July 24, 1934. A. H. SCHAFFERT 1,967,481

UNDERSCREEN WINDOW OPERATOR

Filed June 6, 1932

Fig. 1.

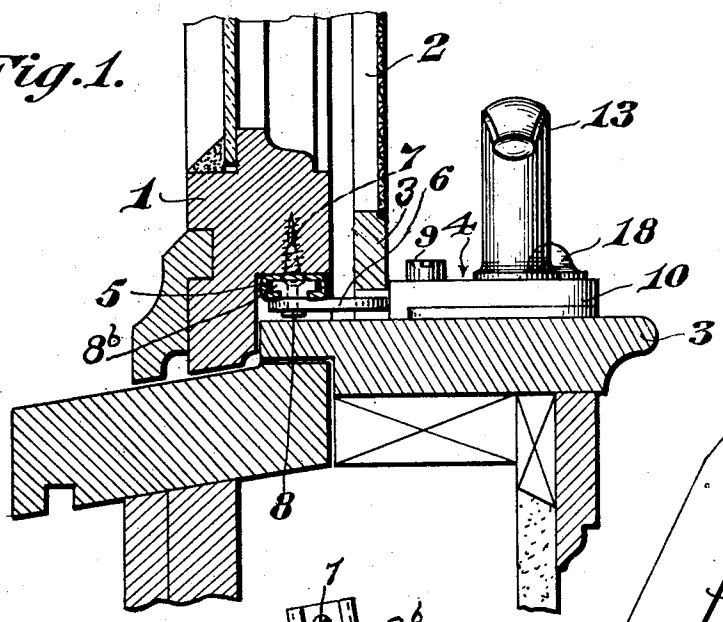


Fig. 3.

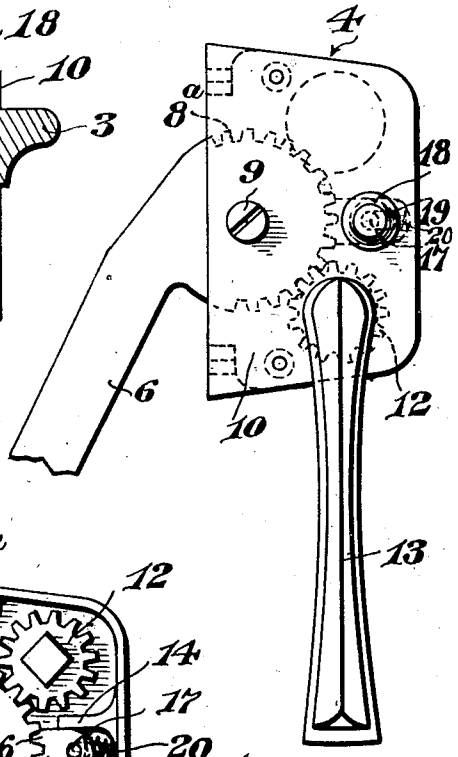


Fig. 2.

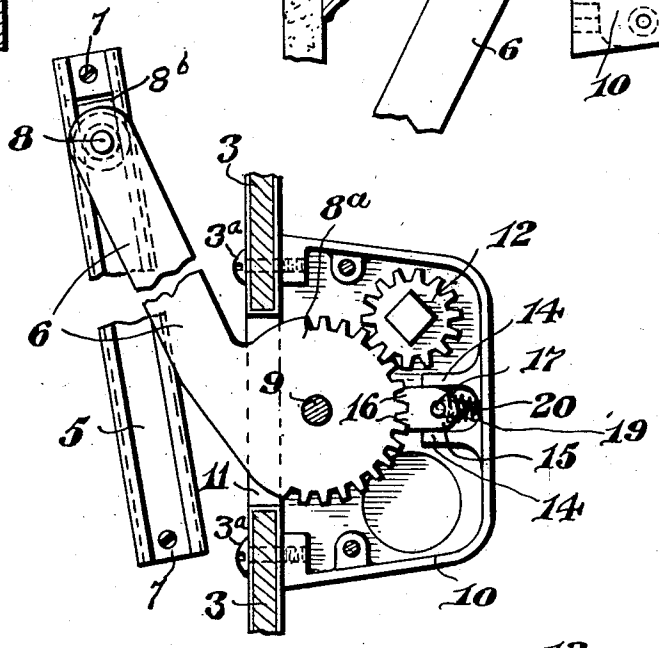
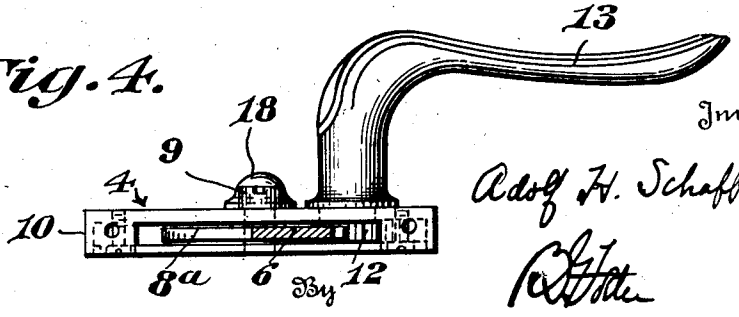


