

L. MANELIUS.
WINDOW SCREEN.
APPLICATION FILED JUNE 15, 1910.

975,146.

Patented Nov. 8, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

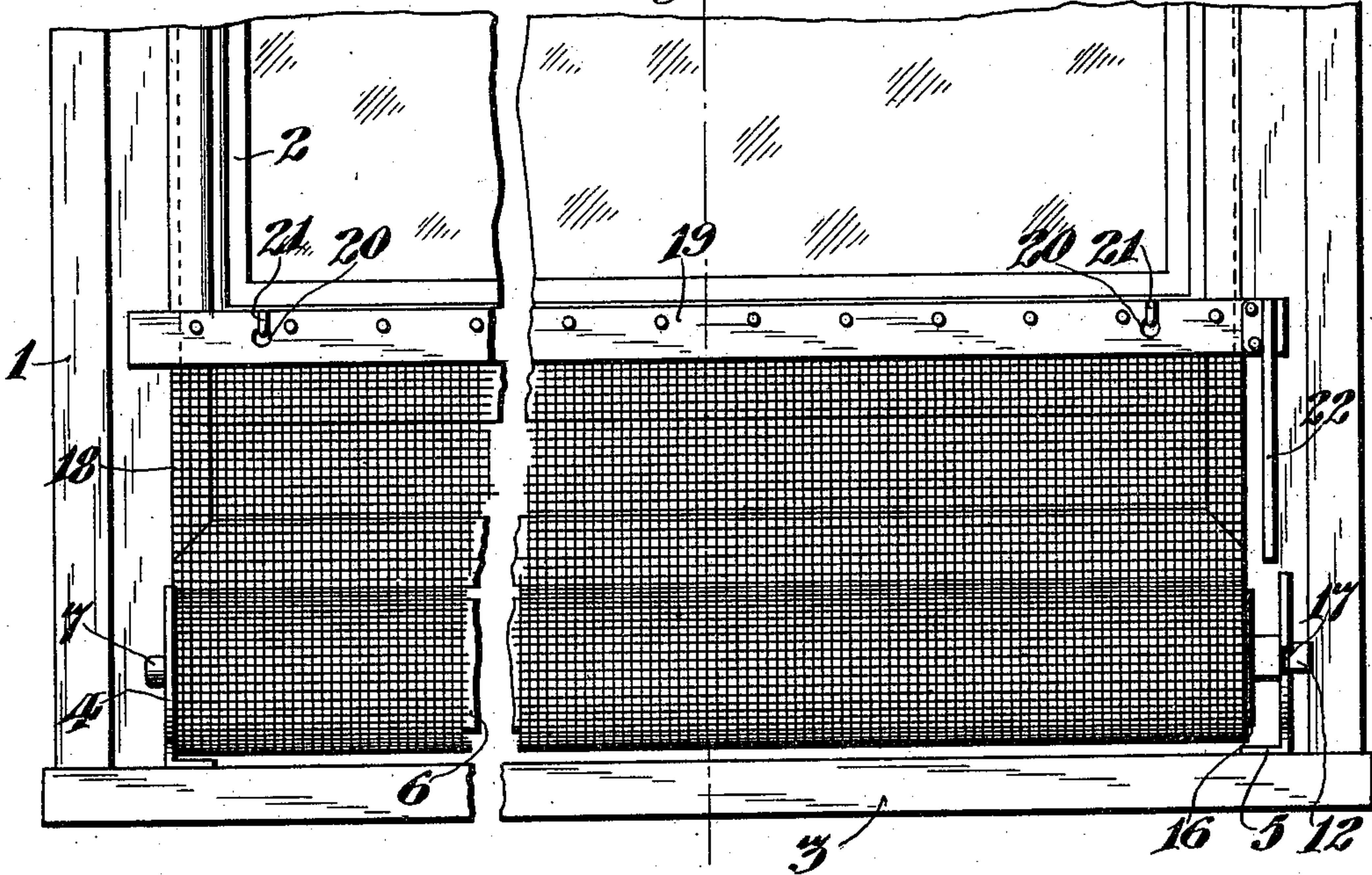
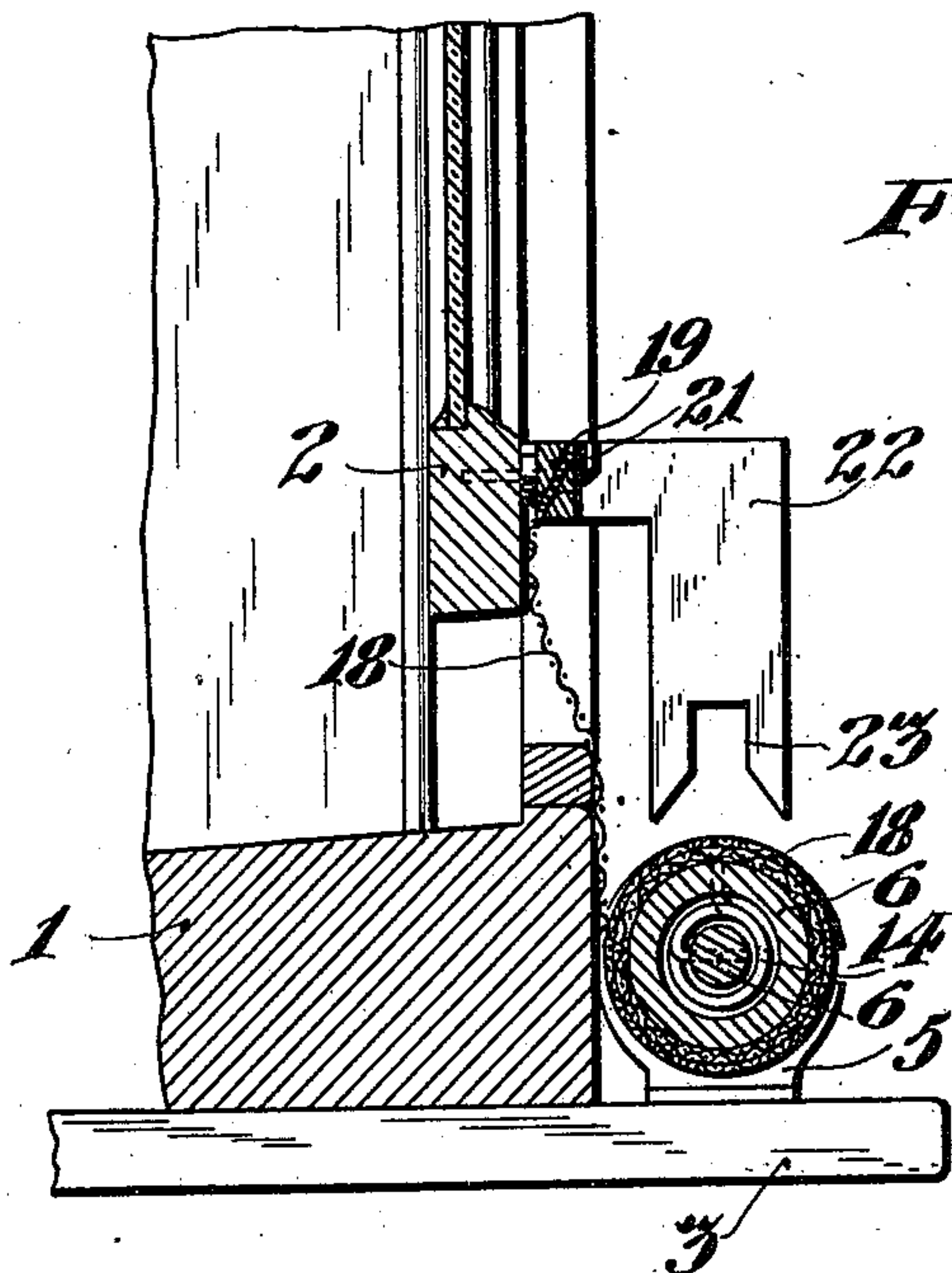


