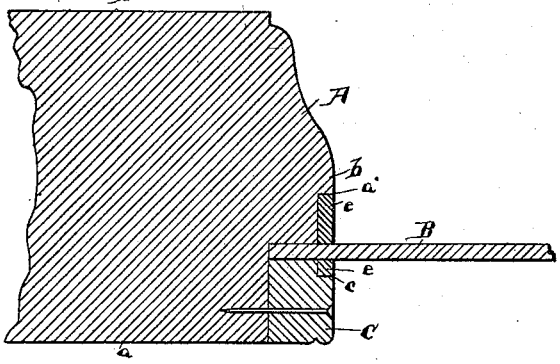
(No Model.)

J. S. FETHERSON.

WINDOW SASH OR DOOR.

No. 456,322. Patented July 21, 1891.

Fig 1.



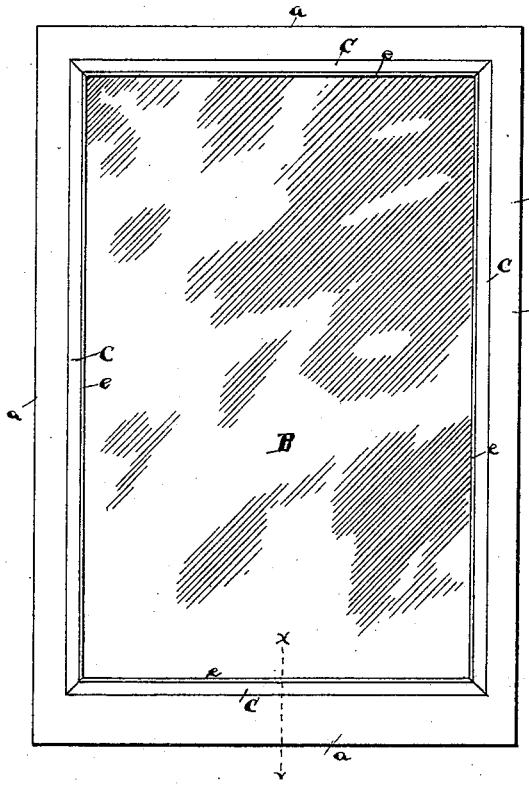


Fig 2.

Witnesses
H. B. Moser.
H. L. McLane.

Inventor
Joseph S. Fetherson.

By his Attorney
H. C. Fisher.

UNITED STATES PATENT OFFICE.

JOSEPH S. FETHERSON, OF AKRON, OHIO, ASSIGNOR OF ONE-HALF TO GEORGE W. SIEBER AND MICHAEL REILLY, BOTH OF SAME PLACE.

WINDOW-SASH OR DOOR.

SPECIFICATION forming part of Letters Patent No. 456,322, dated July 21, 1891.

Application filed October 31, 1890. Serial No. 369,921. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH S. FETHERSON, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Window-Sashes or Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to window-sashes or sash-doors; and the object of the invention is to provide a construction for securing the glass or light in window-sashes or door-frames, whereby the glass or light is mechanically fastened in position without the use of putty or the like, but in which putty, white-lead, or their equivalent is used on both sides of the glass in such manner that moisture cannot penetrate the sash or enter about the edge of the light at the bottom or sides to rot the frame and loosen the fastenings.

It is well known that the present common and well-nigh universal practice of fixing glasses in their frames or sashes is by means of putty applied about the edge of the glass against the outside of the frame or sash, the glass bearing against the wood surface on the inside. It is also well known that there is constant accumulation of moisture on the inside of the glass under certain conditions of temperature, which moisture runs down the surface of the glass to the sash or frame and soaks into the exposed surface of the wood next to the glass if the joint is close, or, if the glass and wood do not fit very snugly, fills the space between them and gradually works its way beneath the glass and under the outer coating of putty, undermining the same. This liability to undermine and to rot away the sash or frame is particularly certain and speedy in those numerous cases where the bearing or joint between glass and frame are imperfect, and in the case of large and heavy plate-glass, in which warping or defects of construction, which are almost impossible to avoid, or other causes operate to make more or less opening between the glass and the wood surface. Conscious of these defects and objections, I have devised a method of fastening glasses in position which is at once simple and cheap, adding no extra expense to the work, but which is also effective in overcoming the objections above noted, and at the same time greatly improves the character of the fastening in points of strength and durability. With my construction the danger of undermining the glass and putty by moisture and rot is absolutely avoided, while at the same time the glass is held equally firm and immovable at all points and a finished surface is afforded outside of the bearing proper of the glass which is impervious to moisture. I am aware that these objections to the old method of securing glasses in their frames have long been known, and that different devices have been resorted to to overcome the same; but I am not aware that the construction and invention herein shown and described have ever before been known or used.

In the accompanying drawings, Figure 1 is an enlarged cross-section of my improved sash or frame, taken on line $x\,x$, Fig. 2. Fig. 2 is a plan elevation of a sash or frame, showing the inside thereof.

A represents the window sash or frame of a door containing the glass. This sash or frame may be identically like the ordinary frame or of any other preferred form or style. In both figures, a represents the inside of the sash or frame, and b the outside thereof. The glass is inserted from the inside, and the sash or frame has a rabbet of sufficient depth extending around its inner edge to form a seat for the glass B, as clearly shown in Fig. 2, and to employ the wooden fastening strip or strips C, which are made of such size, preferably, as to fill the rabbet and serve to hold the glass securely in place, screws or nails or their equivalent being employed to fasten the strips C. Obviously this fastening answers every purpose of securing the glass so far as mere security is concerned; but in order that security of the glass may be supplemented with security against rolling the sash and loosening the glass in time I form a further rabbet c in the strips C at the inner edge next to the glass and a rabbet a' in the sash

or frame A on the outer edge next the glass and fill these rabbets with putty *e* or its equivalent.

The putty obviously forms an additional means of security for the glass, but particularly serves to hermetically close or seal the joint upon both sides of the glass against the admission of moisture. Then having painted over the point where the putty joins the wood it is impossible for moisture to enter the sash or frame at any point, and the joint is as secure against exposure or attack as if it were solid wood coated with paint, and hence impervious to moisture.

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

1. A frame having a rabbet along its edge to be occupied by the glass, a fastening-strip adapted to said rabbet, said strip and frame provided with opposite rabbets, substantially as described.

2. The frame having a rabbet along its edge, a glass resting directly against the shoulder of said rabbet and a securing-strip resting directly against the face of the glass, and material, as putty, laid upon said strip and frame, respectively, and against the face of the glass upon both sides thereof, whereby water is prevented from creeping along the face of the glass into the joint, substantially as described.

3. The frame and the glass secured therein, a rabbet on both sides of the frame along the face of the glass, and material, as putty, filling said rabbets, substantially as described.

Witness my hand to the foregoing specification this 22d day of October, 1890.

JOSEPH S. FETHERSON.

Witnesses:
H. T. FISHER,
NELLIE L. MCLANE.