

(No Model.)

J. G. DE COURSEY.
Window Screen.

No. 237,829.

Patented Feb. 15, 1881.

Fig. 2.

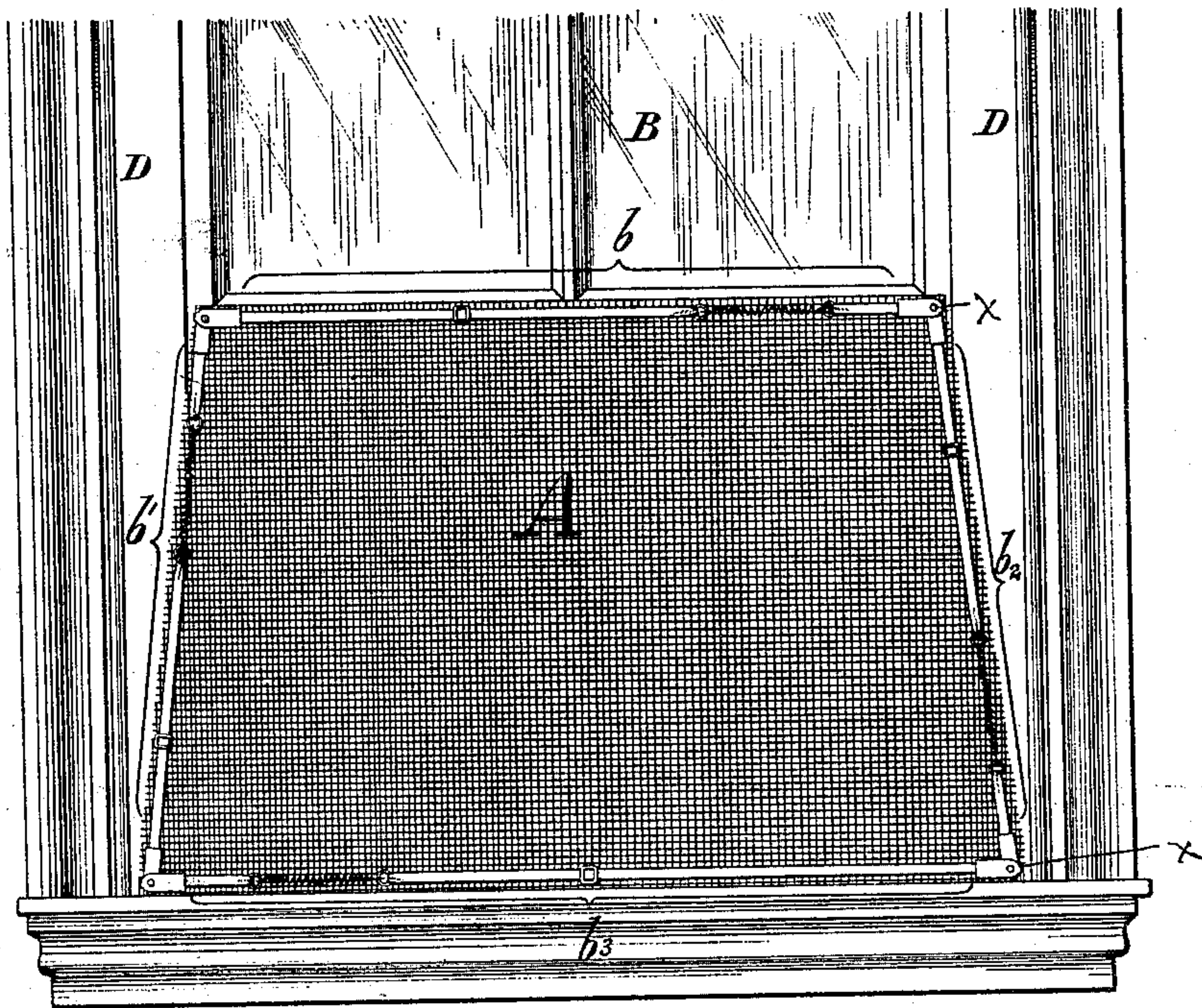


Fig. 1.

