

(No Model.)

C. G. ANDERSON.
WINDOW.

No. 471,729.

Patented Mar. 29, 1892.

Fig 1

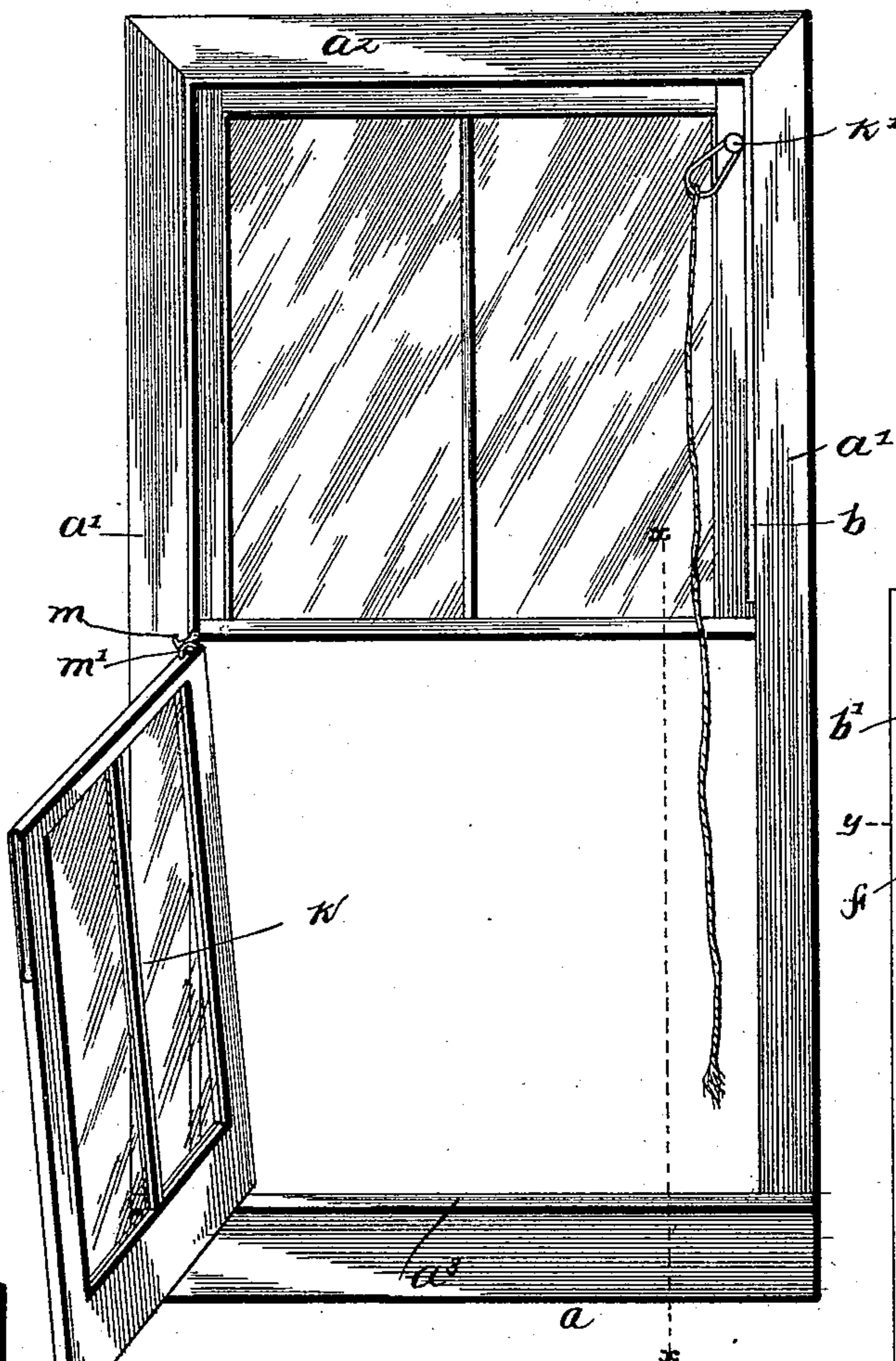


Fig 2

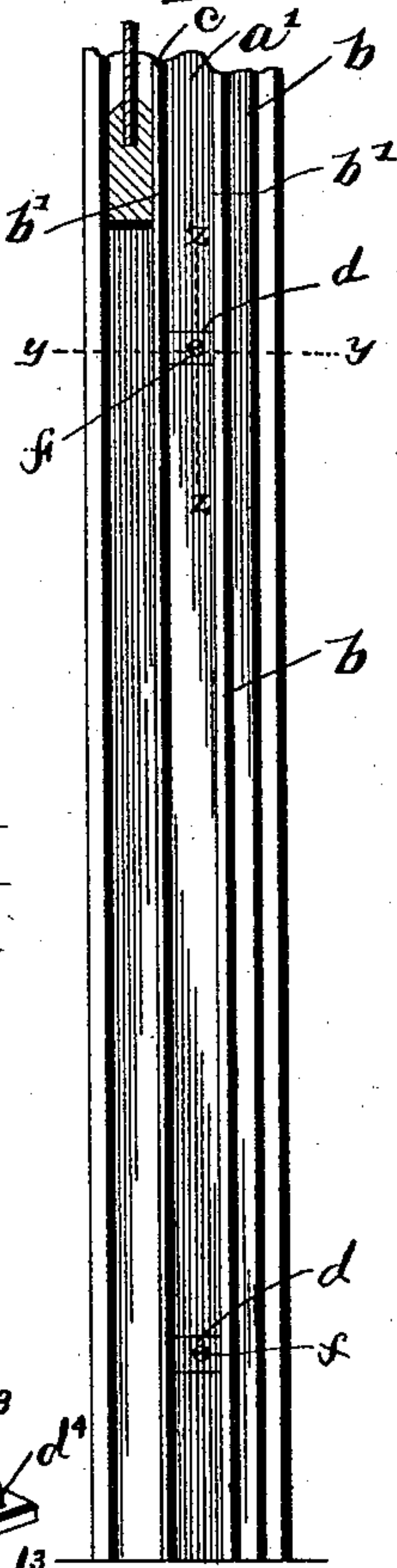


