July 26, 1966 M. T. PHELPS 3,262,726

LATCH MECHANISM

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Fig. 1.

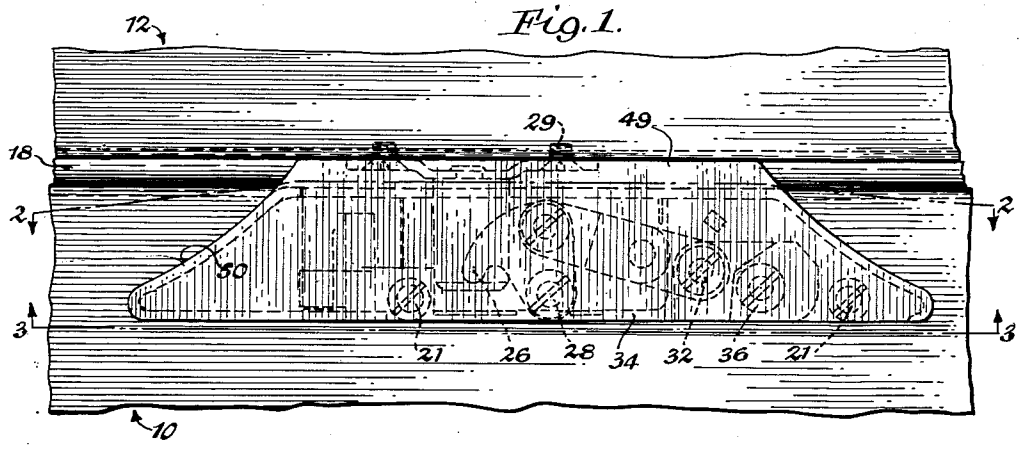


Fig. 2.

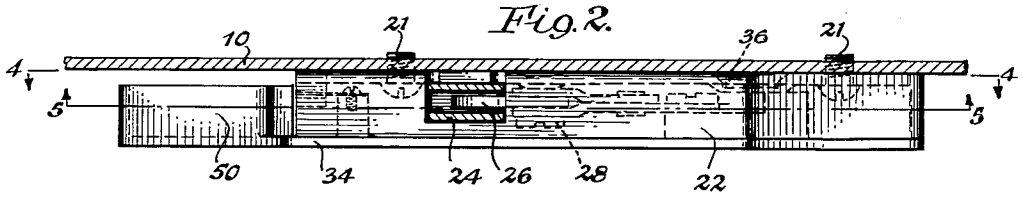


Fig. 3.

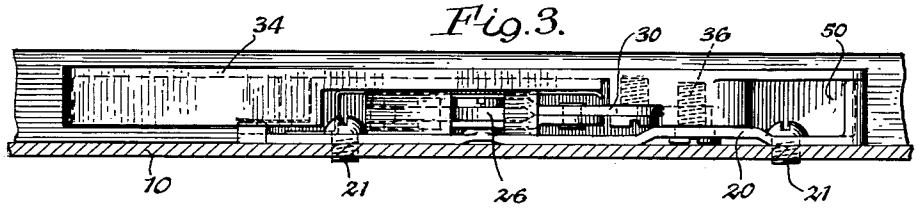
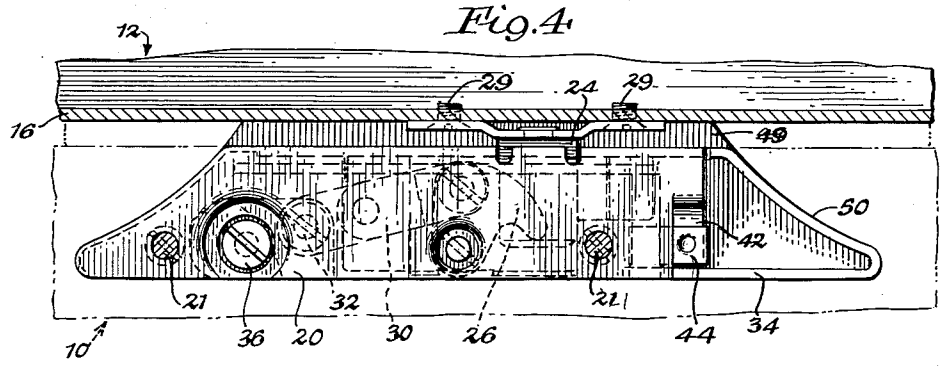


Fig. 4.



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Fig. 5.

