Aug. 26, 1930. F. P. REIDHAAR 1,773,751

WINDOW FASTENER

Filed Aug. 27, 1928

Fig. 1.

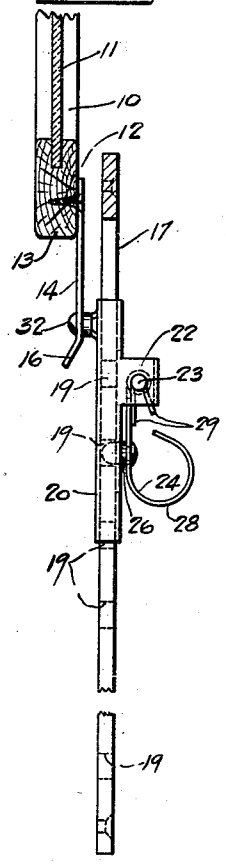
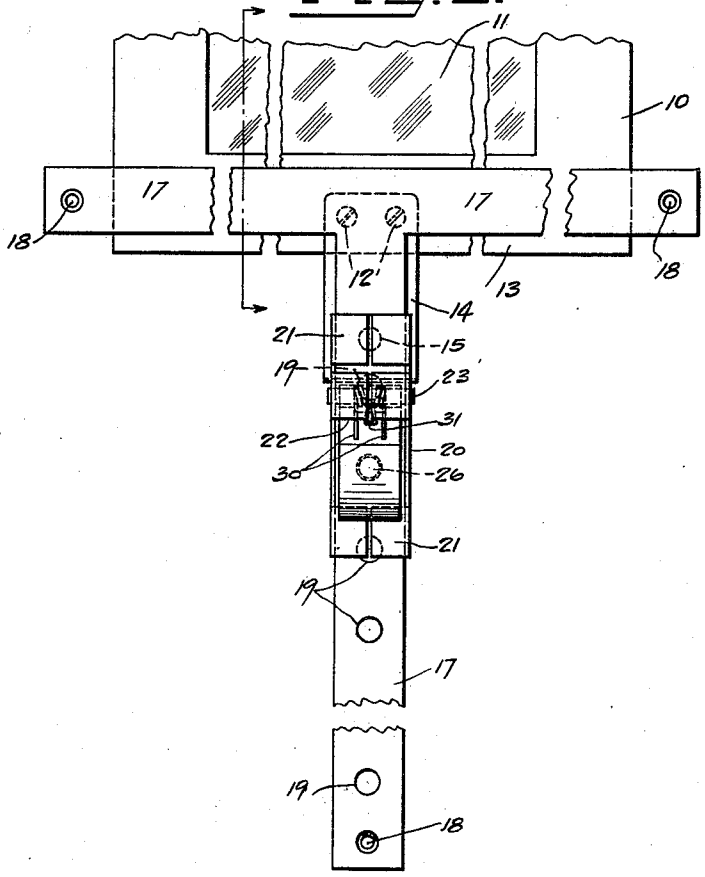


Fig. 2.



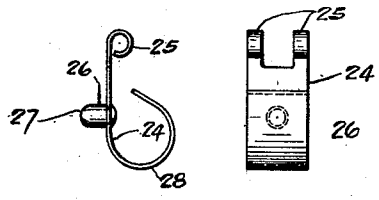


Fig. 3. Fig. 4.

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BY

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UNITED STATES PATENT OFFICE

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WINDOW FASTENER

Application filed August 27, 1928. Serial No. 302,425.

My invention contemplates a new and novel means for fastening windows, doors and the like and particularly for windows in vehicle bodies.

Among the objects of my invention is to provide a window fastening device which may be operated with ease and which is adapted to hold the window entirely closed, all the way open or in intermediate positions.

Another object of my invention is the provision of a device of this type which is simple, sturdy and not likely to get out of order.

