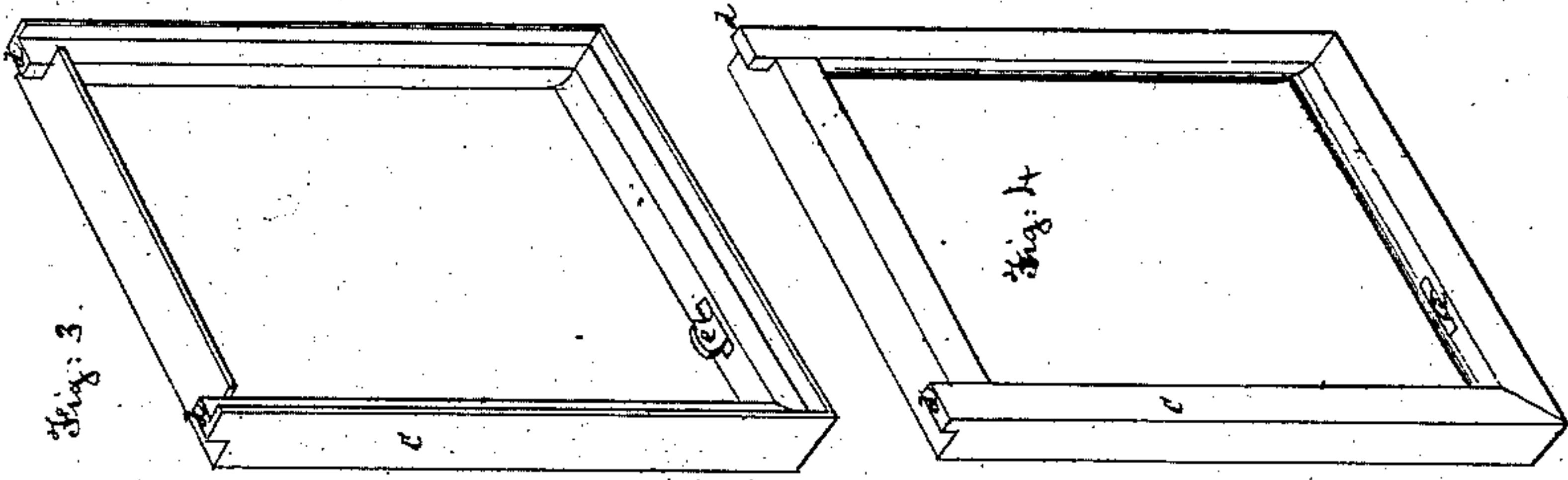
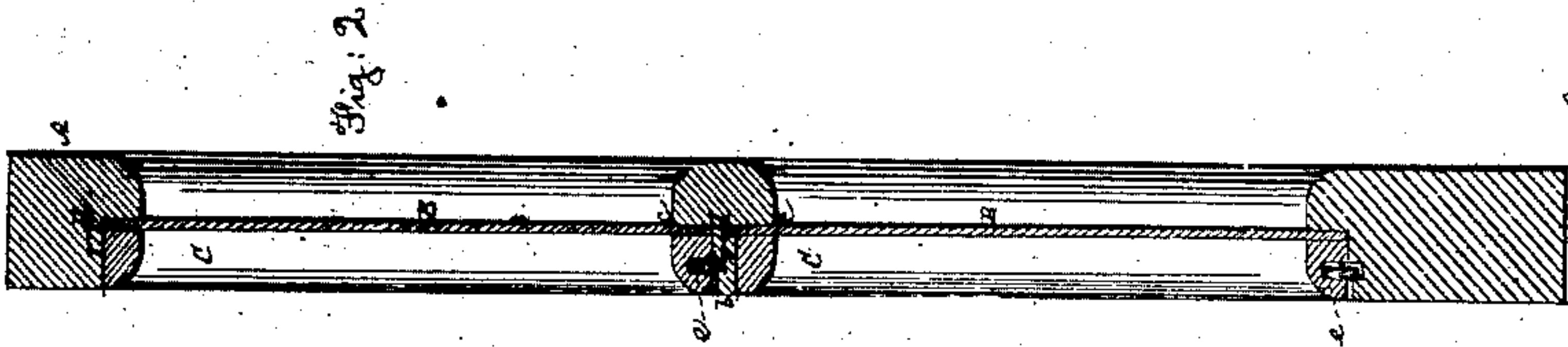
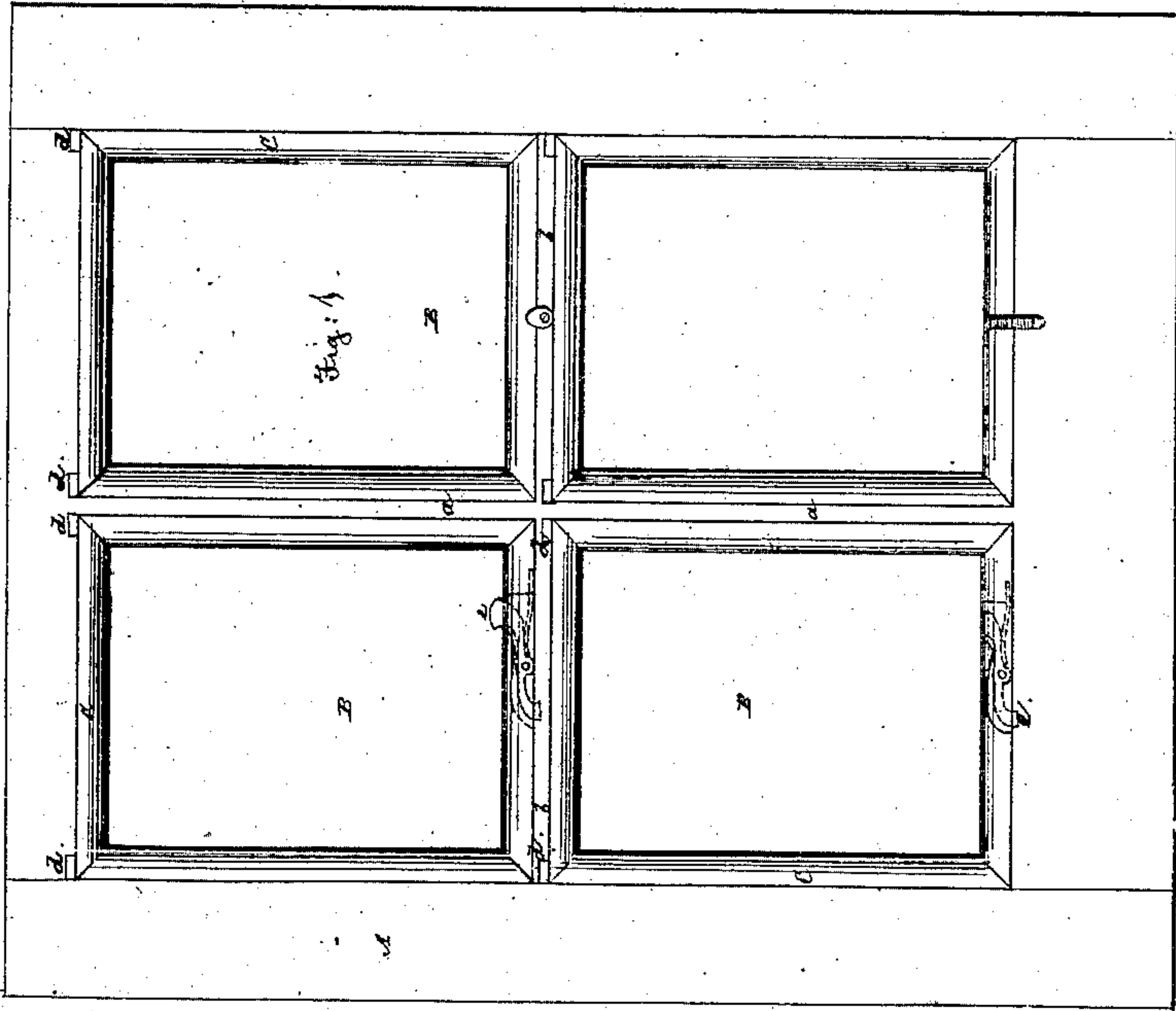


