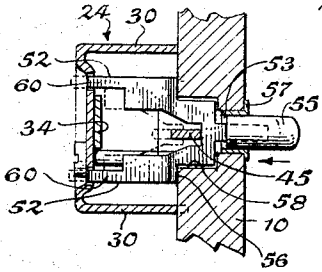


Fig. 4.



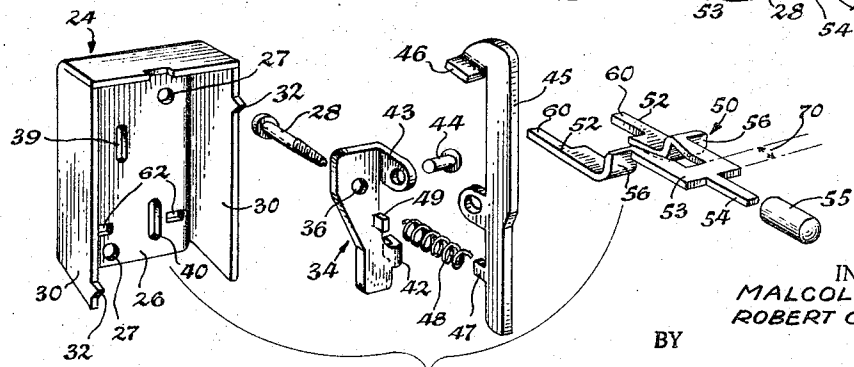


Fig. 5.

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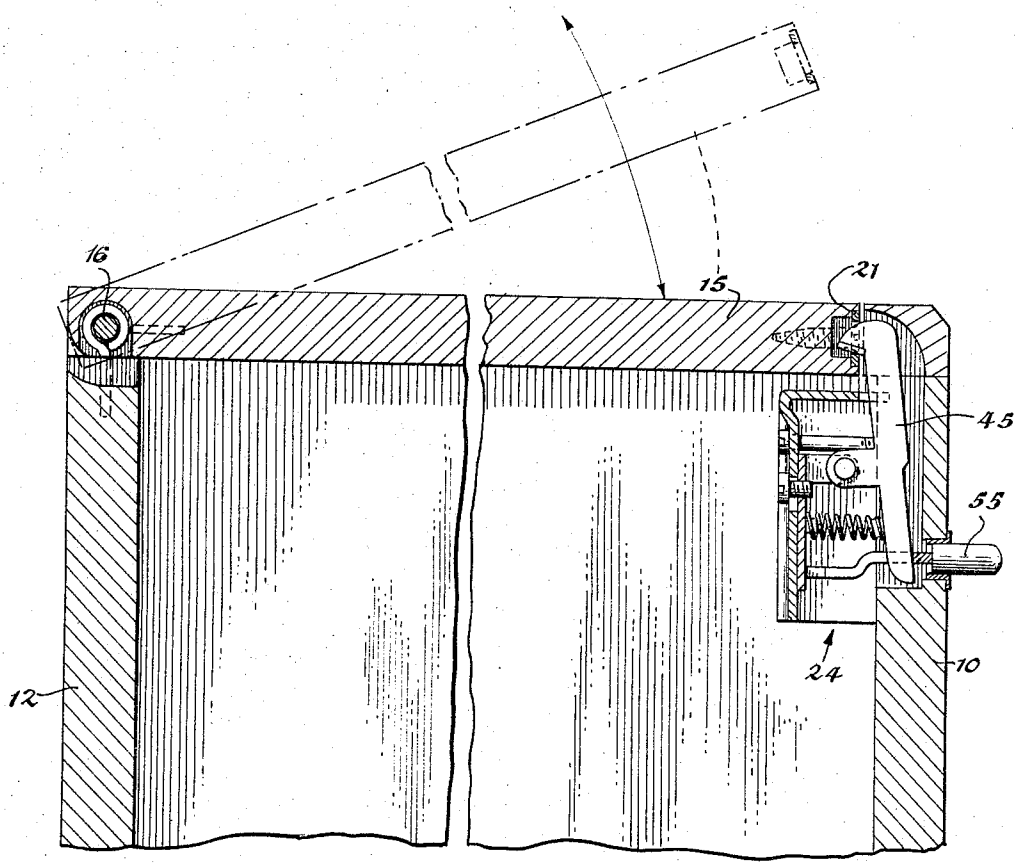


Fig. 6.

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CABINET COVER LATCH

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ABSTRACT OF THE DISCLOSURE

A latch assembly including a latch member and associated pivot bracket and spring biasing means mounted for positional adjustment on a base member, the base member serving in conjunction with a sleeve in an associated cabinet structure to slidably support a latch release member in such fashion as to allow the aforesaid positional adjustment of the latch mechanism itself.

This invention relates to cabinet door or cover or lid latch devices; and more particularly to push-button-released type latches which engage spring-loaded cabinet closures; and which upon manual actuation release the closures to "pop" open.

