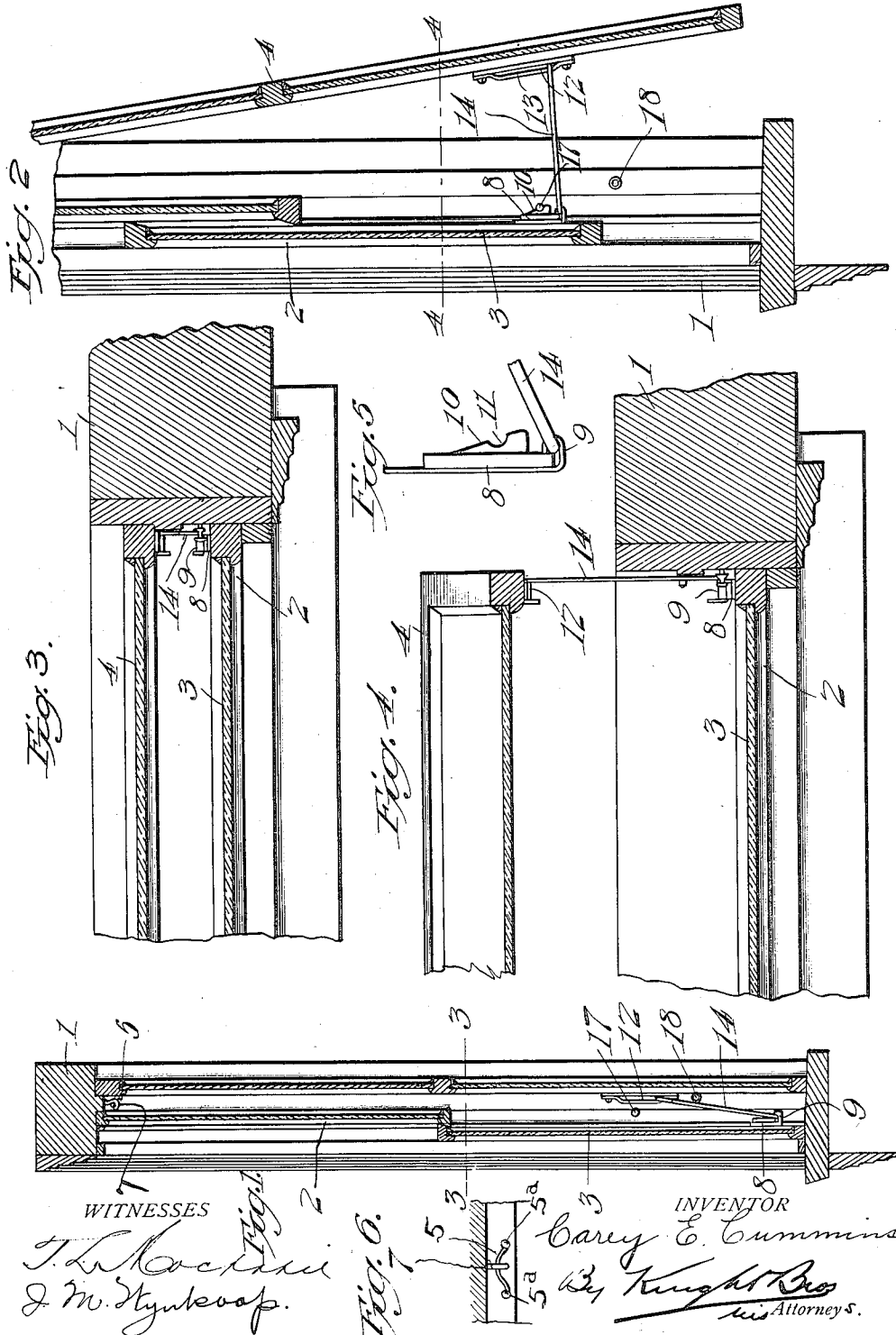


C. E. CUMMINS.
STORM SASH.

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Patented Nov. 26, 1912.

1,045,681.



WITNESSES
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Fig. 6.
Fig. 7.
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CAREY E. CUMMINS, OF ABERDEEN, SOUTH DAKOTA.

STORM-SASH.

1,045,681.

Specification of Letters Patent.

Patented Nov. 26, 1912.

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To all whom it may concern:

Be it known that I, CAREY E. CUMMINS, a citizen of the United States, residing at Aberdeen, county of Brown, State of South Dakota, have invented certain new and useful Improvements in Storm-Sashes, of which the following is a specification.

