No. 769,011. PATENTED AUG. 30, 1904.

W. N. PACKER.

COMBINED SASH LIFT AND FASTENER.

APPLICATION FILED APR. 11, 1903. RENEWED MAY 6, 1904.

NO MODEL.

Fig. 1.

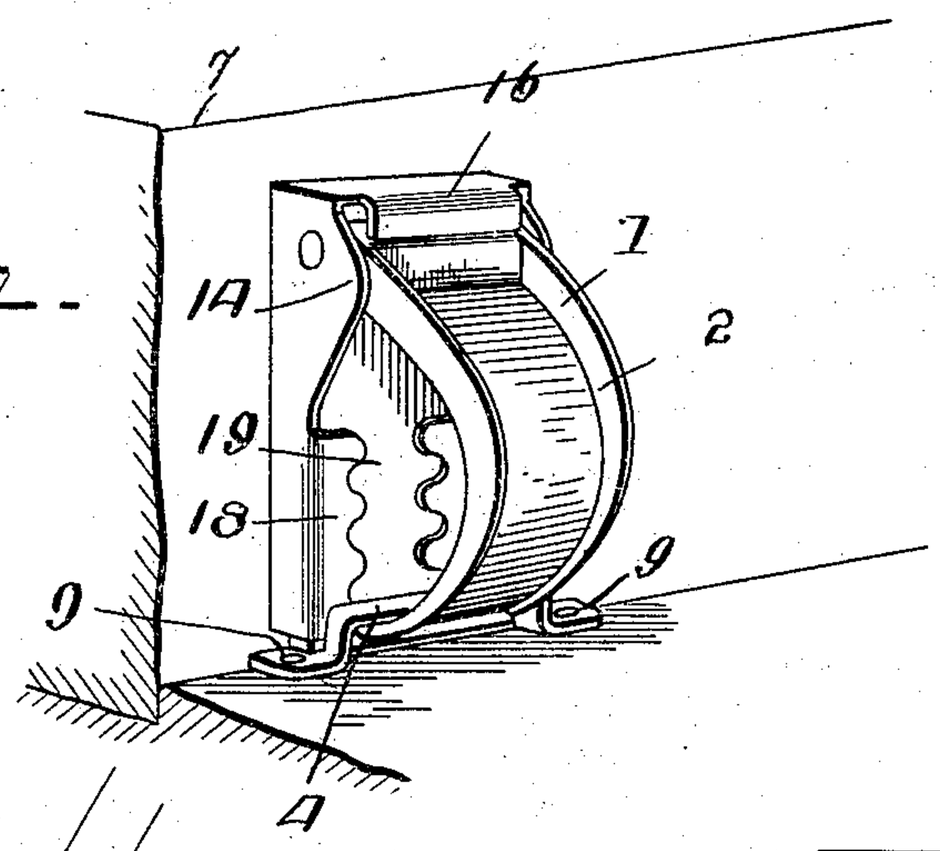


Fig. 2.

