

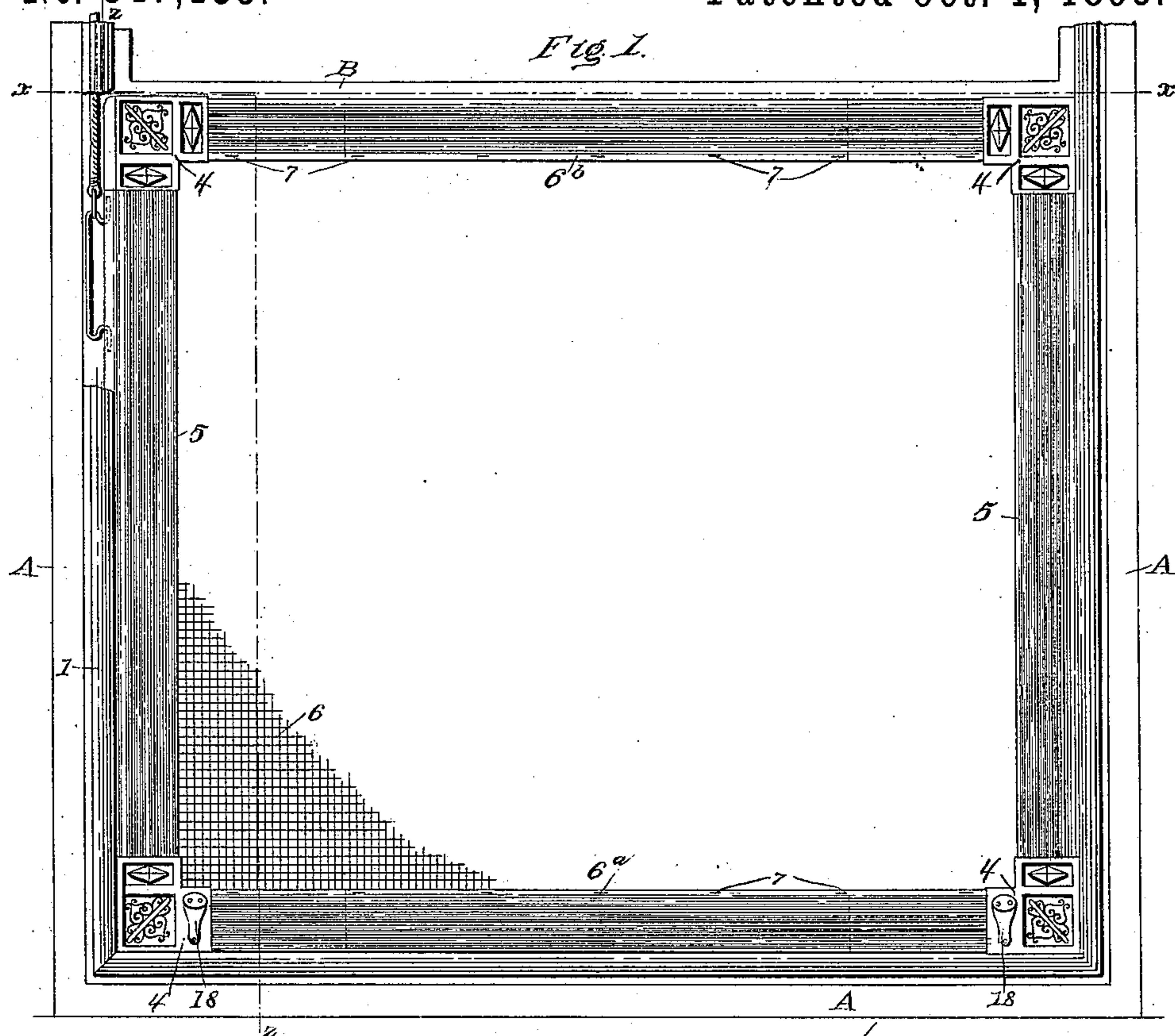
(No Model.)

2 Sheets—Sheet 1.

H. WERNLE.
WINDOW SCREEN.

No. 547,135.

Patented Oct. 1, 1895.



Witnesses;

Geo. L. Gatchel.

