

(No Model.)

H. KNUEPPEL.
Window Sash.

No. 230,024.

Patented July 13, 1880.

Fig. 1.

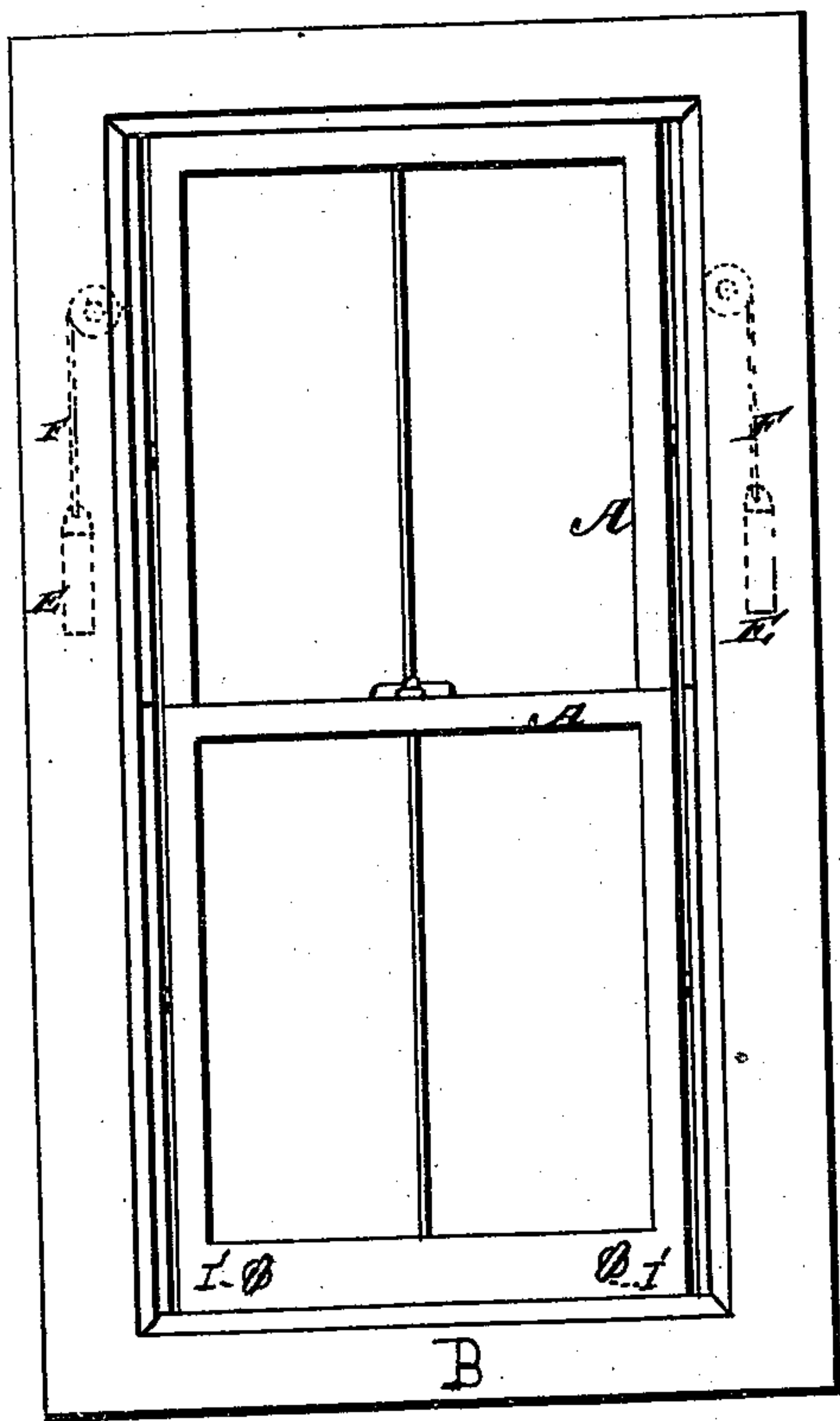


Fig. 2.

