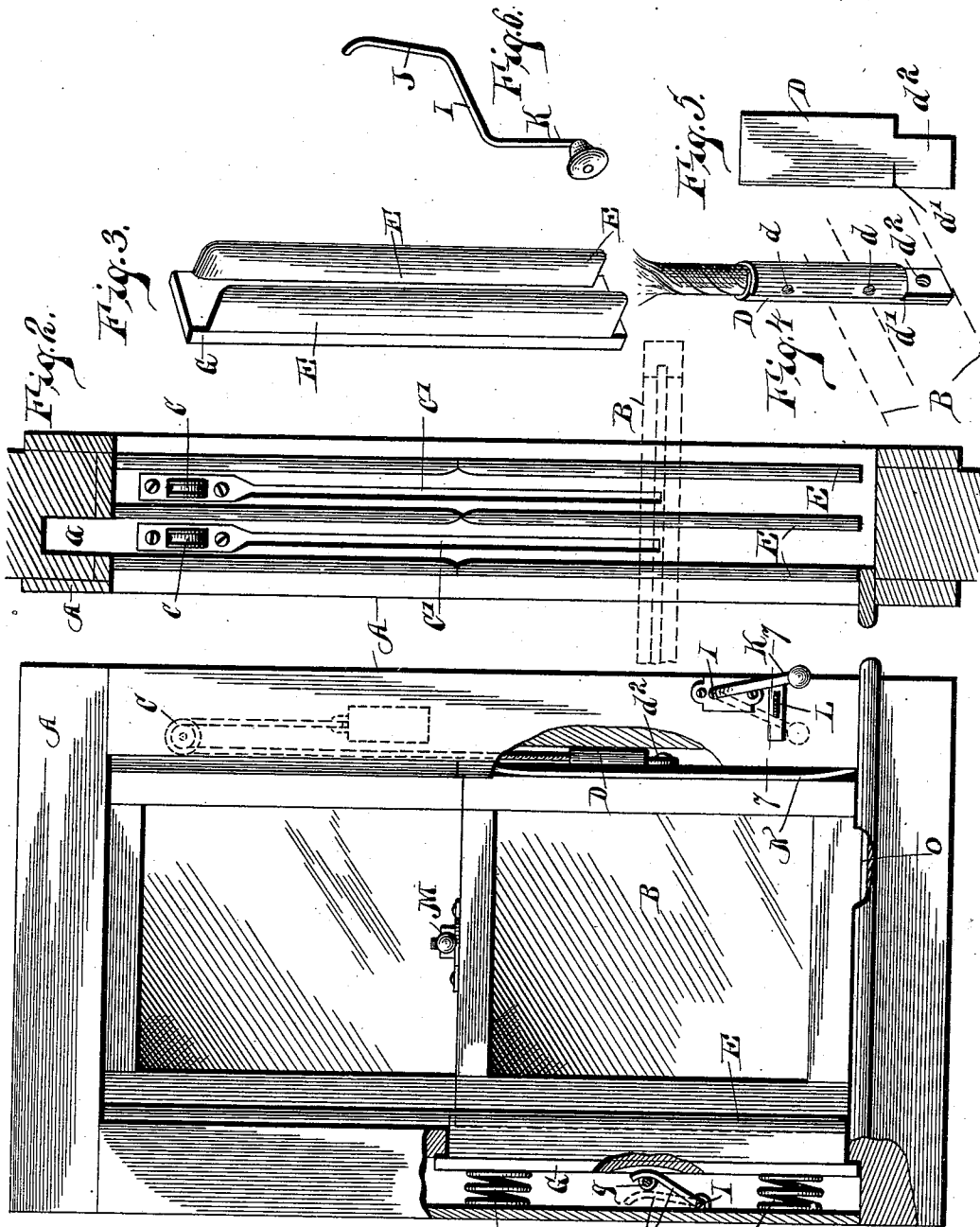


(No Model.)

B. F. BETTS.
WINDOW.

No. 541,711.

Patented June 25, 1895.



WITNESSES:

Fred G. Dietrich
P. B. Turpin.

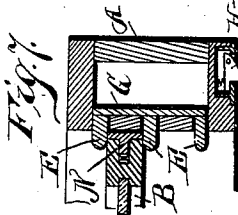


Fig. 1.

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UNITED STATES PATENT OFFICE.

BENJAMIN F. BETTS, OF BUTTE, MONTANA.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 541,711, dated June 25, 1895.

Application filed February 26, 1895. Serial No. 539,775. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN FRANKLIN BETTS, of Butte, in the county of Silver Bow and State of Montana, have invented a new and useful Improvement in Windows, of which the following is a specification.

