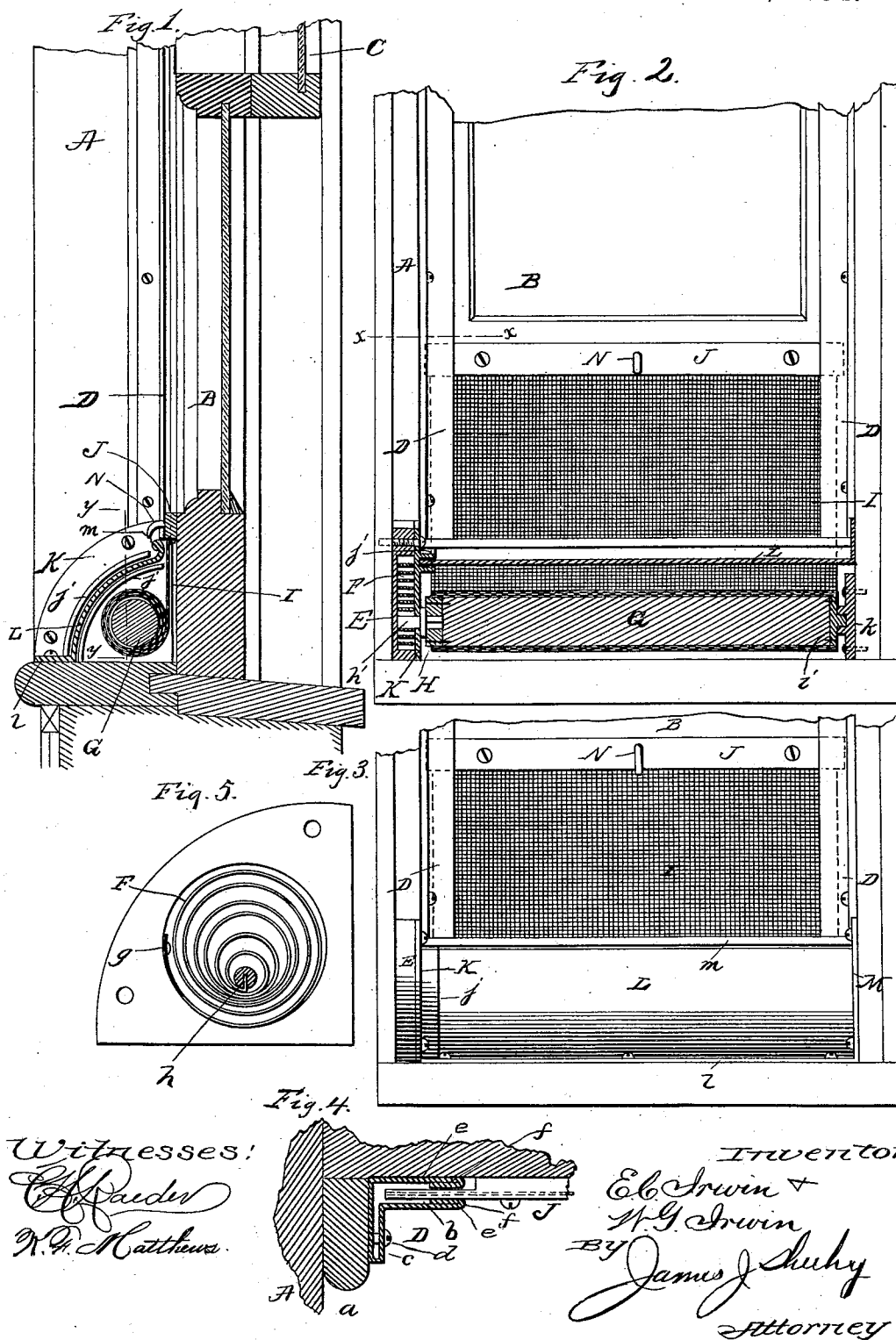


(No Model.)

E. C. & W. G. IRWIN.
WINDOW SCREEN.

No. 530,272.