G. M. Copuchaver

Inventor:

Henry Thorne.

by O. D. Stockbridge & Co.
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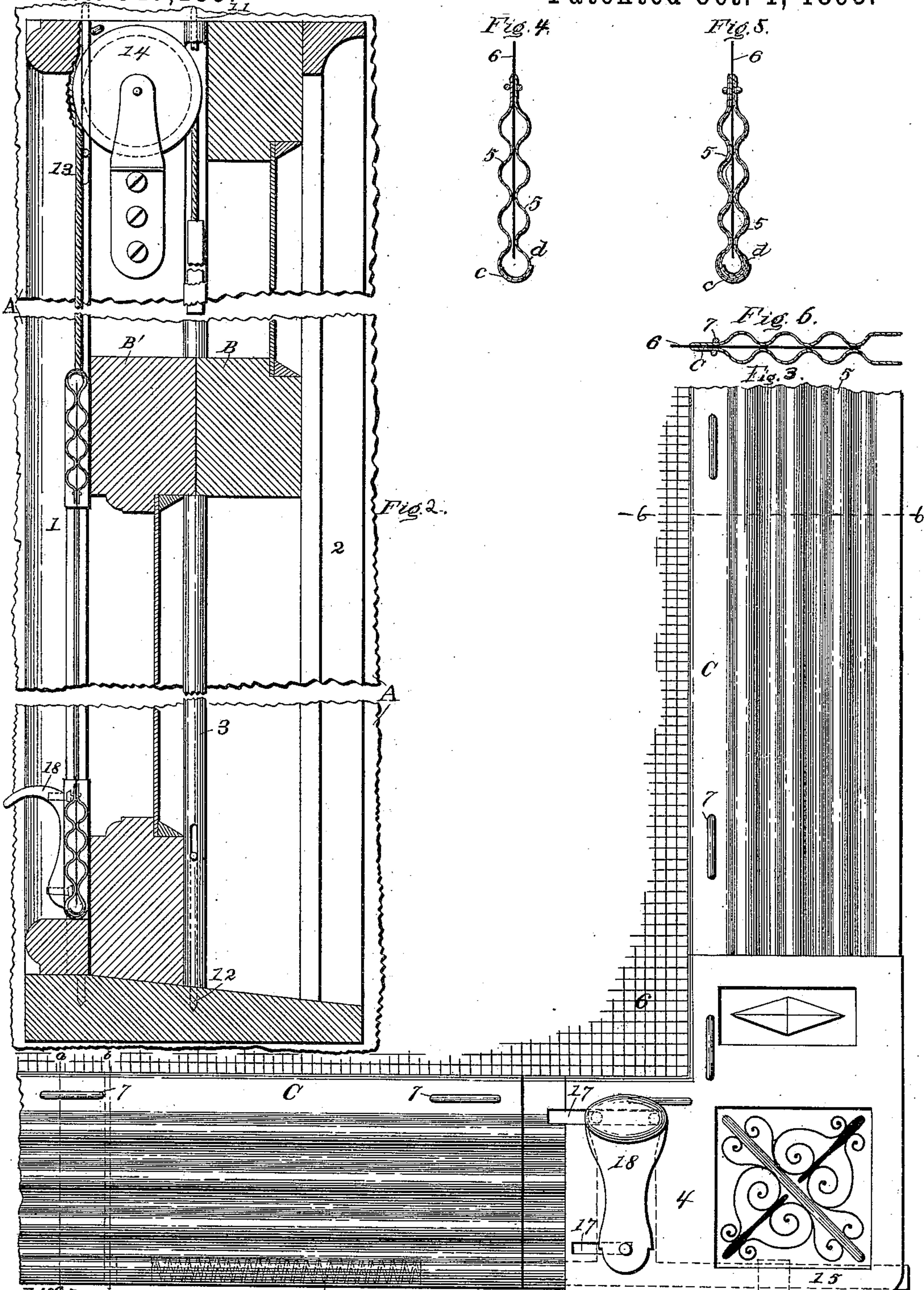
(No Model.)

2 Sheets—Sheet 2.

H. WERNLE.
WINDOW SCREEN.

No. 547,135.

Patented Oct. 1, 1895.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY WERNLE, OF PHILADELPHIA, PENNSYLVANIA.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 547,135, dated October 1, 1895.

