(No Model.)

J. C. & E. W. ELA.

SCREEN.

No. 329,893. Patented Nov. 10, 1885.

Fig. 1.

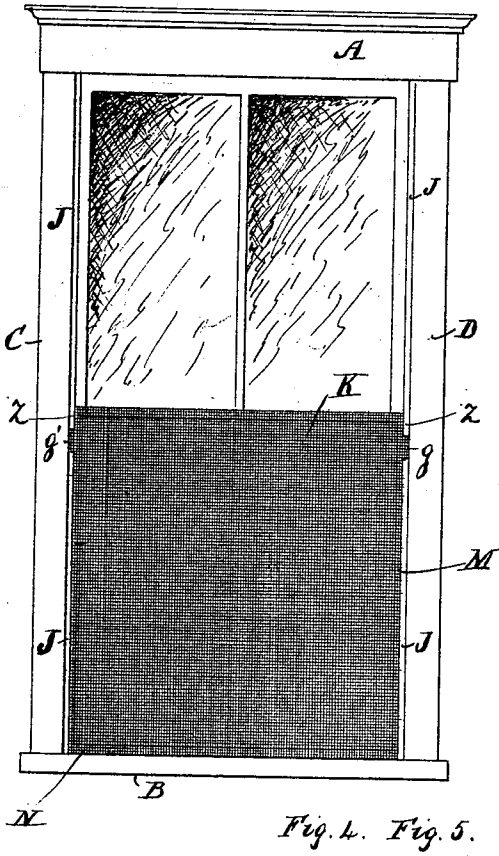


Fig. 2.

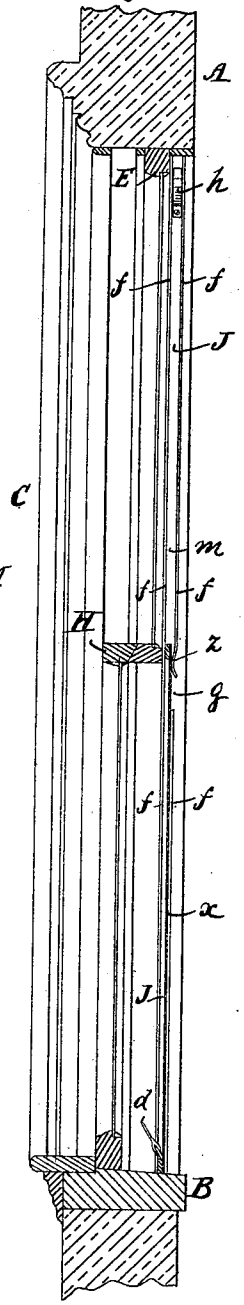


Fig. 3.

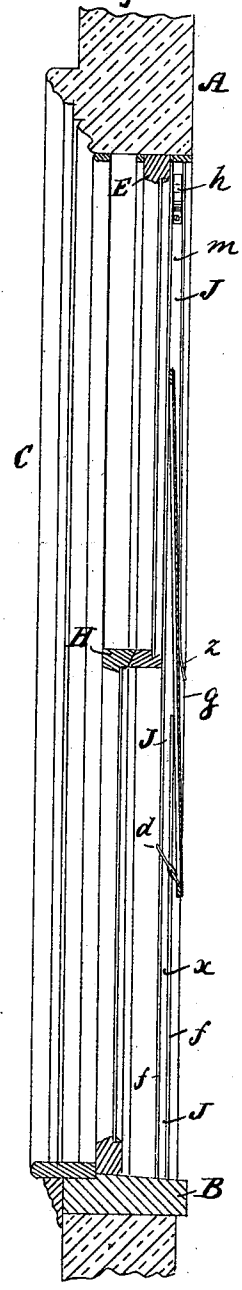


Fig. 4. Fig. 5.

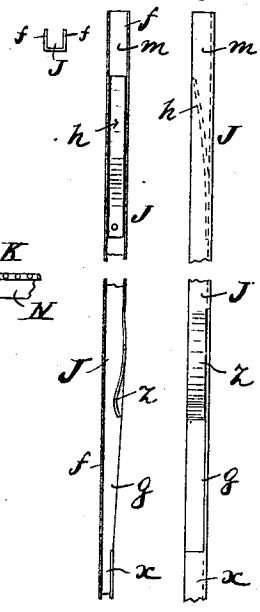
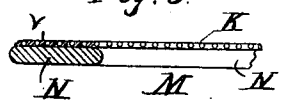


Fig. 6.