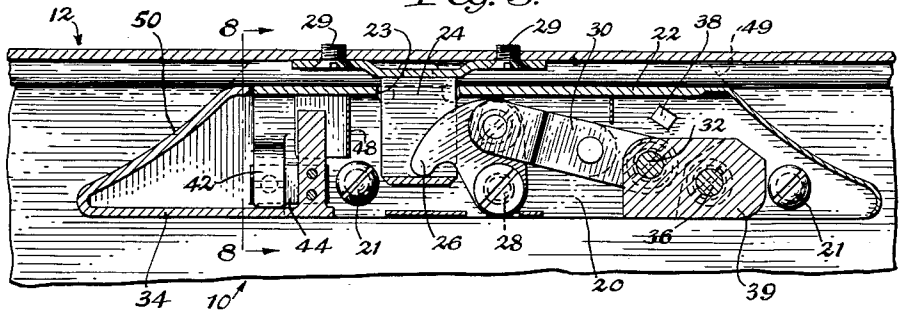
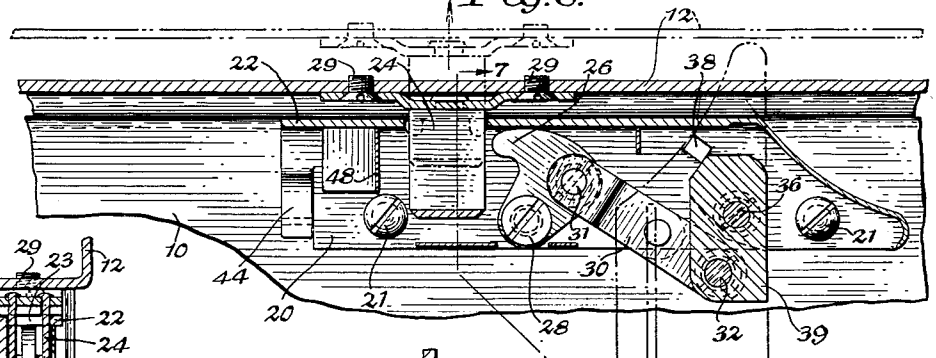


Fig. 6.



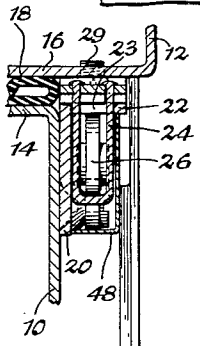


Fig. 8.

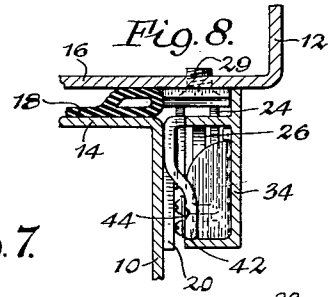


Fig. 7.

Fig. 9.

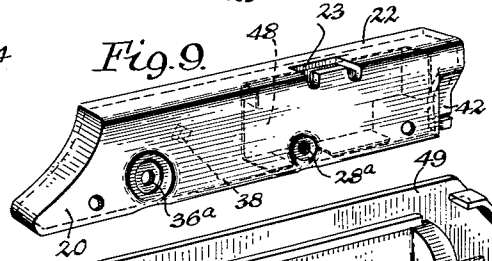


Fig. 10.

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LATCH MECHANISM

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Filed Jan. 22, 1964, Ser. No. 339,448
3 Claims. (Cl. 292—196)

This invention relates to sealing latches such as are used to pull down and hold down cabinet covers, or the like, particularly as in the case of burial caskets, and more specifically to an improved latch for closing and securing the cover of a casket having an air-sealing gasket of substantial thickness. Specifically, the present invention relates to further improvements in latches of the type referred to in my earlier Patent No. 3,035,862.

As in the case of the patent aforesaid, it is a primary object of the present invention to provide a latching mechanism that is of simple construction; easily manufactured; and that may be assembled on a casket or the like as and when desired with facility; and which when mounted will occupy a protected and inconspicuous position beneath the overhanging edge of the casket cover when the cover is in closed position.

Another object of the present invention is to provide an improved latch device as aforesaid which will have a substantial "pull-down" range, and which is therefore operable with facility in conjunction with relatively thick gasket devices.

Another object is to provide a latch as aforesaid embodying improved means for holding it against inadvertently being released.

Another object is to provide an improved latch device as aforesaid which includes a handle member of improved form, facilitating manual operation of the handle and functioning as an improved form of decorative front covering for the latch mechanism.

