R. Dirks,

Sash Holder.

No. 34,352. Patented Feb. 11, 1862.

Fig. 1.

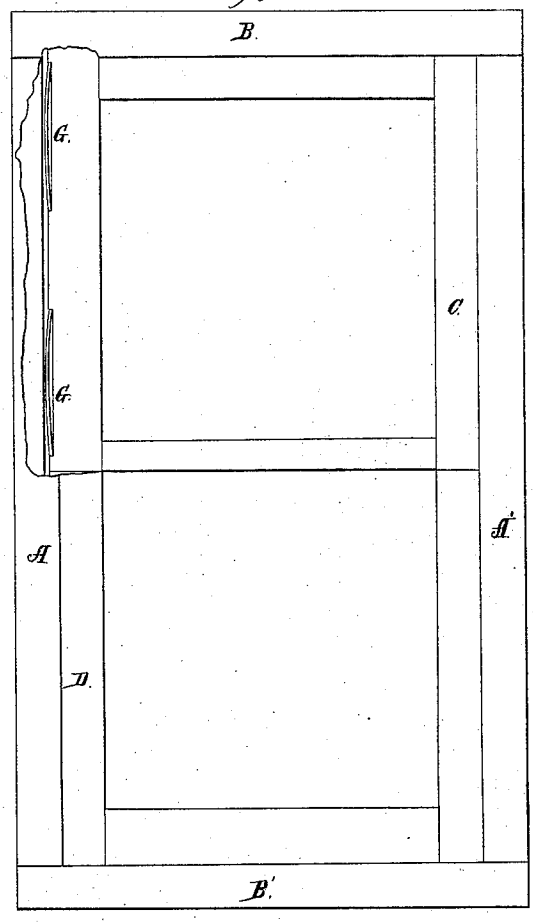


Fig. 2.

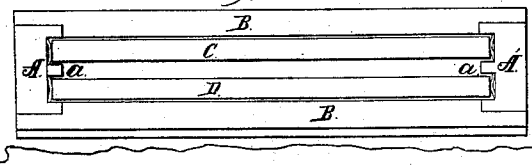


Fig. 3.

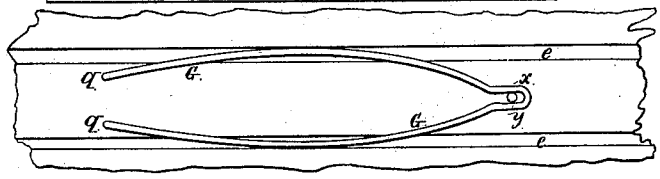
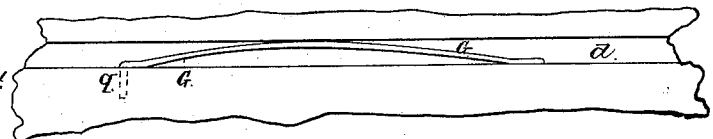


Fig. 4.



Witnesses:
Chas. Howson,
Saml. Harrod.

Inventor:
Henry Howson.
Atty for R. Dirks.

UNITED STATES PATENT OFFICE.

RUDOLPH DIRKS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SASH-SPRINGS.

Specification forming part of Letters Patent No. **34,352**, dated February 11, 1862.

To all whom it may concern:

Be it known that I, RUDOLPH DIRKS, of Philadelphia, Pennsylvania, have invented a new and Improved Sash-Spring; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a spring composed of one piece of wire, bent, attached to the sash, and arranged in respect to the grooves of the sash-frame, in the manner set forth hereinafter, so as to form a cheap and simple sash-spring, and one which will effectually retain the sash in an elevated position within the frame without the former being allowed to bear against the latter.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a front view of a window-frame and sashes, part of the frame being represented as cut away in order to illustrate my improvement. Fig. 2 is a ground plan of Fig. 1; Fig. 3, an edge view of part of the sash with a portion of the frame in section, and showing a plan view of my improved spring; and Fig. 4 is an edge view of the spring with portions of the frame and sash in section. Figs. 1 and 2 are drawn to a reduced scale, Figs. 3 and 4 being full-sized views.

Similar letters refer to similar parts throughout the whole of the views.

A and A′ represent the side beams of the frame, connected together by the upper cross-bars B B and lower cross-bar B′. On the inside of each of the opposite side beams are formed two grooves, separated from each other by the strip *a*, the said grooves being arranged to receive the edges of the sashes C and D, which are so constructed as to be somewhat less in thickness than the grooves are wide, the sashes being also of such a width that there shall be a narrow space between the edges of each sash and the bottom of the groove.

On each edge of each sash are secured two springs G G, the form and manner of applying which will be best observed on reference to the enlarged views, Figs. 3 and 4. Each spring consists of one piece of steel wire, bent so as to form the end *x*, Fig. 3, which fits over and is guided by a pin *y*, secured to the edge of the sash at a point midway between the opposite sides of the same. The ends of the wire which compose the spring are turned down at *q*, as seen in dotted lines, Fig. 4, the turned-down ends being driven into orifices bored in the edge of the sash. Between the end *x* and turned-down ends *y y* of the spring each side of the latter is bent or bowed outward in two directions, as illustrated in Figs. 3 and 4, so that one side of the spring shall take its place in and bear against one corner, the opposite side of the spring taking its place in and bearing against the opposite corner of the groove in the frame. As the pressure of the springs against the frame is equal on both edges of the sash it will be evident that they will be the means of maintaining a space *d*, Fig. 4, between the said edges and the inside of the groove in the frame. It will also be evident that spaces *e e*, Fig. 3, between the sides of the sash and the sides of the groove will be maintained by the same springs, which thus serve to retain the sashes in their proper position within the frames to impart the necessary friction for retaining the sashes in an elevated position, and to prevent that contact of the sash with the frame which, through the accumulation of dust, generally results in such an inordinate friction as to render the movement of the sashes a matter requiring much exertion and delay.

It should be understood that although there is a space *e* between the groove and the sash on both sides of the latter, the space on one side is so small that no inconvenient volume of air or annoying quantity of dust can penetrate through it. In other words, the springs should be so arranged that the sash shall on one side be as close as possible to the side of the groove without being in actual contact therewith.

Any movement imparted to the springs during the movement of the sashes will cause the end *x* of each spring to slide on the edge of the sash, while the pin *y* will serve to retain this end of the spring in its proper position.

It will be evident without further description that the above-described spring is simple

and cheap as regards construction and application and effective as regards the accomplishment of the desired result.

I do not desire to claim a sash-spring so arranged as to bear against the corner of the groove in the frame; but

I claim as my invention and desire to secure by Letters Patent—

The spring G, composed of one piece of wire bent, attached to the sash, and arranged in respect to the grooves of the frame, as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RUDOLPH DIRKS.

Witnesses:

HENRY HOWSON,

CHARLES HOWSON.