The invention is applicable for example for use in connection with record player type cabinets or the like, such as are characterized by being of open-top form and provided with spring-counterbalanced tops, covers or lids, which are hinged thereto so as to be movable between vertically standing "open" and horizontally extending cabinet-closing positions. When in cabinet-closing position the latch device engages a strike carried by the closure, thereupon holding the latter in closed position until subsequently released as by manual pressure on the latch release button; whereupon the closure counterbalance spring mechanism causes the closure to swing to cabinet-open position. Thus, it will be understood that the invention is equally applicable to closures of the upwardly swinging "lid" types, or to closures of the horizontally swinging "door" types.

Whereas numerous latch mechanisms for the aforesaid purposes have been previously devised, it is an object of the present invention to provide in a latch device as aforesaid an improved overload guard feature, whereby the latch mechanism per se will be amply protected against damage in the event that the cabinet closure is inadvertently forced "open" against the latch holding action.

Another object of the invention is to provide an improved latch device as aforesaid wherein the manual control component of the latch may comprise any one of a plurality of standard shaped but differently sized fork-shaped members; whereby upon selection of a member of the proper length (according to the wall thickness dimension of the cabinet part to which the latch mechanism is to be applied), the latch mechanism will be thereby "tailored" for installation in cabinets having wall structures of varying thickness dimensions.

Another object of the invention is to provide an improved latch mechanism as aforesaid, wherein the latch support hinge bracket of the mechanism is positionally adjustable on the main latch base member in improved manner. Hence the base member may be initially installed on the cabinet at approximately the correct position, following which the latch hinge bracket may be finally adjusted relative to the main latch base from externally of the device with ease and facility. This insures that the cabinet closure or lid may be assembled so as to be held in "flush" (or other preferred relation) to the adjacent cabinet structure, and that the latch and strike devices of the mechanism meet in proper relation in spite of any dimensional variances such as may appear in the parts

comprising the assembly, deviating from the prescribed specifications therefor.

Other objects and advantages of the invention will appear from the following specification and the accompanying drawing wherein:

FIG. 1 is a fragmentary vertical sectional view, by way of example, through a cabinet having a vertically hinging lid, equipped with a latch mechanism of the present invention;

FIG. 2 is a fragmentary sectional view taken as suggested by line 2—2 of FIG. 1;

FIG. 3 is a fragmentary sectional view taken along line 3—3 of FIG. 1;

FIG. 4 is a fragmentary sectional view taken along line 4—4 of FIG. 1;

FIG. 5 is a disassembled view in perspective, of the major components of the latch mechanism; and

FIG. 6 corresponds to FIG. 1 but shows application of the latch mechanism to a different type strike device.

As shown by way of example in the drawing herewith, the invention is illustrated as being embodied in a cabinet comprising a front wall panel **10**; a back wall **12**; side walls **14**; and a top cover or lid **15** which is hinged as indicated at **16** (FIG. 1) to the cabinet structure so as to be swingable between horizontal "cabinet-closed" and "open" positions as shown by the solid and broken line illustrations, respectively, in FIG. 1. The cabinet cover panel **15** carries a strike **20** of the apertured angle-plate type, illustrated herein as being connected to the lid **15** by wood screws **22**. However, it is to be understood that any other suitable type of strike device may be employed for engagement by the latch mechanism of the present invention, as will be explained hereinafter.

The latch device of the invention is shown herein to comprise a main latch support base member **24** which, as best shown in FIG. 5, is of generally box-like form open at one side and at the bottom end thereof. The back wall portion **26** of the base memer **24** is apertured as indicated at **27, 27** to accommodate mounting screws **28, 28**; whereby the base may be mounted against the inside surface of the cabinet front wall portion **10**. The opposite side wall portions **30, 30** of the base member **24** are provided with prongs **32, 32** (FIG. 5) adapted to dig into the relatively softer material of the cabinet front wall panel **10** when tightened thereagainst by means of the screws **28**. Thus the base member may be firmly anchored relative to the cabinet front panel **10** at the time of initial installation in the cabinet.

It is a particular feature of the present invention that when the latch support base member is installed it need only be approximately correctly located relative to the lid strike member, without regard to any typical manufacturing inequalities and/or deviations from dimensional specifications for the cabinet and/or latch mechanism parts; thereby effecting substantial labor cost economies in connection with assembly of the hardware on the cabinet. This desirable result is attained by provision of a separate pivot-bracket member as shown generally at **34** which is drilled and tapped as shown at **36** to accommodate a machine screw **38**. The screw **38** slide-fits through a slotted portion **39** of the base member **24**, thereby permitting the bracket member **34** to be positionally adjusted on the base member before tightening of the screw **38** and locking of the bracket **34** in position relative to the cover strike **20**. Further to guide and hold the bracket in proper alignment while being adjusted, the base member **24** is formed with a guide slot **40** into which a bent finger portion **42** of the bracket slip-fits.

The bracket **34** is also formed with a pivot arm support portion **43** which is apertured to receive a pivot pin **44** upon which is pivotally mounted the latch member **45**.

At one end the latch **45** is formed with a jaw portion **46** shaped to operatively engage the cabinet cover strike **20**; and at its other end with an abutment **47** upon which fits one end of a compression spring **48**. The other end of the spring **48** fits upon an abutment **49** extending from the bracket **34**; and thus it will be seen that the latch bar **45** is at all times spring-biased towards strike-engaging position.