Further objects and advantages incident to my invention will be apparent from the following description and accompanying drawings, of which:

Fig. 1 is a side view partially in cross-section of my fastening device in conjunction with a window;

Fig. 2 is a front elevational view of the device shown in Fig. 1;

Fig. 3 is a side view of a part of the device shown in Figs. 1 and 2; and

Fig. 4 is a front view of the part shown in Fig. 3.

Referring more particularly to Fig. 1, reference character 10 designates a window frame which supports a pane of glass 11. Frame 10 is slidably mounted in the usual way in suitable guides which permit vertical movement of the frame. Attached by means of screws 12 to the lower horizontal member 13 of frame 10 is a vertically extending metal arm 14. An aperture 15 is provided in arm 14 near its lower end and immediately below the aperture the arm is bent at an angle to the vertical as is indicated at 16.

A fixed T-shaped guide member 17 is secured to the door or side of the vehicle by screws which pass through apertures 18. The horizontal branch of member 17 is of sufficient length to extend beyond the frame 10 so that the screws holding member 17 will not interfere with the vertical movement of the frame. The vertical branch of member 17 is provided with a number of apertures 19 spaced a suitable distance apart, as will appear later.

Slidably mounted on the vertical branch of guide member 17 is a sleeve 20. Sleeve 20 is made of a single piece of metal so formed as to have solid back and sides. The front is not solid but comprises two pairs of arms 21, one pair at each end, which retain the sleeve on guide 17. Sleeve 20 also comprises a pair of forwardly extending arms 22 which are bent so that their ends substantially meet and lie in the same plane. A pin 23 passes through and is supported by arms 22.

On pin 23 is pivotally mounted a latch 24, the form of which is clearly shown in Figs. 3 and 4. One end of latch 24 is partially cut away leaving two arms 25 which are bent to a radius substantially that of pin 23. A projection 26 is affixed to the straight, more or less central part of latch 24. Projection 26 has a diameter slightly less than that of apertures 19 in guide 17. The end of projection 26 is rounded as is clearly shown at 27 in Fig. 3. The other end of latch 24 is formed in the shape of a hook 28 which is adapted to be engaged by the operator's finger.

Mounted on pin 23 between arms 25 of latch 24 is a coil spring 29. The ends 30 of spring 29 bear against latch 24 while the central extended part 31 of the spring bears against the bent-over portion of arms 22. A stud 32, having a diameter slightly less than that of aperture 15 in arm 14, is affixed to the back of sleeve 20. The end of stud 32 is rounded, as was the end of projection 26.

When incorporating my device into a vehicle body assembly the window frame 10 with arm 14 attached is placed in its guides and the guide member 17 secured to the body by screws passing through holes 18. Frame 10 is then attached to sleeve 20 by simply lowering the frame by hand until the lower end of arm 14 comes in contact with stud 32. The bent portion 16 of the arm will pass over the stud, the resilience of arm 14 permitting this deflection, and stud 32 will pass through aperture 15 in the arm. Frame 10 is now securely attached to sleeve 20 but may be readily detached for such purposes as to remove the frame to replace a broken pane of glass by deflecting arm 14 by hand or with a screw-driver, or other similar implement, a sufficient distance to permit stud 32 to slip out of aperture 15.

My device operates to regulate the position of the window as follows:

In Figs. 1 and 2 the window is shown in a partially opened position. If it is desired to close the window the finger is placed in hook 28 of latch 24 and the latch is moved about pin 23, against the resistance of spring 29 a sufficient distance to disengage projection 26 from the aperture 19. Sleeve 20 may now be moved upwardly along guide 17, raising window frame 10 with it, until projection 26 engages the upper most aperture 19. The window is now in its fully closed position and will remain so until altered by the operator. To open the window, projection 26 is disengaged and sleeve 20 slipped down along guide 17 until the window is opened the desired amount whereupon projection 26 is allowed to engage one of the apertures 19 provided in guide 17 for that purpose.

Having thus described my invention, what I claim is:

1. A window fastener comprising a T-shaped guide member provided with a series of apertures in the vertical leg thereof, a sleeve slidably mounted on said vertical leg, means for connecting said sleeve to a window frame, the horizontal portion of said T-shaped guide member extending beyond the sides of said window frame, and a projection mounted on said sleeve operable to engage any one of said apertures.