Application filed March 10, 1894. Serial No. 503,185. (No model.)

To all whom it may concern:

Be it known that I, HENRY WERNLE, a citizen of the United States, residing at Philadelphia, (Bridesburg,) Pennsylvania, have invented certain new and useful Improvements in Window-Screens; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to window-screens and comprises improvements in the construction of the screen-frame, as will be hereinafter fully described and claimed.

In the accompanying drawings, which illustrate my invention and form a part of this specification, Figure 1 represents a front elevation showing my improved screen in position against the inner surface of the lower sash of a window. Fig. 2 represents a vertical section on the line *z z* in Fig. 1, the view being extended to the top of the window to show the manner of applying the counterbalancing weight and cord. Fig. 3 is a face view of a segment of an extensible screen-frame provided with a locking-bolt for securing it in different positions. Fig. 4 is a vertical transverse section through the lower rail of the screen-frame. Fig. 5 is a similar section, on the line *b b* in Fig. 3, through the double or telescopic part of the frame; and Fig. 6 is a section on the line *6 6* of Fig. 3.

A designates the window-frame; B B', the upper and lower sashes, mounted in the frame to slide up and down therein and confined and guided by inside and outside beads 1 2 and an intermediate or parting bead 3, all as usual.

C designates a metallic screen-frame comprising in its preferred form corner-pieces 4, vertical side bars 5 5, and top and bottom rails 6^b 6^a, as shown in Fig. 1. The corner-pieces 4 are formed of inner and outer plates of thin sheet metal cut into right-angular form, as shown, and placed and secured together face to face. These plates may be stamped up or embossed in any preferred pattern or design to give them an ornamental appearance. The top and bottom rails and the side bars are also formed of inner and outer plates of thin sheet metal corrugated longitudinally to give strength and rigidity

and laid and secured together with the edges of the screen 6 clamped between them and secured in any appropriate manner or by any preferred means—as, for example, by soldering or by wire fastenings 7, passing through the parts, as represented in Fig. 3. The plates forming the top and bottom rails 6 6^a are beaded along their outer edges, the bead on one plate being open and of a size to receive that on the companion plate, whereby a smooth finish is given to the outer edges of said rails. Preferably the female bead *c* is somewhat more than semicircular in cross-section and of a size relatively to that of the male bead *d* to closely embrace the latter, sliding one within the other by a longitudinal movement and forming a connection which secures the edges of the two plates together without other fastenings.

For the purpose of securing the screen in adjusted position I provide it, preferably at the bottom, with bolts 15, adapted to be projected laterally into suitable notches in the frame. These bolts may be located in the hollow beads *c d*, which unite the parts of the bottom rail, as above described, or in any of the corrugations of the companion plates, the outer ends projecting between the plates of the corner-pieces, and they may be made to act automatically by springs 16, located behind them in the said beads or corrugations, as indicated by broken lines in Fig. 3. Knobs or stems projecting from the bolts through slots 17 serve as a means for withdrawing the bolts to release the screen when the latter is to be raised or lowered.

To enable the screen to be conveniently raised and lowered, I provide it with lift-hooks or buttons 18, which for convenience may be connected with the bolts 15, as represented in Fig. 5.

To adapt the screen to be adjusted to windows of different widths, it is made laterally extensible by dividing the top and bottom rails into two sections, which overlap each other, as indicated at the bottom of Fig. 5 by full and broken vertical lines.

While I prefer to join the top and bottom rails of the frame to the side bars by corner-pieces, as above described, it is manifest that the corner-pieces may be omitted and the parts mitered together or joined by overlap-

ping the ends and fastening them together in any approved manner.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A window screen consisting of the combination of a screen fabric and a frame of rails and side bars composed of inner and outer plates of thin corrugated metal arranged face to face with the screen fabric between them the thin plates of the rails being beaded and telescopically united along their outer edges substantially as described.

2. A frame for window screens having its

bars formed of double strips of sheet metal corrugated longitudinally, the top and bottom rails being beaded at their outer edges, the bead of one strip fitting within that of the companion strip, the beads forming a connection between the two strips, as shown and described.

In testimony whereof I affix my signature in the presence of two witnesses.

HENRY WERNLE.

Witnesses:

SEBASTIAN HEIM,
GOTTLOB H. BETZ.