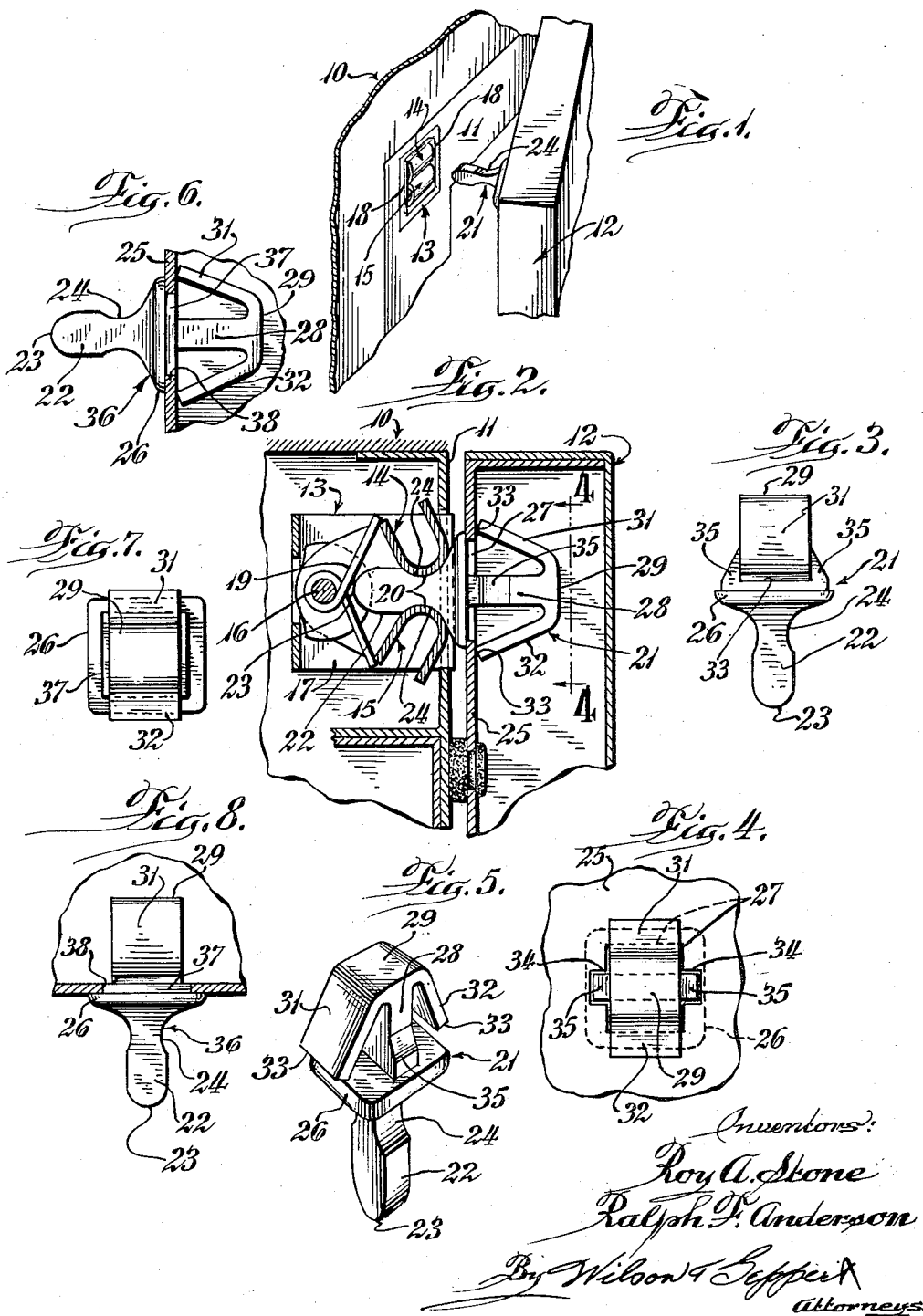


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SNAP-IN DOOR LATCH STRIKE

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SNAP-IN DOOR LATCH STRIKE

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The present invention relates to a novel latch strike unit that can be quickly applied to a cabinet door or other closure, and more particularly to a novel snap-in strike in which its attaching or anchoring means are formed integral with the strike unit.

