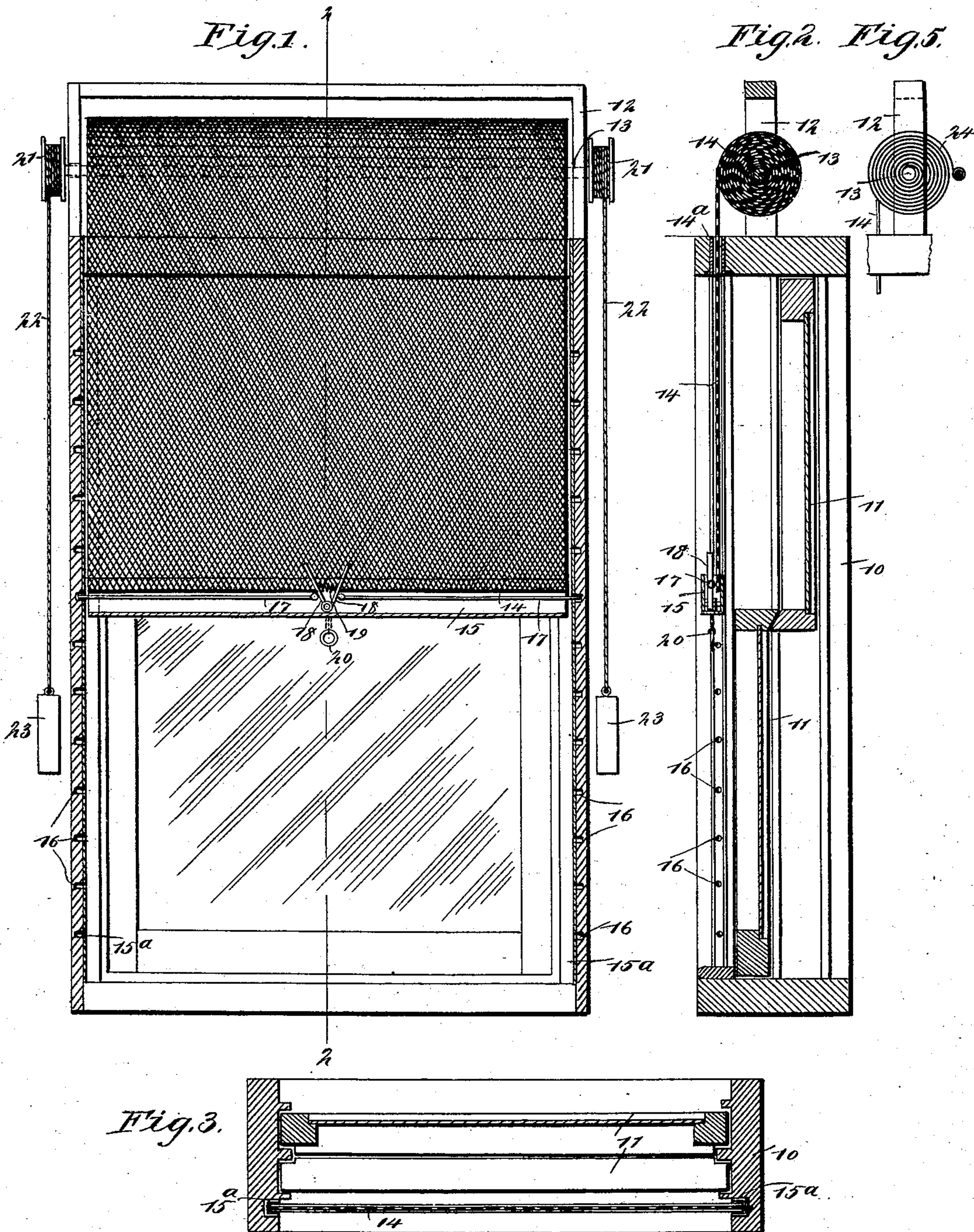


(No Model.)

J. O'DONNELL.
WINDOW SHUTTER AND CURTAIN.

No. 506,537.

Patented Oct. 10, 1893.



WITNESSES:
S. M. Andle.
C. Sedgwick

Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN O'DONNELL, OF MOUNTAIN LAKE PARK, MARYLAND.

WINDOW SHUTTER AND CURTAIN.

SPECIFICATION forming part of Letters Patent No. 506,537, dated October 10, 1893.

Application filed May 22, 1893. Serial No. 475,044. (No model.)

To all whom it may concern:

Be it known that I, JOHN O'DONNELL, of Mountain Lake Park, in the county of Garrett and State of Maryland, have invented a new and Improved Window Shutter and Curtain, of which the following is a full, clear, and exact description.

