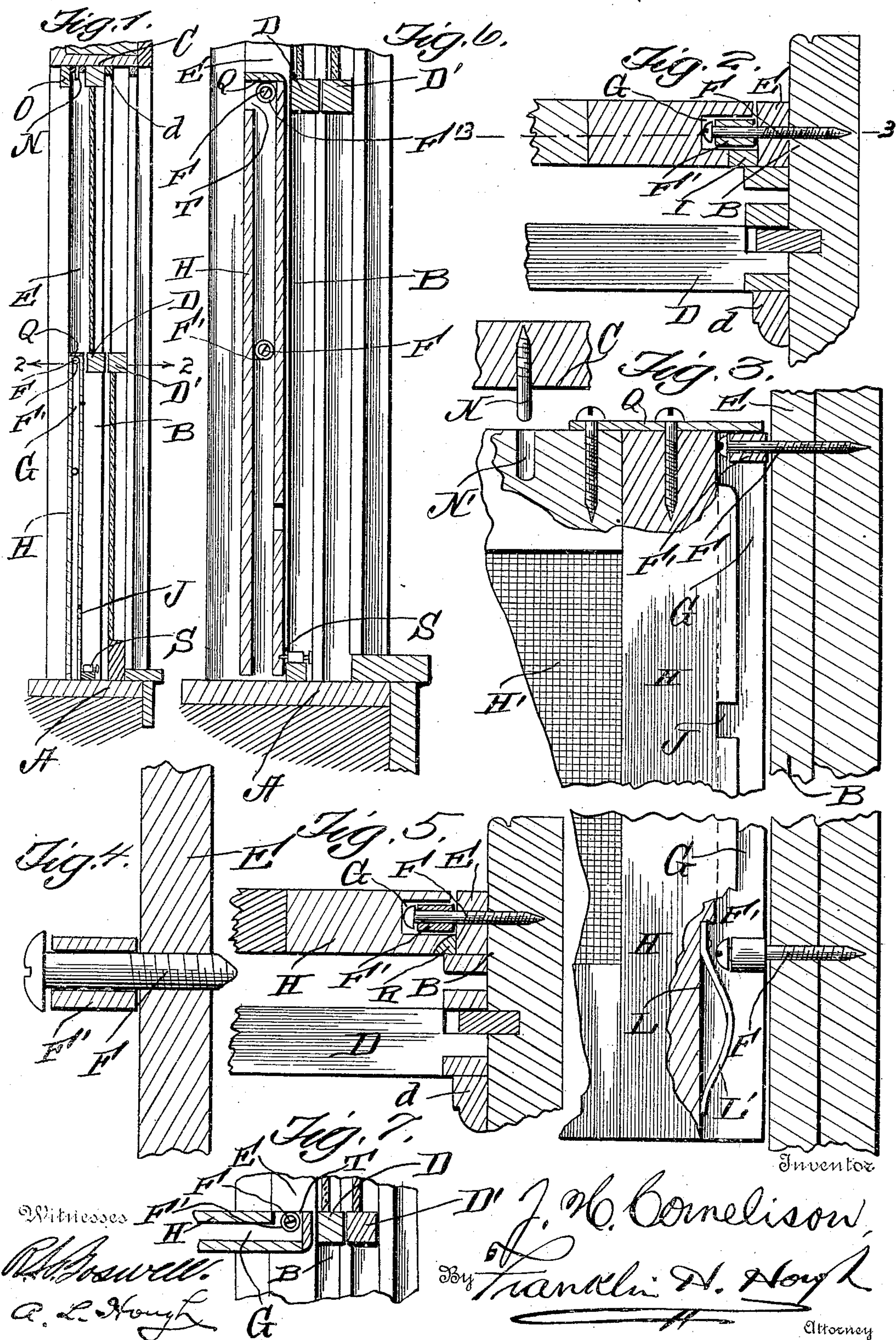


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WINDOW SCREEN.
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Patented Nov. 2, 1909.



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WINDOW-SCREEN.

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Specification of Letters Patent.

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to all whom it may concern:

Be it known that I, JOHN H. CORNELISON, citizen of the United States, residing at St. Louis city, and State of Missouri, have invented certain new and useful Improvements in Window-Screens; and I do hereby 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in window screens adapted to have both a swinging and a sliding movement and so adapted to the window as not to interfere with the use of outside blinds or shutters.

