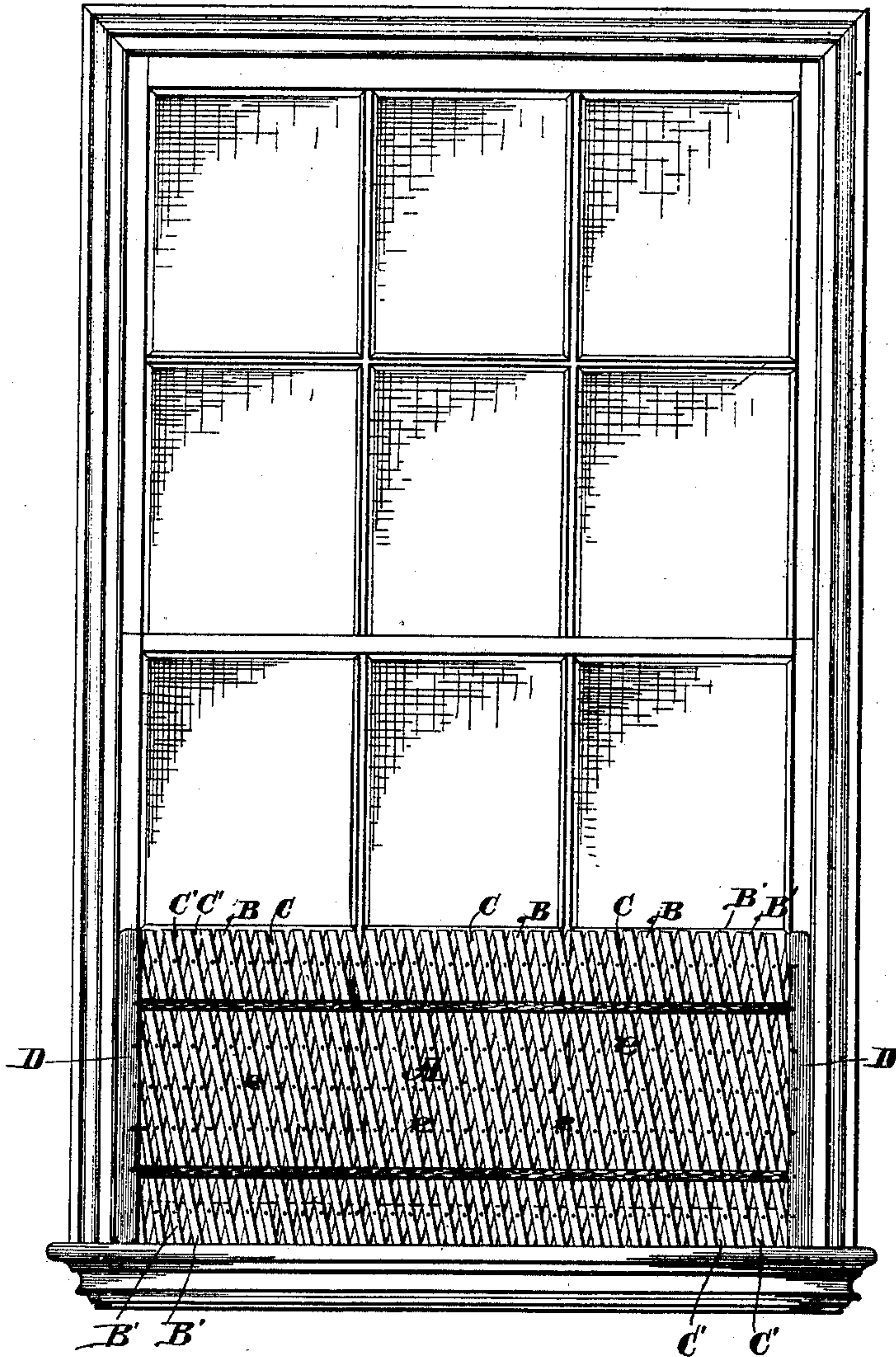


G. HARTIG.
Window-Screen.

No. 223,341.