A combination latch retainer and "push" device is provided as indicated generally at **50** (FIG. 5). The device **50** comprises a fork-shaped member having parallel tines or legs **52—52** joined at a bridge portion **53** which is necked-down as shown at **54** to accommodate thereon a push-button as shown at **55**. Each leg **52** is bent to provide a forwardly directed abutment portion **56** intermediately of its length. The front wall panel **10** of the cabinet structure is bored as illustrated at FIGS. 1, 4, to accommodate a metal sleeve or ferrule **57** which in turn slidably supports the push-button **55**; and the inside surface of the cabinet wall **10** is counter-bored or recessed as shown at **58** (FIG. 4) to freely accommodate the shoulder portion **53** of the device, while at the same time providing a base upon which the shoulder portions **56—56** of the device bear to "stop" the outward travel of the device **50** in response to action of the spring **48**. The ends **60—60** of the leg portions **52—52** are arranged to slip-fit in guiding relation through apertures as shown at **62—62** in the main base member **24**.

Hence, when the parts are relatively assembled as illustrated herein, with the fork-shaped control device **50** straddling the latch bar **45**, the action of the spring **48** will cause the latch bar to press the leg abutment portions **56—56** against the inner surface of the cabinet wall as shown in FIG. 4. However, upon application of manual pressure against the "push-button" **55**, the latter will cause the latch bar to rock against the action of its spring **48** until the jaw **46** at the opposite end of the latch bar pulls out of engagement with the strike **20**, thereby releasing the cabinet cover **15** to rise or "pop-up" in response to the action of its counter-balance spring **16**.

As previously stated, it is a particular feature of the invention that the pivot bracket **34** is vertically shiftable on the main support base member **24**. Hence, at the assembly operation the latch parts may be slip-fitted together and the base member **24** may then be jig-positioned on the wall panel **10** and permanently fastened thereon by means of the screws **28—28**. Then, to suit the latch mechanism to each installation environment, having regard to manufacturing tolerances and/or inadvertent dimensional deviations; as a final step of the cabinet assembly operation the pivot bracket lock screw **38** may be loosened to permit the latch bar to be positionally shifted relative to the strike so as to bring the parts into optimum operational alignments, whereupon the screw **38** is tightened to complete the final adjustment and assembly.

Another feature and advantage of the device of the invention is that the latch control device may be easily fabricated to suit any cabinet wall thickness dimensional changes as may be encountered for example in a mass production operation wherein "runs" of cabinets of different wall thickness may be alternately scheduled. In such cases there will be kept on hand stocks of standard parts and appropriate assortments of latch control devices of standard form but of suitably various stem lengths, so that according to the wall thickness dimensions of the cabinets being assembled during any production "run" the parts of the mechanism will be readily available and fed to the production line in the manner of any "standard-parts" operation. The term "stem lengths" as used herein refers to the dimension indicated at **70** (FIG. 5).

It is still another feature of the mechanism of the present invention that the latch jaw portion **46** is so shaped at its strike engaging surface as to be inclined away from perpendicularity relative to the operative "centerline" of the latch member when in strike engaging position. Therefore, in event that the cabinet cover **15** is inadvertently pressured toward open position while the latch parts are in engagement with the strike member, thereby avoiding damage to the mechanism. FIG. 6 illustrates application of the latch mechanism of the invention to a different form of cabinet lid and strike device. In this case the strike is illustrated at **21** to comprise a simple flat plate of metal apertured to receive the jaw of the latch bar.

Therefore, it will be apparent that the invention provides an improved latch mechanism, applicable either to up-rising "cover" or horizontally swinging cabinet "door" devices, or the like; and that although only one form of the invention has been illustrated and described in detail herein, various changes may be made therein without departing from the spirit of the invention or the scope of the following claims.

We claim:

1. In a cabinet or the like having an open face and a cover panel therefor movably mounted thereon and carrying a latch strike device, the improvement comprising:

a latch mechanism mounted on a wall portion of said cabinet for releasable engagement with said cover strike device wherein said latch mechanism comprises;

a base member rigidly mounted on said wall portion of said cabinet, said base member including opposite side walls engaging said wall portion of the cabinet in outstanding relation thereto, and a back wall joining said side walls and presenting an inner face disposed in spaced relation to said wall portion of the cabinet;

a pivot bracket member mounted on said inner face of said back wall, and including an outstanding arm between said side walls;

a latch member pivotally mounted on said outstanding arm and having a jaw portion adapted to engage in latching relation with said strike member;

spring means biasing said latch member toward strike engaging position;

a sleeve carried by said wall portion of the cabinet;

and a latch release having a push button slidably received in said sleeve being bifurcated to provide a pair of legs straddling said latch member and slidably received through said back wall.

2. A cabinet latch mechanism as set forth in claim **1** wherein said spring means is seated against said pivot bracket member and said pivot bracket member is adjustably connected to said back wall so that said pivot bracket, said spring means and said latch member may be shifted as a unit relative to said base member and said latch release.

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