

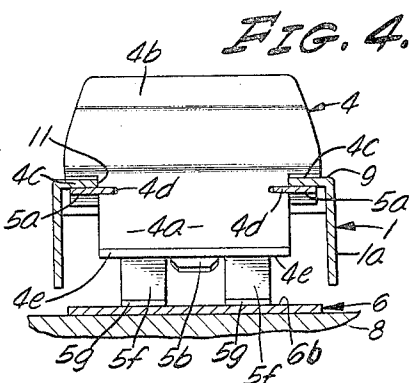
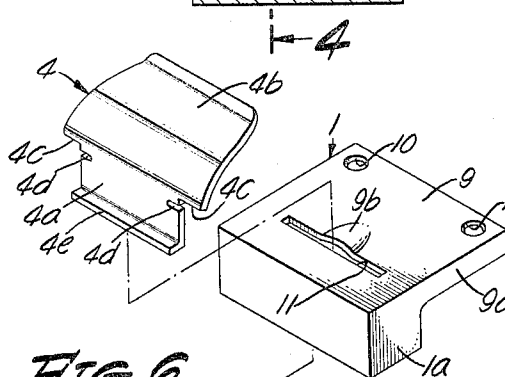
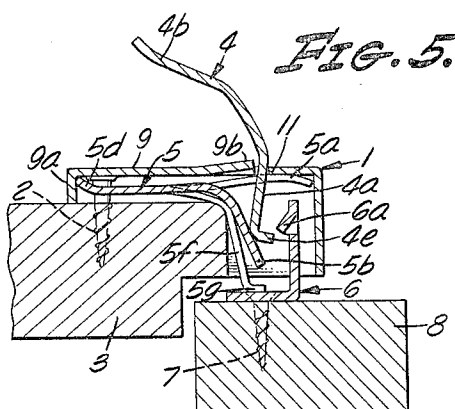
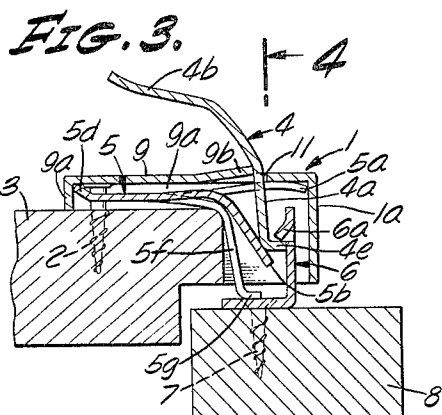
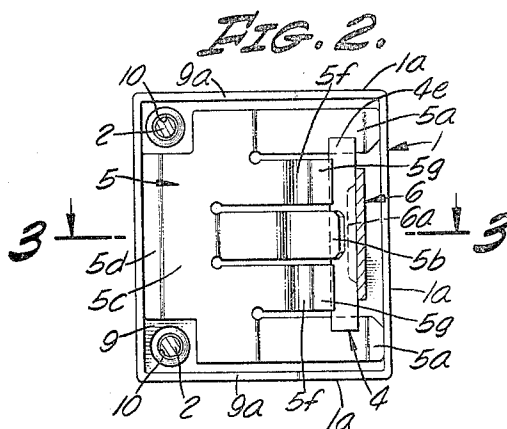
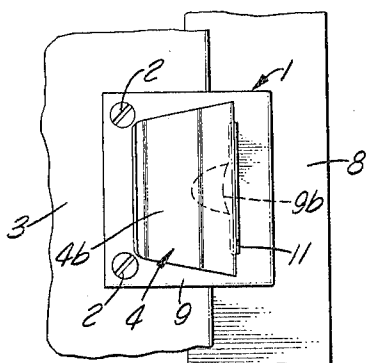
**Nov. 29, 1966**

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3,288,508

CATCH FOR CABINET DOORS AND THE LIKE

Filed Aug. 6, 1964



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## CATCH FOR CABINET DOORS AND THE LIKE

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Filed Aug. 6, 1964, Ser. No. 387,968

8 Claims. (Cl. 292-128)

This invention relates to a catch or latch of the type that will releasably hold a cabinet door or the like in closed position incident to the closing of the door.

It is an object of this invention to provide a door latch or catch unit of the type above described which constitutes an improvement over catches heretofore made, in point of being of comparatively simple in construction, comprising fewer parts, having reliability of performance, also as to being comparatively small and inconspicuous when installed and yet subject to being readily and easily released with a simple door opening movement as effected with one hand.

The above and other objectives of this invention are achieved by having the door carried unit of the catch formed of a simple small housing and an equally simple spring biased member that is movably connected with the housing in a novel manner and has a portion thereof operable to engage a cabinet or door frame carried strike element so as to latch the door closed, while another portion serves as a handle which when gripped and pulled as for opening the door, with one hand, will release the catch and permit the door to be opened in one simple movement.