The novel strike assembly of the present invention is an integral unit so constructed that it may be quickly applied to a supporting wall or other support by the mere insertion of its mounting end with its resilient anchoring tongues into an aperture in the support and, when inserted to the proper depth, these tongues are permitted to flex outwardly whereupon they engage the margins of the support about said aperture and automatically anchor the unit in the support.

The present invention further provides a novel one-piece strike unit composed of nylon and requiring no separate fastening or anchoring means for mounting in a supporting structure.

It is a further object of the present invention to provide a novel snap-in latch strike the inner end of which may be readily inserted into and anchored in an opening or slot in a supporting wall and such inner end provided with integral flexible tongues, an abutment on said strike located intermediate its length and forwardly of said tongues and providing a stop to limit the depth of penetration of the inner end of the strike, and when said stop abuts the margins of the wall about the exterior of the opening the tongues flex and engage the margins of the wall about the interior of the opening and anchor the strike in the wall.

Another object of the present invention is the provision of a novel one-piece latch strike composed of nylon and so constructed that it may be readily inserted into a supporting wall and automatically anchored in operative position, said latch strike having an integral stop intermediate its length and resilient tangs on the inner end for anchoring the strike in the wall, said stop and flexible tangs being so constructed and arranged that when the inner end of the strike with its tangs contracted is inserted and forced into an opening in the supporting wall to a depth in which the stop seats against the exterior margins of the supporting wall about the opening, these resilient tangs thereupon expand and engage the interior margins of the supporting wall about the opening and retain the strike in anchored position.

Further objects are to provide a construction of maximum simplicity, efficiency, economy and ease of assembly and operation, and such further objects, advantages and capabilities as will later more fully appear and are inherently possessed thereby.

In the drawing:

Figure 1 is a fragmentary perspective view of one corner of a cabinet and its door or closure in open position, the door being equipped with a snap-in latch strike embodying the present invention.

Fig. 2 is a fragmentary enlarged view in side elevation of the novel latch strike engaged in the catch in the

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cabinet to retain the door closed, the catch and the closed door being shown in vertical cross section.

Fig. 3 is a top plan view of the novel latch strike.

Fig. 4 is a view in rear elevation of the latch strike taken in a plane represented by the line 4—4 of Fig. 2 and viewed in the direction of the arrows.

Fig. 5 is a perspective view of the novel latch strike.

Fig. 6 is a view in side elevation of a modified form of snap-in latch strike and showing the manner in which it is mounted and retained in a wall of a door or other support.

Fig. 7 is a view in rear elevation of the latch strike of Fig. 6; and

Fig. 8 is a top plan view thereof.

Referring to the drawing and to the novel illustrative embodiment of the present invention disclosed in Figs. 1 to 5, inclusive, reference character 10 indicates generally a cabinet having a door frame on walls 11 surrounding an access opening adapted to be closed by a door or closure 12. In the illustrative embodiment, the cabinet and the door are disclosed of sheet metal with the door provided with a catch 13 of the type disclosed in the North Patent No. 2,550,852, of May 1, 1951, in which the catch comprises a pair of sheet metal clamping and holding jaws 14 and 15 pivotally mounted upon a pintle 16 spanning spaced walls of a housing or frame 17. This housing has the margins of its free edges bent outwardly in opposite directions to form flanges 18 which provide stops or abutments to limit the projection of the housing 17 through an opening in the wall 11 of the cabinet. A spring 19 spring-biases the curved clamping portions 20 of the jaws 14 and 15 into engagement and retains them centered until they are spread apart by the entry of the projecting end of a latch strike.