Patented Jan. 6, 1880.

Fig. 1.



WITNESSES=

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Fig. 2.

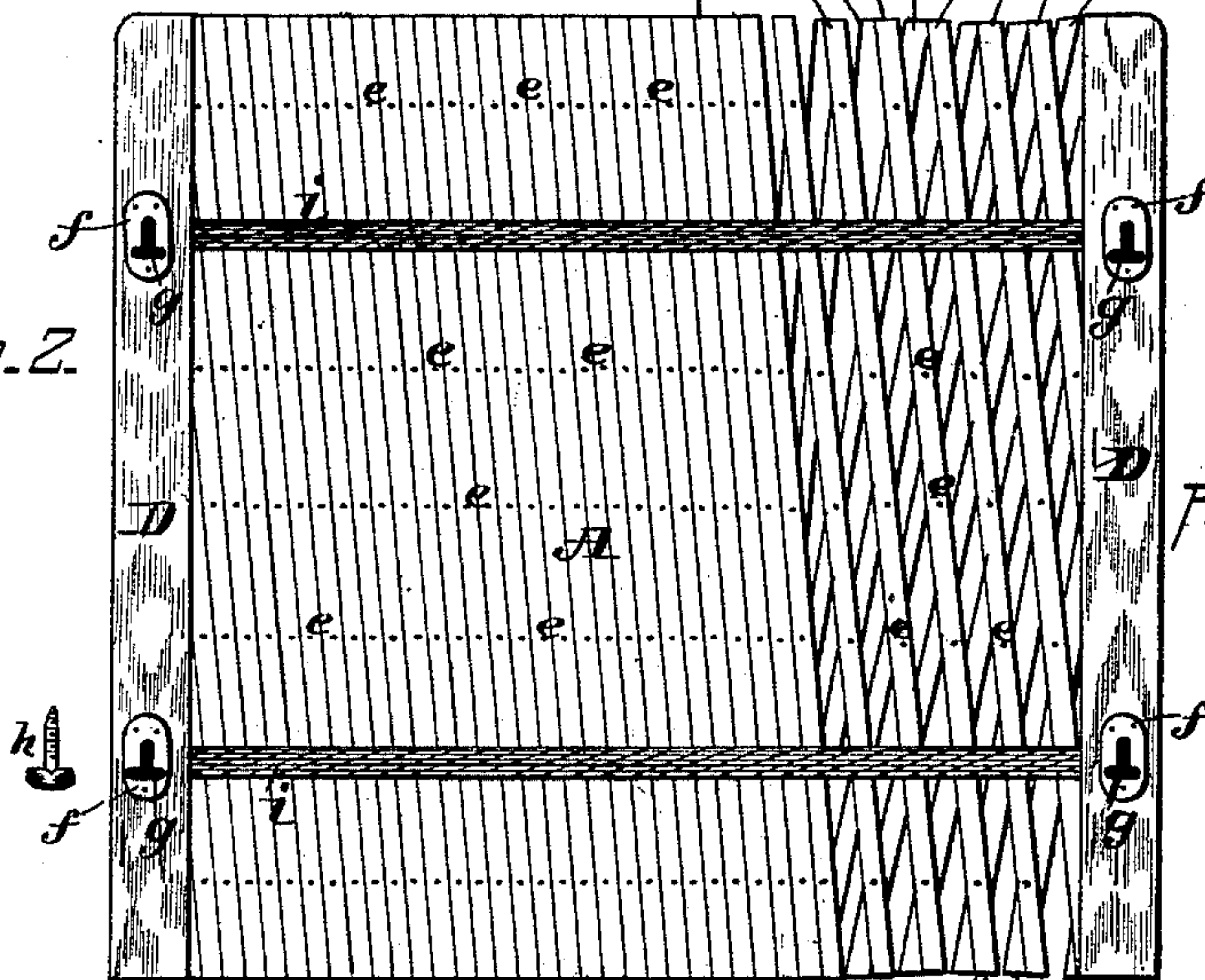


Fig. 3.