Other objects and advantages of the invention will be apparent from the following specification, and the accompanying drawing wherein:

FIG. 1 is a side elevational view of a latch mechanism of the present invention; the latch being shown in operative position on a casket, and holding the cover thereof in closed position;

FIG. 2 is a horizontal sectional view taken on line 2—2 through the device of FIG. 1;

FIG. 3 is a bottom plan view of the mechanism, taken as suggested along line 3—3 of FIG. 1;

FIG. 4 is an inside elevational view taken substantitally along line 4—4 of FIG. 2;

FIG. 5 is a section taken along line 5—5 of FIG. 2;

FIG. 6 is a view similar to FIG. 5 but showing the positions of the operative parts when the latch is in fully released condition;

FIGS. 7 and 8 are fragmentary sectional views, taken substantially along lines 7—7 and 8—8 of FIGS. 6 and 5, respectively;

FIG. 9 is a rear perspective view of the device; and

FIG. 10 is an inside view of the front cover-handle member of the device.

The invention is illustrated in conjunction with a casket 10 having a cover 12, and it will of course be understood that the cover 12 will usually be hinged thereto along one side of the casket. As best shown in FIGS. 7 and 8, the side walls of the conventionally constructed metal casket terminate at their upper edges in inturned flange portions 14; and the cover member 12 also includes an inturned horizontal flange 16 which overlaps the casket flange 14. To provide for air-sealing the casket, the inturned flange 14 mounts a sealing device as indicated at 18. As shown herein, the sealing member 18 may, for example, be formed of tubular cross section stock or of sponge-like resilient material, or the like, so

as to be adapted to be compressed between the flanges 14, 16 when the cover 12 is pulled down in tight closing position. Thus, an air protective seal is provided between the casket and its cover when the latter is drawn downwardly by the latches of the present invention and into fully closed position. Whereas the casket side wall and the cover and the intermediate sealing devices are shown only fragmentarily herein, it will be appreciated that the front end rear walls and the end walls of the receptacle, as well as the cover and the sealing material, will all be continued uninterrupted perimetrally of the casket, to provide the desired casket closing and sealing effect.

The present invention relates to the latch device by which the cover 12 is secured in closed position relative to the receptacle 10. It will of course be appreciated that any desired number of latches may be employed, but as illustrated herein only one latch of the invention is shown and described. The latch mechanism includes a base plate portion 20 which is of generally rectangular form and adapted to be secured as by screws 21 to the front wall of the casket with the upper edge of the base plate 20 disposed substantially flush with the top surface of the casket flange 14. The base plate 20 includes a top flange 22 which is apertured as indicated at 23 to accommodate movements therethrough of the latch mechanism keeper 24. As shown herein (FIG. 7) the keeper 24 is of U-shaped sectional form, rounded at its bottom end and thus providing a stirrup in which the hold-down nose of the cam 26 operates. The cam is mounted by means of a pin 28 at 28*a* to the back plate 20. The keeper is attached to the cover by means of screws 29—29. The cam 26 is controlled to rotate upon the pin 28 by means of a link 30 which pivotally connects at one end by means of a pin 31 to the cam 26 and at its other end by means of a pin 32 to the latch control lever 34 which is pivotally mounted by a pin 36 at 36*a* on the base plate 20.

The parts are so proportioned and arranged that when the latch handle is rotated in clockwise direction from the position of FIG. 6 towards the position of FIG. 5, the nose portion of the cam 26 will protrude into and engage the bottom land of the keeper 24, and will thereupon act to pull it downwardly into cover closing and gasket compressing position, while the keeper 24 rides against the edges of the aperture 23 through the top flange 22. Thus, the cam action is essentially in vertical direction against the keeper and is reacted against and contained by the back plate 20; and therefore there is no tendency to displace the cover 12 horizontally relative to the container 10 during the cover-latching operation.

An abutment or stud 38 (FIGS. 5, 6) is provided to extend from the base plate 20 to cooperate with a filler block portion 39 extending inside the lever 34 to limit downward swinging movements of the lever, as to the vertical position shown in FIG. 6. The base plate 20 also includes at one end a laterally deflected end portion 42 which abuts the inner bottom surface portion of the lever when in its "up" position, thus stopping the lever in horizontally aligned position. Also, the portion 42 provides a flat land surface in friction-bearing relation with a dimpled leaf spring 44 extending from the control lever 34 when the latter is moved into its "up" position as shown in FIGS. 1, 4, 5, 8. Thus, the latch handle is frictionally held in its relatively inconspicuous horizontal position; such as when the casket is on display whether the cover is open or closed. Also, the base member 20 is provided with an internal partition member 48 covering the latch cam and linkage devices when the handle 34 is pulled down, thereby covering the latch cam and link and control parts from view. Also note that the front plate portion of the handle 34 is formed with an upwardly extending lip 49 running lengthwise of the handle,

which operates to conceal the keeper and strike mechanisms when the handle is up in the position of FIGS. 1, 4, 5, 8.