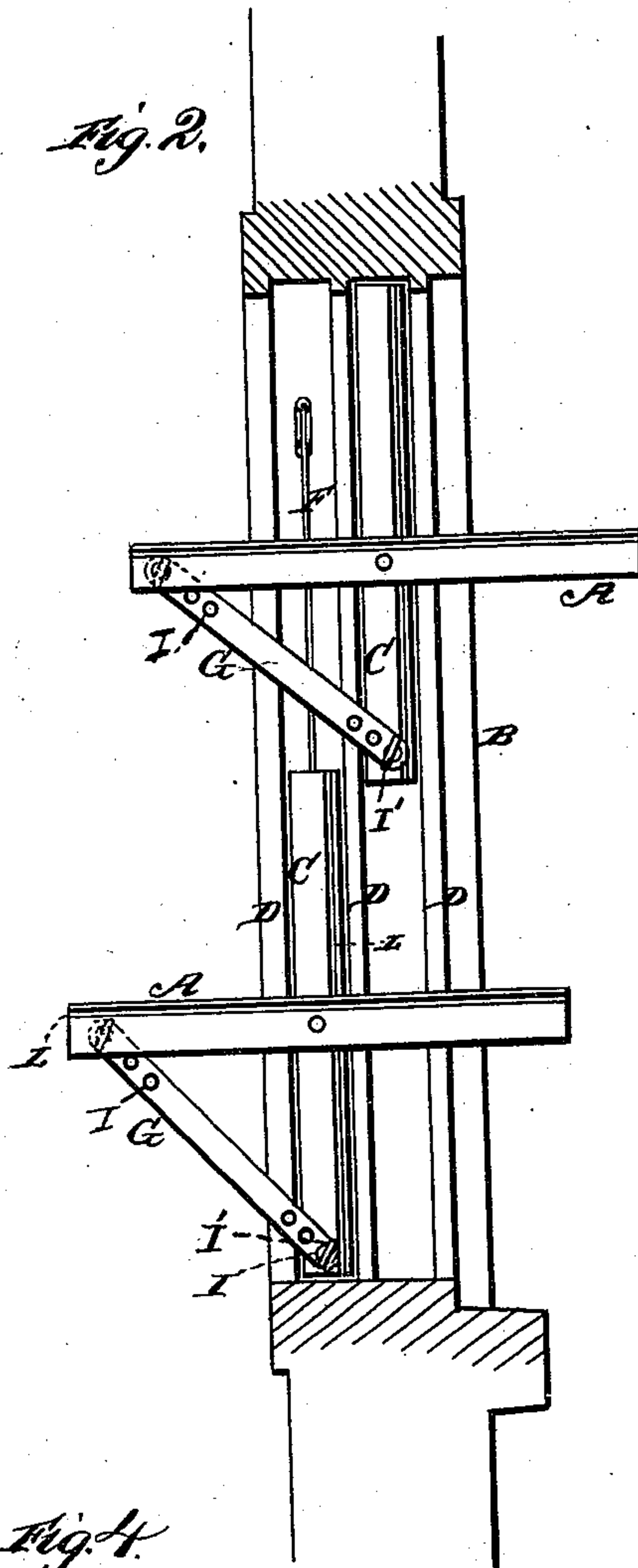


Fig. 3.