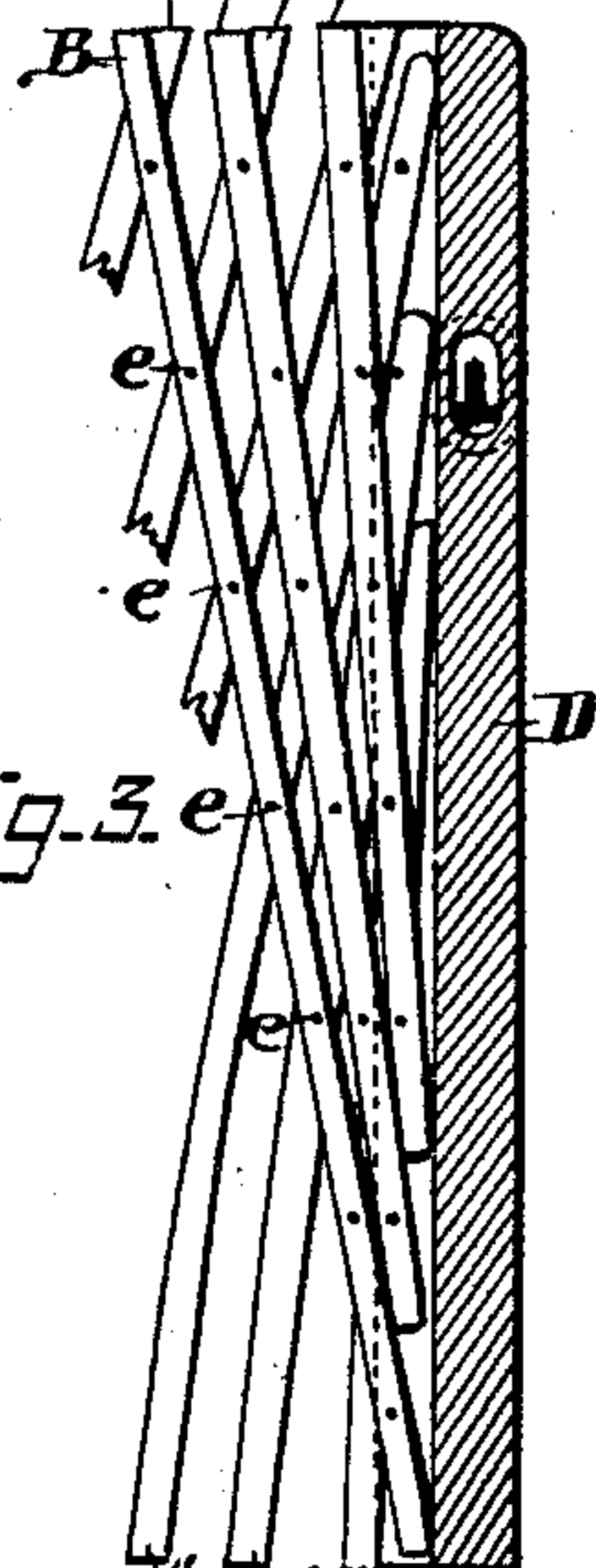


Fig. 4.

