H. WAKEMAN & A. BATAILLE.

Window-Screen.

No. 211,446. Patented Jan. 14, 1879

Fig. 1.

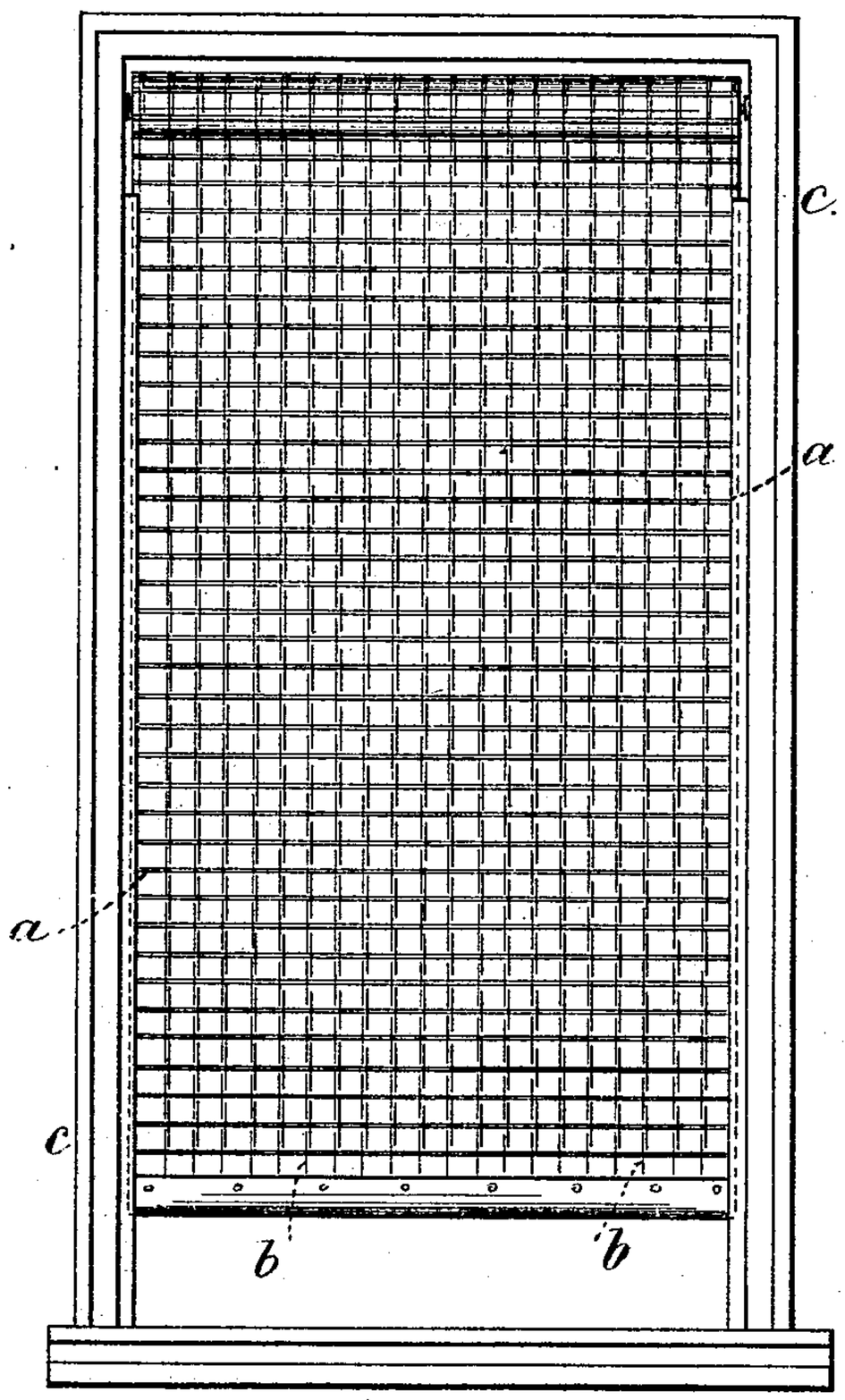
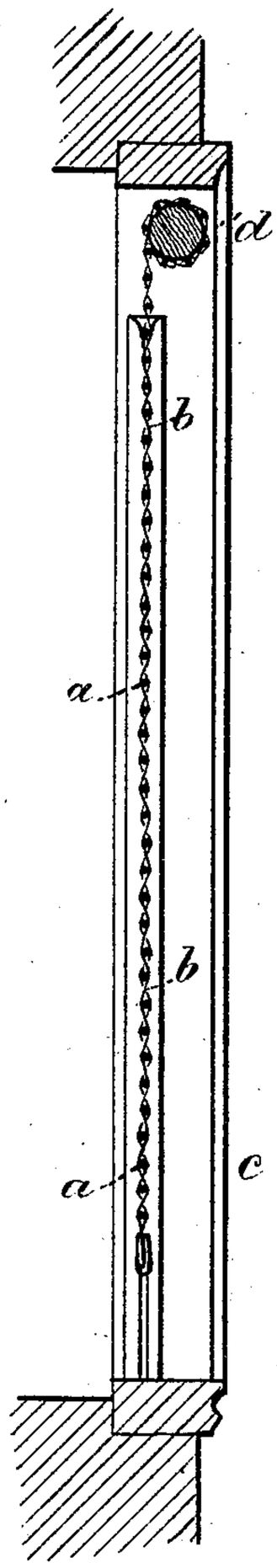