2. A window fastener comprising a T-shaped guide member provided with a series of apertures in the vertical leg thereof, a sleeve slidably mounted on said vertical leg, means for connecting said sleeve to a window frame, the horizontal portion of said T-shaped guide member extending beyond the sides of said window frame, a projection on said sleeve operable to engage any one of said apertures and a spring arranged to hold said projection in engagement.

3. A window fastener comprising a T-shaped guide member provided with a series of apertures in the vertical leg thereof, a sleeve slidably mounted on said vertical leg, means for connecting said sleeve to a window frame, the horizontal portion of said T-shaped guide member extending beyond the sides of said window frame, a latch pivotally mounted on said sleeve and a projection mounted on said latch and operable to engage any one of said apertures.

4. A window fastener comprising a T-shaped guide member provided with a series of apertures in the vertical leg thereof, a sleeve slidably mounted on said vertical leg, means for connecting said sleeve to a window frame, the horizontal portion of said T-shaped guide member extending beyond the sides of said window frame, a latch pivotally mounted on said sleeve, a projection mounted on said latch and a spring bearing on said latch to normally engage said projection with any one of said apertures.

5. A window fastener comprising a T-shaped guide member provided with a series of apertures in the vertical leg thereof, a sleeve slidably mounted on said vertical leg, means for connecting said sleeve to a window frame, the horizontal portion of said T-shaped guide member extending beyond the sides of said window frame, a latch pivotally mounted on said sleeve, a spring bearing on said latch to normally engage said projection with any one of said apertures and means to disengage said projection from said aperture.

6. A window fastener comprising a T-shaped guide member provided with a series of apertures in the vertical leg thereof, a sleeve slidably mounted on said vertical leg, means for connecting said sleeve to a window frame, the horizontal portion of said T-shaped guide member extending beyond the sides of said window frame, a latch pivotally mounted on said sleeve, a spring bearing on said latch to normally engage said projection with any one of said apertures and manually operable means to disengage said projection from said aperture.

7. A window fastener comprising a T-shaped guide member, a sleeve mounted on the guide member, means to connect said sleeve to a window frame, the horizontal portion of said T-shaped guide member extending beyond the sides of said window frame and means to retain said sleeve in various positions on the vertical leg of the guide member.

8. A window fastener comprising a guide member provided with a series of apertures, a sleeve slidably mounted on said guide member, an arm secured at one end to a window frame and provided with an aperture near its other end, a projection on the back of said sleeve engaging said aperture in said arm and a second projection on said sleeve operable to engage any one of said apertures in said guide member.

9. A window fastener comprising a guide member provided with a series of apertures, a sleeve slidably mounted on said guide member, an arm secured at one end to a window frame and provided with an aperture near its other end and bent away from said sleeve below said aperture, a projection on the back of said sleeve engaging said aperture in said arm and a second projection on said sleeve operable to engage any one of said apertures in said guide member.

10. A window fastener comprising a T-shaped guide member provided with a series of apertures in the vertical leg thereof, a sleeve slidably mounted on said vertical leg, an arm secured at one end to a window frame and provided with an aperture near its other end, a projection on the back of said sleeve en-

gaging said aperture in said arm, the horizontal portion of said T-shaped guide member extending beyond the sides of said window frame and a second projection on said sleeve operable to engage any one of said apertures in said guide member.

11. A window fastener comprising a T-shaped guide member provided with a series of apertures in the vertical leg thereof, a sleeve slidably mounted on said vertical leg, an arm secured at one end to a window frame and provided with an aperture near its other end and bent away from said sleeve below said aperture, a projection on the back of said sleeve engaging said aperture in said arm, the horizontal portion of said T-shaped guide member extending beyond the sides of said window frame and a second projection on said sleeve operable to engage any one of said apertures in said guide member.

In testimony whereof I have affixed my signature.

FRANK PAUL REIDHAAR.