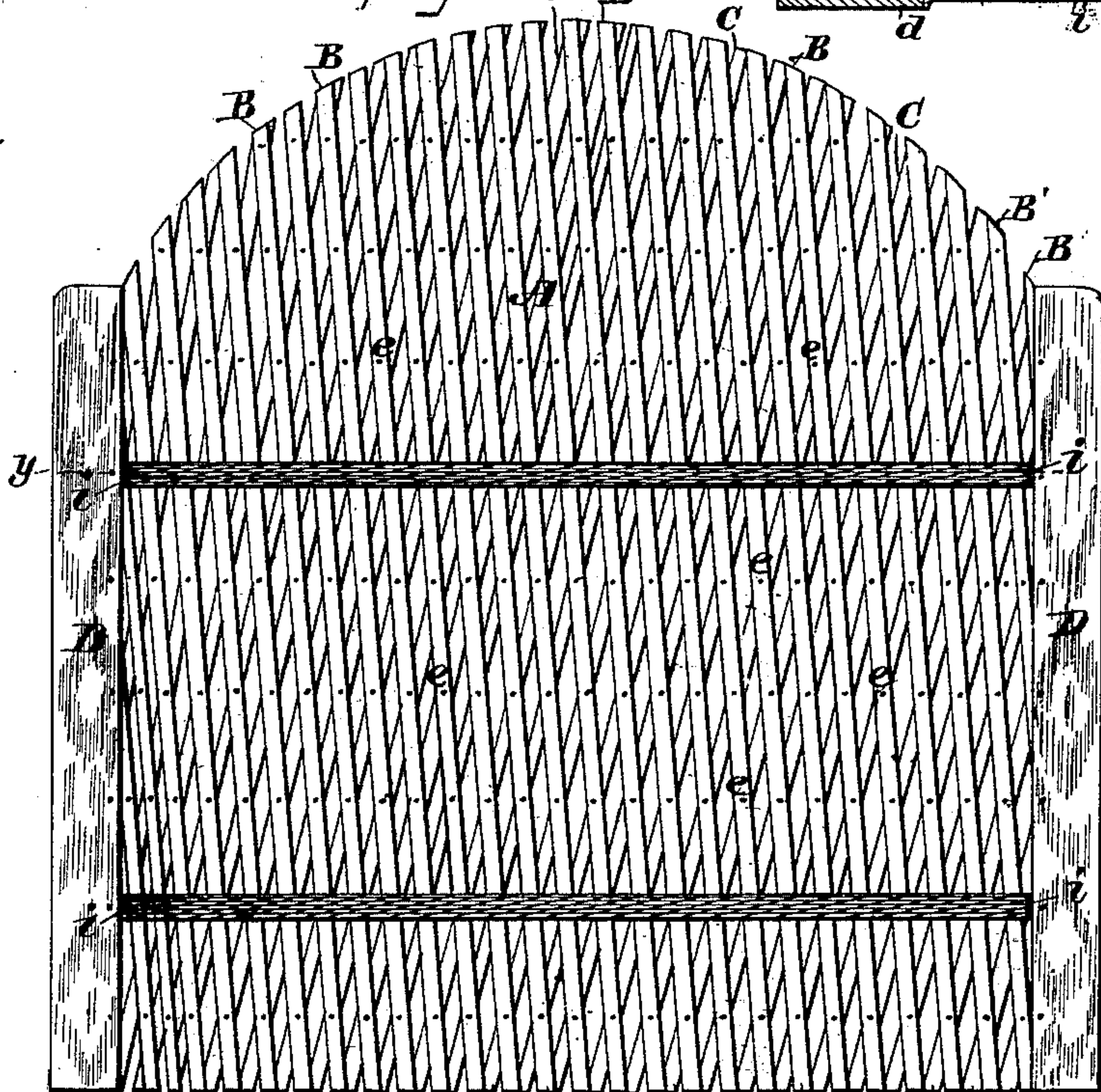


Fig. 5.