My invention relates to improvements in window shutters and curtains or shades; and the object of my invention is to produce a very simple and cheap, but extremely strong and durable shutter and curtain, which is constructed of open chain-like netting strong enough to resist an ordinary bullet, and also to prevent burglars from gaining easy access to a house; and a further object of my invention is to construct the shutter and shade in such a way that it may be easily fastened at any desired height, will run up automatically when released, will serve the purposes of an ordinary mosquito screen as well as a shade, and may be applied to any ordinary window of a building, car, or other structure.

Another object of my invention is to construct the shade so that it will serve the above described purposes and will also afford sufficient ventilation in warm weather.

To these ends my invention consists of certain features of construction and combinations of parts, as will be hereinafter described and claimed.

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

Figure 1 is a sectional front elevation of a window provided with my improved shutter and shade or curtain. Fig. 2 is a longitudinal or vertical section on the line 2—2 in Fig. 1. Fig. 3 is a sectional plan of the window frame and shutter or curtain. Fig. 4 is an enlarged detail view of a section of the shutter or curtain; and Fig. 5 is a detail view of a modified means of raising the shutter or curtain.

The window frame is of the usual kind and may be of any ordinary construction, and in it are hung the usual sliding sashes 11. Above the window frame is a supplemental or roller frame 12 in which is journaled the roller 13, and this carries the flexible shutter or cur-

tain 14 which is of coarse screen material; that is, it is made up of a series of connected chains, as shown in Fig. 4, which are light enough to enable the curtain or shutter to be raised easily and to roll conveniently upon the roller 13, but strong enough to resist the force of a bullet and to prevent a sneak thief or burglar from readily breaking through it. The mesh of the shutter should be fine enough to prevent mosquitoes and other insects from flying through it, but open enough to permit the air to pass freely through it so that when drawn down, in warm weather, it will exclude insects but permit the adequate ventilation of the room. The shutter or curtain passes downward through a metal lined slot 14^a in the top of the window frame, see Fig. 2, and it has at its lower end a hollow sheath 15 which slides in vertical grooves 15^a in the sides of the window frame, and the shutter is also wide enough to enter these grooves which are metal lined so as to prevent excessive wear. In the hollow sheath 15 are fastened rods 17 which extend horizontally from the central portion of the sheet and project through its ends, and these rods are adapted to project into holes 16 which are produced at frequent intervals in the backs of the grooves 15^a, and it will be seen that when the rods are thrown into the holes the shutter will be held down and fastened. The inner ends of the fastening rods 17 are pivoted to levers 18 which are fulcrumed centrally in the sheath 15 and project upward through it, so that their upper ends may be grasped and pressed together so as to release the fastening rods 17. The levers 18 are normally pressed apart by a spring 19 which is arranged between them, and the pressure of the spring forces the rods 17 outward, so that they normally engage any set of holes 16 which may be opposite them.

It will be seen that to move the curtain or shutter up or down, it is first necessary to press the levers so as to retract the rods 17. The curtain or shutter is preferably provided with the usual ring 20, which is hung in the center of the shutter and by which it may be pulled down. For automatically raising the shutter, the arrangement of weights shown in Fig. 1 is preferably employed, although the

spring mechanism shown in Fig. 5 may be used if desired.

5 The roller 13, as shown in Fig. 1, is provided with pulleys 21 on which are wound cables or
cords 22, which hang behind the frame in the
same way that sash weights usually hang, and
these cables have, at their free ends, weights
23 sufficiently heavy to unwind the cables,
10 turn the pulleys 21 and roller 13, and raise the shutter 14. It will be seen that when the shutter is pulled down, the cables 22 are wound up, thus raising the weights 23, and when the fastening rods 17 are released the weights drop and raise the shutter. The
15 same effect may be had by the use of the springs 24, as shown in Fig. 5, as by use of the weights. As here shown, springs 24, which are the usual coil springs, are coiled around the roller at its ends, one end of each
20 spring being secured to the roller and the other to an adjacent support, and when the shutter is pulled down the springs are tightened, and when the shutter is released the re-

action of the springs turns the roller and winds up the shutter.

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

The combination with the roller and the wire curtain wound thereon and having a 30 channel strip on its lower end and a spring or its stated equivalent against the action of which the curtain is unwound, of the oppositely extending bolts within the said channel strip, levers 18 pivoted at their lower ends 35 within the middle of the strip and connected above their pivot to the inner ends of the bolts, a spring pressing the upper exposed ends of the levers apart, and vertical channel 40 strips for the edges of the curtain and provided with apertures for the ends of the bolts, substantially as set forth.

JOHN O'DONNELL.

Witnesses:

S. F. JONES,

G. A. FRALEY.