Fig 4

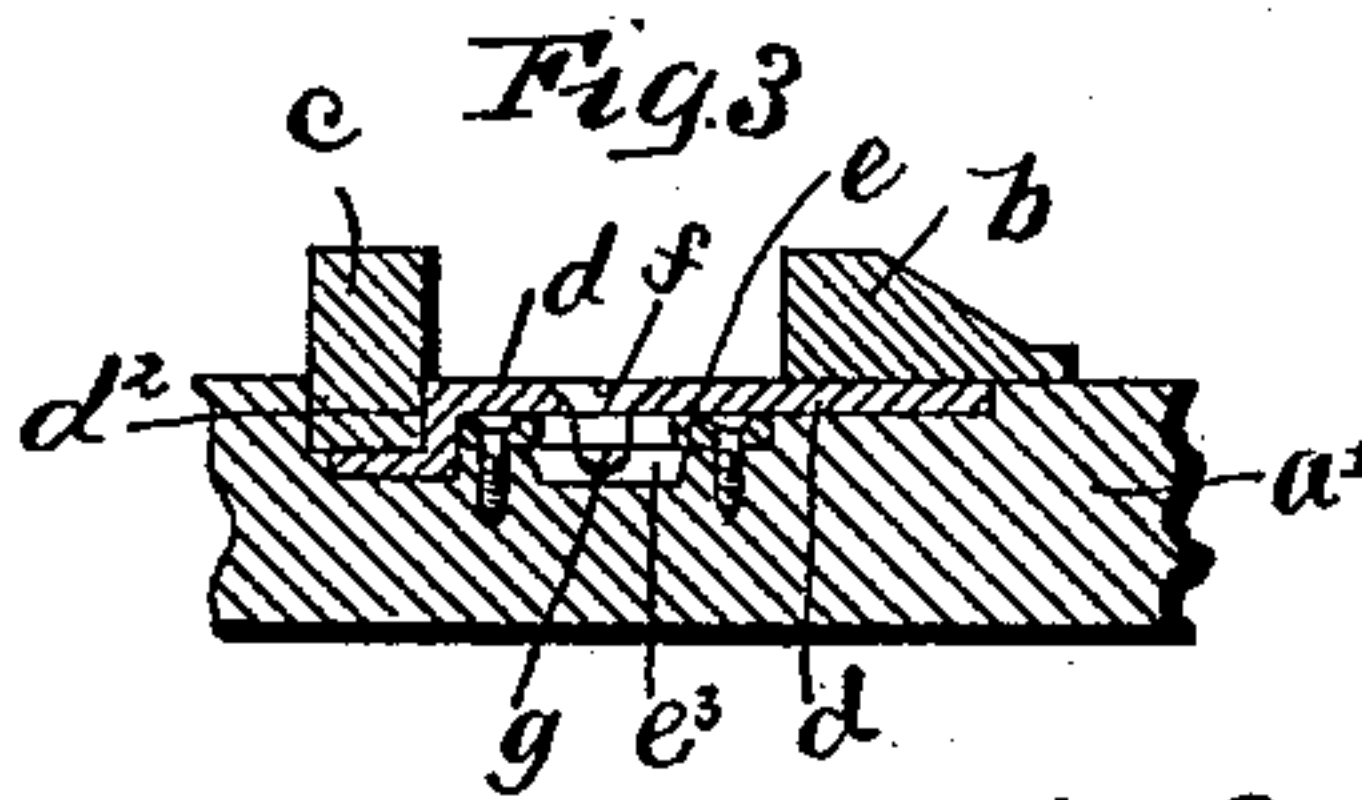
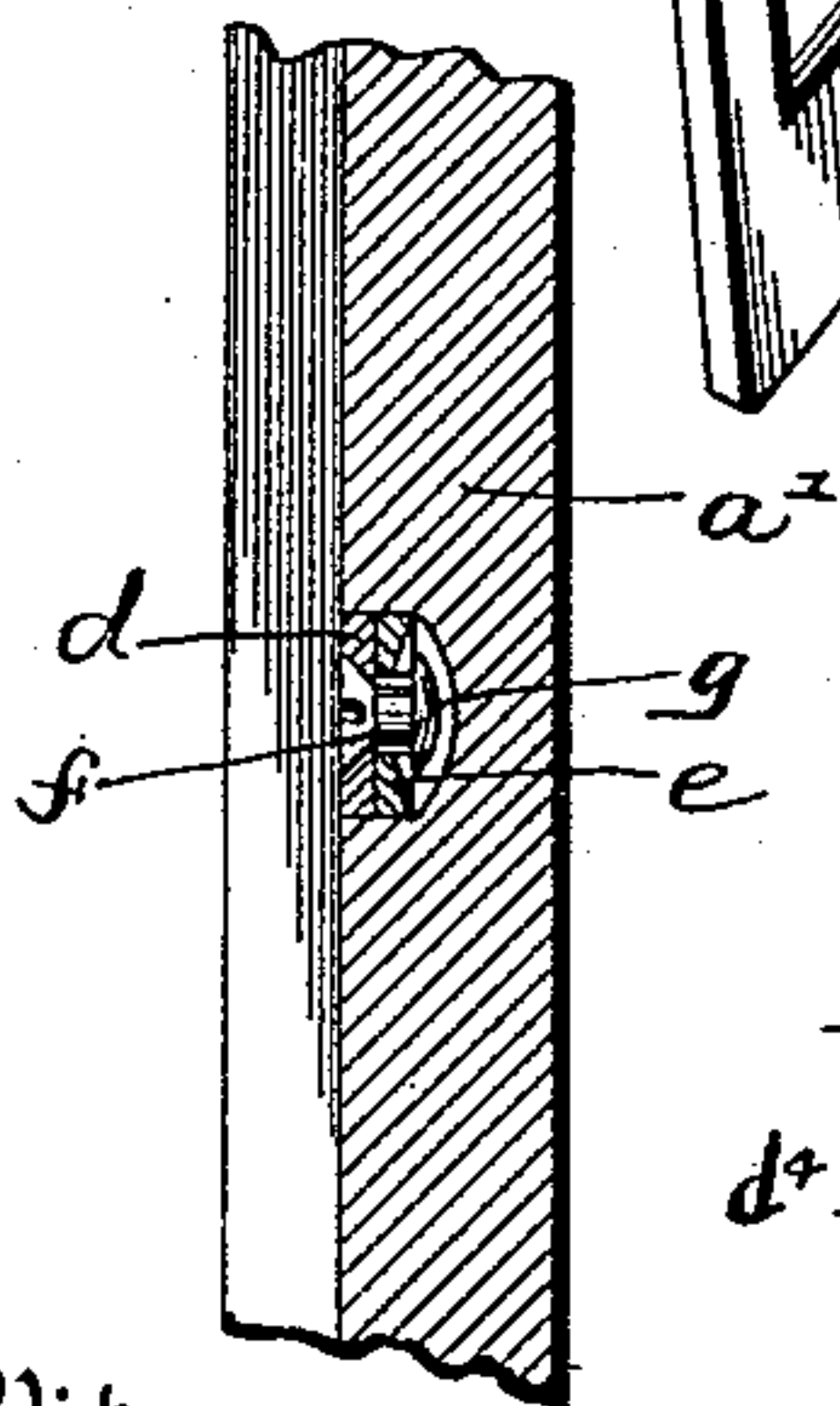