More specifically, the invention consists of a sliding and swinging screen having a closed slot in the opposite vertical edges thereof in which guide pins project and in the provision of plates closing the grooves and adapted to rest upon said pins to form bearings whereby the screen may swing freely, means being provided for holding the upper portion of the screen from swinging outward when held in its highest position.

The invention consists of other details of construction and combinations of parts which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a vertical sectional view through a window frame, sash and screen showing my invention as applied thereto. Fig. 2 is a cross sectional view through a portion of the sash, screen and window jamb. Fig. 3 is a vertical sectional view on line 3—3 of Fig. 2. Fig. 4 is a detail sectional view through one of the guide pins or studs with anti-friction roller thereon. Fig. 5 is a sectional view through the screen showing a modified form of guide or rabbet strip, and Fig. 6 is a detailed sectional view of a modified means allowing the screen to be removed by swinging the same outward and lowering the same. Fig. 7 is a detail sectional view showing the screen in a position at right angles to its position in Fig. 6.

Reference now being had to the details of

the drawings by letter, A designates the sill of a window, B the jamb and C the lintel, all of the usual construction. Mounted between the jambs of the window are the upper and lower sashes, designated respectively by letters D and D', between which is the usual parting strip *d*. Fastened to the faces of the window jambs are the blind strips E to each of which are fastened the pins or studs F, the shank portion of each of which forms, preferably, a bearing surface for a hollow roller F', thereby reducing the friction intermediate the pins or studs and the walls of the guide grooves G, formed in the vertical bars H of the screen H', to a minimum. Each of said bars H is rabbeted upon one face thereof and adapted to receive the guide strips I which, when fitted in place, have their outer faces flush with the faces of the screen.

Each of the bars H of the screen frame is recessed or slotted as at J, affording means whereby the screen may be swung outward when the slot comes opposite one of the studs or pins F. The bottom wall of each groove G formed in the screen bars H is recessed as at L, and L' designates a spring fastened at one end within said recess, and having a curved portion projecting in the manner shown so as to contact with the end of one of the studs or pins F with sufficient frictional force, when the screen is at its highest limit, to hold the same in such adjusted position. Projecting from the lintel of the window is a stud or pin N which is adapted, when the screen is at its highest position, to engage a socket N' formed in the upper marginal edge of the screen frame. Projecting also from the under edge of the lintel is a screen retaining strip O which is positioned outside the screen and serves as an additional means for holding the upper end of the screen from moving outward when raised to its highest position, said strip O forming, when the screen is raised and engaging the same, a lap joint, either one of these means being utilized for preventing the screen from moving outward.

Fastened to the upper end of the screen is a plate Q which overhangs and forms a closure to the groove G which is formed in the edge of the screen bar and adapted to rest upon the roller F' mounted upon the upper of the studs or pins F, it being understood that each vertical edge of the screen

has a similarly formed groove and a plate Q as described, forming a closure for the end thereof, and that the rollers upon the upper of the studs F form bearing surfaces
5 for the screen as it swings.

In Fig. 5 of the drawings, I have shown a slight modification of the form of rabbet strip in which, instead of rabbeting the screen frame entirely through the wall of
10 the slot or groove therein, I form a recess, preferably with a concaved wall as shown and adapted to receive a guide or rabbet strip R having a convexed edge conforming to the concaved wall of the rabbeted portion
15 and with its other two edges flush with the face and edge of the screen frame.

In Fig. 6 of the drawings, I have shown a modified form of removing the screen from the window jambs, consisting of forming a slot T on the outside of the screen,
20 thus affording means whereby the screen may be removed by swinging the same outward and in such position giving the same a downward movement, as will be readily
25 understood. In order to hold the screen locked, in its lowest position, any suitable fastening means S may be applied thereto and adapted to engage the sill of the window.

In operation, when it is desired to adjust the screen in place, the slots J are brought opposite one of the pins F, allowing the screen to be inserted intermediate the blind stops. The anti-friction rollers mounted
35 upon the pins will serve as guides to the slots or grooves to allow the screen to be raised and lowered as an ordinary vertically movable window sash. When it is desired to hold the screen at its highest position, it
40 is done by the spring L' engaging frictionally the head or ends of the studs or pins F while the upper end of the screen will be held from lateral movement by means of the stud or pin N engaging the socket N' or
45 the retaining strip O, either one or both of which may be employed. When it is desired to remove the screen from the window, it may be done by lowering the screen so that one of the slots or recesses J will come
50 opposite the stud F, allowing the screen to be pushed outward. When the screen is adjusted to swing, the plates Q will rest upon the upper of the studs or rollers F forming bearing surfaces.