Fig. 4.



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UNITED STATES PATENT OFFICE

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UNDERSCREEN WINDOW OPERATOR

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Application June 6, 1932, Serial No. 615,718

2 Claims. (Cl. 74—528)

This invention relates to new and useful improvements in underscreen window operators.

It is the principal object of my invention to provide in an underscreen window operator, novel means of an effective character for firmly holding the window sash in an adjusted position against movement by the wind or other forces.

In the accompanying drawing illustrating a preferred form of my invention,

Figure 1 is a view of a screen and window assembly containing my underscreen adjustably locked window operator.

Figure 2 is a bottom view of the window operating and locking mechanism, with the cover plate removed.

Figure 3 is a top plan view of the window operator, showing the button for shifting the locking pawl.

Figure 4 is a side view of the same.

Referring to the accompanying drawing, the numeral 1 designates the bottom rail of a window sash that is hingedly secured for outward movement in front of a stationary screen 2.

The window 2 is swung outwardly and inwardly by an operator 4 secured to the usual frame bar, designated 3, by screws 3*a*. This operator comprises a channel member 5, a sector arm 6, and handle, gear and pawl mechanism to be described.

The channel member 5 is secured by screws 7 in a rabbet formed within the under surface of the bottom rail 1 of the window sash. Slidable in this channel member 5 is a runner 8*b* connected by a hinge pin 8 to the outer end of the arm 6. The latter terminates at its inner end in a toothed sector 8*a* that is free to turn upon a pivot stud 9 within a case 10.

The arm 6 projects out of the case 10 through a fly-tight opening 11 provided in the screen 2.

The sector 8*a* is engaged and turned by a gear 12 fast on the squared portion of a handle 13 that is located outside the case.

It is the particular object of this invention to lock the window 1 against movement in any of a plurality of adjusted positions. To this end I have formed on the inner surface of the casing at one side of the gear 12, two straight parallel guide walls 14 that extend toward the sector 8*a* and provide a longitudinal guideway for a pawl 15.

The pawl 15 comprises a slidable member having a free longitudinal movement between the guide walls 14. This pawl also has a rounded outer end to enter a semicircular recess formed at the outer end of the guideway and has teeth 16 at its inner end.

An operating button 18 on the exterior of the casing 10 has a shank 17 that passes through a slot 19 in the casing and is connected to the pawl 15. The pawl is urged into its locking position by means of a helical spring 20 interposed between the rear wall of the casing and the pawl and having one end fitting in a recess in said pawl.

The teeth 16 of the pawl are off center and enter the interdental spaces of the sector to effectively lock the latter against turning movement in either direction. The pawl 15 may be easily shifted out of locking position with the sector by operating upon the exposed button 18, thus freeing the arm 6 and permitting it to be swung by the handle 13 to any desired position.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim, is

1. In a device of the type described, a casing, an operating arm having a toothed sector portion pivotally secured within the casing, means for turning said sector, a guide on the inner surface of said casing, directed toward the sector, a pawl slidable along said guide, a compression spring between the outer wall of the casing and the outer end of the pawl to press the latter into engagement with the teeth of the sector, said casing formed with a longitudinal slot, and a finger grip member to which the pawl is secured, and movable through said slot, to withdraw the pawl from engagement with the toothed sector.

2. In a device of the type described, a casing, an operating arm having a toothed sector portion pivotally secured within said casing, means for turning said element, two parallel projections on the interior surface of said casing, directed toward the sector, said casing having a longitudinal slot between said projections, a slidable pawl between said projections, two parallel off center teeth on the inner end of said pawl, a compression spring between the outer end of said pawl and the outer wall of the casing between the projections to press said teeth into engagement with the teeth of the sector, and a finger grip element to which the pawl is secured, and movable through said slot, to withdraw the pawl from engagement with the toothed sector.

ADOLF H. SCHAFFERT.