Thus, it will be appreciated that the control handle member **34** also functions as a cover device when the handle is up in cover holding position, and is itself held in an inconspicuous position closely under the front edge of the cover. As indicated at **50** the free end of the handle is truncated to provide sufficient space for thumb access room between the handle and the cover whereby to facilitate manual actuation of the handle. Also, as shown at **51**, the opposite end of the handle may be similarly shaped to provide a symmetrical appearance.

It will be observed that during the last phase of the latch handle movement toward locking position the ratio of cam to handle displacement decreases with a consequent increase in mechanical advantage coinciding with the last phases of gasket compression when resistance to keeper displacement is greatest. It will also be seen that, as shown in FIGS. 1, 4, 5 of the drawing herewith, when the latch control handle is in its fully closed position, the center line of pull between the pivot pins **31**, **32** is dead center on the pivot **36**, whereby the control handle is self-locking when in its fully closed position. The latch parts are assembled by means of simple pin riveting processes thereby providing further inherent frictional-drag effects against any unintended movements of the latch parts. Also, the friction brake action is augmented by reason of the snug bearing contact of the lever arm spring **44** against the abutment land **42** when the latch control handle is moved into fully latched position. Hence any possibility of accidental release of the latch or downward falling of the latch handle is precluded, whenever the latch handle is in its upward, horizontally disposed position.

Thus, it will be appreciated that the pull-down and hold-down latch of the present invention provides a particularly compact nesting of operating parts within smoothly streamlined and unobtrusive appearing cover devices of minimum overall dimensions; and that whereas only one specific 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.

I claim:

1. In combination with a container having a front wall and a lid having a flange portion overhanging the top edge of said front wall,

a base plate having a main body portion fixed flatwise against said front wall immediately below said flange portion of the lid,

a lever member comprising plate-like body disposed along a plane parallel to but spaced from said main body portion of the base plate, said plate-like body having a portion complementing the shape of said main body portion of the base plate and normally lying in face-to-face opposition thereto, said plate-like body also having an end portion extending beyond said base plate and having an upper edge sloping downwardly from said flange portion of the lid when the lever member is normally disposed as aforesaid,

means pivotally connecting said lever member to said base plate about an axis normal to the base plate adjacent that end of the cover member opposite to said end portion thereof which extends beyond the base plate,

a cam rotatably mounted on said base plate in spaced relation to said means, and disposed between said base plate and said lever member, said cam having an eccentric nose portion,

a keeper depending from said flange portion of the lid for disposition between said base plate and said lever member and having a bottom land engaged by said nose portion of the cam when said lever member is normally disposed as aforesaid,

and a link pivotally connected at it opposite ends to said cam and said lever member.

2. The combination defined in claim **1** wherein said base plate is provided with an outstanding flange along its top and that end edge adjacent said means, which flange extends into close proximity to said plate-like body of the lever member, and said lever member having a peripheral flange extending therefrom toward said front wall throughout that end portion thereof which extends beyond said base plate.

3. In combination with a container having a front wall and a lid having a flange portion overhanging said front wall,

a base plate fixed to said front wall below said flange portion of the lid,

a cam pivotally mounted on said base plate about an axis normal to said front wall and having an eccentric nose portion, a keeper fixed to and depending from said flange portion of the lid, said keeper having a horizontal bottom land engaged by said nose portion of the cam and urging said lid downwardly toward said front wall,

a cover plate pivotally connected to said base plate about an axis normal to said front wall and disposed adjacent one end of said base plate in spaced relation to the axis of said cam, said cover plate being disposed in outwardly spaced face-to-face opposition to said said base plate in obscuring relation thereto and having its end, opposite to that end pivotally connected to the base plate, spaced below said flange portion of the lid to provide a finger grip clearance space,

and a link pivotally connected at its opposite ends respectively to said cam and said cover plate for rotating the nose portion of the cam away from and clearing said bottom land of the keeper when said cover plate is swung downwardly away from said flange portion of the lid.

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