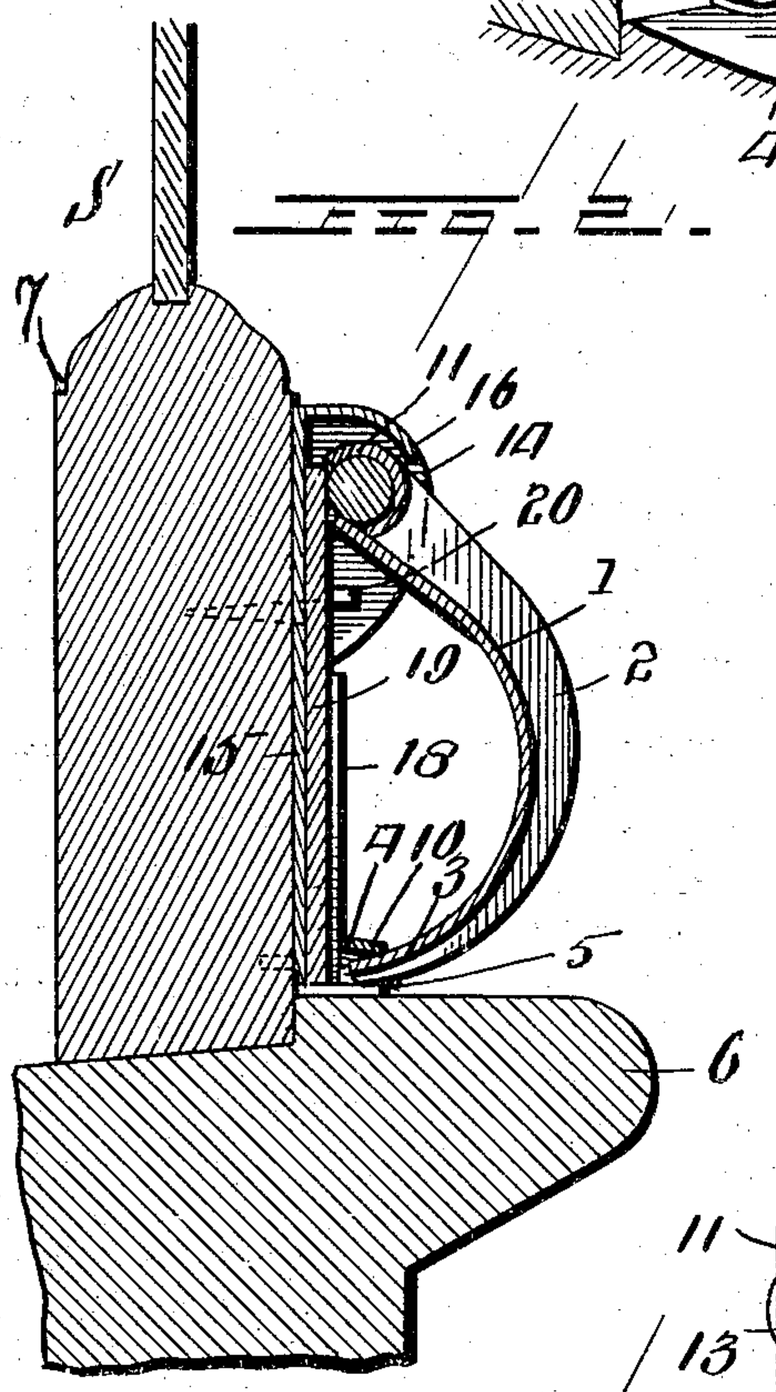


Fig. 3.