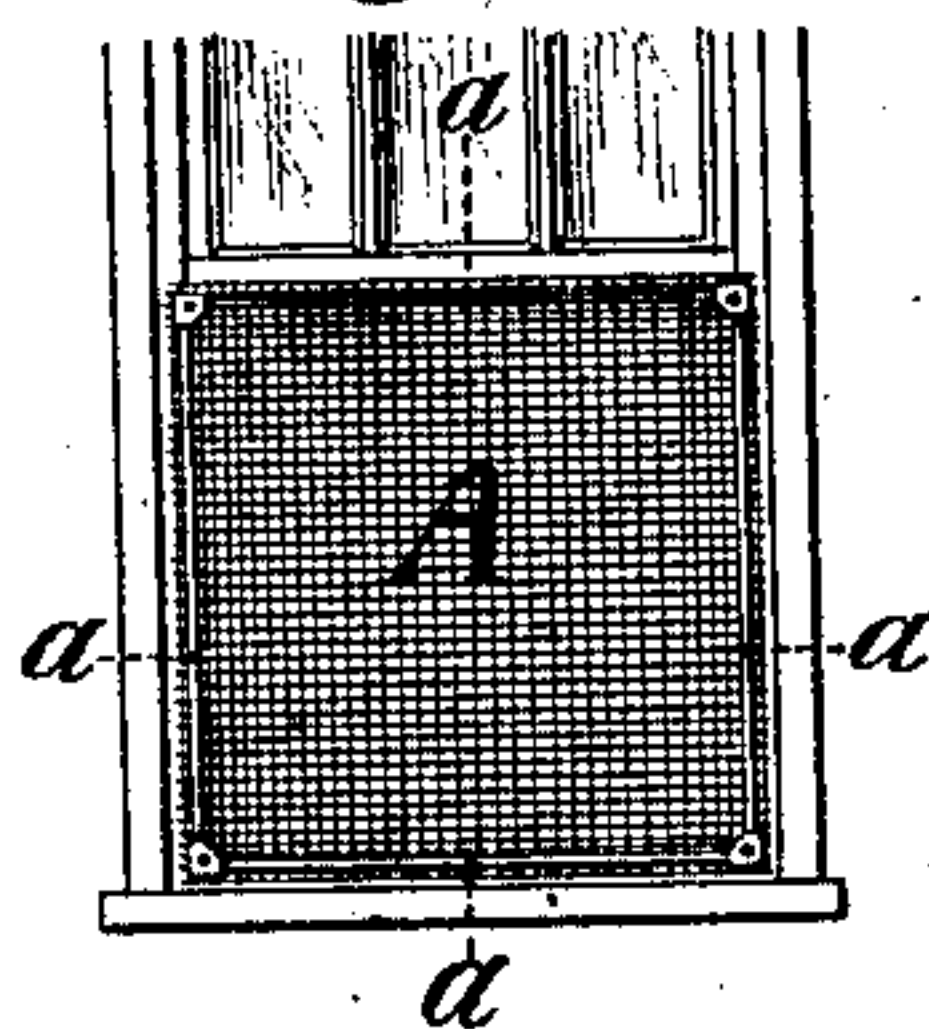


Fig. 3.

