(No Model.)

R. H. WHEELER.

SASH HOLDER AND LIFTER.

No. 573,374. Patented Dec. 15, 1896.

Fig. 1.

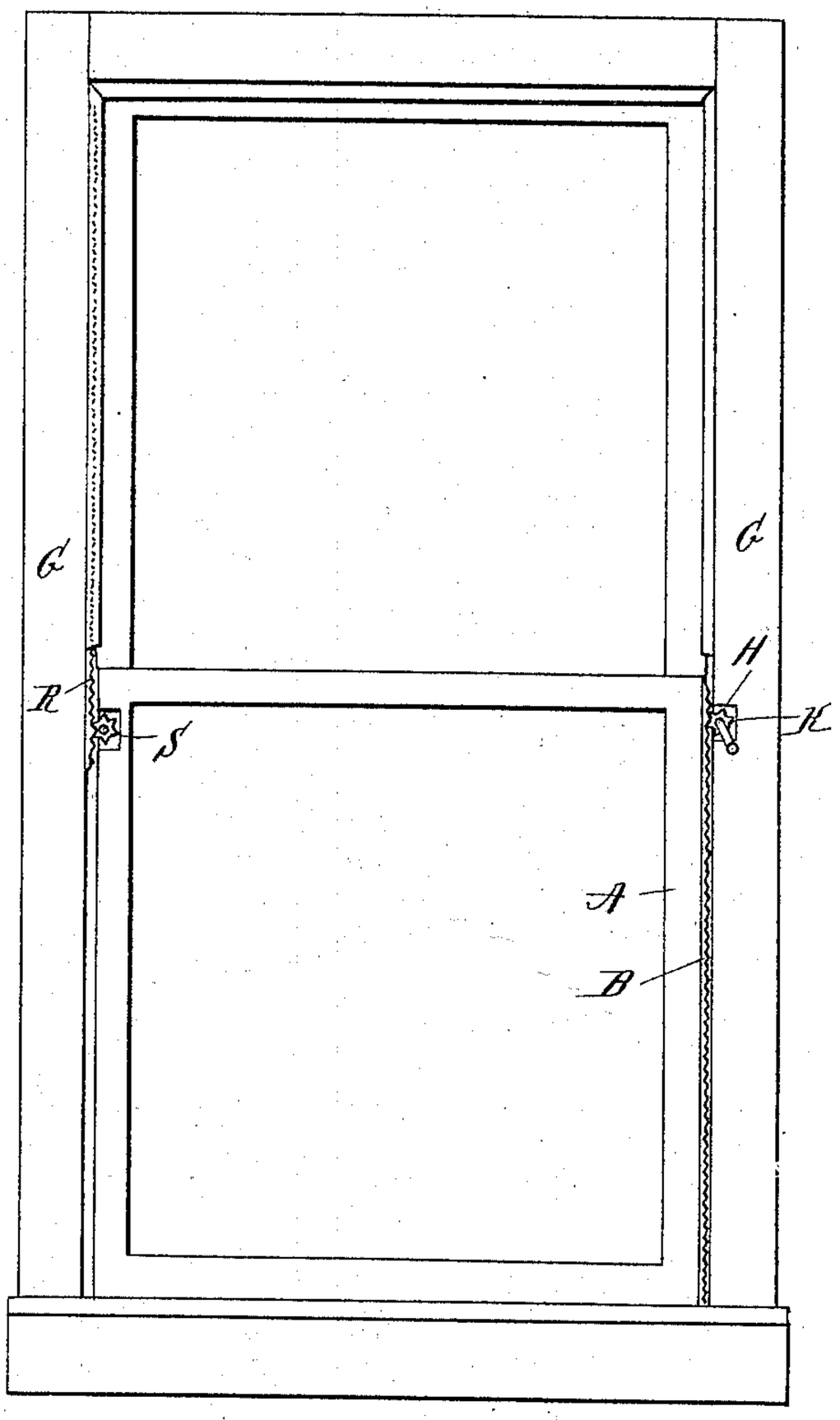
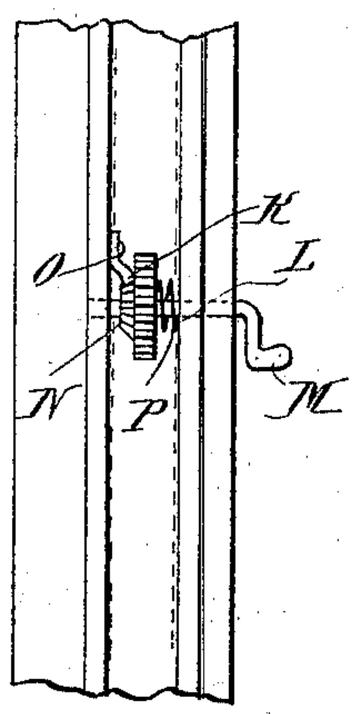


