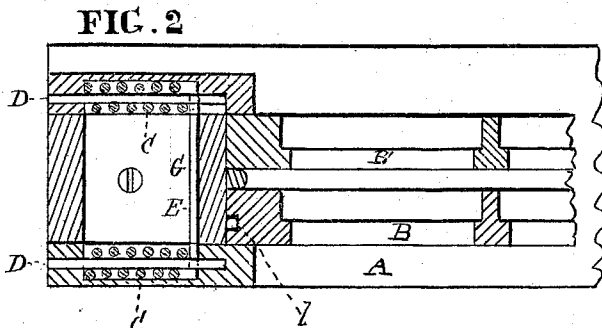
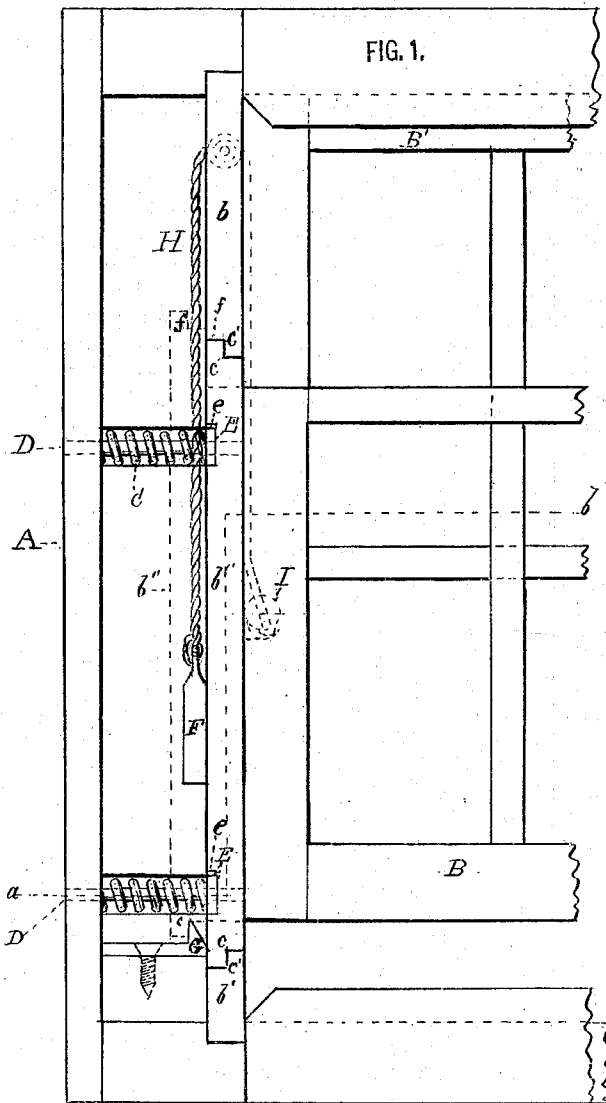
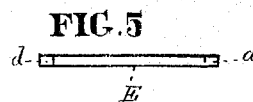
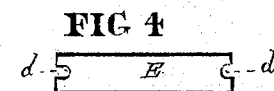
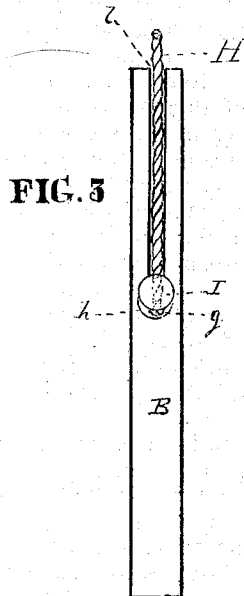


F. McSTOCKER.
Improvement in Window Frames.
 No. 125,826. Patented April 16, 1872.



WITNESSES.

Thomas J. Bowley
Isaac P. Mudge



INVENTOR,
Francis McStocker
 By His Attorney,
Stephen Wick

UNITED STATES PATENT OFFICE.

FRANCIS McSTOCKER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN WINDOW-FRAMES.

Specification forming part of Letters Patent No. 125,826, dated April 16, 1872.

Specification describing Improvements in Window-Frames and Sash, invented by FRANCIS McSTOCKER, of the city of Philadelphia and State of Pennsylvania.

This invention relates to the construction of the stiles of the window-frame with a loose section supported by springs, and so arranged that by pressing the sash against one of said loose sections the latter is caused to recede into the chamber of the jambs and thus admit of the sash being taken out of the frame. The loose sections are held back by means of a catch, as hereinafter described.

Figure 1 is a front view of a window-frame, A, and sash B and B', a facing, *a*, being removed for the purpose of showing the arrangement of the improvements. Fig. 2 is a horizontal section at the line *a b* of Fig. 1. Fig. 3 is an edge view of the sash B. Figs. 4 and 5 are a side and edge views of a bar, E.

Like letters in all the figures indicate the same parts.

A is a window-frame; B is the lower sash; and B', the upper sash. The stiles of the frame have a permanent section, *b*, at top, with which the pulleys are connected in the usual manner. The short section *b'* of the lower end of the stile is also permanent. The loose section *b''* has rabbets *c c* at the ends, which fit the rabbets *c' c'* of the permanent pieces *b* and *b'*, so that the three sections make a continuous stile, as seen in Fig. 1. At each end of the loose section *b''* there are springs C C on the rods D D. E E are metal bars, which have slots *d* in their ends, as seen in Figs. 4 and 5, which are caused to slide over the rods when the section *b''* is moved inward. The said section has cross-grooves *e e*, into which the bars are pressed by the springs so as to admit of the weights F F moving up and down freely without touching the bars. When

the sashes have to be removed for cleaning, &c., they are brought into the position the sash B assumes in Fig. 1, and then pressed against one of the loose sections *b''* until it is brought into the position indicated by dotted lines. The section, when pushed back and the sash removed, may be slightly raised, as indicated by dotted lines, so as to catch the lip *f* of the upper rabbet back of the permanent section *b*, and the lower end back of the catch G, so as to hold the section in its back position. The cords H are made detachable from the sash by means of the elastic balls I, which have a hole, through which the end of the cord is passed and prevented drawing out by the knot *g*. The balls fit in recesses *h* in the edges of the sash, and the cords lie in grooves *l*, as seen in Fig. 3. When the sash has to be removed from the window-frame by taking hold of the cords, the balls are readily withdrawn from the recesses. The balls I may be made of metal, wood, or other hard material, but I prefer making them of India rubber or other elastic substance, so as to fill the recesses and remain securely in place without rubbing against the window-frame.

I claim as my invention—

1. The loose section *b''* of the stiles, in combination with the permanent sections *b* and *b'*, springs C, bars E, and the sash B and B', substantially in the manner and for the purpose set forth.

2. The combination of the catches G with the frame A, arranged and operating in relation to the loose sections *b''*, substantially as described.

FRANCIS McSTOCKER.

Witnesses:

STEPHEN USTICK,
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