The present invention comprehends the provision of a novel snap-in latch strike 21 composed preferably of nylon, giving to the strike the desired flexibility and long life. This nylon latch strike is formed as an integral member provided with a strike projection or bayonet portion 22 having its forward or outer end 23 rounded or contoured for directing the projection between the clamping and holding jaws 14 and 15 of the catch with the clamping portions or curved base 20 of these jaws seating upon and tensionally gripping the neck or reduced shank 24 of the latch strike 21 when the door is closed.

To anchor the snap-in latch strike 21 in a wall 25 of the door or closure 12 or in any other supporting wall, the strike is provided with an enlargement or base 26 forming a stop or abutment adapted to seat against the exterior of the wall 25 and overlie the margins of an opening 27 in this wall, and with a rearwardly projecting leg 28 adapted to project through the opening 27 and into the hollow interior of the door or closure 12. This leg 28 at its inner end 29 is provided with two laterally and forwardly projecting and diverging resilient tangs or tongues 31 and 32 with their free ends 33 projecting adjacent to but spaced from the base 26 an amount substantially corresponding with the thickness of the supporting wall 25, whereby when the anchoring portion of the latch strike is projected or forced through the opening 27 and the base 26 abuts the exterior of the wall 25 about the margin of the opening, the diverging resilient tangs 31 and 32 are disposed at the rear of the supporting wall and thereat spring apart or expand to the position shown in Fig. 2 where their free ends 33 engage the inner margins of the wall 25 about the opening and thereby anchor and retain the latch strike 21 in operative position.

To retain the latch strike 21 against lateral displacement, the opening 27 in the wall 25 is of approximately rectangular contour to substantially conform to the end 29 and tangs 31 and 32 of the strike, but also provided

with two opposed slots 34 to receive opposed, laterally projecting and tapered wings or shoulders 35 on the leg 28.

The leg 28 with its diverging, resilient tangs or tongues 31 and 32 projecting from the end 29 and its opposed wings or shoulders 35, and the opening 27 and its opposed slots 34 for receiving the shoulders 35, are so conformed and related that when the end 29 of the strike and its tangs 31 and 32 are directed and forced into the opening 27 and its slots 34, the resilient tangs are contracted or squeezed together and when the base 26 abuts the exterior of the wall 25, the ends 33 of the tangs 31 and 32 are released from contact with the margin of the opening. When released, these tangs flex or expand to their anchoring position (Fig. 2) in which their ends 33 engage the margins of the wall 25 at two of the opposite sides of the opening 27 and thereby anchor and retain the snap-in latch strike 21 in its operative position. The tapered wings or shoulders 35 being conformably received in the slots 34, retain the strike unit against excessive lateral play.

In Figs. 6, 7 and 8 is disclosed an alternate construction of snap-in latch strike 36 in which the strike when anchored in operative position, is retained against lateral shifting by means of a substantially rectangular reduction 37 at the rear of the base 26. This rectangular reduction 37 is adapted to be conformably received and seat in a similarly shaped aperture or opening 38 in the wall 25. In other respects, the two embodiments of the present invention are the same and similar reference characters have been applied to common elements.

While the present strike is shown employed or associated with a form of catch of the type disclosed in the North Patent No. 2,550,852, of May 1, 1951, its use is not intended to be so limited. Furthermore, although this one-piece strike is preferably composed of nylon which provides an exceptionally long life of the contacting surfaces of the projection 22 of the strike 21, has the desired flexible characteristics for the tangs 31 and 32 for anchoring and retaining the strike in its supporting wall and also provides for the desired rigidity, other plastic compositions having the desired properties may be employed. One such composition is polyethylene, although best results have been obtained by the use of nylon material.

