

(No Model.)

A. F. SMITH.
WINDOW SASH.

No. 593,909.

Patented Nov. 16, 1897.

FIG. 1.

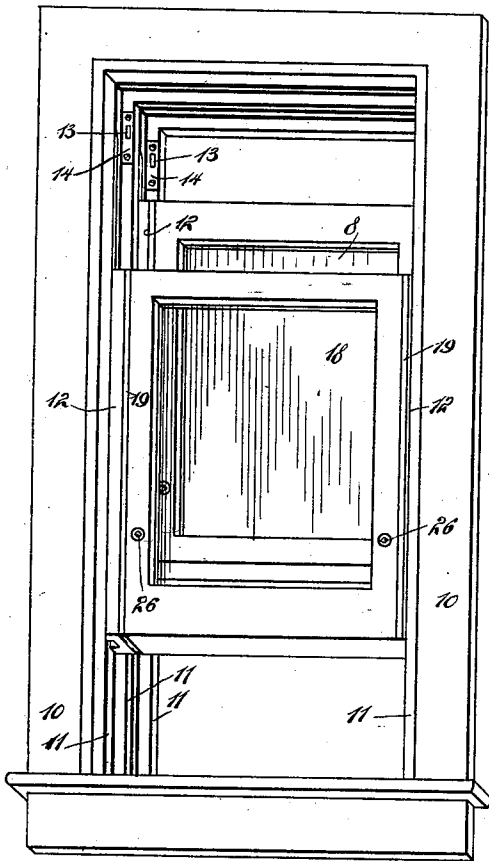


FIG. 2.

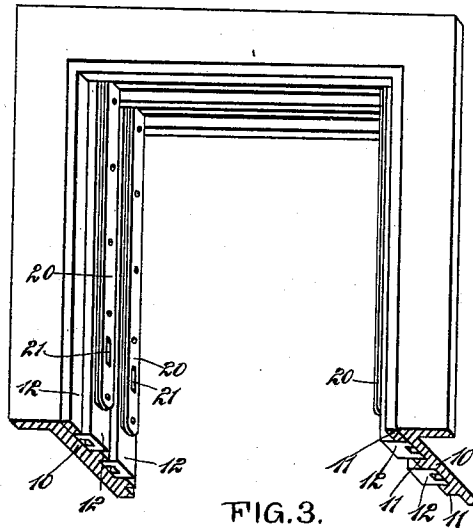
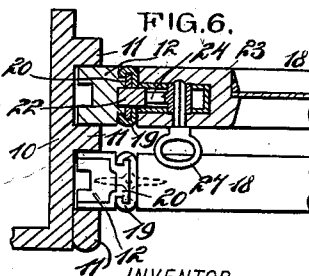
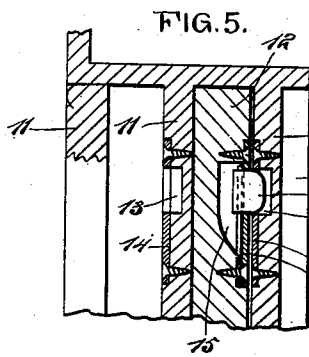
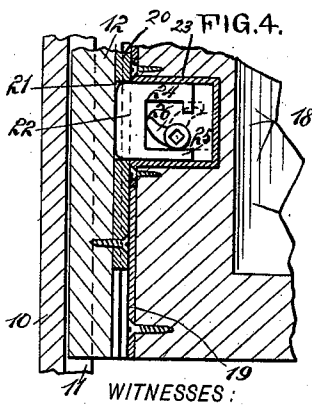
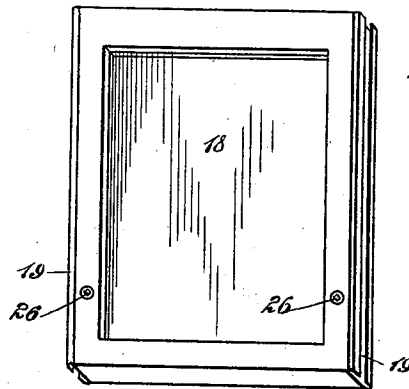
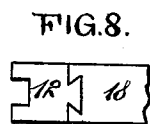
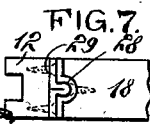


FIG. 3.



Donn Turtchill

Franc B. Brown



INVENTOR
A. F. Smith.
BY *Mumford*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALFRED F. SMITH, OF LAS VEGAS, TERRITORY OF NEW MEXICO.

WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 593,909, dated November 16, 1897.

Application filed April 22, 1897. Serial No. 633,355. (No model.)

To all whom it may concern:

Be it known that I, ALFRED F. SMITH, of Las Vegas, in the county of San Miguel and Territory of New Mexico, have invented a new and Improved Window-Sash, of which the following is a full, clear, and exact description.

This invention is an improvement in window-sashes by which the sashes may be readily removed from the frame without withdrawing screws or nails or other permanent fastening devices.

This specification is the disclosure of one form of my invention, while the claims define the actual scope of the conception.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the invention complete. Fig. 2 is a fragmentary perspective view showing the sashes removed. Fig. 3 is a perspective view of one of the sashes. Fig. 4 is a sectional view showing the lock between the sash and the cleats. Fig. 5 is a sectional view showing the catch for the cleats. Fig. 6 is a sectional view taken horizontally through one of the locks shown in Fig. 4, and Figs. 7 and 8 are detail views of forms of slides for the sash.