The object of my invention is to provide hangers for storm sashes or screens, which will allow the sash to be readily opened for ventilating purposes by raising or lowering the lower sash of the inner window. Also to provide convenient hangers for screens and stationary storm windows.

With this and minor objects in view my invention consists of the parts and combinations of parts as will hereinafter be more fully pointed out.

In the drawing:—Figure 1 is a vertical section of a window frame and sash with my invention applied, the storm sash being in a closed position. Fig. 2 is a similar view with the storm sash in an open position. Fig. 3 is a section on line 3—3, Fig. 1. Fig. 4 is a section on line 4—4 Fig. 2. Fig. 5 is a detailed view of the lock for holding the storm sash in a secure and open position, and Fig. 6 is a detailed view of hinge for storm sash, screens, etc.

1 represents a window frame of any approved form, 2 the upper and 3 the lower sash thereof.

4 is the storm sash which is hinged at its upper end to the window frame by means of a hinge member 5 comprising a piece of spring wire with elongated eyes in either end to receive the pins 5^a to secure said member to storm sash. Said spring is made straight but in use is bowed as shown to give proper tension so as to hold said window or screen in proper position. The pin or large headed nail or screw 7 is driven into the blind stop, or if preferred a metal hook may be used, said hook to be screwed to blind stop, from which the window by means of hinge 5 is suspended. This type of hinge enables me to hang sash or screens from within.

8 is a plate or casting adapted to be screwed to the lower window sash 3 at a point near the bottom thereof and is provided at its lower end with an eye 9. 10 is a cam face preferably formed integral with the plate 8 and provided with a notch 11 to be hereinafter referred to.

12 is a casting or plate secured to the storm sash and provided with an elongated

slot 13, in which one end of spreader arm 14 is secured. The other end of the spreader arm 14 is secured in the eye 9 of the plate or casting 8 by means of a dog or locker 8^a which is pivoted to plate 8 by means of a little rivet 8^b in such position that it may be pushed to one side while arm 14 is being put into position in hook 9, it then falls back into position securely locking arm 14 to plate 8. This device enables one to remove the arm 14 or replace the same without removing plate 8.

17 is a pin secured to the window frame and adapted to engage the notch 11 in the cam plate 10, when the lower sash is raised and the storm sash extended as in Fig. 2 thereby locking sash in the position shown.

18 is an anti-friction roller bearing secured to the window frame which is engaged by the spreader arm 14 in the opening and closing movements of the storm sash, said bearing 18 acting as a bearing and as a fulcrum for the spreader arm 14.

The operation is as follows: Upon elevating the lower sash the spreader arm 14 is moved from contact with its bearing 18 and the upper end of the arm moves in the elongated slot 13 on the storm sash until it reaches the upper end of said slot. As soon as the outer end of the spreader arm has reached the end of the elongated slot 13 further movement of the lower sash swings the storm sash open, and the parts are held in this position by reason of the pin 17 engaging the cam face 10 and snapping into the notch 11 of the plate 8. In this position the parts are held against movement or rattling in case of wind. The purpose of the elongated slot 13 is to allow the lower sash to be raised sufficient to permit the loosening of the storm sash in case it may be swollen or frozen to the window frame. To close the storm sash the window sash is forced downward disengaging the pin 17 from the notch 11 and pulling the storm sash into a closed position by means of the spreader arm 14. As the lower sash nears its closed position the spreader arm contacts with the anti-friction bearing 18 which now serves as a fulcrum for the spreader arm (which is made of spring steel) acts as a lever to tightly close the storm sash and hold it in its closed position. The operating parts may be secured to the upper sash if desired.

By the construction shown all metal attachments are on the inside and protected

from the action of the elements, thus avoiding the rusting of the parts and discoloring the painted parts of the building.

What is claimed is:—

- 5 In a storm window, the combination with a sliding sash, of an outside sash, a casting having an elongated slot secured to the outside sash, a spreader one end of which is
10 slidably mounted in said slot, a member secured to the sliding sash having an eye at its lower end in which the other end of the spreader is mounted, and a roller on the window frame acting as a bearing and a ful-

crum for the spreader whereby the spreader acts as a lever to draw the storm sash tightly 15 against the window-frame and lock it in that position, the elongated slot permitting the end of the spreader to move vertically.

The foregoing specification signed at Aberdeen, S. D. this twenty-ninth day of 20 March, 1911.

CAREY E. CUMMINS.

In presence of—

N. R. MURNER,
E. C. RYAN.