Having thus disclosed the invention, we claim:

1. A one-piece self-anchoring strike capable of being inserted and retained in an opening of a supporting wall without other fastening means, comprising a strike projection at one end and a leg at the other end provided with a pair of oppositely disposed and diverging flexible tongues with their free ends projecting forwardly from the end of said leg and with the end of said leg of smaller dimensions than the opening in the supporting wall, an enlargement on said strike intermediate said ends to provide a stop for engaging the exterior of the supporting wall about said opening and limiting the depth to which the leg and its tongues are projected through said opening and a part conformably received in the opening of the supporting wall, said tongues being of such length that the free end of each is spaced from said enlargement sufficiently to receive therebetween the margin of the supporting wall surrounding said opening, the free ends of the tongues being contracted when forced through said opening and automatically flexed outwardly when projected therethrough to such depth that the part enters the opening and the enlargement abuts the exterior of the wall whereupon these free ends engage the interior of said supporting wall and retain the strike in anchored position.

2. A one-piece strike capable of being assembled and retained in an opening in a supporting wall without other fastening means, said strike comprising a strike projection at its outer end having a reduced shank, an enlargement projecting laterally from the inner end of the shank and a leg projecting rearwardly from said enlargement, the inner end of the leg being of smaller dimensions than the opening in the wall to facilitate insertion thereof and as-

sembly of the strike in said opening, said leg being provided with forwardly diverging flexible tangs with their free ends projecting toward but stopping short of said enlargement, said leg and its flexible tangs when assembled being forced through said opening in the supporting wall with the enlargement being of greater dimensions than said opening and upon abutting the exterior margins of the wall about the opening the free ends of said tangs flex outwardly into engagement with the interior margins of the wall about the opening to anchor the strike in the wall, and a part projecting rearwardly from said enlargement and received in the opening in the supporting wall for locating the strike in operative position and retaining it against lateral shifting.

3. An integral, snap-in latch strike consisting of a body having anchoring means at one end, a strike member at the other end adapted to project forwardly from an opening in a wall in which the latch strike is mounted, and a base between said strike member and said anchoring means and of greater dimensions than the opening in the wall, said anchoring means comprising a longitudinally extending leg having at its rear a pair of opposed flexible and forwardly projecting tongues having their free ends diverging outwardly and forwardly toward but with these free ends stopping short of said base, said free ends flexing outwardly and engaging the margins of the wall at the interior about the opening when the base abuts the margins of the wall at the exterior about the opening and thereby anchoring the strike in the opening in the wall, and means at the rear of said base and conformably received in the opening for preventing lateral shifting of the assembled strike.

4. A snap-in latch strike adapted to be anchored in an opening in a wall without the use of other fastening means, consisting of a one-piece assembly including a projecting strike member at the outer end, anchoring means at the inner end and an enlargement therebetween providing a stop to abut the exterior wall when the inner end and its anchoring means are projected through an opening in the wall, and a part adjacent said enlargement and conformably received in the opening in the wall to retain said strike against lateral movement, said anchoring means comprising spaced flexible tongues projecting forwardly and diverging outwardly from the inner end toward the interior of the supporting wall about the opening, and when the strike is anchored in operative position these tongues flex outwardly to engage the interior surface when said part enters the opening and the enlargement engages the exterior surface of the supporting wall.

5. A snap-in latch strike adapted to be mounted in an opening in a wall and comprising an integral assembly including a strike projection at the outer end, a base adapted to seat against the exterior of the wall about the margins of the opening and of greater dimensions than said opening, a part at the rear and inwardly of said base adapted to be conformably received and retained thereby against lateral shifting in said opening, a leg projecting inwardly of said part and base and at its inner end provided with outwardly and forwardly projecting and oppositely diverging flexible tangs having their free ends projecting toward the rear of said wall, said tangs being contracted when inserted into and projected through the opening, and when the base abuts the exterior of the wall and the part is received in the opening in the wall the free ends of said tangs flex outwardly into engagement with the rear margins of the wall about the opening to anchor the strike in the wall.

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