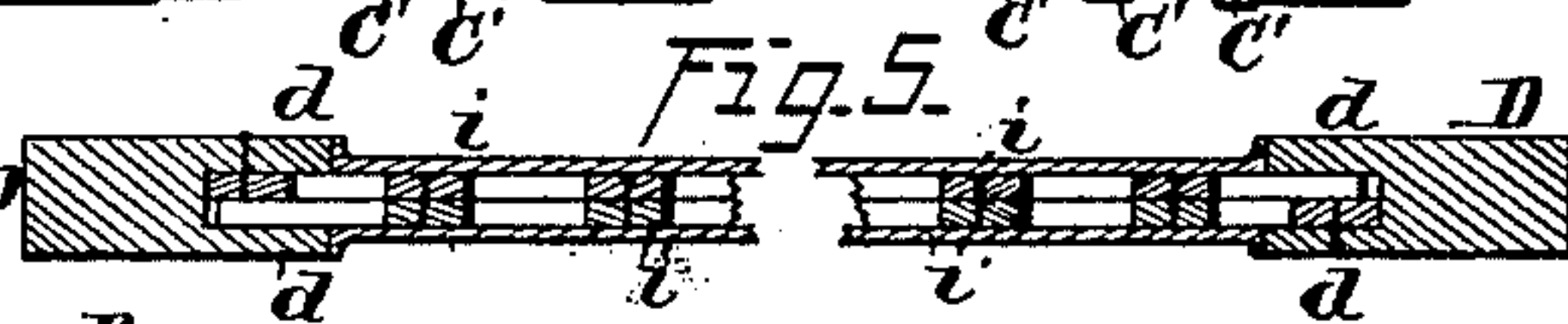
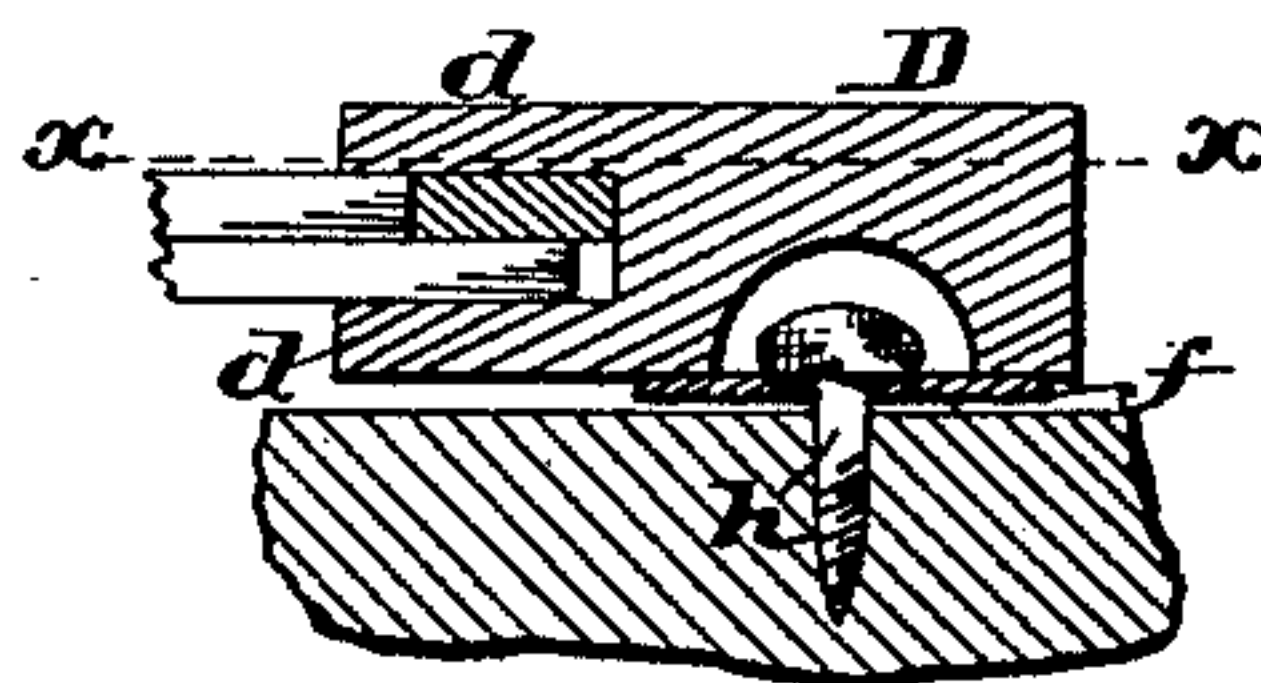


Fig. 6.



