Oct. 22, 1929. I. C. LARSON 1,732,940

DOOR CATCH

Filed May 20, 1927

Fig. 1.

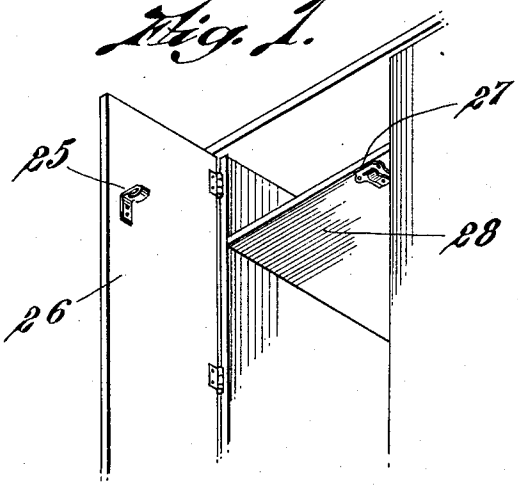


Fig. 2.

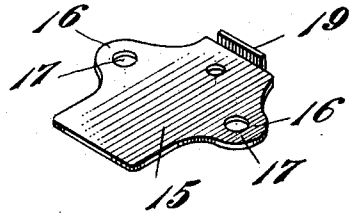


Fig. 3.

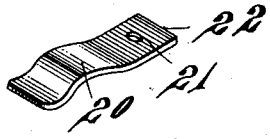


Fig. 5.

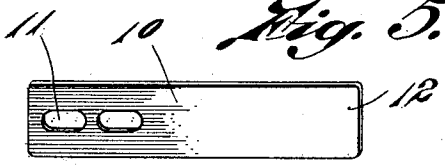
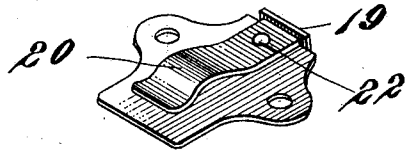


Fig. 4.



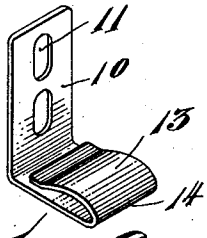


Fig. 6.

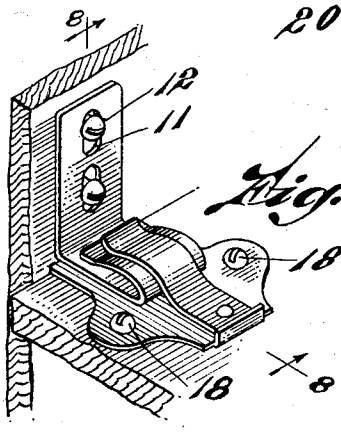
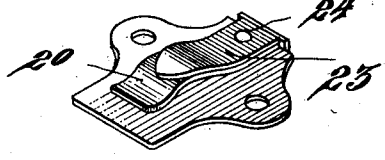


Fig. 7.

Fig. 9.



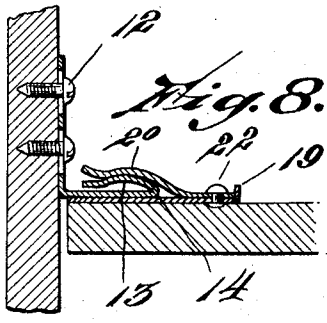


Fig. 8.

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1,732,940

UNITED STATES PATENT OFFICE

IVAR C. LARSON, OF PROVIDENCE, RHODE ISLAND

DOOR CATCH

Application filed May 20, 1927. Serial No. 192,895.

This invention relates to an improved construction of spring door catch or holder; and has for its object to provide in such a catch or holder a male member having a fastening base and an enlarged engaging stud portion also having a gripping member with a base portion and a separate spring tongue secured to the base for gripping the enlargement of the stud member.

A further object of the invention is the folding of the end of the male or stud member to provide a yielding engaging stud portion to cooperate with the spring tongue of the gripping member to releasably secure the two members together.

A further object of the invention is the forming of the spring tongue of the gripping member separate and independent of its base portion whereby the spring tongue may be hardened independently of the base portion and so retain its gripping effect throughout a long period of use.