Fig 5

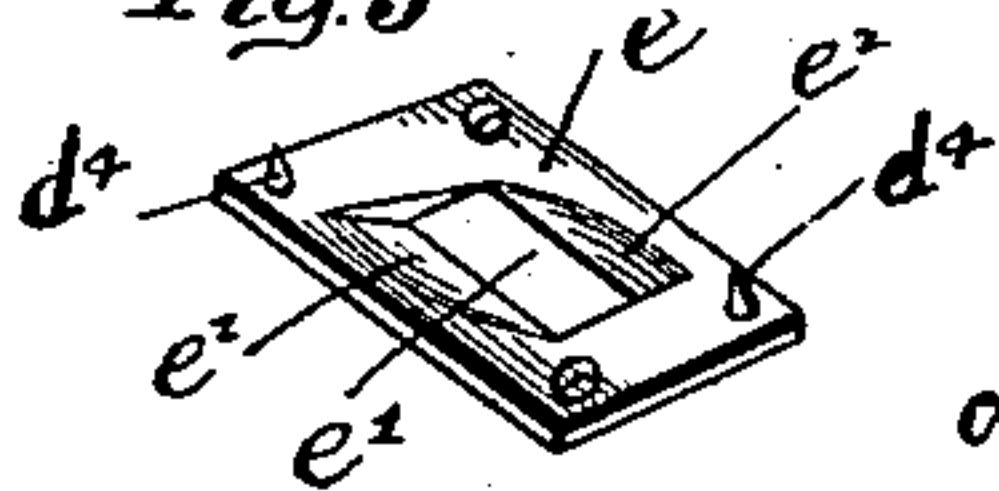
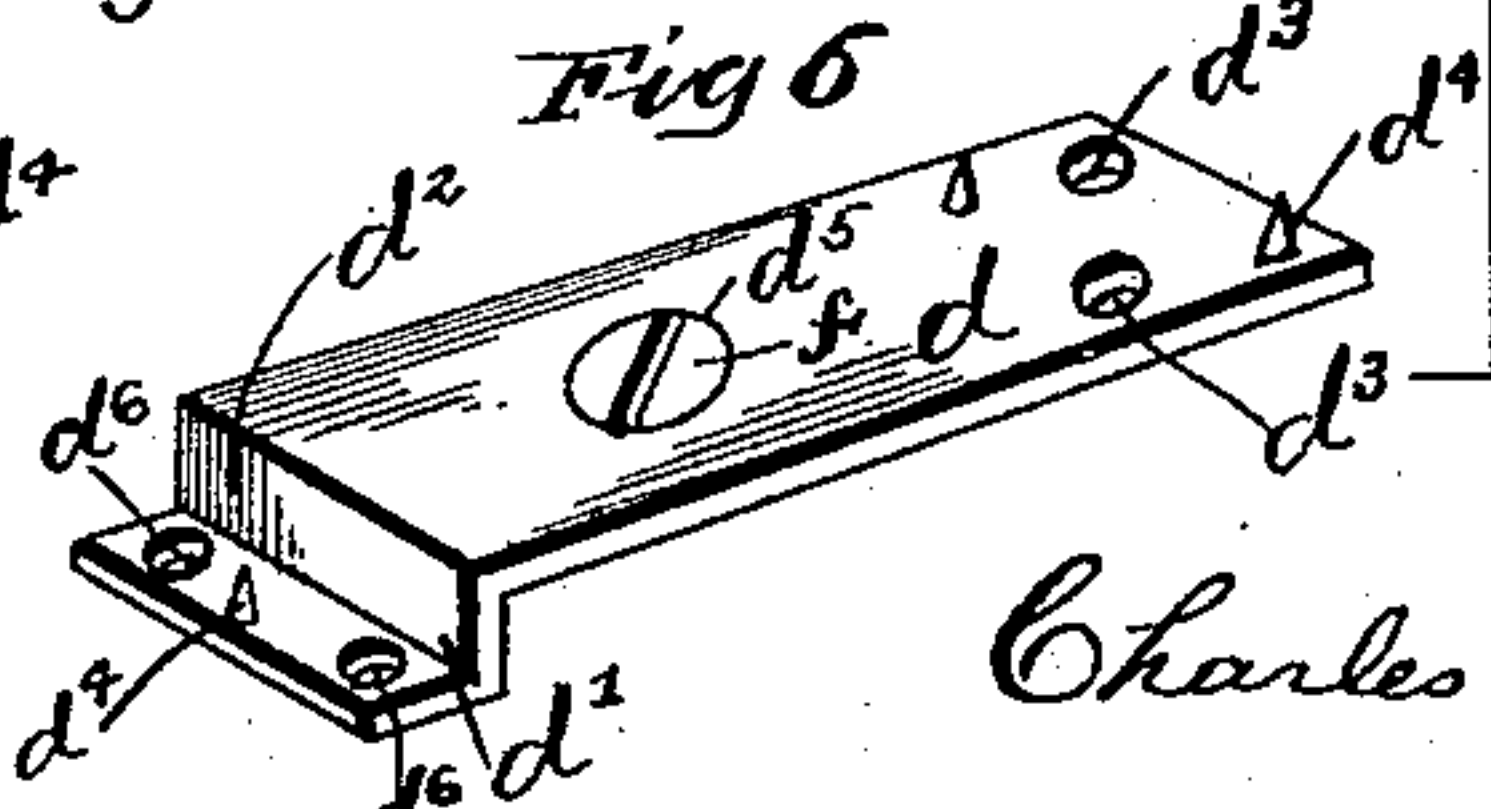