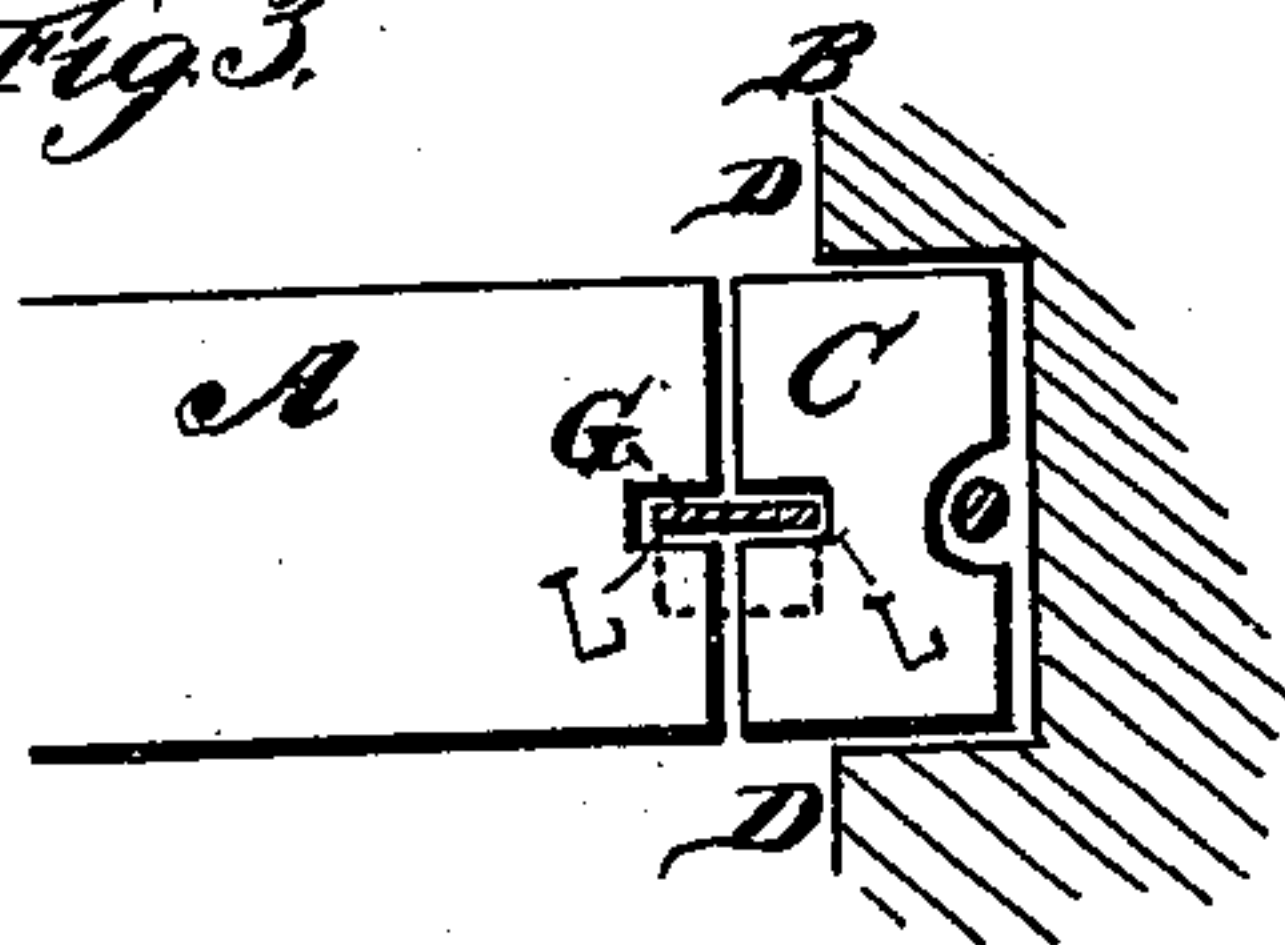


Fig. 4.



WITNESSES

Robert Emmett
James J. Sheehy

INVENTOR

Herman Knueppel.
Gilmore, Smith & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

HERMAN KNUEPPEL, OF ST. LOUIS, MISSOURI.

WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 230,024, dated July 13, 1880.

Application filed April 5, 1880. (No model.)

To all whom it may concern:

Be it known that I, HERMAN KNUEPPEL, of St. Louis, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Window-Sashes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front of my window-sash. Fig. 2 is a longitudinal sectional view of the same; and Figs. 3 and 4 are detail views.

My invention relates to that class of window-sashes in which the sash is pivoted to slides, so that it may be turned upon its axis, both the sash-frame and the slides being grooved, so that the sash may be held in a vertical plane and keyed to the slides by means of strips inserted in the grooves of the sash-frame and slides.

My improvement consists in forming said strips with a series of holes at each end, and in providing thumb-screws, whereby, by removing the strips from the grooves in the sash-frame and slides, the said strips can be secured by the thumb-screws at one end to the slides, and at the remaining end to the sash, thus holding the sash at an angle.

A A designate the upper and lower sashes of a window, and B the usual window-frame.

C C are slide-bars, which slide between the strips D D. These slides connect with the usual counterbalance-weights E by cords F, whereas in windows of ordinary construction the cords of the counterbalance-weights connect directly with the window-sash.

As herein illustrated, the upper sash is pivoted to slides which are entirely independent of the slides of the lower sash, the upper sash being also counterbalanced by weights which are entirely independent of the weights of the lower sash.

The sash-frames are pivoted at the centers of their sides, and they may be turned upon their pivotal points, and thereby set at an angle. In this way increased facilities for

ventilation are afforded, since the sashes may be set either at an angle or both may be turned so as to lie in horizontal planes, thus affording a large area for the admission of fresh air into an apartment.

In order to maintain the sashes at such angles as may be found desirable I provide strips or keys G, of wood or metal, these strips having holes I adjacent to their ends, so that thumb-screws I' may be passed through the holes of the strips and screwed into the slides and the sash-frames. Each sash may be thus held at an angle or horizontally by one or two strips, as desired.

To lock the sashes to their respective slides, so that they will each be in a horizontal plane, I form the sash-frames and the slides with grooves L L, and by removing the thumb-screws and bringing the sashes into horizontal planes the strips may be passed down into the grooves of the slides and sash-frames, thus locking or keying the sashes with their respective slides.

These strips, being thin strips, require but narrow grooves in the sashes, and the strips also serve to exclude dust when the windows are closed and the strips inserted in said grooves.

It will be observed that although the sashes are keyed to the slides, they will move vertically with said slides, which are free to have such movement.

The upper ends of the strips are bent, so as to prevent them from being pushed too far down into the grooves.

The thumb-screws, when not in use, may be screwed into the sashes in any desired location.

The thumb-screws may be used to raise the sash, since if they are placed as herein shown they will serve as handles for the operator to take hold of. This is illustrated in Fig. 1, where the thumb-screws are screwed into the lower part of the sash-frame.

What I claim is—

As an improvement in window-sashes, the combination of the sash A, grooved in its edges and pivoted to the slides C, as shown, the slides C, grooved in their faces, and the

strips G, perforated at I and bent at their upper ends and adapted to fit the pockets formed by the grooves in the sash and slides when the window is closed, and to be secured to
5 the sash and slides by set-screws to hold the sash at an angle when the window is open, as hereinbefore set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HERMAN KNUEPPEL.

Witnesses:

CHARLES T. KNUEPPEL,
LOUIS A. STEBER.