No. 861,059. PATENTED JULY 23, 1907.

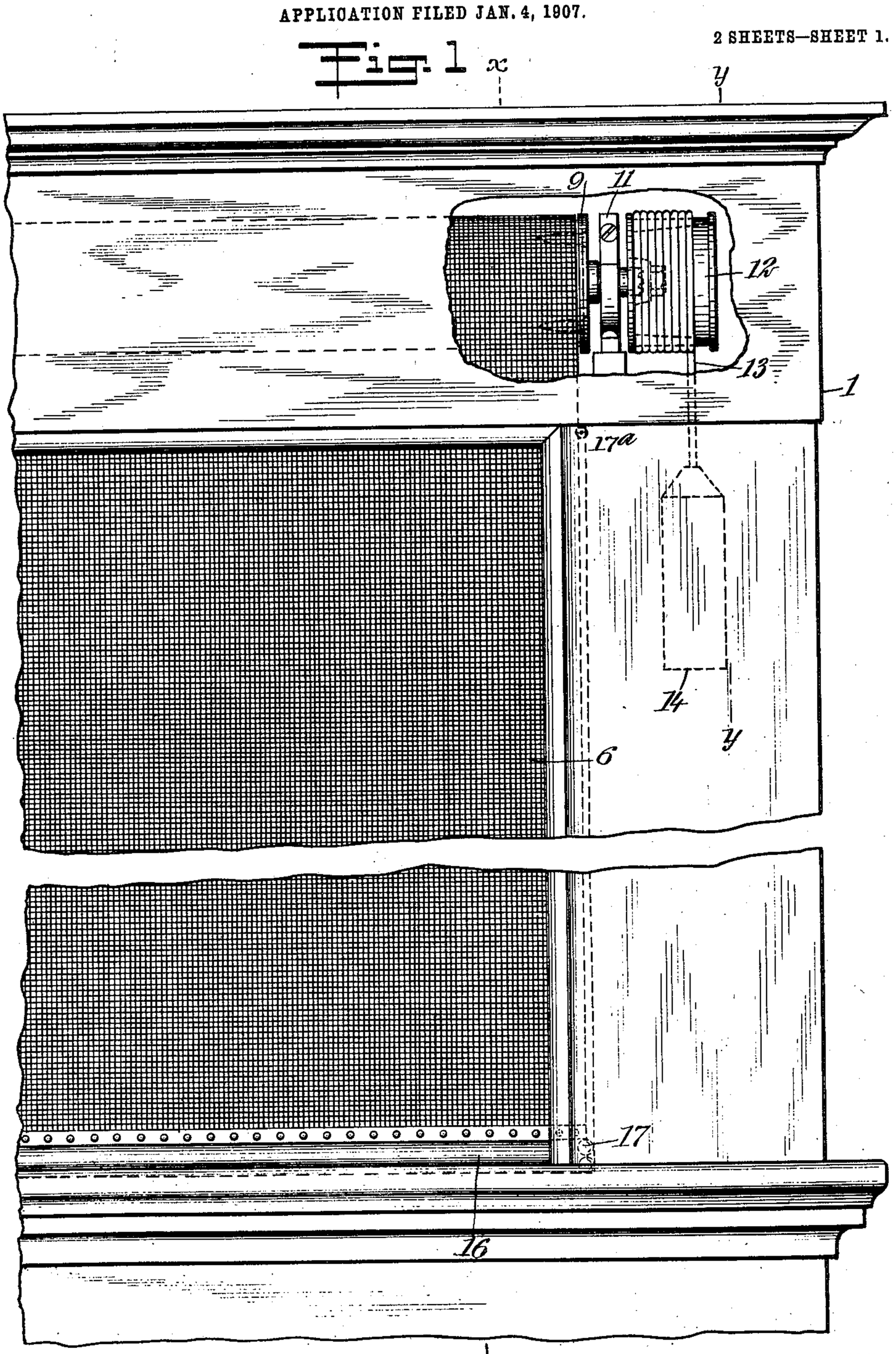
J. STORK.

WINDOW SCREEN.

APPLICATION FILED JAN. 4, 1907.

2 SHEETS—SHEET 1.

Fig. 1



WITNESSES

F. D. Sweet.

J. P. Davis

INVENTOR

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2 SHEETS—SHEET 2.