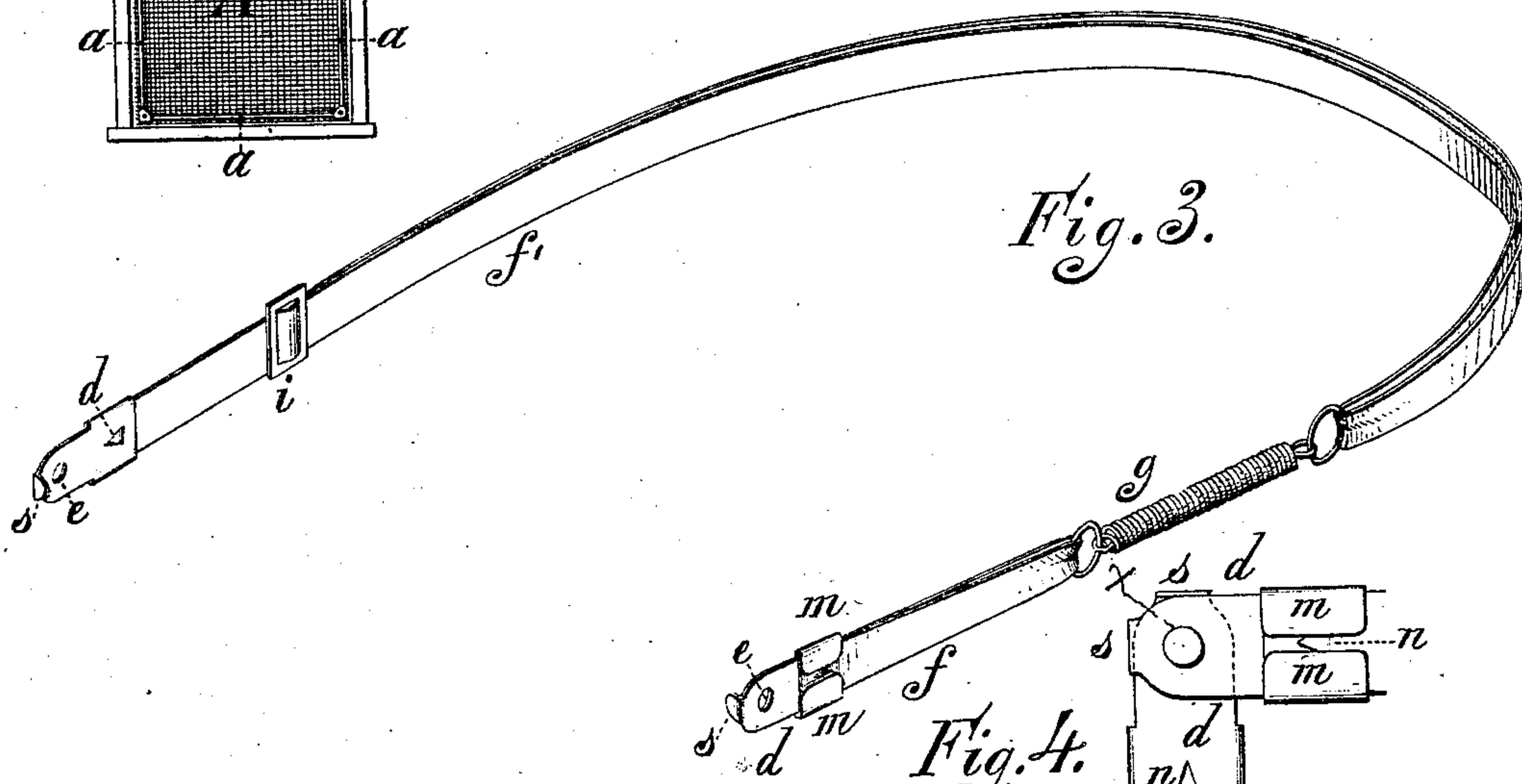
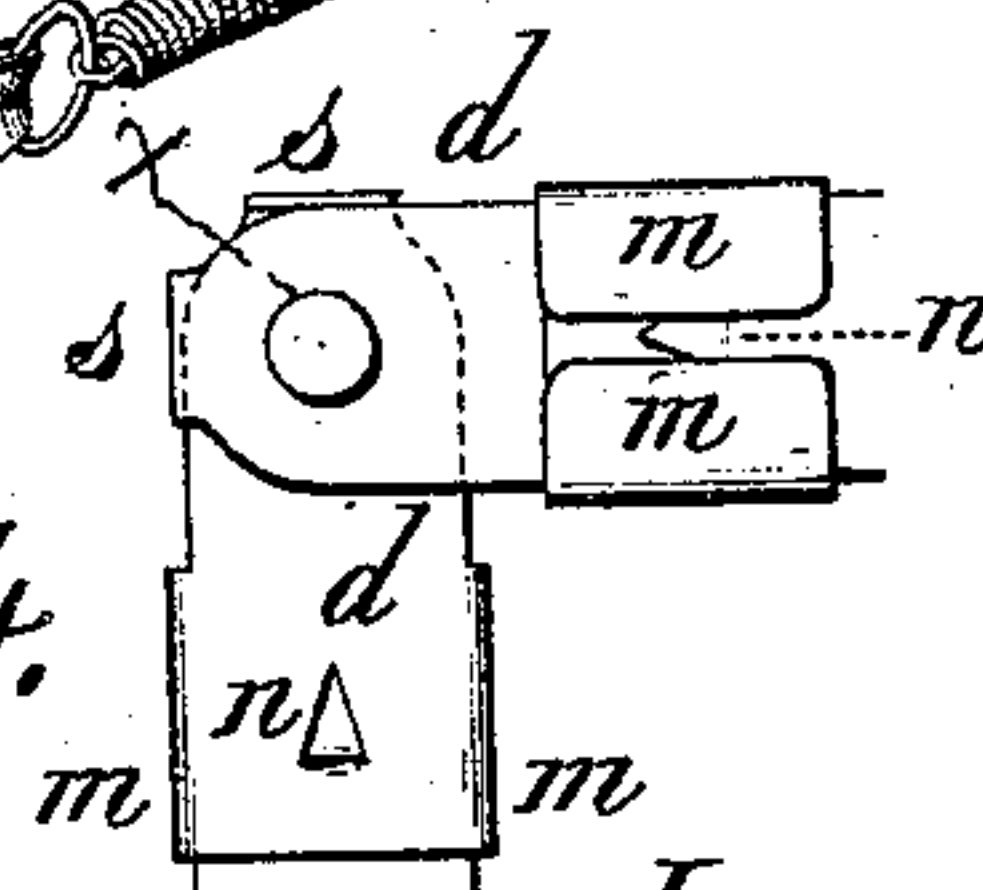