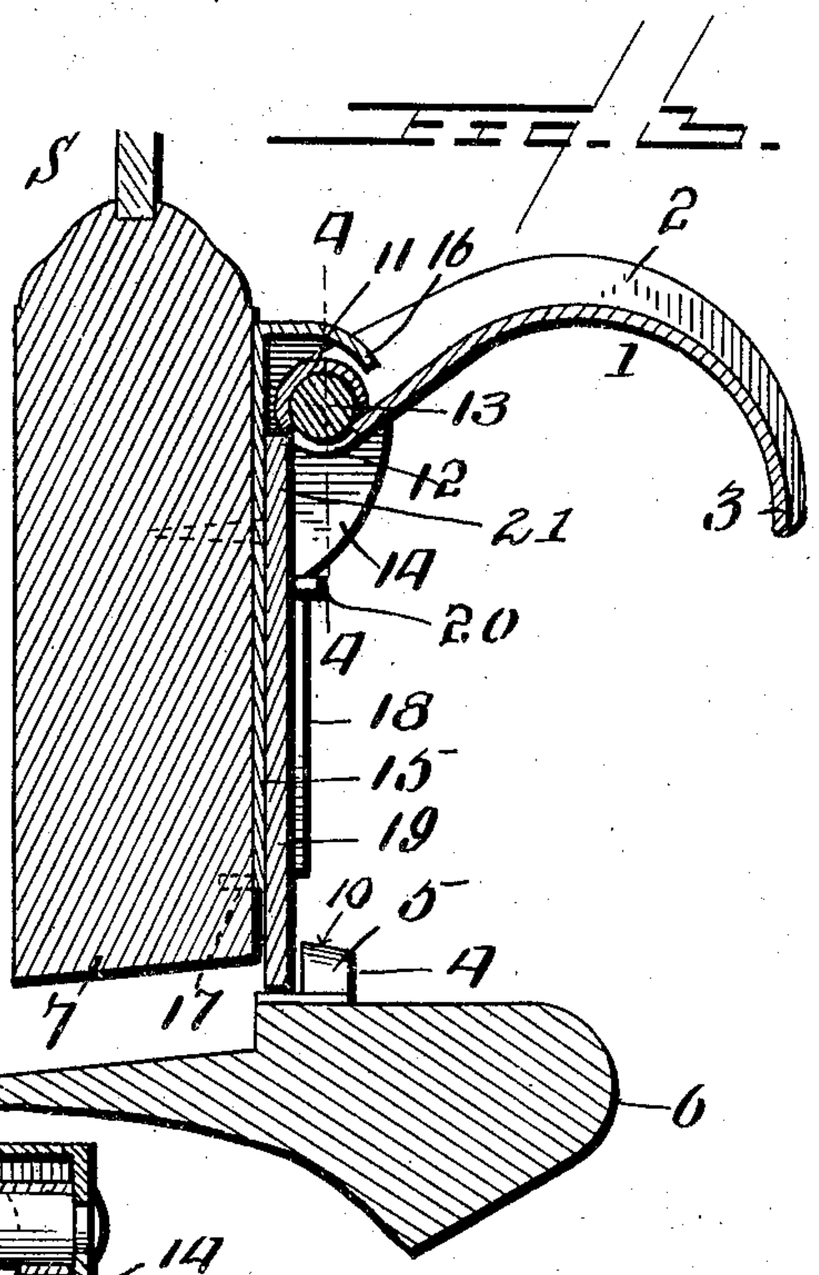
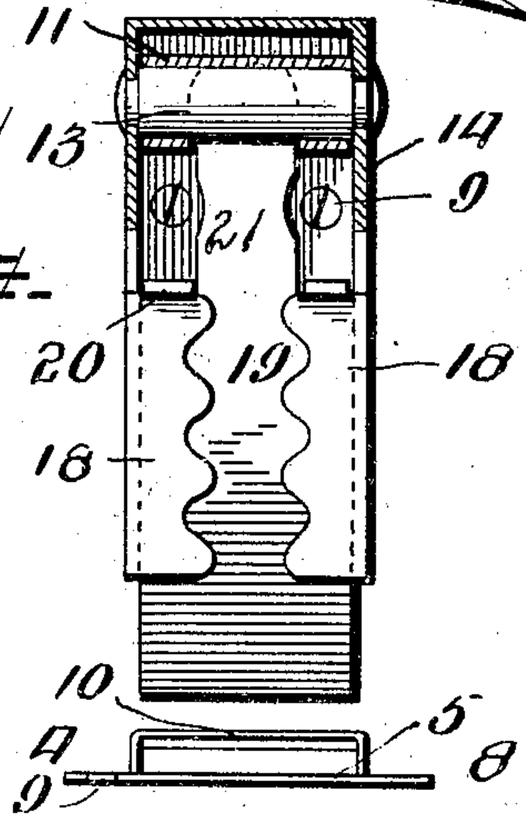


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLARD N. PACKER, OF SHELBY, OHIO, ASSIGNOR TO THE SHELBY SPECIALTY COMPANY, OF SHELBY, OHIO, A CORPORATION OF ARIZONA TERRITORY.

COMBINED SASH LIFT AND FASTENER.

SPECIFICATION forming part of Letters Patent No. 769,011, dated August 30, 1904.