Fig 6



Witnesses

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CHARLES G. ANDERSON, OF COLUMBUS, OHIO.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 471,729, dated March 29, 1892.

Application filed April 29, 1891. Serial No. 391,013. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. ANDERSON, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Windows, of which the following is a specification.

My invention relates to means for detaching window-sash from the frame; and the objects of my invention are to provide improved means for detachably connecting sections of the sash-stops with a window-frame, to provide for the ready removal of portions of the inner and central sash-stops of the window-frame, to admit of the sash being swung inward for convenience in cleaning and other purposes, to employ simple and inexpensive means for accomplishing these objects, and to render the connection of the stop-sections invisible when the sash is in place. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is an inner elevation of a window-frame, showing the lower sash turned inward in position for cleaning. Fig. 2 is an enlarged sectional view on line *xx* of Fig. 1. Fig. 3 is an enlarged transverse section taken on line *yy* of Fig. 2, showing a portion of the frame side broken away. Fig. 4 is a vertical longitudinal section on line *zz* of Fig. 2. Fig. 5 is a detail view in perspective of the window-frame catch-plate, and Fig. 6 is a view in perspective of the stop-connecting plate.

Similar letters refer to similar parts throughout the several views.

a represents a window-frame, which consists of the side pieces *a'* and top and bottom cross-pieces *a²* *a³*.

b represents the inner vertical sash-stops, which are secured to the inner faces of the frame sides *a'* adjoining or in close proximity to the interior face of the frame.

c represents the central stop-strips, which are ordinarily let into the window-frame, as shown in Fig. 3, and which form the interior bearing for the outer window-sash and the outer bearing for the inner sash.

As shown in the drawings, the stops *b* and *c* of one side of the frame are in two sections, the upper ends of the lower sections meeting and joining the lower ends of the upper sections at a point slightly above the

center of the height of the window-frame, as indicated at *b'*. The upper sections of the stops *b* and *c* are rigidly connected with the window-frame in the usual manner, while the lower sections are detachably connected therewith, as hereinafter described.

d represents stop-connecting plates, each of which consists of a horizontal metallic plate, which is provided at one end with an angular bend, as indicated at *d'*, and which forms a shoulder *d²*. These stop-plates are each provided at their straight ends with screw-holes *d³* and spurs *d⁴*, which project from the inner side thereof. Said plate is also provided near the center of its length with a flaring or countersunk perforation or bolt-hole *d⁵*. The outer or remaining end of each of the plates *d* has its horizontal end portion provided with one or more spurs *d⁴* and screw-holes *d⁶*. As shown in the drawings, the plates *d* serve to connect or couple the removable stop-sections *b* and *c*, said couplings being preferably formed near the upper and lower ends of said sections. The inner end of each of the plates *d* is secured against the rear side of the detachable section *b*, while the horizontal outer or opposite end is secured to the rear side of the central stop-strip *c*, the shoulder *d²* of the plate abutting against the interior face of said stop. In this manner it will be seen that the lower detachable sections of the central and inner stops on one side of the window-frame are coupled together.

