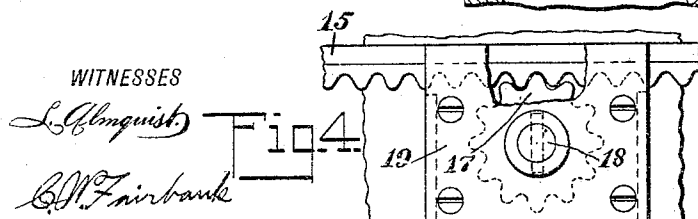
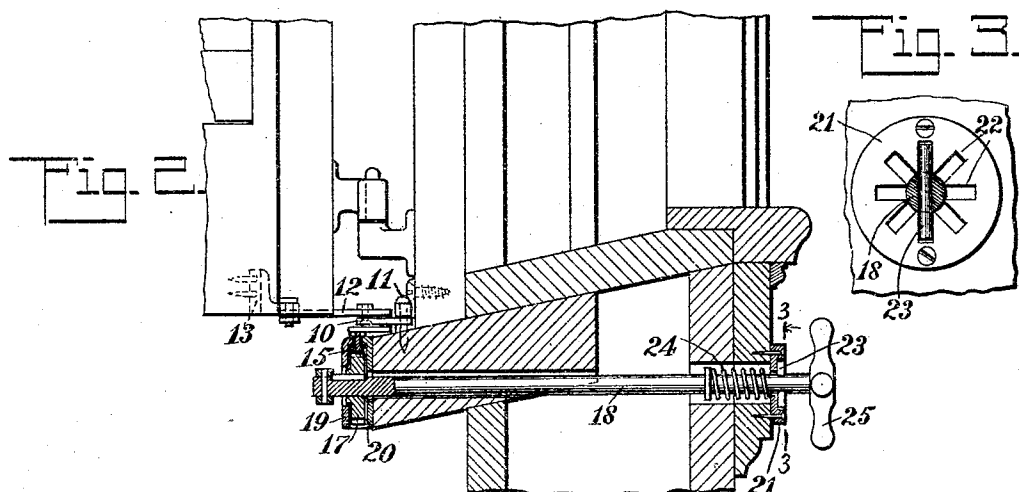
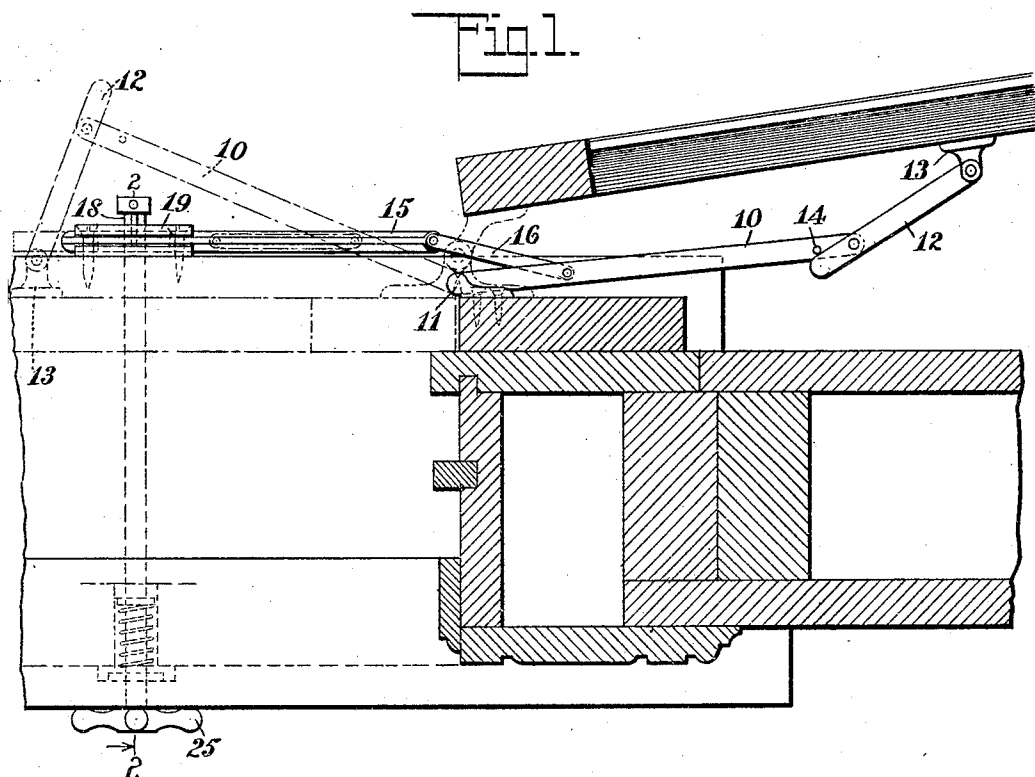


A. WEBER.
SHUTTER OPERATOR.
APPLICATION FILED APR. 21, 1909.

941,899.

Patented Nov. 30, 1909.



WITNESSES

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UNITED STATES PATENT OFFICE.

AUGUST WEBER, OF LONG BRANCH, NEW JERSEY.

SHUTTER-OPERATOR.

941,899.

Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed April 21, 1909. Serial No. 491,272.

To all whom it may concern:

Be it known that I, AUGUST WEBER, a citizen of the United States, and a resident of Long Branch, in the county of Monmouth and State of New Jersey, have invented a new and Improved Shutter-Operator, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in shutter operators, and more particularly to that type of shutter operator illustrated in my prior patent, Number 910,248, issued January 19, 1909.

One object of my present invention is to so construct the device that it may be more easily applied to a window sill and casing, and a further object is to so construct the device that it will operate upon the exterior rather than the interior surface of the blind or shutter.

A further object is to so construct the device that the shutter will be automatically locked in the desired position upon the release of the operating member.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a horizontal section through a portion of a window casing and showing my improved device in plan; Fig. 2 is a transverse section on the line 2—2 of Fig. 1; Fig. 3 is a transverse section on the line 3—3 of Fig. 2; and Fig. 4 is an exterior view of the rack bar operating means, a portion thereof being broken away.

In my prior patent above referred to, I illustrate a shutter operator in which a longitudinally-movable rack bar is carried by the window sill and is operatively connected by suitable links and levers to the shutter to swing the latter upon the longitudinal movement of the rack bar, and having connections with means extending to the inner side of the window casing for moving the bar longitudinally.

In my present construction, I mount the rack bar upon the window sill in such a position that it does not pass through the window casing, and in such a position that the connections between the rack bar and the shutter may engage with the outer surface rather than the inner surface of the latter.

In the specific form illustrated, I provide

a lever 10 secured to a pivot pin 11 carried by the window sill adjacent its outer surface and closely adjacent the hinge of the shutter. When the shutter is opened, as indicated in Fig. 1, the lever extends substantially parallel to the shutter and between the shutter and the side wall of the building. At its outer end the lever is pivotally connected to a link 12, which latter has pivotal connection with a bracket 13 on the adjacent surface of the shutter. This bracket is upon the side of the shutter toward the wall of the building when the shutter is open, and the outer surface of the shutter when the latter is closed. The lever is preferably provided with a lug or stop 14 for engaging with an adjacent end of the link 12 to prevent the two from coming into alinement when the shutter is in its open position.

For operating the lever to swing the shutter, I provide a rack bar 15 mounted to slide in suitable guides upon the outer surface of the window sill and operatively connected to the lever 10 intermediate the ends of the latter by a link 16. As the pivot 11 of the lever 10 is out of alinement with the rack bar 15, it is evident that as said rack bar moves longitudinally, it tends to swing the lever 10 about its pivot. The teeth of the rack bar are upon the under side thereof, and mounted in engagement with said teeth is a pinion 17 rotatable to move the rack bar. This pinion is mounted upon a rotatable rod 18 extending through the window to the inner surface of the latter, and the pinion is held against longitudinal movement by inner and outer plates 19 and 20, which, at the same time, constitute guides for the rack bar. The rod is preferably keyed to the pinion and capable of a short longitudinal movement through the pinion to provide for the locking of the rod and pinion against rotation, and the consequent locking of the shutter in the desired position.

Upon the inner surface of the window casing I preferably provide a plate 21, as indicated particularly in Fig. 3. This plate constitutes a bearing for the rod 18 and is provided with a plurality of radially-disposed slots 22 in its outer surface. The rod 18 is provided with a pin 23 extending there-through, which pin normally lies within two oppositely-disposed slots. Within the casing the rod is provided with a spring 24 normally tending to move the rod lengthwise

and retain the pin in the adjacent slot. The inner end of the rod is provided with a suitable handle 25, by means of which the rod may be pulled lengthwise against the action of the spring 24, so as to bring the pin out of engagement with the plate 21, and the rod may then be rotated to rotate the pinion and move the rack bar. Any movement of the rack bar is accompanied by a corresponding movement of the shutter as the two are connected by the lever 10 and the links 12 and 16. As soon as the handle 25 is released, the spring draws the rod lengthwise to bring the pin into one of the slots in the plate, and thus lock the rod and pinion against rotation in either direction. Thus the shutter may be moved to any desired extent, and as soon as the person releases the handle the shutter automatically becomes locked against further movement or a return movement.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A shutter operator having a longitudinally-movable rack bar adapted to be secured to a window sill, a lever pivoted to the window sill, a link connecting said rack bar and said lever, a link connecting said lever and the outer surface of said shutter, and

means for moving said rack bar longitudinally.

2. A shutter operator having a longitudinally-movable rack bar adapted to be secured to a window sill, a lever pivoted to the window sill adjacent the hinge of the shutter and extending outwardly adjacent the outer surface of said shutter, a link connecting said rack bar and said lever, means for connecting the outer surface of the shutter and said lever, and means for moving said rack bar longitudinally.

3. A shutter operator having a longitudinally-movable rack bar adapted to be secured to a window sill substantially parallel to the plane of the window, a lever pivoted to the window sill and extending outwardly adjacent the outer surface of the shutter, connections between said rack bar and said lever, connections between said lever and said shutter, and a pinion in engagement with said rack bar for moving the latter longitudinally.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUGUST WEBER.

Witnesses:

EDWARD SCHOENTHALER,
JOSEPH CORN.