The invention further consists in the forming of a flange on the base portion of the gripping member against which one end of the tongue may rest, whereby it is only necessary to provide a single rivet cooperating with the flange for retaining the spring tongue in proper operative aligned position and prevent it from swivelling.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings:

Figure 1 is a perspective view showing the stud member as being fastened to the door and the gripping member as fastened to the under side of a closet shelf.

Figure 2 is a perspective view showing the base plate of the gripping member with the spring tongue removed.

Figure 3 shows the spring tongue as removed from its base plate.

Figure 4 shows the spring tongue as riveted to its base plate with the end flange to cooperate with a single rivet and hold the same in working alignment against a swinging action.

Figure 5 is a perspective view of the stud member before it is folded.

Figure 6 shows the stud member formed from a strip of sheet stock and having right-angularly disposed portions, one of the portions having its end portion folded back upon itself to form a resilient enlargement.

Figure 7 is a perspective view showing the stud member in engagement with the gripping member.

Figure 8 is a sectional elevation showing the stud member as engaged by the tongue of the gripping member.

Figure 9 is a modification in which the spring tongue is reinforced by a second spring leaf to increase its gripping effect or capacity.

It is found in the practical construction and operation of a spring door catch or holder of this character, of advantage to provide a stud member which in itself is also somewhat resilient to cooperate with the spring of the gripping member which resiliency is obtained by folding the operating end of the stud member back upon itself with the parts slightly spaced from each other so as to permit a yielding action under the pressure tension of the spring tongue also to provide a gripping member which is provided with a base formed of ordinary untempered sheet stock and to provide a separate tempered tongue riveted to its base. Also to provide an upturned lip or flange on the edge of the base member against which the riveted end of the spring tongue may abut to hold the tongue in proper alignment and secure the same in that position by the use of but a single rivet; and the following is a detailed description of the present embodiment of my invention and showing one means by which these advantageous results may be accomplished:—

With reference to the drawings, 10 designates the strip of metal from which the stud member may be formed, the same being first punched with holes 11 therein to receive the fastenings screws 12.

This strip is then folded preferably adjacent its middle section and the stud end 12 is then folded back upon itself as at 13, see Figure 6, the parts being spaced from each

other providing an enlargement which may be compressed slightly when engaged by the bight of the spring tongue, the entering edge 14 of this enlargement being preferably tapering so as to facilitate its entering the mouth of the gripping member beneath the spring tongue. These openings 11 are preferably oblong so as to permit a slight adjustment relative to the gripping member to compensate for warping or springing of the closet door to which it is attached.

The gripping member comprises essentially a base plate 15 having laterally-extending ears 16 pierced as at 17 to receive the fastening screws 18 and the rear edge of this base plate is turned up as at 19 providing an abutting flange against which the end of the spring tongue 20 rests. This spring tongue is formed of a hardened strip of steel punched at 21 and squared at its secured end at 22 to abut against this upturned flange and is punched as at 21 to provide a hole for the rivet 22 and is secured in position by simply passing the rivet therethrough and heading it on the under side of the plate.

By this construction it will be seen that the base plate may be made of ordinary soft metal easily stamped out and punched, while the spring tongue may be made of tempered steel which will maintain its gripping efficiency throughout the life of the device.

In some instances instead of using a spring tongue of single thickness I may superimpose one or more tempered spring leaves 23 upon the base leaf 20 and secure the same in position by the use of but a single rivet 24, as illustrated in Figure 9. In this way the gripping action of the spring may be made as strong as is desired.

My improved stud member 25 may be secured to a closet door 26 or other support while the gripping member 27 may be secured to the under side of a closet shelf or other support so that when the door is swung closed the gripping member will releasably engage the stud member and so releasably retain the door in closed position until it is desired to open the same by a simple opening pull and by forming the spring tongue of a tempered material the same will retain its gripping effect throughout the working life of the device.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claim.

I claim:

A spring door catch or holder comprising a stud member formed of a strip of sheet stock having a supporting element and a right angularly disposed enlargement formed thereon with a tapering entering edge, and a spring gripping member having a flat supporting base with an upturned flange and a separate tempered spring tongue member secured to the base between its working end and the flange and abutting against the flange to prevent rotation of the spring tongue member relative to the base.

In testimony whereof I affix my signature.

IVAR C. LARSON.