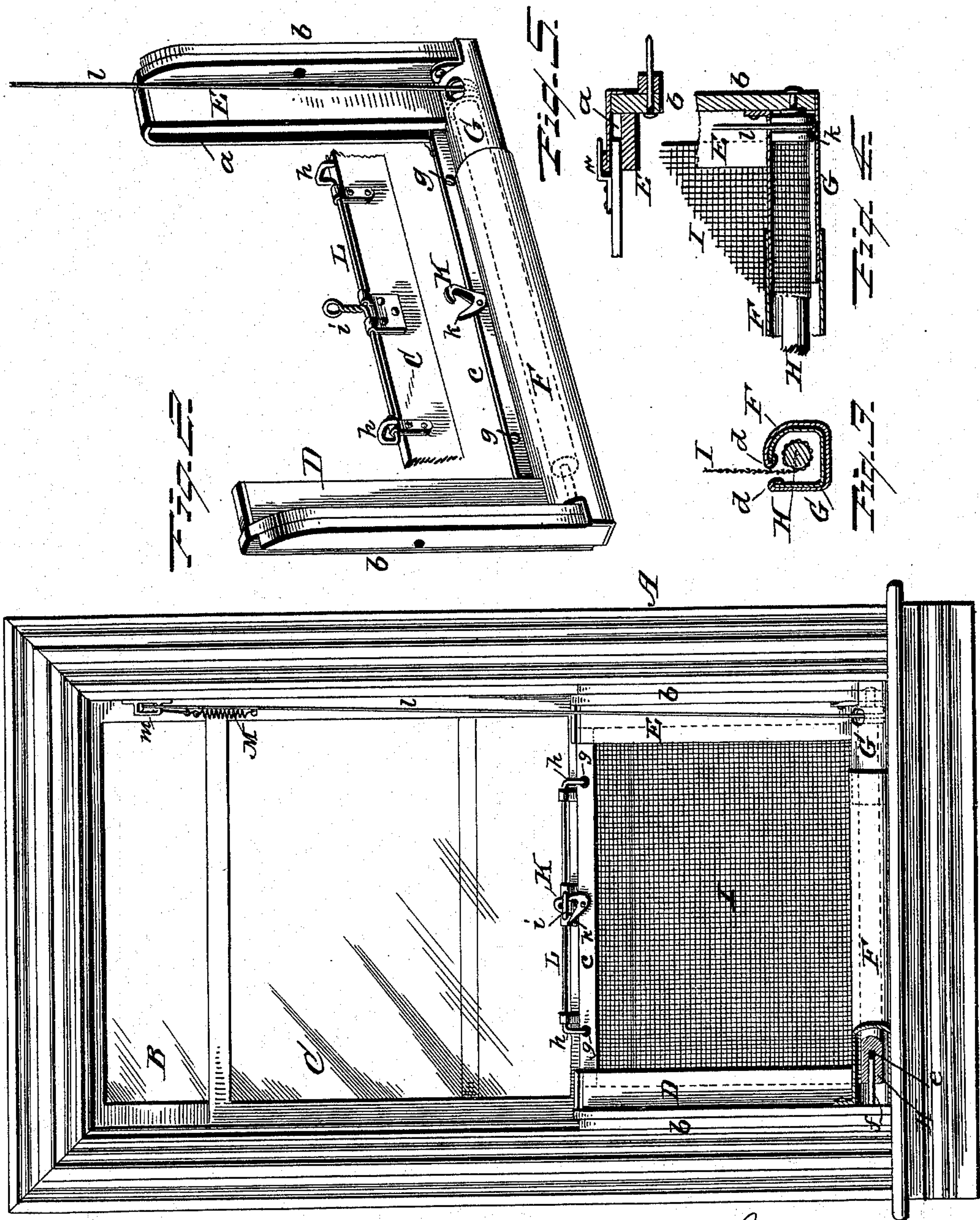


(No Model.)

J. F. BITTLE.
WINDOW SCREEN.

No. 527,401.

Patented Oct. 16, 1894.



Witnesses
G. Williamson.
G. Goddard.

Inventor
James F. Bittle.
per Cha. H. Fowler.
Attorney

UNITED STATES PATENT OFFICE.

JAMES F. BITTLE, OF BRUNSWICK, MARYLAND.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 527,401, dated October 16, 1894.