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

RALPH HORACE WHEELER, OF MYSTIC, CONNECTICUT.

SASH HOLDER AND LIFTER.

SPECIFICATION forming part of Letters Patent No. 573,374, dated December 15, 1896.

Application filed June 25, 1895. Serial No. 553,992. (No model.)

To all whom it may concern:

Be it known that I, RALPH HORACE WHEELER, a citizen of the United States, and a resident of Mystic, county of New London, and State of Connecticut, have invented certain new and useful Improvements in Sash Holders and Lifters, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to windows and to means for raising and lowering the same; and the object thereof is to provide a simple and effective device for this purpose which can be applied to any window, and is particularly applicable to car-windows.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, and in which—

Figure 1 represents a frame and a window-sash therein provided with my improvement; and Fig. 2, a side view of a portion of the frame, taken in the direction of the arrow 2 of Fig. 1.

In the practice of my invention I secure to one side of a window-sash A a rack-bar B, formed of metal of the same width as the edge of the sash, and set into the frame G at H is a gear-wheel or pinion K, the shaft L of which extends outwardly and is provided with a crank-arm M.

The inner side of the wheel or pinion K is provided with a ratchet wheel or hub N, formed thereon or secured thereto, and secured to the frame is a pawl O, adapted to engage therewith and prevent the reverse action of the wheel K, and mounted on the shaft L of the wheel K is a spring P, one end of which has a bearing on the frame G and the other upon the wheel.

Secured to the opposite side of the frame G is a rack-bar R, similar to that shown at B, and mounted in the sash A is a pinion S, adapted to contact with and operate in connection with said rack-bar R.

The shaft L is preferably capable of slight longitudinal movement to provide for the disengagement of the pawl O and the ratchet N, and when it is desired to raise the lower sash or window pull the shaft L in and turn the crank M to the right.

The pawl O will prevent the reverse movement of the wheel K and keep the sash in the raised position, and when it is desired to let the window-sash down pull out the shaft L to disengage the ratchet N from the pawl O, when the sash may be easily lowered or will come down by gravity.

The spring P forces the shaft L outward and the wheel K is therefore normally out of contact with the rack-bar; but when the shaft is pulled in and the wheel comes into engagement with the rack-bar the sash can be raised, and when so raised the frictional contact of the pawl O on the pinion K maintains the shaft in this position and the wheel in engagement with the rack-bar.

The shaft L is forced in when the sash is raised as stated.

The rack-bar R and pinion S assist in the even and regular movement of the sash and prevent the cramping or twisting thereof, and it will be seen that I accomplish the object of my invention by means of a simple and effective construction which is easily applied and operated, and at the same time durable and comparatively inexpensive.

Having fully described my invention, I claim and desire to secure by Letters Patent—

The combination with a window-sash and a rack-bar fixed vertically thereon, of a sash lifter and fastener fixed on the window-frame consisting of pinion K provided with a ratchet-hub outwardly-extending crank-shaft L, gear-wheel N, spring P and a pawl O fixed to the frame, all constructed and combined substantially as herein shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 19th day of June, 1895.

RALPH HORACE WHEELER.

Witnesses:
LUCIUS N. GUERNSEY,
HERBERT WARREN RATHBUN.