Application filed April 11, 1903. Renewed May 6, 1904. Serial No. 206,641. (No model.)

To all whom it may concern:

Be it known that I, WILLARD N. PACKER, a citizen of the United States, residing at Shelby, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in a Combined Sash Lift and Fastener, of which the following is a specification.

This invention relates to sash lifts and fastenings, and has special reference to an improved device embodying means whereby the same performs the functions of a combined sash lift and fastener.

To this end the invention contemplates a simple, practical, and effective combination sash lift and fastener associated with the lower rail of the sash and the sill of the window and embodying means for permitting of the ready and convenient raising of the sash, as well as providing for the secure and automatic locking thereof to the window sill or frame when the same is lowered to its closed position.

A further object of the invention is to provide a combination device of the character indicated which can be readily made of sheet-metal stampings and which at the same time is light and strong.

Another object is to provide a novel construction of combined lift and fastener wherein by the act of grasping the lift element to raise the sash a powerful leverage is exerted on the sash in the direction of the opening thereof to readily start the same from the sill as the lifting pressure is applied thereto by the finger of the hand.

With these and many other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts, which will hereinafter be more fully described, illustrated, and claimed.

The essential features of the invention involved in the carrying out of the objects indicated are susceptible to modification; but a preferred embodiment of the invention is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a combined sash lift and fastener embodying the present invention and shown applied to the lower rail of a sash and the sill of the window-frame. Fig. 2 is a vertical sectional view of the combination device with the parts in the position which they occupy for locking the sash. Fig. 3 is a similar view showing the parts in the position which they occupy during the employment of the device as the lift for raising the sash. Fig. 4 is a sectional elevation on the line 4 4 of Fig. 3.

Like reference characters designate corresponding parts throughout the several figures of the drawings.

In manufacturing the combination device, while the various elements thereof may be constructed in any suitable manner and of any suitable material, yet it is preferable to form the same from sheet-metal stampings on account of the cheapness, lightness, and strength of the latter; but irrespective of these details in manufacturing the essential features of the invention are always preserved.

The combination device involves in its general organization a main element designated by the numeral 1 and performing the dual function of a finger lift or hook for the sash and a lock-lever for fastening the latter to the sill of a window-frame. This combined lift and lock-lever 1 is preferably in the form of a curved hook to afford a convenient and easy grip for the finger of the hand and is usually provided at its edges with the offstanding longitudinal reinforcing-flanges 2, which impart thereto rigidity and strength, whereby it may effectually withstand the strain imposed thereon in its dual function as a lift and lock element. The curved lever 1 is provided at its free swinging end with a bolt-like extremity forming an engaging nose 3, adapted to be moved into and out of the upstanding open keeper-loop 4 of a keeper member 5, adapted to be screwed or otherwise suitably fastened upon the upper face of the window-sill 6, which sill receives the lower rail 7 of the window-sash S in the usual manner. The said keeper member 5 essentially consists of a base-plate 8, provided with fastener-receiving perforations 9 and formed with the up-

standing keeper-loop 4, which is preferably provided with an inclined top cross-bar 10, the inclination of which is such as to cause a downward wedging action on the sash-rail when the nose 3 of the lever is forced into the loop 4 beneath and against the top cross-bar thereof, as may be plainly seen from Fig. 2 of the drawings. At the end opposite its engaging nose 3 the reinforced or strengthened lever 1 is provided with a cylindrical pivot-sleeve 11, having in one side thereof a shouldered operating-notch 12 and loosely working upon a fixed pivot-pin 13, fixed at its opposite ends in the supporting ears or flanges 14, struck up from opposite side edges of a carrying-plate 15, which is adapted to be held by screws or other suitable fasteners to the outer side of the lower sash-rail 7. The supporting ears or flanges 14 project forwardly from the body of the carrying-plate 15 at and contiguous to the upper end thereof, and at such upper end the said plate is further provided with an integral forwardly and downwardly projected stop-tongue 16, which extends over the outer side of the pivot-sleeve 11 of the lever 1 and the extremity of which is adapted to be engaged by the body portion of said lever contiguous to its pivot when the lever reaches its extreme open position, so as to act solely in the capacity of a finger-engaged lift for the sash, as may be plainly seen from Fig. 3 of the drawings.

