June 12, 1951 F. M. RAMESON 2,556,821

DOOR LATCH AND PULL

Filed March 26, 1946

Fig. 1.

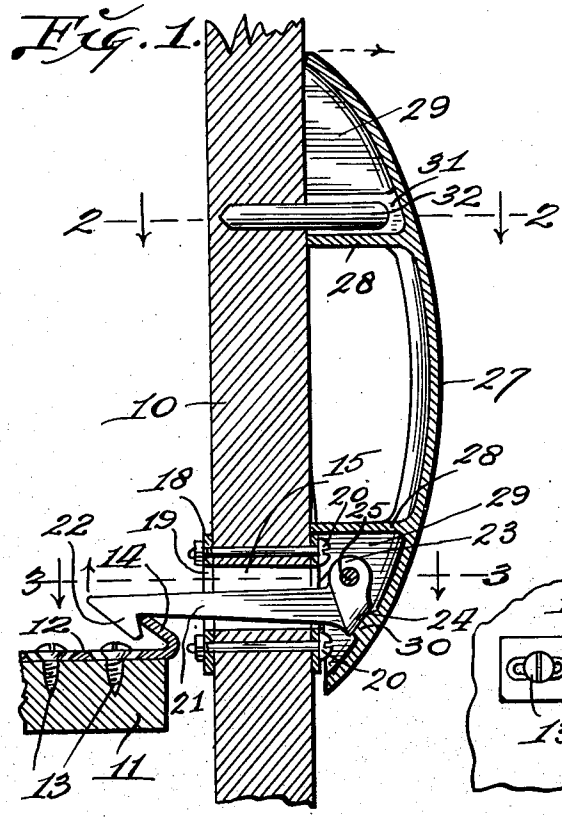


Fig. 2.

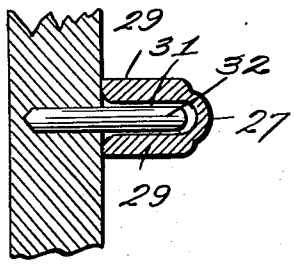


Fig. 3.

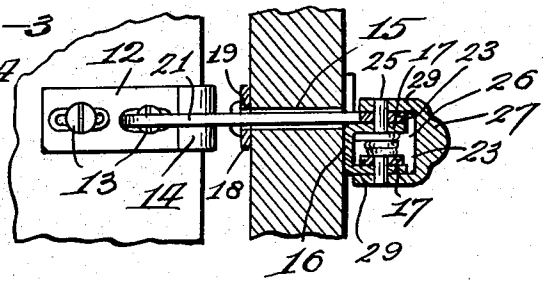


Fig. 4.

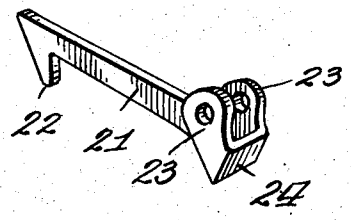


Fig. 5.

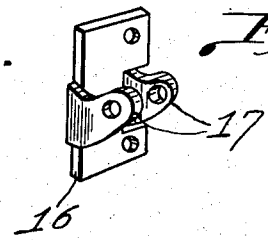
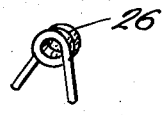


Fig. 6.



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2,556,821

DOOR LATCH AND PULL

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Application March 26, 1946, Serial No. 657,133

1 Claim. (Cl. 292—126)

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My invention relates to a door latch and pull and has for its principal object, to provide a simple, practical, highly efficient and inexpensive device capable of being readily installed for use and which functions to securely latch the door when closed and to pull said door open by a continuation of the same pulling movement that releases the hook of the catch from its keeper.

A further object of my invention is to provide a door latch of the character referred to, wherein the latching hook is released by an elongated, substantially bow-shaped handle or "pull" that is pivoted near one end, co-axially with said hook and the free end of said handle being guided in its travel in both directions, by rigid means, such as a stud or pin seated in and projecting from the door.

A further object of my invention is to provide a door latch having a pull or handle that presents a neat, pleasing and finished appearance and which closely follows the present trend of household hardware manufacturers, to produce curved and stream lined effects.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangement of parts which will be hereinafter more fully described and claimed and illustrated in the accompanying drawing, in which:

Fig. 1 is a vertical section of the improved pull and latch applied to a door.

Fig. 2 is a horizontal section taken on the line 2—2 of Fig. 1.