Fig. 2

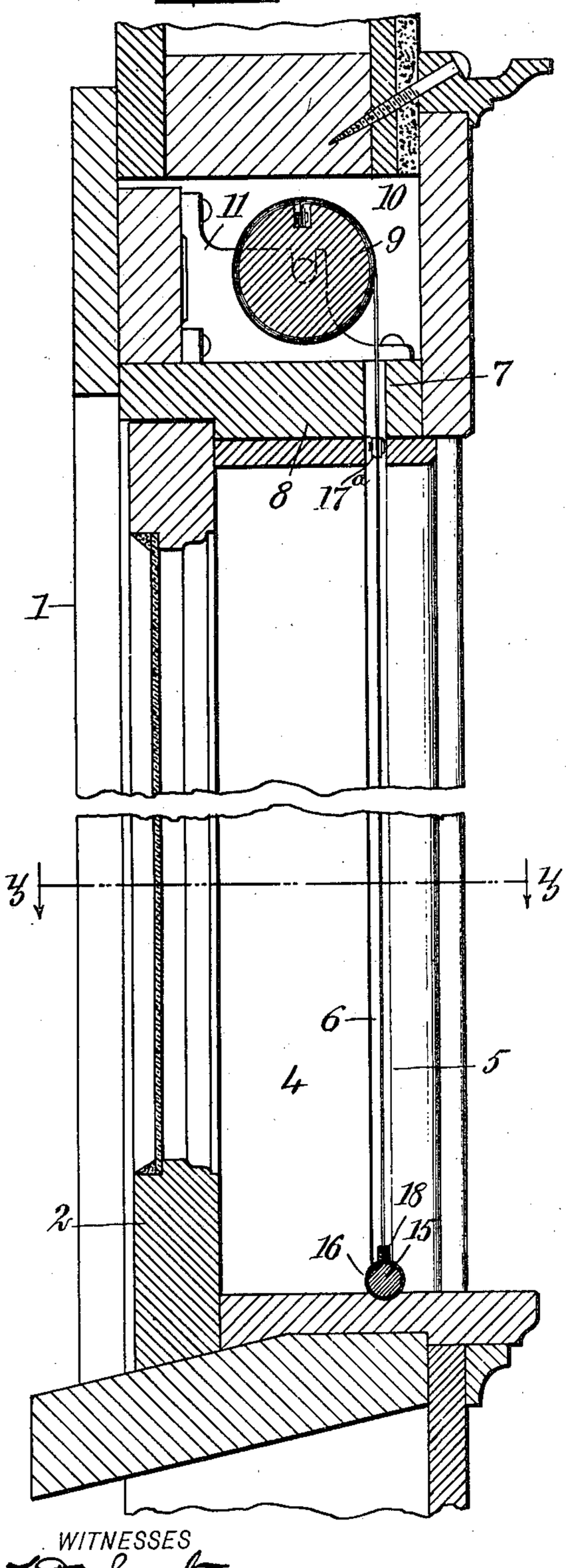


Fig. 3

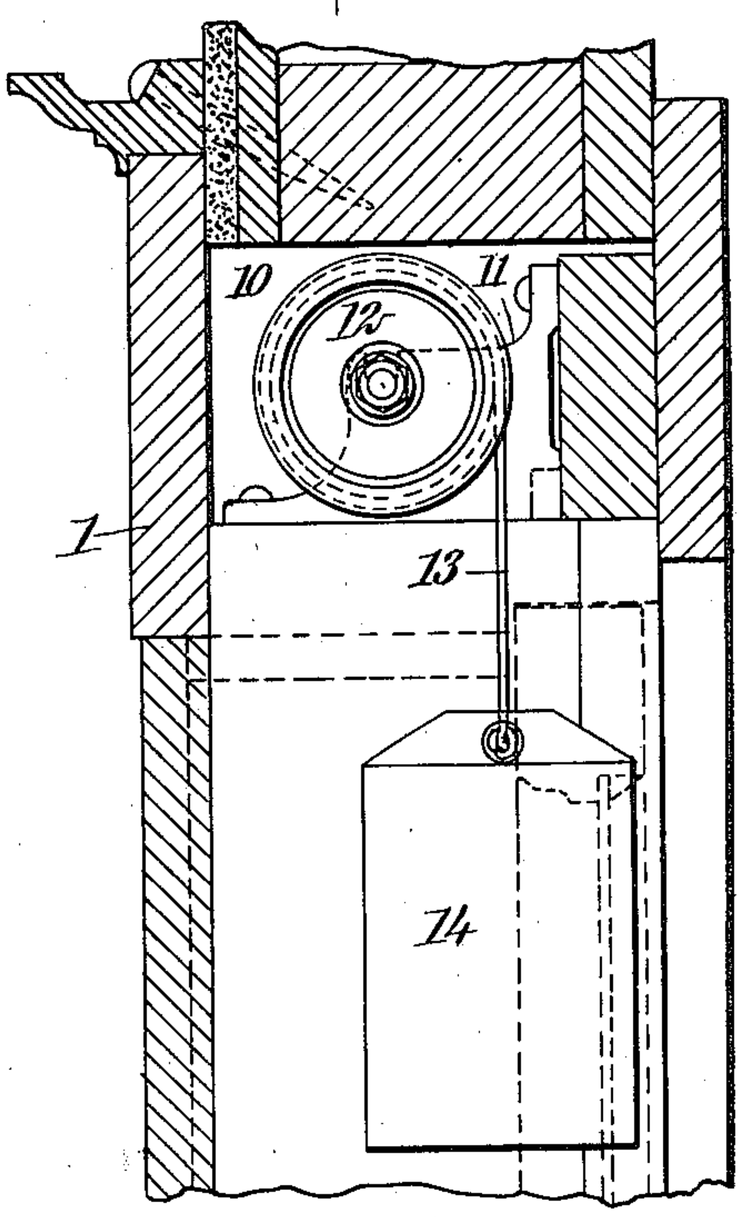
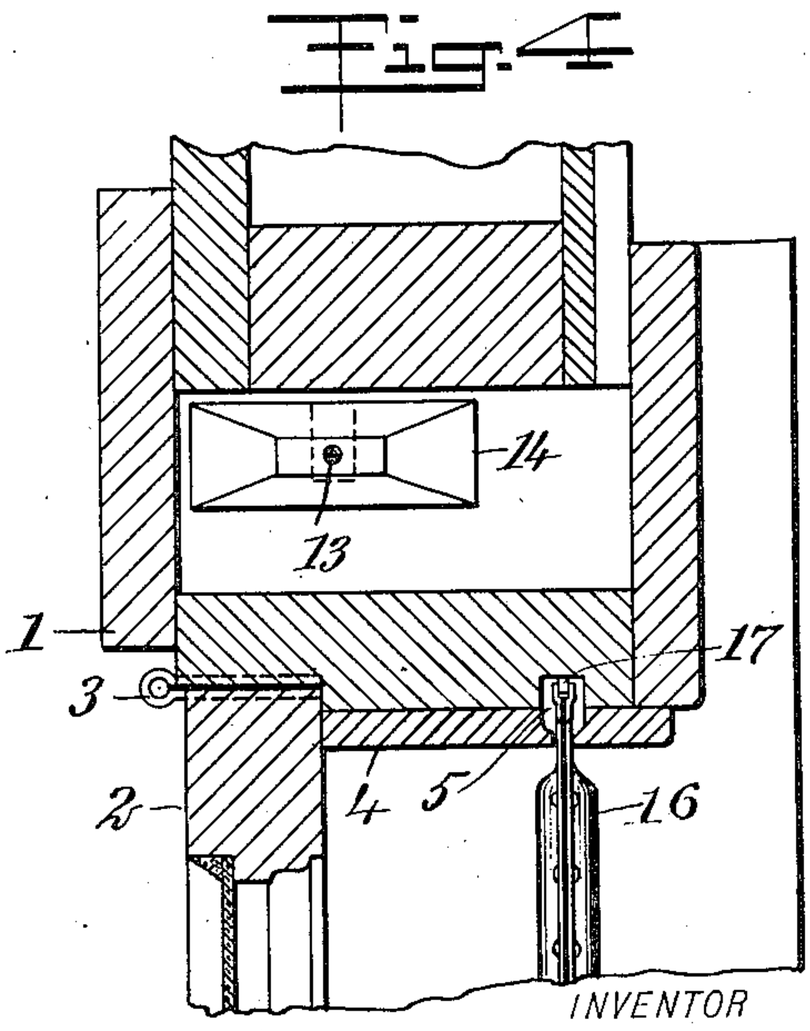


Fig. 4



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UNITED STATES PATENT OFFICE.

JOHN STORK, OF SAN DIEGO, CALIFORNIA.

WINDOW-SCREEN.

No. 861,059. Specification of Letters Patent. Patented July 23, 1907.

Application filed January 4, 1907. Serial No. 350,717.

To all whom it may concern:

Be it known that I, JOHN STORK, a citizen of the United States, and a resident of San Diego, in the county of San Diego and State of California, have invented a new and Improved Window-Screen, of which the following is a full, clear, and exact description.

