

L. JONES & J. STROUD.

SASH-HOLDER.

No. 189,940.

Patented April 24, 1877.

Fig:1.

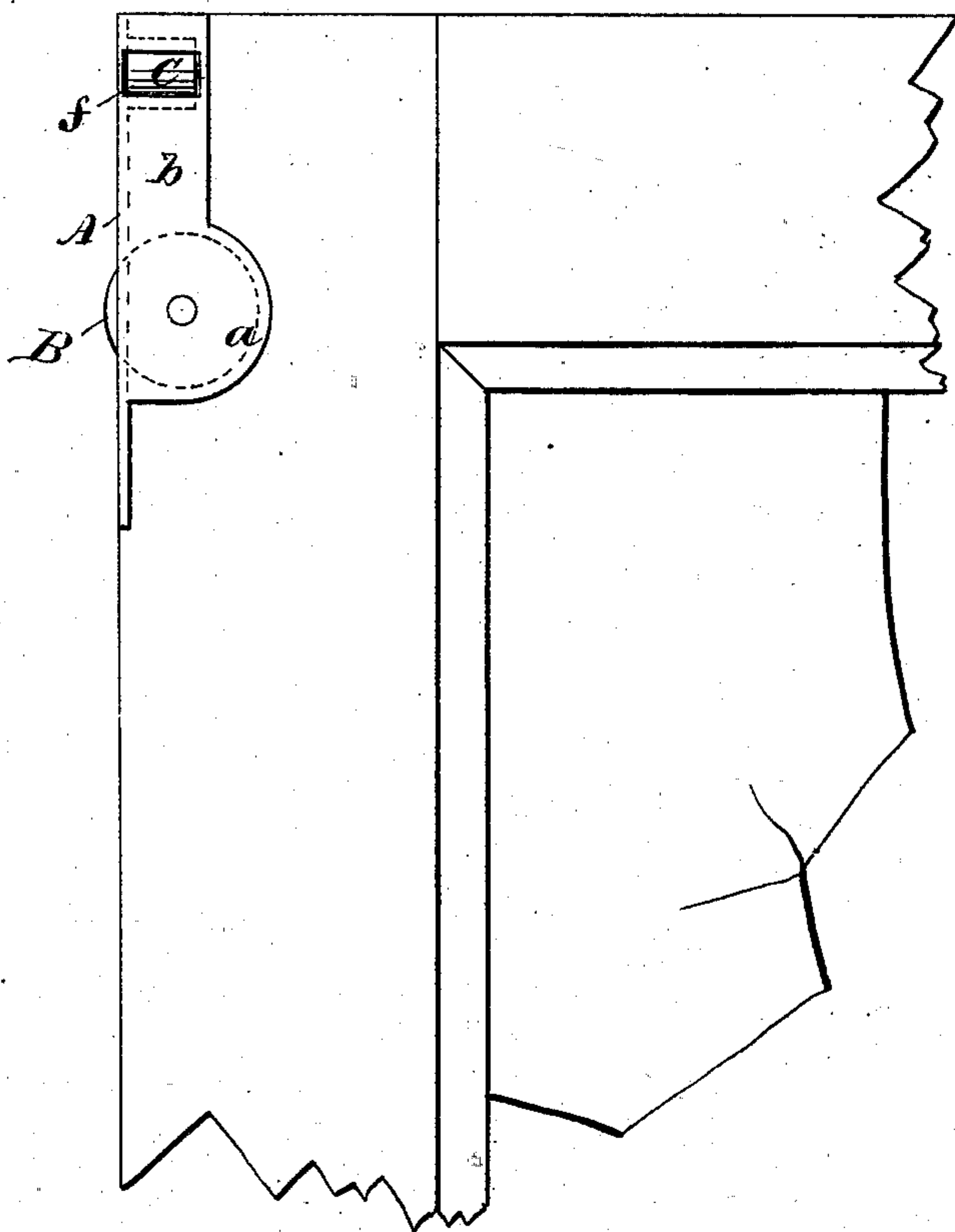


Fig:2.