Another object of the invention is to provide a door catch such as described in which a combined latch member and handle is held in assembled relation with the housing in a novel manner by means of a single plate element that readily and easily may be installed and which may also be employed to serve as a spring to bias the combined catch and handle member for effecting releasable latch engagement with the strike.

A further object is to provide a catch such as next above noted wherein the member for holding the combined latch and handle member in assembled relation with the housing may also serve as a means for suppressing the noise usually occasioned in the closing of doors equipped with catches and for also preventing rattling of the catch and door due to vibration as in cabinet doors of cabinets installed on vehicles such as house trailers, campers and the like.

Other objects and advantages of the invention will be hereinafter described or will become apparent to those skilled in the art, and the novel features of the invention will be defined in the appended claims.

Referring to the drawings:

FIG. 1 is a front elevation of the catch as when installed on a cabinet door;

FIG. 2 is a rear elevation of the catch;

FIG. 3 is a sectional view taken on the line 3-3 of FIG. 2 with the catch in latched position;

FIG. 4 is a sectional view taken on the line 4-4 of FIG. 3;

FIG. 5 is a sectional view corresponding to FIG. 3 with the catch in unlatched position; and

FIG. 6 is an exploded perspective view of the catch unit.

The illustrative embodiment of a catch made in accordance with this invention generally comprises a housing 1 adapted to be secured by fastenings 2 on a cabinet door 3, and a spring biased combined catch and handle member 4 having a catch portion 4a and a handle portion 4b. The member 4 is connected with the housing 1 by means of a fastener plate 5 so that upon closing the

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door, the catch portion 4a will engage and latch to a strike element 6 secured by fastening 7 on the cabinet 8. Movement of the handle portion 4b of the combined catch and handle member 4, by holding the same with one hand while exerting a pull thereon in door opening direction, will release the catch portion 4a from the strike element 6 so that the door may be quickly and easily opened.

The housing 1 may be rectangular as here shown or of any suitable shape and has an outer wall 9 provided with side walls 9a depending from the margins thereof. This outer wall 9 is provided with openings 10 for receiving the fastenings 2, and with a slot 11 to receive the combined catch and handle member 4 so that the catch portion 4a is disposed on the inner side of the wall 9 while the handle portion 4b overlies this wall. In this connection, it should be noted that the housing 1 has an enlarged portion 1a which overhangs a margin of the door 3 so that catch portion 4a is disposed therein for engaging the strike element 6 and for being disengaged therefrom as shown in FIGS. 3 and 5 respectively.

The fastener plate 5 is substantially rectangular and fits snugly between side walls 9a so as to be removably frictionally held in the housing for engaging and holding the combined catch and handle member 4 in operative relation to the housing. Accordingly, the handle portion 4b is of greater width than the catch portion 4a and, therefore, forms a pair of shoulders 4c at the juncture of such portions. These shoulders serve as fulcrums for the member 4 as they engage the outer surface of wall 9 and thereby support the member 4 for rocking movement while the plate 5 holds the member 4 in place. For this purpose, the member 4 is provided with a pair of notches 4d in the portion thereof disposed inwardly of the wall 9, whereas the fastener plate 5 is provided with a pair of finger portions 5a which extend into the notches 4d. The plate 5 may be made of resilient metal and the finger portions 5a therefore may yield as may be required when the handle portion 4b is moved to release the catch portions 4a and moved to engage the catch portion with the strike element 6.

The catch portion 4a of the member 4 includes an end flange 4e extending laterally therefrom and adapted to slide past and beneath an inclined outwardly struck portion 6a of the strike element 6 to latch the door in closed position.

Any suitable spring means may be employed for spring loading or biasing the catch portion 4a so that it will snap into latched engagement with the strike element 6 incident to engagement therewith, for example the resilient plate 5 may be provided as here shown with a spring finger portion 5b struck therefrom and bent to bear against the catch portion 4a as shown in FIGS. 4 and 5.

The catch unit may be assembled by inserting the narrower catch portion 4a of the member 4 downwardly through the slot 11 in the outer wall 9 of the housing, while the fastener plate 5 is removed therefrom. The shoulders 4c on the member 4 will limit movement of member 4 through the slot 11 and will rest on the outer surface of the wall 9. Next the fastener plate 5 is placed in the housing 1 so that the finger portions 5a of the plate extend through the notches 4d in the member 4 after which the plate 5 is forced in place in the housing with margins thereof in frictional engagement with the side walls 9a to securely hold the plate in place. The portion 5c of the plate 5 opposite the portion at which the fingers 5a and the spring fingers 5b are disposed is reduced in width to clear the fasteners receiving openings 10 in the outer wall 9. This reduced portion 5c is bent so as to have a radius as at 5d to facilitate the frictional engagement with the adjacent side wall 9a and with the

underside of the wall 9 so as to space the plate 5, for the most part, from contact with the underside of the wall 9 as shown in FIGS. 4 and 5, only the slightly curved or rounded ends of the fingers 5b being engaged with the inner surface of the wall 9. This makes possible the yielding of the fingers 5b as the member 4 is rocked back and forth about the fulcrum points provided by the shoulder 4c.