By the provision of the rollers engaging the grooves in the screen frame, the usual tongues are dispensed with and the friction between the screen and the guide rollers will be reduced to a minimum.

60 What I claim to be new is:—

1. In combination with a window frame, a screen frame having grooves in its outer vertical edges, said grooves being closed at their upper ends, projections from the jamb of the
65 window frame extending into said grooves

and serving as guides to the frame, one wall of each of said grooves being recessed for allowing the screen to swing laterally.

2. In combination with a window frame, a screen frame having grooves in the outer vertical edges, said grooves having closures at their upper ends, guide studs projecting from the jamb of the window frame into said grooves and adapted to contact with said closures to form bearings upon which
75 the screen is allowed to swing.

3. In combination with a window frame, a screen frame having grooves in its outer vertical edges, plates secured to the top of the screen and forming closures to said grooves,
80 guide studs projecting from the jamb of the window frame and extending into said grooves, the upper of said studs adapted to form bearings upon which said plates rest to allow the screen, when at its lowest position,
85 to swing outward.

4. In combination with a window frame, a screen frame having grooves in its outer vertical edges, plates secured to the top of the screen and forming closures to said grooves,
90 guide studs projecting from the jamb of the window frame and extending into said grooves, anti-friction rollers upon said guide studs, the upper of said rollers adapted to form a bearing upon which the screen
95 swings.

5. In combination with a window frame, a screen frame having grooves in its outer vertical edges, guide strips in rabbeted portions of the screen frame, plates forming closures
100 to the upper ends of said grooves, studs projecting from the jamb of the frame and extending into said grooves and forming bearings upon which the plates rest as the screen swings.
105

6. In combination with a window frame, a screen frame having grooves in its outer vertical edges, guide strips in rabbeted portions of the screen frame, plates forming closures
110 to the upper end of said grooves, studs projecting from the jamb of the frame and extending into said grooves and forming bearings upon which the plates rest as the screen swings, and means engaging frictionally the
115 ends of said studs for holding the screen elevated.

7. In combination with a window frame, a screen frame having grooves in its outer vertical edges, guide strips in rabbeted portions of the screen frame, plates forming closures
120 to the upper end of said grooves, studs projecting from the jamb of the frame and extending into said grooves and forming bearings upon which the plates rest as the screen swings, means engaging frictionally the
125 lower of said studs for holding the screen elevated.

8. In combination with a window frame, a screen frame having grooves in its outer vertical edges, guide strips in rabbeted portions
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the screen frame, plates forming closures to the upper end of said grooves, studs projecting from the jamb of the frame and extending into said grooves and forming bearings upon which the plates rest as the screen swings, means engaging frictionally the lower of said studs for holding the screen elevated, and means for holding the upper end of the screen from moving laterally when in a raised position.

9. In combination with a window frame, a screen frame having grooves in its outer vertical edges, guide strips in rabbeted portions of the screen frame, plates forming closures to the upper end of said grooves, studs projecting from the jamb of the frame and extending into said grooves and forming bearings upon which the plates rest as the screen swings, a spring fastened in a recess in the bottom wall of said groove and adapted to contact with the ends of said studs to hold the screen in a raised position, and a projection upon the lintel adapted to engage the upper portion of the screen to hold the same from moving laterally.

10. In combination with a window frame, a screen frame having grooves in its outer vertical edges, guide strips in rabbeted portions of the screen frame, plates forming clo-

tures to the upper end of said grooves, studs projecting from the jamb of the frame and extending into said grooves and forming bearings upon which the plates rest as the screen swings, a spring fastened in a recess in the bottom wall of said groove and adapted to contact with the ends of said studs to hold the screen in a raised position, and a strip projecting downward from the lintel and adapted to form a lap joint over the upper edge of the screen when raised.

11. In combination with a window frame, a screen frame having grooves in its outer vertical edges, closures to the upper ends of said grooves, the corresponding side walls of the grooves having slots therein, drag studs projecting from the jambs of the window and extending into said grooves, the upper of said studs forming bearings engaging the closures to the grooves for allowing the screen to swing, said slots allowing the ends of said pins to move therethrough.

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

JOHN H. CORNELISON.

Witnesses:

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