April 18, 1939. R. W. HEMPEL 2,154,936

LATCH FOR FASTENINGS

Original Filed July 22, 1937

Fig. 1.

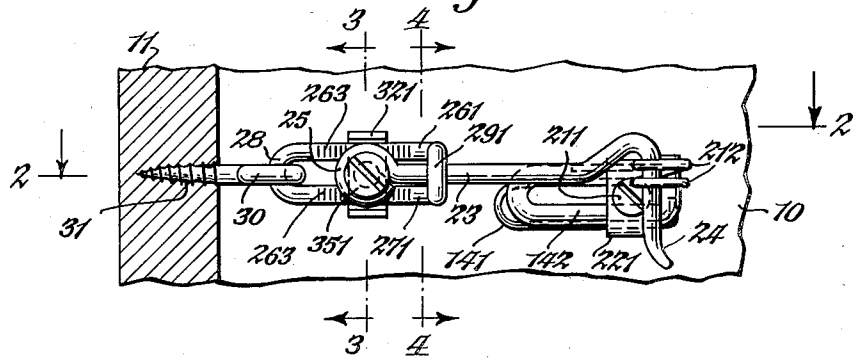


Fig. 2.

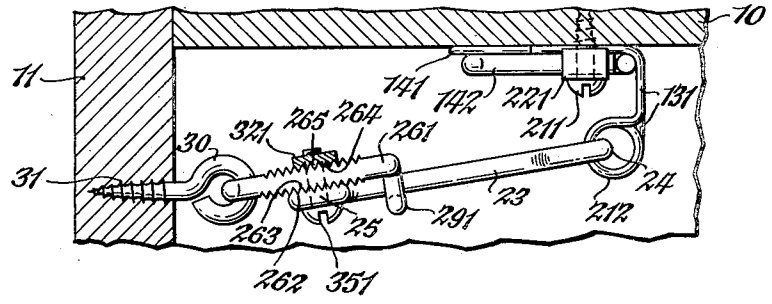


Fig. 3.

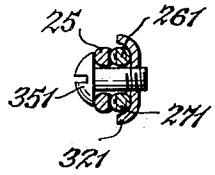


Fig. 4.

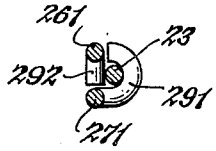
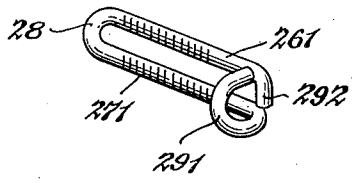


Fig. 5.



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LATCH FOR FASTENINGS

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Original application July 22, 1937, Serial No. 155,060. Divided and this application January 22, 1938, Serial No. 186,409

3 Claims. (Cl. 292—101)

This invention relates to a latch adapted to form part of a fastening for detachably connecting two relatively movable parts, such for example, as a screen door and a door frame. The object of this invention is to provide an improved latch of this character which is low in cost and of simplified construction and which is capable of being adjusted as to length so that the same can be readily mounted on the door and frame without requiring absolute accuracy in such mounting and still enable the latch and keeper with which it co-operates to properly engage one another without undue looseness or tightness between these members and thus ensure easy operation of the fastening and avoid rattling.

In the accompanying drawing:

Fig. 1 is a side elevation of this latch and an approved form of keeper associated therewith applied to a door and door frame.

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

Figs. 3 and 4 are vertical sections taken on the correspondingly numbered lines in Fig. 1.

Fig. 5 is a perspective view of the yoke forming part of the latch.

This application is a division of United States patent application, Serial No. 155,060, filed July 22, 1937.

In the following description similar characters of reference indicate like parts in the several figures of the drawing:

The numeral 10 represents the stationary part or member of a building and 11 the movable part or member of the same, which members may consist of a door frame and a screen door, respectively, although this fastening may be advantageously employed in other installations where like conditions occur.

In the form of the keeper shown in Figs. 1 and 2, the numeral 212 represents a coupling eye which may consist of one or more turns of a piece of wire the opposite ends of which connect with the outer ends of spring arms 131 arranged transversely of the frame 10. The inner ends of these arms connect with a longitudinal loop-shaped base or foot 141 which engages with the adjacent surface of the frame 10. This base or foot is secured to the frame by means which permit of adjusting the eye 212 and parts connected therewith lengthwise of the latch with which it co-operates, the means for this purpose consisting preferably of a clamping loop 142 engaging the outer side of the foot or base 141, a plate-shaped clip 221 engaging the outer side of the clamping loop 142, and a fastening screw 211 passing through the plate 221, clamping loop 142 and base 141 into the frame 10. Upon loosening the screw 211 the coupling eye 212 and associated parts may be adjusted lengthwise of the latch and after such adjustment has been effected, tightening of the screw 211 will hold these parts in place on the frame 10. The eyes 212, arms 131 and base or foot 141 are preferably constructed from a single piece of resilient wire.