Application filed May 28, 1894. Serial No. 512,744. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. BITTLE, a citizen of the United States, residing at Brunswick, in the county of Frederick and State of Maryland, 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 same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has relation to that class of window screens adapted to be automatically wound upon a roller when not in use, said roller and fixtures being permanent attachments to the window frame.

The object of the invention is to improve the construction of the window screens of this character whereby the complete device with the screen is rendered extensible to adapt it to window frames of various widths and the roller automatically operated to wind up the screen without the use of the usual spring-rollers heretofore employed, thereby materially enhancing the value of the device and rendering it less liable to become inoperative by any of its parts failing to act and being less complicated may be manufactured at a greatly reduced cost.

Figure 1 of the drawings represents a front elevation of my improved screen attachment showing it in position upon the window frame; Fig. 2, a perspective view of the complete device detached from the window frame; Fig. 3, a central cross section of the extensible casing, the roller and wire screen; Fig. 4, a detail sectional view of a portion of the device, showing the extensible casing, the roller, screen, and the frame to which it is connected; Fig. 5, a horizontal section of one side of the frame showing the binding strip to which the upper edge of the screen is secured, and the guide therefor.

In the accompanying drawings A represents a window-frame of the usual construction and B C the upper and lower sashes respectively.

The device constituting the invention consists of an extensible frame adapted to windows of different widths and is complete in itself and ready to be attached to any window, which frame is composed of the two

uprights D E having grooved guides *a* and the cleats *b* at right angles thereto which fit against the sides of the window frame and are secured thereto by screws or other suitable fastenings. The uprights may be formed in one piece with the guide groove or a strip of metal may be connected to the uprights to provide a recess which would be an equivalent to the groove, either of which would form a guide for the ends of the binding strip *c*. To the cleats *b* are rigidly connected the sections F G which are extensible and form together the casing in which is located the roller H, and to said roller is connected the screen I. The section G fits within the section F, and the former section has its edges turned over to form guides *d* for the edges of the inner section, as shown in Fig. 3, thereby holding them together and allowing of their moving laterally upon each other. The roller H at one end has a deep or long hole or mortise *e* to receive a pin of considerable length as shown at *f*, which pin is fixed to the cleat of the upright D. This pin and mortise which are of unusual length are to allow the lateral extension of the frame to adapt it to the frame of the window without danger of the roller being disconnected from its bearings, and the guides in the uprights are sufficiently deep so that the ends of the binding strip *c* will at all times be in engagement with the guides without regard to the adjustability of the frame.

One end or edge of the screen I is attached in any suitable manner to the roller H and the opposite or upper edge is secured to a binding strip *c* hereinbefore described, which binding strip has an automatically operating catch K pivoted thereto, and holes *g* to receive the hooks *h* upon the ends of a rod L. This rod is pivotally connected in any suitable manner to the lower cross-bar of the sash C, and said rod is provided with a handle *i* for operating it.

To one end of the roller H is rigidly fixed a grooved pulley *k* to which is connected one end of a cord *l*, the opposite end of the cord passing over a suitable pulley *m* connected to the window frame near its upper end and the extremity of the cord attached to a coil spring M secured to the sash C at its top. When the window is closed the screen is

wound over the roller and concealed from view by the extensible casing inclosing the same, and when it is desired to bring the screen in position for use, the handle *i* of 5 the rod *L* is pressed down to a horizontal position which will strike the trip *k* of the latch and force it over the handle and the hooks *h* in engagement with the holes *g* of the binding strip *c*. The sash and screen are now connected together and when the sash is raised 10 the screen will be pulled up with it to cover the open space formerly occupied by the sash, the cord winding up and unwinding the screen from the roller when the sash is closed 15 and opened respectively.

The coil spring *M* serves to keep the cord taut at all times and takes the strain off and prevents breaking should it become caught or for any reason fail to operate.

20 Guide brackets *n* are connected to the binding strip *c* to embrace the side of the uprights *D E* so as to render the screen more steady in its movement.

Having now fully described my invention, what I claim as new, and desire to secure by 25 Letters Patent, is—

A screen attachment for windows consisting of a frame formed of two laterally extensible sections having uprights with grooved guides for the ends of the binding strip of 30 the screen, and right angle cleats to fit against the sides of the window frame, a sectional casing for the roller, a screen attached to the roller and means for fastening the screen to the sash, and a coiled spring connecting the 35 roller to the window frame by means of a cord, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence 40 of two witnesses.

JAMES F. BITTLE.

Witnesses:

LORENZO S. GARDNER,
E. C. SHAFFER.