Fig. 4.



Witnesses:
Harry Smith
Robert H. How.

Inventor:
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by his Attorneys
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UNITED STATES PATENT OFFICE.

JOHN G. DE COURSEY, OF PHILADELPHIA, PENNSYLVANIA.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 237,829, dated February 15, 1881.

Application filed July 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. DE COURSEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Window-Screens, of which the following is a specification.

My invention relates to certain improvements in the window-screen for which Letters Patent No. 55,473 were granted to me June 12,
10 1866, the main object of my present improvements being to overcome certain defects to which the patented device was subject. As the manner in which I attain this object is fully set forth hereinafter, any detailed men-
15 tion of it in this part of the specification will be unnecessary.

In the accompanying drawings, Figure 1 is a diagram illustrating the patented screen; Fig. 2, a view of part of a window frame and
20 sash, showing the application of my improved screen thereto; and Figs. 3 and 4, detached views of parts of my improved screen, illustrating features of my present invention.

The screen forming the subject of my above-
25 mentioned patent comprised a sheet, A, of gauze or net-work held to the window sash and frame by four elastic tapes, *a*, the latter being united at the ends to four triangular corner-
30 pieces of metal, having openings adapted to pins on the sash and frame, the edges of the sheet of gauze being inserted beneath the tapes, and thereby confined to the said sash and frame, or the sheet of gauze having a hem formed around its edge, to which the tapes
35 were adapted.

In practical use two objections to this screen were developed. In the first place, the tapes had to be measured to accord with the size of the window for which the screen was intended,
40 the elasticity of the tapes not being sufficient to permit their adaptation to windows of different sizes; and, secondly, the tapes, owing their elasticity to interwoven strips of rubber, were liable to be affected by atmospheric
45 changes, and in time lost their elasticity. These objections I effectually overcome by my present invention, which also includes certain improvements in the end pieces, whereby the tapes are attached to the sash and frame.