To hold the carrying-plate 15 rigid in its applied position to the lower sash-rail 7, the same is preferably provided at its lower corners with the rearwardly-projected holding-spurs 17, which are embedded in the sash-rail, and at its opposite longitudinal side edges the plate 15 is provided with the inturned guiding-flanges 18, forming a slideway for an adjusting-actuator 19 in the form of a sliding plunger-plate, whose edges are engaged beneath the flanges 18. The sliding plunger or adjusting-actuator has a play within the slideway provided therefor of greater extent than the length of the guiding-flanges 18, but is preferably limited in such play by forming the same at its upper edges with the integral outturned stop-lugs 20, adapted to engage with the top edges of the flanges 18. At its upper edge the plunger or plunger-plate 19 is further provided with a dog member 21, whose point is adapted to project into the operating-notch 12 of the sleeve 11 and engage against one of the shoulders of such notch.

When the curved combined lift and lock lever 1 is thrown entirely open, so as to act solely as a lift, as shown in Fig. 3 of the drawings, the shouldered notch 12 engaging against the dog of the actuator or plunger 19 holds the lower end of the latter below the plane of the carrying-plate 15, so that when the sash is moved down to its lowermost closed position the lower end of the actuator 19 strikes against the sill or keeper-plate 8, thereby thrusting the actuator or plunger upwardly and forcibly against one of the shoulders of the notch 12, with the consequence of automatically swinging the lever 1 downwardly and carrying the nose 3 thereof into the keeper-loop 4, thus securely fastening or locking the lower sash in its closed position. When it is desired to open or raise the sash, the lever 1 is grasped by the finger, and by the act of drawing the nose thereof out of the loop 4 the lower end of the pluger is forcibly pressed against the sill, with the consequence of exerting a powerful leverage upon the sash in the direction of opening, with the consequence of effecting an easy raising thereof as the upward pulling pressure is continued on the lever 1.

From the foregoing it is thought that the construction, use, and many advantages of the herein-described combination sash lift and fastener will be readily apparent without further description, and it will also be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a combined sash lift and fastener, the combination with the keeper fitted to the sill, of a combined lift and lock-lever pivotally supported upon the sash-rail and arranged to engage the keeper, and an actuator also carried with the sash and having an operating connection with the lever, said actuator being arranged to automatically move the lever to a locked position by the closing of the sash, and to exert a leverage on the sash in the direction of opening when a lifting pressure is applied to the lever.

2. In a combined sash lift and fastener, the combination of a keeper member fitted to the sill and having an open keeper-loop, of a combined lift and lock-lever in the form of a curved hook pivotally supported at one end upon the sash and having at its other end an engaging nose coöperating with the keeper-loop, and an actuator-plunger slidably mounted upon the sash and having an operative connection at one end with the lever and arranged to have its other end engage the sill when the sash is closed.

3. In a combined sash lift and fastener, the combination with the keeper member fitted to the sill, of a carrying-plate fitted to the sash-rail and provided with a slideway and at its upper end with a stop projection, a pivot-pin supported by the carrying-plate, a curved combined lift and lock-lever having a nose at one end for engagement with the keeper member and at its other end provided with a

notched pivot-sleeve supported by the pin, and a plunger-plate working in the slideway of the carrying-plate and provided with stop elements and also with a dog member coöperating with the notch of said pivot-sleeve, the lower end of said plunger being arranged for engagement with the window-sill.

In testimony whereof I affix my signature in presence of two witnesses.

WILLARD N. PACKER.

Witnesses:
J. C. FISH,
JAS. G. VAN HORN.