This invention relates to improvements in screens for windows of the casement type, that is, in which the sash is hinged to the casing so as to swing, the object being to provide a simple means or mechanism whereby the screen may be easily raised and lowered and wholly independent of the sash.

I will describe a window screen embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is an elevation of a portion of a window casing, with a screen and operating mechanism embodying my invention; Fig. 2 is a section on the line *x*—*x* of Fig. 1; Fig. 3 is a section on the line *y*—*y* of Fig. 1; and Fig. 4 is a section on the line *z*—*z* of Fig. 2.

Referring to the drawings, 1 designates a window casing in which a sash 2 is designed to swing outward, the sash being hinged to the casing at one side, as indicated at 3. The jambs 4 of the casing are provided with vertical channels 5 into which the edges of a screen 6 extend. The said screen also passes through a slot 7 formed in a lintel 8 and has its end secured to a roller 9 arranged in a chamber 10 above the lintel. The spindles on the ends of the rollers have bearings in metal brackets 11 and on the ends of the spindles are spools or drums 12 engaged by small wire cables or cords 13, one end of the cables or cords, of course, being secured to the spools or drums, and on the free ends of the cables or cords are weights 14 movable in pockets in the sides of the window casing. In the drawings only one drum, cable and weight are shown. Attached to the lower end of the screen 6 is a balance bar 15 of suitable metal, and of the same heft as the weights 14, so that the screen may be readily moved up and down. The balance bar 15 has a casing 16 of sheet metal, such, for instance, as copper, and the ends of the balance bar 15, which terminate inward of the jambs and lintel of the casing, are compressed, and arranged in the compressed portions are rollers 17 which engage with the inner walls of the channels 5, and not only form guides for the up and down movements, but prevent lateral swaying movement of the screen, and obviously the balance bar 15 will keep the screen taut. At the upper portion of the channels 5 are guide rollers 17ª with which the edges of the screen engage.

In the operation, when it is desired to open or close the window, the screen may be readily moved upward, the weights 14 causing the same to wind upon the roller 9. If it is desired that the window shall remain closed, the screen may be left in its uppermost position and practically out of sight. When the window is to be left open the screen is to be drawn down, as indicated in Fig. 2, and in said Fig. 2 it will be noted that the lower end of the screen is secured between flanges extended upward from the casing 16, these flanges being indicated at 18.

It is obvious that a screen operated in the manner devised by me will be much more convenient than are screens mounted in frames arranged to swing on hinges in the window casing, because such swinging screens will interfere with curtains or the like, and also present an unsightly appearance.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. The combination with a window casing having vertical channels in its jambs, of a roller arranged in the upper part of the casing, a screen having its upper end attached to said roller and having its edges extending into said channels, means connected with the roller for winding the screen upon said roller when the screen is raised, a balance bar connected with the lower end of the screen, the ends of said balance bar being reduced and extending into said channels, guide rollers at the reduced ends of said bar and engaging with the inner walls of said channels, and guide rollers at the upper portion of said channels with which the edges of said screen engage.

2. The combination with a window casing having vertical channels in its jambs, of a roller arranged in the upper part of the casing, a screen having its upper end attached to said roller and having its side edges extending into said channels, means connected with said roller for turning the same to wind the screen upon the roller when the screen is raised, a balance bar, a metal casing inclosing said bar and attached to the lower end of the screen, the ends of the casing extending into the said channels in the jambs, and guide rollers at the ends of the said metal casing for engagement with the inner walls of said channels.

3. The combination with a window casing and a swinging window mounted therein, the jambs of said casing having vertical channels, a roller arranged in the upper portion of the casing, a screen attached to said roller and having its edges extended into said channels, a balance bar at the lower end of the screen, a metal casing surrounding the balance bar and to which the screen is directly attached, the ends of said metal casing being compressed, rollers mounted in said compressed portions and engaging with the inner walls of the aforesaid channels, drums carried by the roller, cables or cords for engaging with said drums, and weights attached to said cables or cords.

4. The combination with a window casing having vertical channels in its jambs, of a roller arranged in the upper portion of the casing, a screen attached to said roller and having its edges extending into said channels, drums carried by the roller, weights having flexible connections with said drums, a balance bar, a metal casing surrounding the balance bar and attached to the lower end of the screen, the ends of the casing being compressed and extending into the said channels in the jambs, said ends being provided with guide rollers engaging with the inner walls of said channels.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN STORK.

Witnesses:
FRANK MEATZMANN,
A. J. FASTER.