Patented Dec. 4, 1894.



UNITED STATES PATENT OFFICE.

EDWARD CRAY IRWIN AND WILLIAM GEORGE IRWIN, OF WINNIPEG,
CANADA.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 530,272, dated December 4, 1894.

Application filed May 14, 1894. Serial No. 511,220. (No model.)

To all whom it may concern:

Be it known that we, EDWARD CRAY IRWIN and WILLIAM GEORGE IRWIN, citizens of the Dominion of Canada, residing at Winnipeg, in the county of Selkirk and Province of Manitoba, Canada, have invented certain new and useful Improvements in Window-Screens; and we do declare the following to be 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.

This invention has relation to an improvement in window screens, and it has for its prime object to improve that class of screens in which a flexible wire screen or the like, is wound upon a roller situated in or upon the sill of the casing, by providing a durable and effective means at a comparatively small expense which will absolutely exclude the entrance of flies and other insects, and which may be applied to any window casing without altering its construction in any manner whatever and may be quickly attached to and disconnected from the window sash without removing any of the parts.

Other objects and advantages will appear from the following description and claims when taken in connection with the annexed drawings, in which—

Figure 1, is a vertical, cross-sectional view taken through the window sill and through the sashes. Fig. 2, is a front elevation with parts in section, the section being taken in the plane *y, y*, on Fig. 1. Fig. 3, is a front elevation of the lower part of the casing and lower sash with parts broken away. Fig. 4, is a cross-sectional view taken in the plane indicated by the dotted line *x, x*, on Fig. 2. Fig. 5, is a face view of the spring casing illustrating the journal to which the spring is attached, in section.

Referring by letter to said drawings:—A, indicates a window casing, and B the lower and C the upper sash, all of which may be of any ordinary or approved construction.

Secured to the inner sides of the side rails *a*, of the window casing, are guides D. These guides may be formed from a sheet of metal or other suitable material, and are of a construction, as better shown in Fig. 4, of the drawings, having a slot *b*. In forming these

guides of sheet metal, we would take a piece of material of sufficient length and width, and bend it lengthwise so as to form a flange *c*, comprising two parallel branches, for attachment to the side walls *a*, of the casing by means of screws *d*, or other suitable fastening devices, and the slotted branch *b*, may comprise the two parallel strips *e*, arranged a sufficient distance from each other to form the slot *b*, and the free ends of these strips may be turned inwardly upon themselves as shown at *f*. It is obvious however that these guides may be formed in different ways and from any suitable material, and the flanges *c*, being secured to the inner sides of the casing at opposite points, the slotted guide flanges will be arranged opposite each other to receive the longitudinal edges of the screen and also the opposite ends of a cross bar carried by said screen, as will be presently described.

E, indicates a casting, which is adapted to receive within it a coiled spring F. This casting which is of a form as better shown in Fig. 5, of the drawings, is secured at the base of one side of the casing and upon the sill and one end of the coiled spring is secured to said casting, as shown at *g*, the opposite end being secured to the spindle *h*, of a roller G. This roller G, may be of the ordinary construction as employed in rollers, carrying at one end the plate H, from which extends the angular stud or journal *h'*, and the opposite end of the roller has secured to it a stud plate *i*, the stud of which takes into a socket in the plate *k*, which is secured to the opposite inner side of the window casing as shown. This roller carries a screen I, which is secured at its lower, transverse edge to the roller, and secured to the opposite or upper transverse edge of the roller is a bar J. This bar J, is adapted to be secured to the lower rail of one of the sashes, and its opposite ends are adapted to pass into the guide slots *b*, of the guides secured to the window casing, as shown in Fig. 4, of the drawings, and the edges of the screen are also carried into said guides so as to absolutely prevent the entrance of flies or other insects to the room.