The inner side of the side piece of the window-frame is recessed at points opposite the coupling-plates *d* to receive below the surface thereof a short catch-plate *e*, each of said catch-plates being secured therein by screws or otherwise and having formed therein slotted openings *e'*, which extend crosswise of the frame side. The rear side of each of the plates *e* has its surface on opposite sides of the opening *e'* preferably cut away or beveled, as shown at *e²*, the incline of said bevel running to the opening *e'*. Opposite each of the plate-openings *e'* is formed in the frame side a small sub-recess *e³*. These plates *e* are also preferably provided with projecting pins or spurs *e⁴*, which enter the wood of the frame and assist in rigidly connecting the plate and frame. The frame-side recesses which receive the plate *e* are of such depth as to receive,

also, the stop-coupling plates d until the latter are flush with the inner surface of the window-frame, when they are connected with the catch-plates e . This connection is formed by providing the central opening d^5 of each of the plates d with screw-headed pins f , the beveled head of which bears in the counter-sunk mouth of the opening d^5 until flush with the plate d , and the rear end of which passes loosely through the slotted opening e' of the plate e and carries on its inner end a fixed oblong button g . This button g is of such length as when turned crosswise with the plate e to prevent its withdrawal through the slot e' and admit only of its passage through said slot when turned in the direction of the length of the latter.

The detachable coupled stop-sections being secured in their positions against the inner side of the window-frame side piece, as shown in Fig. 2 of the drawings, the operation of my device is as follows: The lower sash k having been elevated to the upper portion of the window-frame, it is observed that the coupled detachable portions of the stops c and b may be readily removed by so turning the screw-heads of the latch-pins f as to bring the buttons g in the direction of the lengths of the plate-slots e . The detachable stop portions being withdrawn, and thus removed from the window-frame, it is obvious that the lower sash may be lowered to its normal position and swung inward to the position shown in Fig. 1 of the drawings. In case the window-sash are provided with the usual form of side balancing-weights and ropes the sash-connecting end k' of the rope may be disconnected from the lower sash and any ordinary means utilized for holding the sash-rope from complete entrance within the window-frame. In order to support one corner of the lower sash upon the window-sill while the window is being cleaned, I may employ a catch-hook m , pivoted to the interior face of the window-frame and adapted to be made to engage with a suitable staple m' on the upper side of the lower sash-frame.

From the construction herein shown and described it is obvious that the sash may be turned inward in a desirable position for cleaning the outer side thereof and that this may be accomplished with rapidity and ease. It will also be observed that the manner of connecting the stop-strips is exceedingly simple and that the metallic parts herein shown and described are so constructed and located as to be invisible when the window is viewed from either face.

In replacing the window-sash in its normal position the sash is closed to its position in the window-frame, then elevated to the upper portion of the frame, and the coupled portions of the stop-strips inserted in their places in the frame side and connected therewith by turning the screw-heads of the pins f .

Although the operation herein described has been confined to the lower sash, it is obvious that the upper sash may be lowered until in the lower portion of the frame and swung inward, as prescribed for said lower sash, thus admitting of the outer sides of the window-panes of both sashes being supported in a convenient position for cleaning or other purposes.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

In a means of detaching sash from window-frames, the combination, with the window-frame having recesses e^3 in one of the inner sides thereof, and slotted and spurred catch-plates secured over said recesses, of the stop-strips c and b , each consisting of a rigid and a detachable section, transverse plates d , connecting the detachable portions of said stop-strips c and b , and latch-pins, as described, journaled in said plates d and having buttons on their inner ends adapted to enter the frame-recesses e^3 and engage with the inner sides of the catch-plates, substantially as described.

CHARLES G. ANDERSON.

In presence of—

C. C. SHEPHERD,
E. E. BRAGG.