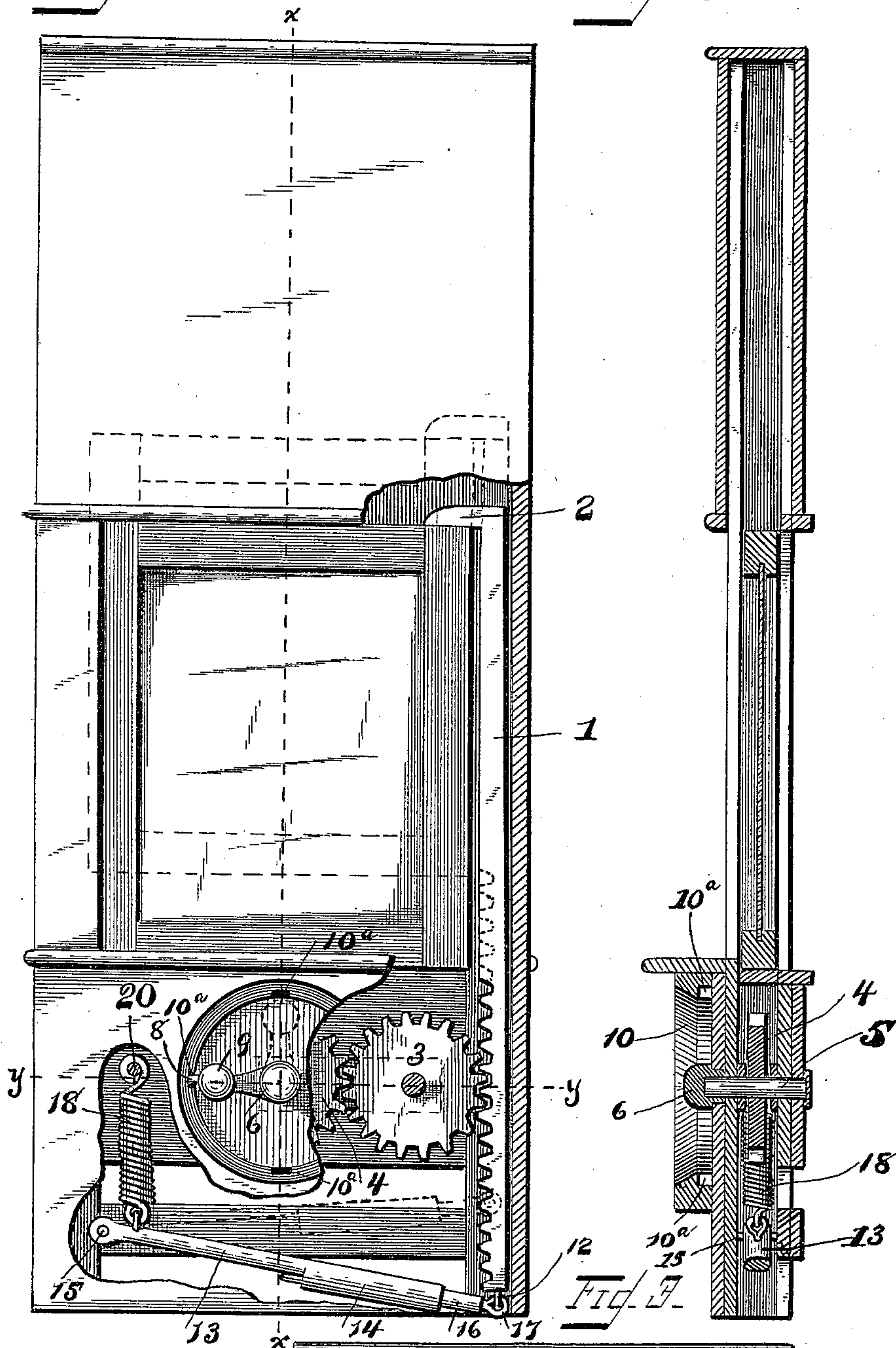


L. S. HANSON.  
SASH FASTENER.

Patented May 18, 1897.

~~SECRET~~

~~Fig 2~~



Witnesses  
 Marcus L. Byng,  
 K. A. Van

Inventor  
Lewis S. Hanson,  
by John Hedderburn  
his Attorney



# UNITED STATES PATENT OFFICE.

LEWIS SAMUEL HANSON, OF HURON, WISCONSIN.

## SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 582,641, dated May 18, 1897.

Application filed June 3, 1896. Serial No. 594,104. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS SAMUEL HANSON, a citizen of the United States, residing at Huron, in the county of Chippewa and State of Wisconsin, have invented certain new and useful Improvements in Sash Fasteners and Lifters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to car-window raisers.

My object is to provide a cheap, powerful, and easily-applied window-raiser which will be simple in construction and manipulation.

The invention consists of those novel features and combinations which appear more fully hereinafter and are pointed out in the claim.

In the accompanying drawings, Figure 1 is a front elevation showing my invention applied to a car-window, certain parts being broken away and shown in dotted lines to better disclose the construction; Fig. 2, a sectional view taken on line X X of Fig. 1; Fig. 3, a like view taken on line Y Y.

A represents the window-sash, which slides in the window-frame B.

A rack-bar 1, working in the window-frame, has its upper end connected to the lower part of the sash by a cross-piece 2.

An idle-gear 3, meshing with the rack 1, also meshes with a second drive-gear 4, which is carried on a spindle 5. This spindle projects through the window-frame below the window-sill and carries on its outer end a crank 6, which is recessed longitudinally to receive a coil-spring 7 and a sliding bolt 8, to which is connected a thumb-knob 9. This sliding bolt is adapted for engagement with four notches 10<sup>a</sup>, located in diametrically opposite sets and cut in the periphery of a circular opening 10, which is made in the lower part of the window-sill 11. The lower end of the rack-bar is provided with an eye 12.

A rod 13, provided with a sleeve 14, is pivoted at 15, while a bolt 16, slidable in said

sleeve, is provided with an eye 17, which interlocks with the eye 12.

A coil-spring 18 has one end connected to an eye 19, which is fastened to the rod 13 near its pivoted connection, and its other end connected to the window frame or casing by a pin or bolt 20. The coil-spring constantly exerts a tendency to draw the rod 13 upward and to raise the rack-bar and lift the window-sash. This tendency is restrained by the crank and catch mechanism, so that the engagement of the latter with any one of the notches 10<sup>a</sup> will hold the window-sash open or closed, as the case may be.

The operation is shown in Fig. 1 and is as follows: When it is desired to raise or lower the window, the crank is turned, whereupon the gears are rotated and the rack moved. If the window is being lowered, its weight acts against the action of the coil-spring, so that little power is required. On the other hand, if the window is being raised the spring materially assists in the operation. The engagement of the spring-pressed sliding bolt in the crank with the notches in the window-sill holds the window at the desired height.

I do not limit myself to the precise construction herein shown and described, but consider myself entitled to all such variations as come within the spirit and scope of the invention.

Having thus described the invention, what is claimed as new is—

In a window-raiser, the combination with a window-sash, of a slidable bar connected to the window-sash, an adjustable bar consisting of two relatively-slidable rods one of which is pivoted and the other connected to the slidable bar, a spring connected to said adjustable bar and adapted to raise the window, and catch mechanism.

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

LEWIS SAMUEL HANSON.

Witnesses:

THOS. O'NEILL,  
W. J. ICKSTEADT.