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

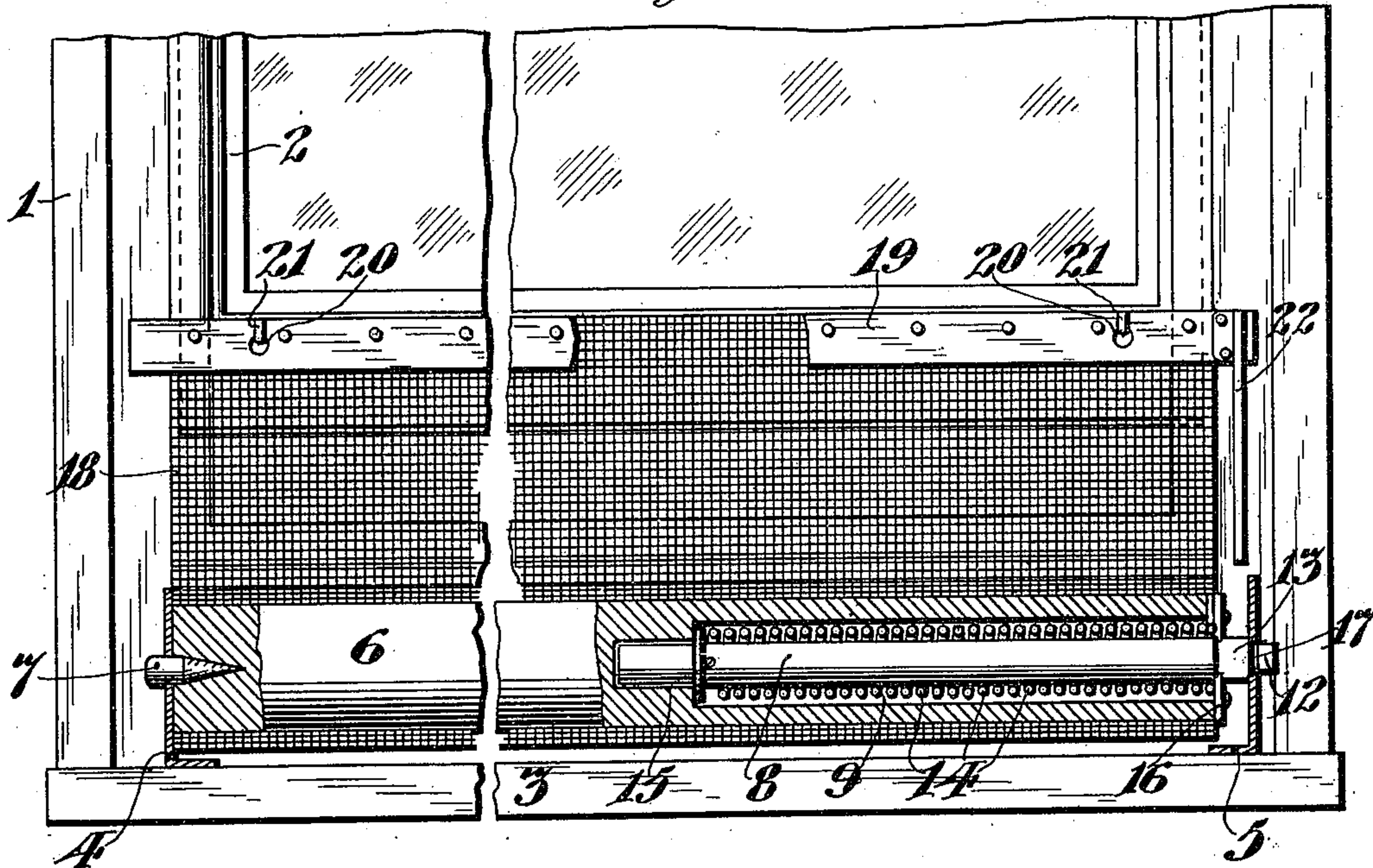


Fig. 4.