No 27,998.

W. H. McCoy & J. G. Muth, Improvement on Window Sash.

Patented April 24, 1860.



William Wagon

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UNITED STATES PATENT OFFICE.

WM. H. MCCOY, OF WHEELING, AND JNO. F. MUTH, OF GRAFTON, VIRGINIA.

WINDOW-SASH.

Specification of Letters Patent No. 27,998, dated April 24, 1860.

To all whom it may concern:

Be it known that we, WILLIAM HARRISON MCCOY, of Wheeling, in the county of Ohio and State of Virginia, and JOHN F. MUTH, of Grafton, in the county of Taylor and State of Virginia, have invented a certain new and useful Improvement on Window-Sash, of which the following, taken in connection with the accompanying drawing, is such a full and clear description as that others will be enabled therefrom to make and use the same.

It has frequently been proposed, and numerous attempts have been made, to so construct window sash as that the ordinary mode of glazing by fastening the panes of glass with putty might be dispensed with and the sash made to hold the panes either by mechanical fixtures or removable mechanical devices constituting in effect a portion of the sash. Thus, the munnions or mullions and cross bars of the sash have been grooved and the top rail made removable, to secure the panes by letting them down into and within the grooved portions of the sash. In other instances, the pane has been slipped into its place as is usually done when securing it by putty, and, in the place of putty, short and separate or disjointed wooden bars or strips, of a width or depth to overlap the pane at its edges, inserted on the inside and fastened by screws to the mullions and cross bars to bind or lock the pane in the sash. Likewise, the mullions and cross bars to the several panes have been divided as if by a plane intersecting the sash throughout its width and length, and the one of such sections with its numerous spaces corresponding to the number of panes in the sash made removable for the purpose of inserting the panes, after which the two sections, with the glasses in between them backed or edged by rubber to prevent rattle, are united by screws to each other. Our improvement effects the like object that these and other arrangements do, namely, of dispensing with putty as a means of securing the pane in the sash, and making the removal of a broken pane and insertion of a new pane an easy matter to those inexpert at "glazing" in the ordinary acceptation of that term. But we accomplish this result in a more perfect and convenient manner and so that a single pane may be removed or be replaced without disturbing or unlocking the others in the sash and without employing broken or disjointed

