

No. 804,669.

PATENTED NOV. 14, 1905.

W. E. NORRIS.

SASH LIFT.

APPLICATION FILED MAY 6, 1905.

Fig. 1.

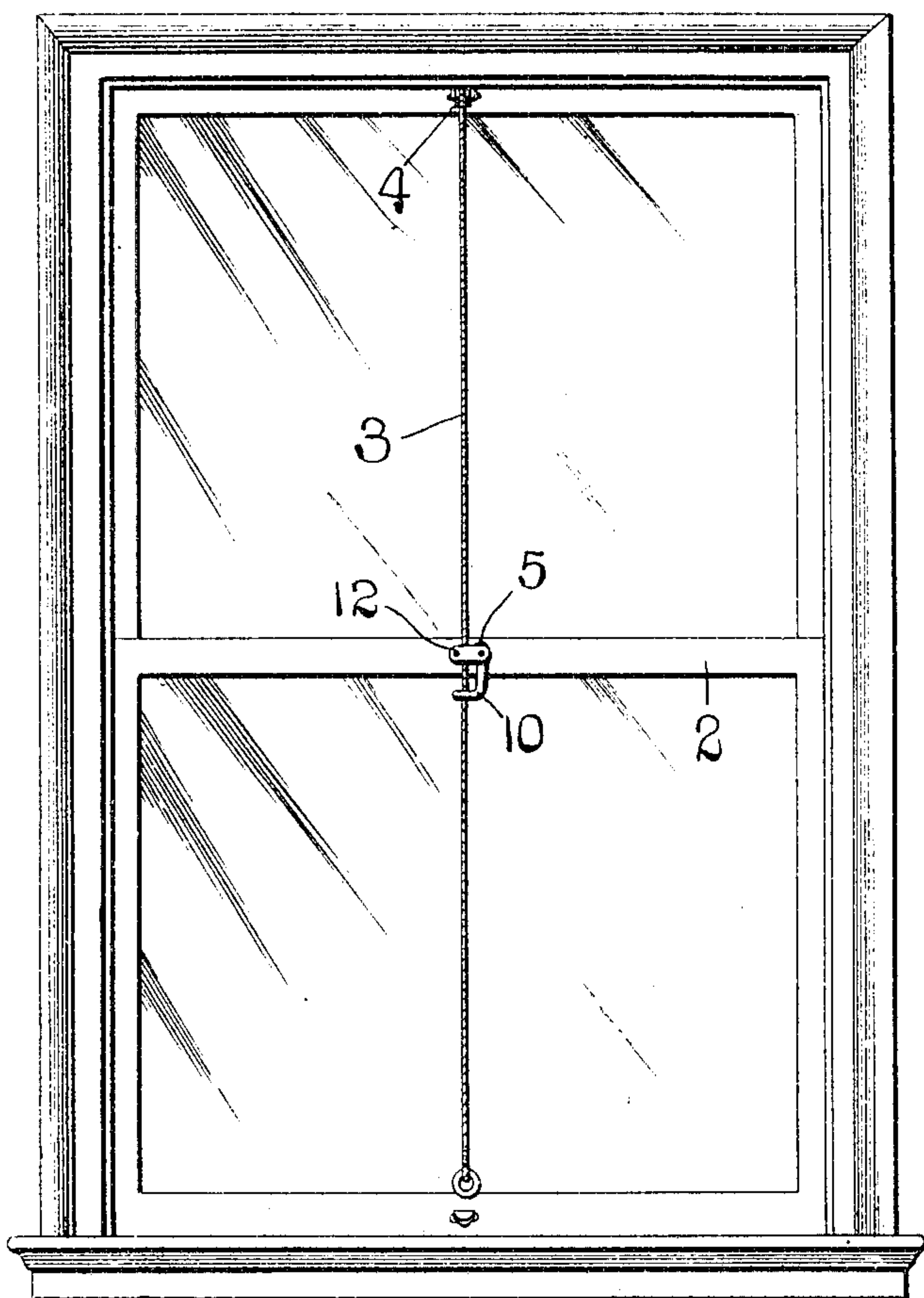
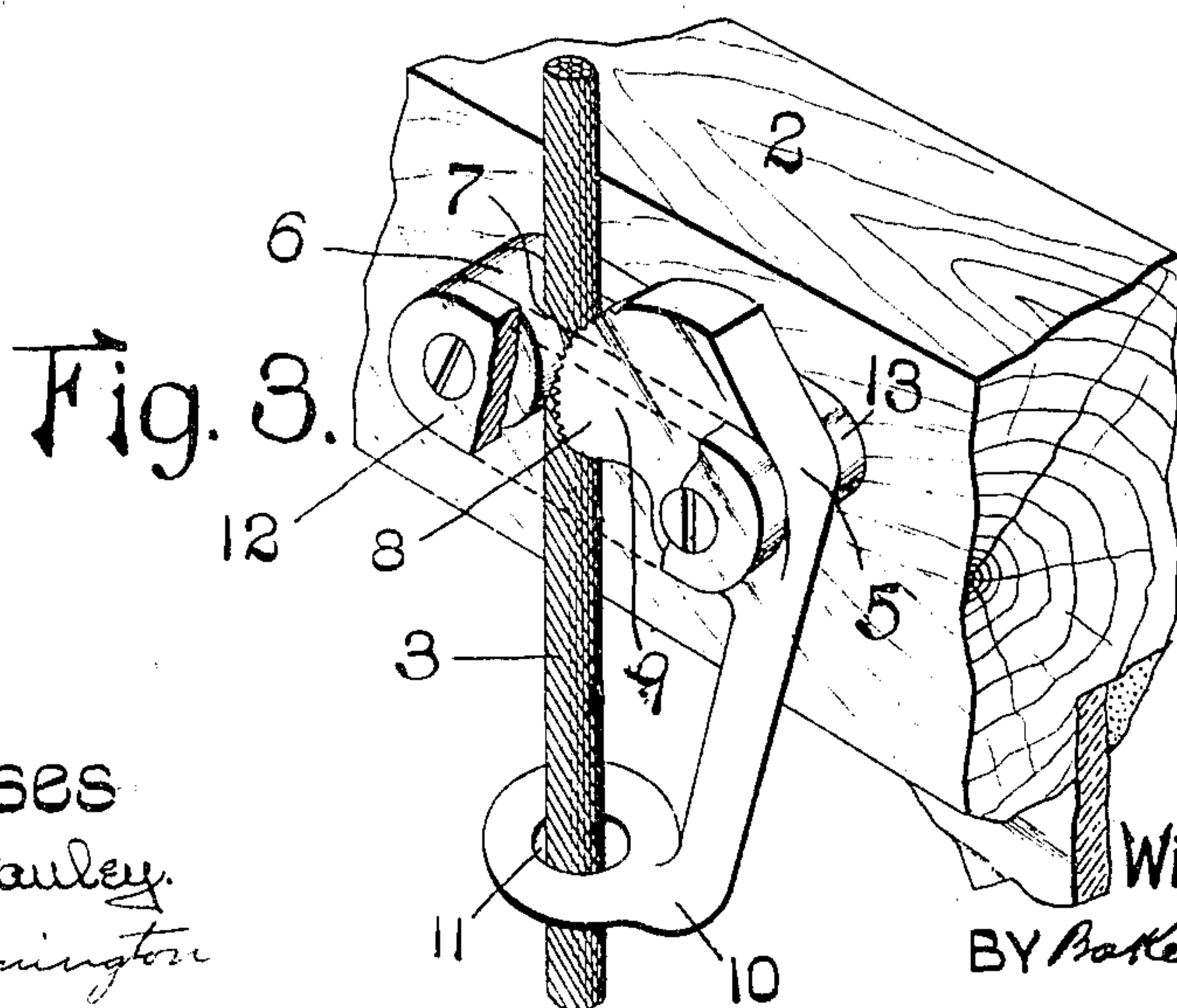
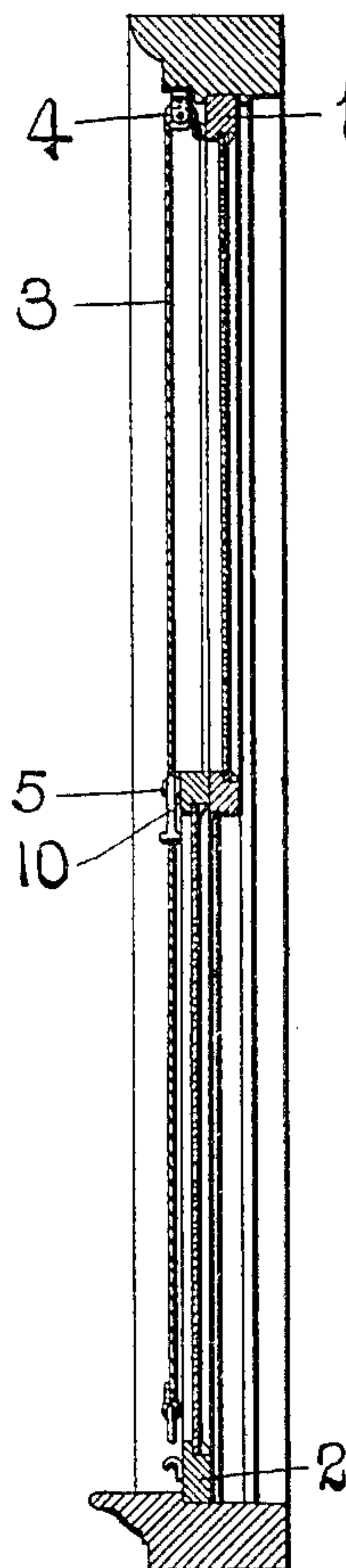