My invention is an improvement in windows and has for an object to provide simple means by which the sash or sashes may be freed to tilt or turn so either side may be cleaned from within the room or so the entire window opening may be exposed for purposes of ventilation or for other reasons desired and by which the guide cleats for said sashes may be adjusted to properly guide and stop the same or to permit the tilting thereof the said cleats being a permanent fixture or part of the frame as distinguished from being removable therefrom.

The invention consists in certain novel constructions, combinations and arrangements of parts as will be hereinafter described and pointed out in the claim.

In the drawings, Figure 1 is a face view of the window, parts being broken away and parts shown in section. Fig. 2 is a vertical section of the frame, the sashes being removed. Fig. 3 is a detail view of one of the guide-cleat supports with its cleats. Fig. 4 is a detail view showing a part of the rope and the connecting-piece. Fig. 5 is a detail view of the blank for the connecting-piece. Fig. 6 is a detail view of the operating-shaft, and Fig. 7 is a cross-section on about line 7 7 of Fig. 1.

The window frame A may in general respects be of ordinary construction having some novel features as will be more fully described. The frame has in line with its guide for the lower sash B an upward extension *a* in which the upper end of the lower sash may project when it is desired to turn or tilt the upper sash. The frame also has pulleys C for the sash cords and grooves C' in which the sash cords and their connecting devices D operate. This connecting device is preferably as shown in the drawings and is formed of a plate of thin or sheet metal bent upon the rope and secured thereto by indentations *d* made by a punch or similar implement and having near one end a transverse slit *d'* facilitating the flattening of said end forming a lug

like portion *d*² for connection with the sash and on which the sash is pivoted and swings. Thus the sash may swing or turn entirely over so the outer side of the glass may be readily washed without leaning out of the window.

The inner and outer guides and stop cleats E for the lower sash are movable laterally in the frame so they may be retracted to points clear of the sash to permit the same to move clear of the beads and swing as desired in or out the beads fitting alongside the lower sash to guide the same and it is also evident that the outer guide cleat for the lower sash forms a guide for and means of preventing the swinging of the upper sash when the latter is lowered.

If the window has but a single sash instead of two the laterally movable cleats may extend the full length of the frame, but where an upper and lower sash are employed it is preferred to make the guides opposite the normal position of the lower sash movable laterally and those opposite the normal position of the upper sash fixed, because of convenience but if desired the movable guides may be arranged above and the fixed ones below without departing from the invention.

The laterally movable guide cleats are preferably supported on back boards or carriers G movably supported in the window frame and actuated forward by springs H bearing against their rear sides so the guide cleats are movably pressed outward into position to lap alongside to prevent the turning of the sash or sashes and also to serve as weather strips or guards.

To adjust the stop and guide cleats outward I provide shafts I journaled in the frame and having crank arms J engaging the carriers G and outer crank arms or handles K which when swung to position to retract or withdraw the guide and stop cleats, are held by a catch L which is preferably spring actuated.

On the meeting rails is provided a sash lock M by which the sashes may be locked as usual.

If desired instead of using a cord and weight the sash or sashes may have spring actuated edge strips N binding or bearing frictionally in the frame and so tending to secure the sash in any position to which it may be adjusted.

If it is desired to tilt the upper sash, the

lower one may be raised and the upper one lowered and the guide cleats adjusted outward when the sash can be tilted as desired, while if it is desired to tilt both sashes the upper one can be lowered and both turned to expose almost the entire frame opening as may be desired in warm weather. The shaft with its crank engaging the carrier G is an important feature of my invention. Its inner crank engages under a rod or bearing *g* on the carrier so that by properly turning the shaft the carrier may be pulled positively back and by arranging this rod *g* midway between the springs which actuate said carrier the motion of the carrier is balanced so that it moves out and in evenly and uniformly at both ends. The laterally movable guides are in line with and below the upper movable guides and the latter have their lower ends beveled or tapered to aid in guiding the sashes in inserting the same as will be readily understood.

At the lower edge of the bottom sash I provide a weather strip O which may preferably be a soft rubber strip or tube slightly project-

ing so when the window is down on the sill it will rest on the rubber and dust and cold will be excluded thereby.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The improved window herein described consisting of the frame, the sash, the plate or carrier operating in the frame and carrying the guide or stop beads for the sash, and movable laterally with said beads to set the latter into and out of normal position, the shafts having inner crank arms engaging and adapted to retract the carriers and having outer handles or crank arms, catches by which the latter may be held to secure the carriers out of normal position and actuating springs engaging the carriers above and below the engagement of the crank arm with said carrier all substantially as and for the purposes set forth.

BENJAMIN F. BETTS.

Witnesses:

JOHN G. HAMMER,
THOS. COUCH.