binding strips or bars to each pane, but forming in substance a series of pane holding frames separately applicable as entireties to the several panes of the sash and so that each pane holder may be separately removed with facility and despatch, and, when removed, the holder made a ready means for measuring or "sizing" a new pane to fit the vacancy left in the sash. These pane holders or "frames" we prefer to construct so as to correspond with the moldings of the sash or to form part of the molding, whereby the sash may retain its ordinary appearance.

Referring to the accompanying drawing, the sash therein represented is "high framed" and of a "fine finish" and similarly ornamental on both sides, but such peculiarities are not essential and may be varied with circumstances just as the size and shape of the sash or its parts or number of panes it is designed to carry may be varied.

Figure 1 in said drawing shows a face view of the sash: Fig. 2 a section thereof at right angles to the face; and Figs. 3 and 4 views in perspective of two of the detachable pane holding frames seen from opposite sides or faces.

The portion marked A represents the outer frame or border pieces of the sash, which border pieces may be permanently secured to each other and the mullions (a) and cross bars (b) likewise permanently or firmly united to or locked with each other and the outer frame as is now customary in constructing window sash, or in any other suitable way. The glazing of the sash does not require these parts to be separated, hence springing and breakage is in a measure avoided. We also are enabled by our improvement to dispense with grooving and slotting the sash to receive the panes by sliding them in through the mullions or cross bars, and are at liberty to employ the usual method of fitting in the panes (B B) from the inside or one face of the sash by causing said panes to butt or lie against ledges (c c) cut in the sash or its moldings, but, in the place of putty or disjointed locking strips or bars to each pane, we retain every previous facility of the most improved modes for removing or inserting a pane without disturbing the adjoining panes and are able to keep the several panes in an uniform plane or level, by employing pane holders (C C) of "frame" construction corresponding to or

in unison with the molding of the sash and made to fit over and on or against the glass when in its place and within the molding cut away to receive the pane. These independent pane holding frames may have tenons (*d d*) at one of their ends to enter mortises cut in the sash for the purpose of securing said frames to the sash at one of their ends or sides, and further be provided with spring or other catches or fastenings (*e e*) at their opposite ends to lock with or in plates or mortises in the sash and so that by pressing down or on the catch to any particular pane holding frame the latter is at once freed so as to admit of being drawn or lifted out together with the glass it served to clamp or the glass be afterward removed.

Bolts or buttons may take the place of spring catches to the pane holding frames or any other suitable fastenings may be employed that will admit of said frames being withdrawn and replaced with the same or like facility and despatch. It is obvious too, that such catches or fastenings may be hung in the sash and made to lock with the pane holding frames instead of being hung in the latter and made to lock with the former. Likewise the tenons (*d d*) to the frames at their one end may be dispensed with and catches or other like fastenings be substituted and made to lock the frames at opposite ends or sides; or one or more screws may, if preferred, be used to hold the independent frames at one (say) of their ends.

To prevent rattle or shake of the glass, the catches or their equivalents may be made, when locking the pane holding frames, to force the latter up against the glass in a soft but firm manner, or a flexible packing may be inserted to form a bed for the glass as heretofore under other arrangements or in any suitable manner. These pane holding frames (*C C*), separately detachable from the

sash and constructed to form a part of the molding of the sash, and admitting of being taken in and out with facility and despatch—and this not in a disjointed manner but as entireties or frames,—present many advantages over the ordinary means of or for glazing window sash, especially in cases of necessary repair and for ventilating purposes. Said frames (*C C*) likewise form compact and readily transportable devices for measuring the size a required new pane should be cut to, away from the place where the sash is, and may be made to constitute a packing frame or holder for the glass during transportation by grooving the frame on its inner face to the size of the glass as represented by the top pane holding frame in Fig. 2 of the drawing.

Having thus described our improvement on "window sash" we claim, as new and useful:

The employment, in combination with a sash formed of divided lights or numerous panes, of separately detachable pane holding frames (*C, C*) constructed and applied to fit the sash essentially as specified for the purpose of retaining the glasses in their places and to admit of the easy and speedy separate removal thereof, also forming a readily transportable means for measuring or sizing the panes, substantially as herein shown and described.

In testimony whereof, we have hereunto subscribed our names.

WM. HARRISON McCOY.
JOHN F. MUTH.

Witnesses on behalf of W. H. McCoy:

A. O. LATHAM,
A. JOSLIN.

Witnesses on behalf of J. F. Muth:

WILLIAM CREAGER,
ISAAC KAHN.