In its general construction the latch comprises a yoke pivotally mounted on the door 11 and a catch adjustably connected with the yoke and detachably connected with the keeper.

The catch includes a longitudinal shank or rod 23 provided at its front end with a hook 24 adapted to engage the eye 212 of the keeper while its rear end is provided with an eye 25.

The yoke consists of two longitudinal bars 261, 271 arranged along opposite sides of the shank or rod 23, a bow or turn 28 connecting the rear ends of said bars and receiving the eye 30 of a pivot which has a screw 31 entering the adjacent part of the door 11, and a guide eye arranged on the front part of this yoke and consisting of a transverse loop 291 extending transversely from the front end of the yoke bar 271 around the bottom, top and one lateral side of the catch shank and a lug 292 projecting inwardly from the front end of the other bar 261 across the other lateral side of the catch shank in line with the loop 291 and thereby completing the guide eye which is slidable lengthwise of the catch shank.

The yoke and catch when free are capable of sliding lengthwise relative to one another so as to permit of engaging the hook 24 with the keeper eye 212 and disengaging the same therefrom easily and after such adjustment has been effected the yoke and catch are rigidly connected so as to press the catch eye 25 against one side of the yoke bars by means of a clamping plate 321 engaging the opposite side of the yoke bars, and a clamping screw 351 passing through the catch eye 25 and through the longitudinal slot between the yoke bars 261, 271 and engaging its head with said catch eye and its threaded end with a clamping plate 321 bearing against the opposite side of said yoke bars, as best shown in Fig. 3.

Upon loosening the damping screw 351 the yoke and catch may be moved lengthwise on each other for lengthening or shortening the latch the requisite extent and after such adjustment has been effected tightening of the screw 351 will hold the several parts in their proper relative position.

For the purpose of preventing the yoke and

catch rod of the latch from sliding lengthwise relative to each other in the event that the screw **351** has not been tightened sufficiently the eye **25** and the outer side of the bars **261**, **271** may be provided with co-operating serrations **262** and **263** and the opposite side of the yoke bars **261**, **271** and the clamping plate **321** may be provided with similar co-operating serrations **264**, **265**, as best shown in Figs. 1, 2 and 5.

This fastening is not only very simple and inexpensive in construction but the same is also neat in appearance and capable of being readily adjusted to properly fit the parts which the same is adapted to detachably connect.

I claim as my invention:

1. A fastening for detachably connecting two relatively movable parts, including a latch having a longitudinal rod, a coupling hook arranged on the front end of said rod and adapted to engage a keeper arranged on one of said relatively movable parts, a yoke having longitudinal bars arranged along said rod, a loop arranged on the front ends of said bars and embracing said rod, a bow connecting the rear ends of said bars and pivotally mounted on the other of said relatively movable parts, a connecting eye arranged on the rear end of said rod and engaging one side of said bars, a clamping plate engaging the opposite side of said bars, and a bolt connecting said plate and connecting eye.

2. A fastening for detachably connecting two relatively movable parts, including a latch having a longitudinal rod, a coupling hook arranged on the front end of said rod and adapted to engage a keeper arranged on one of said relatively movable parts, a yoke having longitudinal bars arranged along said rod, a loop arranged on the front ends of said bars and embracing said rod, a bow connecting the rear ends of said bars and pivotally mounted on the other of said relatively movable parts, a connecting eye arranged on the rear end of said rod and engaging one side of said bars, a clamping plate engaging the opposite side of said bars, a bolt connecting said plate and connecting eye, and the co-operating surfaces of said bars, connecting eye and plate being serrated.

3. A fastening for detachably connecting two relatively movable members comprising a latch including a catch and a yoke, said catch consisting of a longitudinal rod having a hook at its front end adapted to engage with a keeper on one of said members and a connecting eye at its rear end, and said yoke consisting of two longitudinal bars arranged above and below, respectively of said catch rod and engaging said connecting eye, a bow connecting the rear ends of said bars and adapted to be pivotally connected with the other of said members, and a guide eye arranged at the front end of said yoke and receiving said catch rod and consisting of a loop extending transversely from the front end of one of the yoke bars around the catch rod and a lug projecting inwardly from the front end of the other catch bar in line with said loop, and means for connecting said connecting eye and yoke bars and permitting longitudinal adjustment of said yoke and catch relatively to one another.

RICHARD W. HEMPEL.