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM E. NORRIS, OF ST. LOUIS, MISSOURI, ASSIGNOR TO AUTOMATIC SASH BALANCE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF THE DISTRICT OF COLUMBIA.

SASH-LIFT.

No. 804,669.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed May 6, 1905. Serial No. 259,229.

To all whom it may concern:

Be it known that I, WILLIAM E. NORRIS, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Sash-Lifts, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevational view of the upper and the lower sash of a window-frame, showing my invention applied. Fig. 2 is a sectional view through the same, and Fig. 3 is a detail perspective view of the cord-clamp.

This invention relates to sash-lifts; and one of the objects thereof is to provide means whereby the two sashes will counterbalance each other, so that the upper sash may be raised and lowered without affecting the disposition of the lower sash.

Other objects and advantages, as well as the novel details of construction, of the invention will be more particularly referred to hereinafter, it being understood that minor changes in the construction, arrangement, and combination of the several parts may be resorted to without departing from the nature and principle of my invention.

Referring to the drawings illustrating the preferred embodiment of my invention, 1 and 2 designate the upper and lower sashes, respectively. The upper sash is connected to one end of a cord 3, which passes over a pulley 4, secured to the window-frame. On the lower sash is arranged a cord grip or clamp 5, which is designed to be operated so as to adjustably grip the cord at any intermediate point for a purpose to be hereinafter described. The clamp is illustrated as comprising a block 6, serving as a rigid jaw for the clamp and having a groove 7, into which the cord is adapted to be forced by the movable or pivoted jaw 8. The pivoted jaw 8 is illustrated as comprising a lever having a cam-head 9, the engaging portion of which is formed with teeth to bite the cord and avoid the tendency of the cord to slip. At the end

of the lever remote from the head is a right-angular projection 10, having an eye 11, through which the cord passes. The movable jaw is held in an operative position adjacent the rigid jaw by the ears 12 and 13, preferably formed rigid on the block 6.

In operation the operator may pull on the cord, and by swinging the movable jaw on its pivot the cord will be released to adjust the relative positions of the respective sashes. As soon as the sashes are properly positioned—that is to say, when the sashes are adjusted one with respect to the other—the free end of the lever of the movable jaw will be moved toward the longitudinal center of the sashes, which movement will cause the teeth of the cam to bite against the cord and force it into the groove of the rigid jaw, whereby the cord will be tightly clamped and any tendency thereof to slip will be obviated.

By employing the arrangement above described the upper sash may be lowered without disturbing the lower sash by releasing the cord and permitting the upper sash to gravitate. If the lower sash is to be raised without disturbing the upper sash, the cord is held rigid and the movable jaw is caused to release the cord, so that the clamp may slide on the cord, and when the lower sash is raised the proper distance the cord will be automatically clamped and the lower sash will remain in the desired position. In view of the fact that the two sashes are of substantially the same weight they will counterbalance each other, so that by raising the lower sash slightly and then clamping the cord the lower sash may be raised without manipulating the cord or clamp in any way, and any further movement of the lower sash without releasing the cord will affect the position of the upper sash in an obvious manner.

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

A sash-lift clamp comprising a block 6 constituting a stationary jaw having a groove therein adapted to embrace snugly the cord, a pivoted jaw member 8 moving independently of the stationary jaw and having a

cam-head 9, the engaging portion of which is formed with teeth to bite the cord and clamp it in the stationary jaw, a right-angular projection depending from said cam-head
5 and having an eye, and ears 12 and 13 connected to the block and to the cam-head 9; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 12th day of April, 1905.

WILLIAM E. NORRIS.

Witnesses:

F. R. CORNWALL,
GEORGE BAKEWELL.