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UNITED STATES PATENT OFFICE.

GEORGE HARTIG, OF BRIXTON, COUNTY OF SURREY, ENGLAND.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 223,341, dated January 6, 1880.

Application filed November 26, 1879.

To all whom it may concern:

Be it known that I, GEORGE HARTIG, of Brixton, in the county of Surrey, England, have invented certain new and useful Improvements in Window Screens or Blinds, of which the following is a specification.

This invention relates to adjustable window-screens for attachment to the window-frames on the inner sides, its objects being to shield the interior of chambers from observation of passers on the street, and to guard the window-glass from breakage by children or accident.

In the accompanying drawings, Figure 1 is an inside view of a window to the frame of which is secured a screen constructed according to my invention. Fig. 2 is a view of the side of the screen which is next to the window and frame, and showing the attaching devices. Fig. 3 is a vertical section through one of the end bars on the line *x x*, Fig. 6. Fig. 4 is a modified form of the lattice-work. Fig. 5 is a section on line *y y*, Fig. 4. Fig. 6 is a cross-section of one of the end bars through its fastening-plate and recess.

The letter A designates the lattice-work, composed of the two series of slats B B' and C C', crossing each other obliquely, and pivoted together at their intersections *e*.

The width of the slats is preferably from one-fourth to half an inch, but may, of course, be varied as desired, and their thickness may be from one-eighth to one-quarter of an inch, more or less. The distance between the pivots or crossing-points may also be varied, but is preferably from an inch and a half to two and a half inches.

Each series is composed of a certain number of full-length slats, as B and C, and has at each end a number of slats, as B' and C', which are successively shorter, and terminate at the end edges of the screen, their outer terminals being in a line at right angles to the longitudinal edges of the screen, and pivoted to the end bars, D, at intervals about equal to the distance between pivots in the main portion of the screen.

The end bars, D, are grooved to receive the end edges of the screen, the opposite walls *d* of the grooves serving to give a support at both ends to the pivots by which the slats are secured.

Each end bar, D, has in one of its flat faces two recesses, respectively, near its ends, covered by metal plates *f*, in which are cut in-

tersecting slots or openings, commonly known as "metal button-holes," the horizontal portions T of said openings permitting the passage through the plates of T-heads of pins or studs *h*, which project from the window-frame, and the vertical portions of said openings embracing the shanks of said studs when their heads are in the recesses in the bars and the screen is moved slightly downward.

In the modification shown in Fig. 4 the upper edge of the screen is simply curved or arched to give an ornamental effect.

In order to facilitate the contraction of the screen and to hold it in compact form when not in use, I connect the opposite end bars by elastic bands *i*, two of which are shown as extending between and secured to the said end bars at each side of the screen, in order that the screen may not be bent or curved by their tension, as it would obviously be were the bands upon one side only. These bands may be formed of india-rubber, rubber band, or spiral springs, and their tension should be so adjusted as to keep the screen normally constructed, but to permit its extension to its full length.

It will be observed that my screen may be adjusted to any window-frame within a given width, and obviates the necessity of the old-fashioned double sliding frames, with which window-screens have heretofore been provided. When not in use it may be contracted to a compact form of small compass, and is not liable to accidental injury.

The slats and bars may be made of either metal or wood, as desired.

What I claim is—

1. The combination, with the extension-screen composed of the pivoted slats and provided with the rigid end bars, of the elastic bands arranged at each side of said screen, and having their opposite ends secured to said rigid end bars, respectively, substantially as and for the purpose set forth.

2. The elastic extensible screen having the rigid end bars provided with the recesses, covered by the slotted plates adapted to engage with T-headed studs, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

Witnesses:

GEORGE HARTIG.

JAMES L. NORRIS,

J. A. RUTHERFORD.