Fig. 3 is a horizontal section taken in the line 3—3 of Fig. 1.

Fig. 4 is a perspective view of the latching hook.

Fig. 5 is a perspective view of the bracket to which the hook and handle are pivotally connected.

Fig. 6 is a perspective view of a torsion spring that is arranged between the hook and handle.

Referring by numerals to the accompanying drawings which illustrate a preferred embodiment of my invention, 10 designates a door, 11 a shelf behind said door and 12, a strike plate adjustably mounted on said shelf by means of screws 13, or the like that pass through short slots in said strike and projecting upwardly and rearwardly from the forward end of said strike is a lip 14.

Formed through door 10, in a plane just above partition 11, is an aperture 15, and disposed on the front face of said door immediately adjacent one side of said aperture is a plate 16 provided with a pair of vertically parallel perforated ears 17 (see Fig. 5).

Applied to the inner face of door 10 is a plate 18 having an opening 19 that registers with opening 15 and this plate and plate 16 are anchored to the door by means of bolts 20.

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The latching hook used in my improved latch comprises an arm 21 provided on one end with a depending hook 22 having an inclined front edge and on the opposite end of said arm are upright perforated ears 23, the lower ends of which are connected by a transverse web 24 (see Fig. 4).

When the parts of the latch are assembled, the ear 23 in line with arm 21, is positioned against the inner face of one of the ears 17 on plate 16 and the other ear 23 is positioned against the outer face of the other one of said ears 17, with a pivot pin 25 passing through the apertures in the four ears.

Mounted on the central portion of pivot pin between the pairs of ears 17 and 23 is the coiled portion 26 of a torsonial spring, one end of which bears on plate 16 and the other end bearing on the inner face of web 24, thus normally exerting downward pressure on arm 21 of the hook.

A substantially bow-shaped pull or handle 27, preferably of plastics has its outer or exposed face formed with longitudinally disposed ribs and formed integral with and projecting rearwardly from said handle near its ends are short horizontally disposed walls 28. Side walls 29 extend from walls 28 to the ends of the handle and seated in the walls at the lower end of the handle are the ends of pivot 25 (see Fig. 3).

Formed on the inner face of the body of handle 27 below the lower one of the webs 28, is a lug 30 that normally bears against the outer face of web 24, and to enable the handle to tilt slightly on its axis (25) to actuate and lift hook 22 from lip 19, the edges of the lower pair of webs 29 are slightly inclined vertically, so that their lower ends are disposed a greater distance away from the face of the door than their upper ends.

This clearance is shown at the lower end of handle 27 in Fig. 1. The lower portion of the face between the upper pair of walls 29 provide a narrow pocket 31 for the accommodation of the projecting portion of a pin 32 that is seated in door 10, thus firmly supporting the upper portion of the handle and preventing any lateral movement thereof.

Normally the tension of spring 26 maintains hook 22 in engagement with lip 14 and at the same time maintains handle 27 in upright position with its upper end in contact with the outer face of the door.

To unlatch and open the door, handle 27 is engaged and swung a short distance outward on its axis (the pin 25) and lug 30 bearing on web 28 swings the hook arm 21 on its axis (said pin 25) thus elevating hook 22 from lip 14 of the strike and as the pull on the handle continues, the door will be drawn open.

When the door is closed, hook 22 passes over

and then drops behind lip 14, thus securely latching the door in its closed position.

The width of the space between the edges of the lower pair of webs 24 and the face of the door, limits the outward swinging movement of the handle when the door is opened.

Thus it will be seen that I have provided a door pull and latch that is simple in structure, inexpensive of manufacture and very effective in performing the functions for which it is intended.

It will be understood that the structure as herein shown and described may be changed or modified in minor details, without departing from the spirit of the invention, the scope of which is set forth in the appended claim.

I claim as my invention:

In a door latch and pull, a bracket adapted to be secured to the outer face of a door adjacent an aperture therein, a latch hook pivoted on said bracket and extending through said aperture, a handle pivoted at its lower end to said bracket co-axially with said hook, a torsional spring associated with the axis of said hook and handle for exerting yielding pressure on said hook, a lug on the lower inner face of said handle for engaging said hook below its pivot point and thereby transmit spring pressure to the lower portion of said handle to yieldingly maintain its upper portion against the outer face of the door, with said handle being provided in its upper portion with a recess for the reception of a pin seated in the door to which the latch is applied to hold said handle against lateral movement.

FREDERICK M. RAMESON.

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