50 In Fig. 2, A represents the screen, and *b*, *b'*, *b''*, and *b'''* the four tapes whereby said screen

is confined to the sash B and frame D, each tape having a sheet-metal end piece, *d*, in which is an opening, *e*. Each tape comprises two por-
tions, *f* *f'*, connected together by a coiled spring, 55
g, the latter having rings at the ends, and the portions *f* *f'* of the tapes being folded so as to form loops adapted to these rings. In the present instance the portion *f* of each tape is doubled throughout its length, its opposite
60 ends being retained by the end piece, *d*; but the portion *f'* of each tape has but one of its ends secured to the piece *d*, the opposite end being provided with a suitable clasp or buckle,
65 *i*, which embraces the tape or engages with the same in such a manner that while it can be adjusted thereon by hand it is not liable to accidental displacement by the strain to which the tape is subjected when in use.

It will be seen that by the adjustment of the
70 clasp or buckle *i* the portion *f'* of each tape may be lengthened or shortened, as desired, so that the tapes may be adapted to sheets of net-work or gauze of different sizes. When extended adjustments are to be provided for
75 the portions *f* *f'* of each tape may be furnished with clasps or buckles *i*.

The springs *a* are a more reliable means of imparting elasticity to the tapes than the interwoven strips of rubber, as said springs are
80 not liable to deterioration from continued use, or by reason of atmospheric influences.

Each of the end pieces, *d*, has two wings, *m*, and a projecting tongue, *n*, the ends of the tapes being secured to the end pieces by secur-
85 ing said ends to the tongues *n*, then bending down the tongues and finally folding over the wings *m* *m* so as to securely confine the tapes, the end pieces then presenting straight parallel sides, and being of substantially the same
90 width as the tapes. Each end piece, *d*, has a projection, *s*, at right angles to the body, so that when two end pieces are applied to one of the pins *x* on the sash or frame the projec-
95 tion *s* of one end piece will bear against one edge of the body of the other, and thus insure the maintenance of the two end pieces in their proper relation at right angles to each other. The projections also serve as thumb-catches, and facilitate the application of the end pieces
100 to the pins *x*.

The edges of the sheet of net-work or gauze

may be simply inserted beneath the tapes, or may be provided with hems for the reception of the tapes, the end pieces, *d*, in the latter case being used in the same manner as a bodkin for threading the tapes in the hems.

In carrying out my invention the exact construction of end piece need not be adhered to in all cases, however, as the patented end piece may, if desired, be used in connection with the improved tapes, or the tapes may be connected to the improved end piece by eyelets, in which case the formation of separate pin-holes *e* in the end pieces will be unnecessary. I prefer the construction shown, however, on account of its economy and convenience.

Where a screen to cover an entire window-frame is desired, no pins in the sash are required; but in this case it is desirable to have, besides the pins at the corners of the frame, one or more pins at each side of the same, adapted to openings in the tapes.

I claim as my invention—

1. The combination of a window-frame, or frame and sash, having pins *x*, as described, with a screen, *A*, and with tapes *b*, *b'*, *b*², and *b*³, each adapted for application to the pins, and each having a doubled or folded portion provided with an adjustable clasp or buckle, *i*, whereby the tape may be lengthened or shortened, as described.

2. The combination of a window-frame, or frame and sash, having pins *x*, as described, with a screen, *A*, and with tapes *b*, *b'*, *b*², and *b*³, each adapted for application to the pins, and each comprising two portions, *f* *f'*, connected together by a coiled spring, *g*, as set forth.

3. The within-described screen-confining tape, constructed at each end for application to a pin, and having a doubled or folded portion provided with an adjustable clasp or buckle, *i*, as set forth.

4. The combination of each end of each of the screen-confining tapes, with an end piece, *d*, secured to the tape, and having an opening, *e*, the end pieces of each tape being independent of those of the other tapes, as set forth.

5. The combination of the screen-confining tapes with end pieces, *d*, having openings *e* and projections *s*, as set forth.

6. The combination of the screen-confining tapes with end pieces, *d*, having openings *e*, wings *m*, and tongues *n*, as described.

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

JOHN G. DE COURSEY.

Witnesses:

JAMES F. TOBIN,
HARRY SMITH.