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SCREEN.

SPECIFICATION forming part of Letters Patent No. 329,893, dated November 10, 1885.

Application filed April 17, 1885. Serial No. 162,553. (No model.)

To all whom it may concern:

Be it known that we, JONATHAN C. ELA and EDGAR W. ELA, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Screens, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of our improved screen viewed from the outer side of the window to which it is applied, the screen being represented as closed; Fig. 2, a vertical transverse section of the same, including the sash and frame of the window; Fig. 3, a like view with the screen represented as partially withdrawn from the runs; Figs. 4 and 5, views representing portions of the runs or ways in which the screen works; and Fig. 6, a sectional view representing the method of attaching the wire-cloth to the frame.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

Our invention relates to that class of screens which are employed in windows and doors for excluding flies, insects, dust, &c.; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective article of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the top, B the sill, and C D the sides, of the window-frame, which is of the ordinary form and construction and fitted in the usual manner with an upper sash, E, and lower sash, H. A run, J, is secured to the inner face of each of the side pieces, C D, of the window-frame outside of the sash E H. Each of these runs extends the full length of the window, and is composed of a flat strip of sheet metal, having a flange, *f*, turned up at either side, being U-shaped in cross-section to form ways for the screen. The lower portion, *x*, of each run is narrower or of less diameter from front to rear than the upper portion, *m*, so that when the screen, which fits the lower portion nicely, is raised into the upper portion, its lower end may be moved outwardly a sufficient distance to enable the screen to be readily withdrawn through side openings, *g*, which are formed in the outer flanges, *f*, of the runs J. The upper portion of each run J is provided at its outer side and near its lower end with a spring, *z*, adapted to press against the outer face of the screen near its top, as shown in Fig. 1, to hold it tightly closed and prevent it from rattling, these springs yielding to permit the screen to be withdrawn through the openings *g*. There is also a spring, *h*, disposed in either run J near its top, and adapted to exert sufficient pressure on the screen in conjuction with the springs *z* to prevent it from falling when the same is raised to its fullest extent, or nearly so.

The screen proper, M, is composed of a sheet or piece of wire-cloth, K, which is stretched smoothly over a metallic frame, N, and secured by being firmly soldered or brazed thereto around its edges, as shown at *v*. This method of constructing the screen possesses many advantages over the ordinary form of construction, or over screens in which a wooden frame is used, and the wire secured by means of tacks or screws, as the metallic frame is much stronger and more durable, does not swell and bind in the runs when wet, and the wire, being firmly soldered or brazed thereto, is not liable to become detached and permit the entrance of insects and dust.

In the use of our improvement, after the runs J have been properly attached to the window-frame outside of the sash E H, as described, the top of the screen M is inserted through the opening *g*, as shown in Fig. 3, and pushed upwardly into the wide portion *m* of the runs J, after which it is drawn down into the lower or narrow portion *x* by the pulls *d*, as shown in Figs. 1 and 2, thereby securely screening the lower section or half of the window and permitting the lower sash to be raised without danger of admitting flies, insects, &c.

When it is desired to screen the upper section or half of the window, the lower sash is closed and the top sash opened, after which

the screen is raised into the upper portion, *m*, of the runs, where it will be held by the springs *h z*.

We do not confine ourselves to the use of the screen M with the runs J, as a screen of any other suitable construction to prevent the entrance of flies, &c., may be employed therewith, if desired. Neither do we confine ourselves to the use of the springs *h*, as they may be omitted, if preferred; nor to placing the narrow section *x* at the lower portion of the window or door, as it may be placed at the top, and the wide section *m* at the bottom, if desired.

Having thus explained our invention, what we claim is—

1. The run J, having the narrow portion *x*, wide portion *m*, side opening, *g*, and spring *z*, substantially as set forth.

2. The runs J, provided with the narrow portions *x*, wide portions *m*, side openings *g*, and springs *z*, in combination with a screen adapted to work in said runs and prevent the entrance of flies, insects, &c., through the window, substantially as described.

3. In a device for excluding flies, insects, dust, &c., from windows or doors, the runs J, provided with the wide portion *m*, narrow portion *x*, springs *h z*, and opening *g*, and the frame N, and wire-cloth K, in combination with the window-frame A B C D, and sash E H, all constructed, combined, and arranged to operate substantially as and for the purpose specified.

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