With the plate 4 made of resilient metal as here shown, means readily may be provided for preventing a noisy closing or slamming of the door, also for preventing rattling of the door when subjected to vibration of a moving vehicle. Accordingly, spring fingers 5f may be struck from the plate 5 and bent so that the rounded outer ends 5g thereof will engage the base 6b of the strike element 6 in advance of the catch portion 4a being latched to the strike element. These fingers 5f will yield sufficiently to permit final movement of the catch portion 4a into latched engagement with the strike element. Hence, the spring fingers 5f exert a force which acts to move the door 3 away from the strike when the catch portion is disengaged from the strike.

The handle portion 4b of the combined catch and handle member 4 is of arcuate form and is moved back and forth but a short distance upon the unlatching and latching of the catch portion 4a. In both instances the outer end of the handle portion 4b is movable in a direction away or outwardly from the wall 9. This outward movement is limited by the portion 4a being engaged by the spring finger 5b and by the fingers 5a in the notches 4c in the member 4. Movement of the handle portion 4a in the opposite direction, that is, toward the wall 9 when the portion 4a is latched, is prevented by an upwardly struck and arched portion 9b of the housing wall which forms part of the margin of the slot 11 and is abutted by the handle portion 4b when portion 4a is latched to the strike element 6.

It will now be apparent that the catch as a unit is comparatively small yet will serve, without being objectionably conspicuous on a cabinet door, as a reliable latch or catch with the small and curved handle portion 4b located so that it readily and easily may be actuated with one hand in a simple door opening movement to release the catch and open the door.

While it is to be understood that any suitable spring means may be employed to bias the combined catch and handle member 4 as required to cause it to latch with the strike element 6 and to be unlatched relative thereto, it is advantageous however, to employ as a single and simple element of the unit the resilient plate 5, inasmuch as this plate serves the triple purpose of providing the fingers 5a for holding the member 4 in place, the spring finger 5b for biasing the member 4 for its latching action and the spring finger 5c for lessening noise and vibration of the catch unit and the door.

We claim:

1. A catch unit for a cabinet door or the like comprising: a housing having a wall having inner and outer sides and provided with a slot; a combined handle and catch member having a portion formed as a catch element to releasably latch with a strike when engaged therewith, and a portion formed as a handle; said member being extended through said slot with the catch portion disposed inwardly of the inner side of said wall and the handle portion disposed on the outer side of said wall; said member having shoulders engaging said outer side of said wall as fulcrums to support said member on the housing for movement relative thereto; a fastener plate within said housing having resilient portions straddling and engaging said member to connect said member to said housing for movement relative thereto; and spring means carried by said plate and disposed

between and in inwardly spaced relation to said resilient portions and biasing said member for effecting releasable latching engagement of said catch element with said strike.

2. The catch unit as set forth in claim 1, wherein said member is provided with notches in which said resilient portions of said fastener plate are engaged.

3. A catch unit as set forth in claim 1, including other spring means carried by said plate in inwardly spaced relation to said first named spring means in said housing for yieldably engaging said strike in advance of said catch element.

4. The catch unit as set forth in claim 1, wherein said fastener plate is frictionally and removably engaged with portions of said housing beneath said wall to maintain said resilient portions of said plate in engagement with said member.

5. The catch unit as set forth in claim 1, wherein said spring means consists of a finger member integral with said plate.

6. The catch unit as set forth in claim 5, wherein said resilient portions of said plate are in the form of fingers integral with said plate and disposed on opposite sides of said finger member.

7. The catch unit as set forth in claim 1, wherein said fastener plate is resilient and frictionally and removably engaged within said housing; said resilient portions of said plate being in the form of a pair of fingers integral with the plate and are engaged with said member so as to prevent withdrawal of said member from said slot.

8. A catch unit for a cabinet door or the like, comprising: a support member adapted to be connected adjacent to the edge of a door and having opposed end walls; a combined catch and operator member extended through said support member between said end walls; shoulders on said combined member engaging the exterior of said support member and supporting said combined member for pivotal movement of one end thereof toward and away from a strike upon pivotal movement of the other end of said combined member toward and away from said support member, respectively; means for retaining said combined member in assembly with said support member including a resilient plate having opposed end portions spaced apart a distance greater than the distance between said end walls of said support member for resilient interfitting engagement between the latter; said plate having a pair of resilient portions in engagement with said support member between said end walls; said combined member having notch means coengageable by said pair of resilient portions of said plate for retaining said combined member against separation from said support member for enabling pivotal movement of said combined member; and said plate also having a resilient finger integral therewith and engaged with said catch portion of said combined member for normally biasing the same toward said strike.

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