The frame 10 of the window has three vertical beads 11, secured on each inner face and forming in each side of the frame two vertical guideways. Sliding in each guideway is a cleat 12. The upper front portions of two of the beads 11 at each side of the sash have recesses 13 formed therein and surrounded by wear-plates 14, orificed to register with the recesses 13. Each cleat 12 has a recess 15, covered by a plate 16 and carrying a spring-pressed and cam-shaped bolt 17. The bolts 17 are respectively adapted to lock with the plates 14 and recesses 13, whereby to hold the cleats 12 at the limit of their upward movement. The bolts 17 may be disengaged from the plates 14 by applying to the cleats 12 such force as will overcome the pressure of the spring actuating the bolt 17.

The complete window has four cleats 12, two being normally in rigid connection with each sash. Each sash 18 has (according to Figs. 1 to 6) a plate 19, the edges of which are bent to form flanges respectively engag-

ing the overhanging edges on the plates 20, which are respectively carried by the cleats 12. The plates 20 are rigidly secured to the cleats 12 and terminate slightly above the lower ends of the cleats 12. Each plate 20 has an opening 21, with which the lock-bolts 22 are respectively adapted to engage. Each sash has two lock-bolts, respectively slidable in casings 23, sunken in the sashes and having two limbs 24 and 25, the former of which projects inward at its end, so as to partly inclose the respective tumblers 26. The hollow trunnions of the tumblers 26 are respectively revolubly mounted within the sides of the casings 23 and project through one side of the sashes, so that a key 27 (shown in Fig. 6) may be inserted within the trunnions of the tumblers 26 to operate the same in a manner indicated by dotted lines in Fig. 4, so as to throw the bolts 22. Figs. 1 and 3 show the trunnions of the tumblers 26 projecting to the outer side of the window-sash.

Normally the sashes are rigidly connected by the bolts 22 with their respective cleats 12, so that the sashes and cleats slide in unison as the sashes are adjusted in the ordinary manner of operation. If it be desired to hold both the sashes in an elevated position, the sashes are moved so that the bolts 17 will engage with the plates 14 and recesses 13. If it be desired to remove the sashes from the window-frame for the purpose of cleaning, repairing, or otherwise treating the window-sashes, the sashes should be moved to the limit of their upward movement, and the tumblers 26 should be operated to throw the bolts 22 out of engagement with the plates 20. The sashes will now be disconnected from the cleats, and the sashes may be permitted to drop until the sashes run off from the plates 20 and are thus completely separated from the window-frame. The application of the sashes is effected by a mere reversal of the above operation.

Figs. 7 and 8 show substitutes for the parts 19 and 20 in Figs. 1 to 6. Fig. 7 shows a channeled plate 28, two of which are carried on each sash and respectively engage beads formed on plates 29, in turn held by the cleats 12. Fig. 8 shows a tongue-and-groove connection between the parts 12 and 18 at each side of the latter.

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

1. The combination of a sash, a cleat, a plate carried on the cleat and having overhanging edges, a plate carried on the sash and having inturned edges to slidably engage the overhanging edges of the first-named plate, a casing carried by the window-sash, a tumbler having hollow trunnions mounted in the casing and projecting to the outer face of the window-sash, and a bolt slidable in the casing and actuated by the tumbler and capable of removably connecting the sash and cleat with each other.

2. The combination with a window-frame provided with a bead formed with a recess near its top, of a cleat slidable on said frame and provided with a spring-controlled cam-shaped bolt arranged to enter the said recess and by which said cleat is rigidly connected with said bead at the upward limit of its movement, a sash mounted to slide on said cleat and detachable therefrom, and means for rigidly connecting said sash and cleat.

3. The combination with the window-frame, and the bead provided with a recess near its upper end, of the cleat slidable upon said frame, a sash slidable upon said cleat, a spring-controlled cam-shaped bolt carried by said cleat and arranged to enter the recess in said bead when the cleat is at the upward limit of its movement, a casing carried by the window-sash, a tumbler having hollow trunnions mounted in the casing and projecting to the outer face of the window-sash, and a bolt slidable in said casing being actuated by said tumbler, and by which the sash is rigidly connected with the cleat.

4. The combination with the window-frame, of the cleat slidable thereon, means for rigidly connecting said cleat with the frame when the former is at the upward limit of its movement, a sash fitted to slide longitudinally on and off said cleat, said cleat and sash having interlocking edges by which they are held

against lateral displacement, and means for rigidly connecting said cleat and sash together.

5. The combination, with the window-frame, of a sash, a cleat slidable thereon, a plate carried by said cleat, and having overhanging edges, a plate carried by said sash and having inturned edges arranged to engage the overhanging edges of the first-named plate and by which said cleat and sash are slidably connected, a spring-actuated device carried by said cleat and arranged to automatically engage the window-frame, whereby to rigidly connect said cleat therewith, and means for rigidly connecting said cleat and sash.

6. The combination with a window-frame provided with a recess near its top, of a cleat slidable on said frame and provided with a spring-controlled cam-shaped bolt arranged to enter said recess and by which said cleat is rigidly connected with the frame, a plate carried on said cleat and formed with overhanging edges, a sash provided with a plate formed with inturned edges arranged to engage the overhanging edges of the first-named plate, and by which said sash and cleat are slidable one upon the other, and means for rigidly connecting said sash and cleat.

7. The combination with the window-frame provided with a bead formed with a recess near its top, of a cleat slidable on said frame and provided with a spring-controlled cam-shaped bolt arranged to enter said recess and by which said cleat is rigidly connected with said bead at the upward limit of its movement, a sash slidable longitudinally on and off said cleat and being held from lateral displacement by its edges interlocking with the edges of said cleat, and means for rigidly connecting said sash and cleat.

ALFRED F. SMITH.

Witnesses:

JOSEPH WADDINGHAM,
GEO. T. GOULD.