K, indicates a plate, which is designed to cover the spring casing E, and consequently the spring therein. This plate is provided

on its outside with two parallel, curvilinear flanges *j*, which are designed to form a guide way or receiver for a quadrant-shaped cover L. This cover is designed to conceal the roller and screen thereon, and is provided at one end with a flange M, for attachment to one side of the window casing and it is furthermore provided with a longitudinal base flange *l*, for attachment to the sill by means of screws, or the like. The upper, longitudinal edge of this quadrant-shaped cover is turned upwardly and outwardly as shown at *m*, and is arranged in the path of movement of a stop or hook N, secured to the outer side of the cross bar J, of the screen, for a purpose which will presently appear.

In placing our improvements on a window casing, the socket plate *k*, should be secured just above the sill to one side of the casing, and the spring casing E, secured to the opposite side just above the sill with the spring in position. The roller should then be placed with one end in the socket plate and the opposite end receiving the angular stud or journal *h'*. The cross-bar being secured to the outer, transverse edge of the screen should be placed in the guide-ways D, secured vertically to the opposite inner sides of the window casing. The plate K, having been placed over the spring casing E, the quadrant-shaped cover is then inserted at one end between the flanges *j*, of the plate K, and the opposite end and lower, longitudinal edge are both secured to the side of the casing and sill, respectively. Now then when it is desirable to raise the sash, it will be seen that the screen will fill the opening, as the sash has been raised, and the weights for the sashes might be made to hold the same at any desired point or in some cases a fastener might be employed for securing the sash in such open position.

In some seasons of the year when it is not desirable to use the screen, it is simply necessary to detach the cross bar J, from the lower rail of the sash, when the hook N, on said cross bar will engage the upper longitudinal edge *m*, of the quadrant shaped cover and will hold the cross-bar and consequently the spring in a convenient position for ready attachment to the sash when desired, and will also keep the screen from passing entirely into the casing.

While we have shown and described this screen, as arranged on the inner sill, and attached to the lower sash, it is obvious that it can be placed on the outer sill and secured to the outer side of the lower sash rail or it can be secured to the rail of the upper sash if desired.

It will be observed that the parts are all of a cheap and durable construction, there is

nothing about the device to get out of order, and the improvements can be attached to any window casing and sash without disfiguring any of the parts or altering their construction in any manner whatever.

Having described our invention, what we claim, is—

1. The combination with a window casing and a slidable sash arranged therein; of the vertical guides secured to the inner sides of the uprights of the frame, the casing E, secured to the inner side of one of the uprights, the plate *k*, connected to the inner side of the other upright and having a socket, the roller G, having a stud at one end journaled in the socket of the plate *k*, and having a spindle at its opposite end, the coiled spring arranged in and connected at one end to the casing E, and connected at its opposite end to the spindle of the roller G, the plate K, covering the casing E, and having the parallel, curvilinear guides or flanges, the quadrant shaped cover resting at one end between the guides or flanges of the plate K, and having the base flange *l*, connected to the window sill, and the end flange M, connected to the inside of one of the uprights of the frame, and also having its upper edge curved or turned upwardly and outwardly, the bar J, connected to the sliding sash and having the hook or projection adapted to engage the quadrant shaped cover, and the screen connected to the roller G, and to the bar J, and adapted to slide together with said bar between the guides on the uprights of the casing, substantially as and for the purpose set forth.

2. The combination with a window casing, a slidable sash arranged in said casing and a screen connected to and adapted to move with said sash; of the vertical guides D, connected to the inner sides of the uprights of the casing and respectively formed of a single piece of sheet metal bent lengthwise so as to form a flange *c*, comprising two parallel branches and designed for the passage of attaching nails or screws and the parallel strips *e*, disposed at right angles to the flange *c*, and having their free ends *f*, bent inwardly upon themselves, the said ends *f*, being adapted to rest close against opposite sides of the screen, the edge of which rests loosely between the unbent portions of the strips *e*, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWARD CRAY IRWIN.
WILLIAM GEORGE IRWIN.

Witnesses:

JOSEPH LITTLE,
JOSEPH IRWIN.