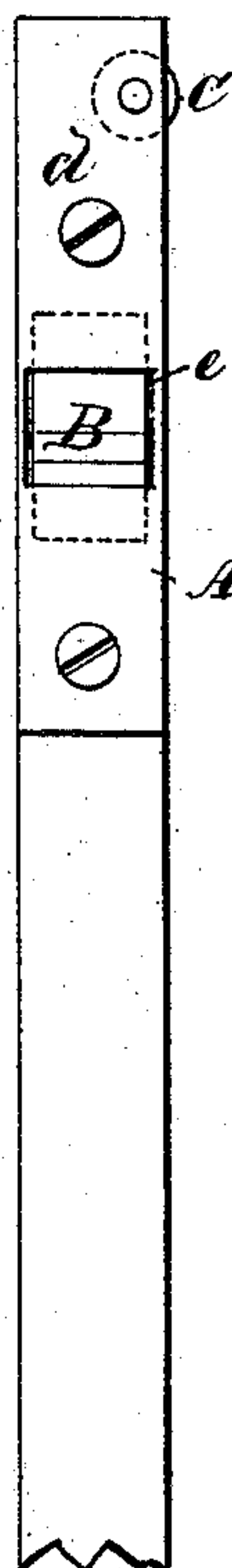
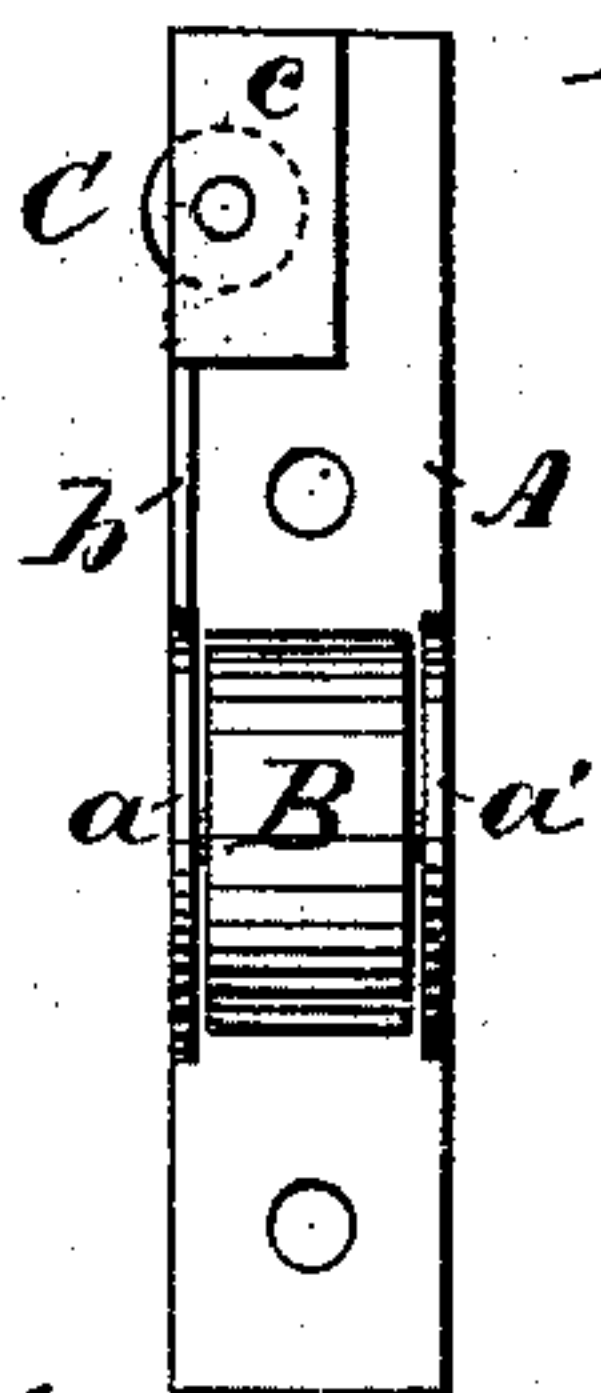


Fig:3.



WITNESSES:

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UNITED STATES PATENT OFFICE

LUTHER JONES AND JAMES STROUD, OF NEW YORK, N. Y.

IMPROVEMENT IN SASH-HOLDERS.

Specification forming part of Letters Patent No. **189,940**, dated April 24, 1877; application filed March 19, 1877.

To all whom it may concern:

Be it known that we, LUTHER JONES and JAMES STROUD, of the city, county, and State of New York, have invented a new and Improved Roller for Car-Window Sash, of which the following is a specification:

Figure 1 is a side elevation of a portion of a sash having our improvement attached. Fig. 2 is a view of the edge of the sash, and Fig. 3 a detail view of the rollers and frame.

Similar letters of reference indicate corresponding parts.

Our invention consists in the arrangement of two rollers at right angles to each other, in a suitable frame for attachment to the upper corners of the window-sashes of cars to relieve them of friction caused by the swelling of the sash or casings when damp, or by the warping of the sash or window-frame, as hereinafter more fully described, and definitely claimed.

Referring to the drawing, A is a frame, consisting of sheet metal, cut in suitable shape to form the ears *a a'* when bent twice at right angles, and to form the part *b* upon which the ear *c* is formed, by bending the metal at right angles to the part *b* and parallel to the face *d* of the frame.

B is a roller that turns on a pin that is fastened in the ears *a a'*. The said roller projects through a rectangular opening, *e*, formed in the face of the frame, and bears against the panel of the window.

C is a roller that is arranged at right angles to the roller B, and turns on a pin that passes through the ear *c* and through the face *d* of the frame A. A rectangular opening, *f*, is formed in the part *b*, through which the roller C projects slightly, so that it may

run in contact with the outer window-strip. The roller C is placed as near the upper part of the frame A as possible, so that when it is fitted in the sash it will relieve the upper and outer corner of the sash from friction caused by being raised at an angle, and outwardly to the upright casing, against which it strikes.

It is obvious that these rollers must be made in pairs of right and left in order that they may be applied to both of the upper corners of the sash.

The frame for the rollers, being made of sheet metal, permits of using rollers of the larger possible dimensions, and, at the same time, it requires but little cutting to fit it to the sash.

When a roller is fitted to the lower part of the sash, the smaller roller at the face of the sash is dispensed with, as the bottom of the sash binds at the edges only.

Our improvement is designed especially for the windows of street-cars and omnibuses where the peculiar manner of opening the window causes them to bind at their upper corners, making it difficult to open or close them. By our improvement this difficulty is entirely obviated.

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

The frame A, having ears *a a'* and *c* and apertures *e f*, in combination with the rollers B C at right angles to each other, substantially as herein shown and described.

LUTHER JONES.
JAMES STROUD.

Witnesses:

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