Fig. 2.



Witnesses

Cha. H. Smith

Geo. T. Pinckney

Inventors

Hazwood Wakeman

Achille Bataille

Lemuel W. Serrell

UNITED STATES PATENT OFFICE.

HARWOOD WAKEMAN AND ACHILLE BATAILLE, OF NEW YORK, N. Y.

IMPROVEMENT IN WINDOW-SCREENS.

Specification forming part of Letters Patent No. **211,446,** dated January 14, 1879; application filed May 13, 1878.

To all whom it may concern:

Be it known that we, HARWOOD WAKEMAN and ACHILLE BATAILLE, of the city and State of New York, have invented an Improvement in Nettings, of which the following is a specification:

Nettings for windows have been stretched in a frame, and nettings of fibrous threads, ordinarily known as "mosquito-netting," have been wound upon a spring-roller at the bottom of the window-frame, and in some cases the roller has been placed in a frame, so that the netting and frame could be adapted to different sizes of windows.

Wire has been used in connection with threads or cords in forming a netting. We combine with the roller upon which the netting is to be wound a fabric that is rigid in the direction of the roller's length, and flexible in the other direction, so as to be easily wound upon the roller, but maintain its full width when in use, and a frame that is recessed or grooved at its inner edges, into which the edges of the material are received.

In the drawings, Figure 1 is an elevation of a portion of a window-netting and frame, and Fig. 2 is a vertical section of the same.

The netting itself is made of straight wires of iron, brass, or other metal, connected together by threads of linen, cotton, or other fiber, interwoven as warp, the wires being inserted as weft, and it is preferable that the warp-threads be double and laid up with the double twist usual in making mosquito-netting.

The fabric is to be painted or varnished to prevent the threads slipping endwise of the wire.

The wire wefts are marked *a a*, and the warps *b*.

The frame *c* is of any usual size, and *d* is a roller at the top or at one end, to which one edge of the netting fabric is attached, so that it can be wound thereupon so as to open the space in the frame, or allow the netting to be drawn down or across the frame to cover the opening thereof.

The netting is flexible in the direction of the periphery of the roller, and rigid, or nearly so, in the direction of its length, so that it may be easily wound upon the roller; but the netting maintains its width, and hence is not drawn away from the frame, but remains in its proper position at the edges of the netting-curtain. The edges of this netting-curtain are received in a groove at each edge of the frame, or in grooves in the stop-bead, or in the window-frame, or between strips upon the frame, so as to be guided thereby.

We claim as our invention—

The combination, with a netting that is flexible in one direction, and rigid, or nearly so, in the other direction, of a roller upon which the netting fabric may be wound, and a frame to receive the roller, and grooved or recessed for the edges of the netting, substantially as set forth.

Signed by us this 8th day of May, A. D. 1878.

HARWOOD WAKEMAN.
ACHILLE BATAILLE.

Witnesses:
GEO. T. PINCKNEY.
WILLIAM G. MOTT.