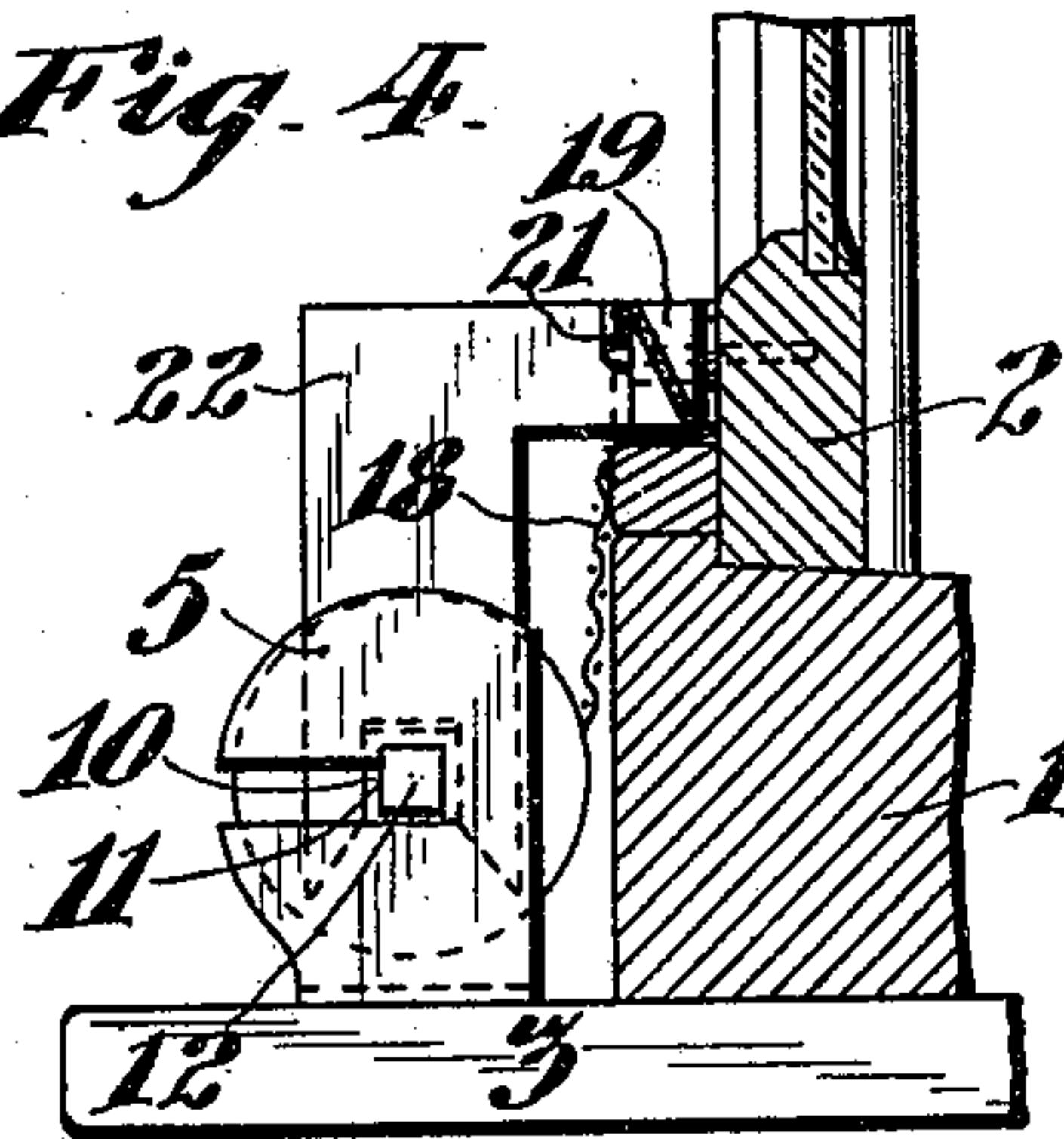


Fig. 5.

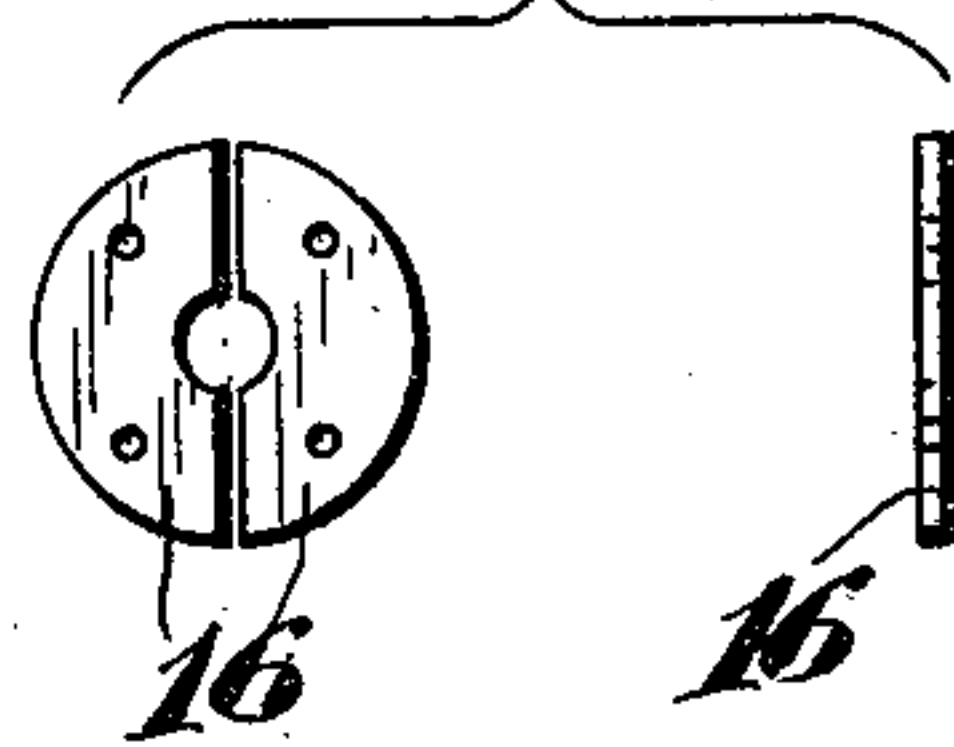
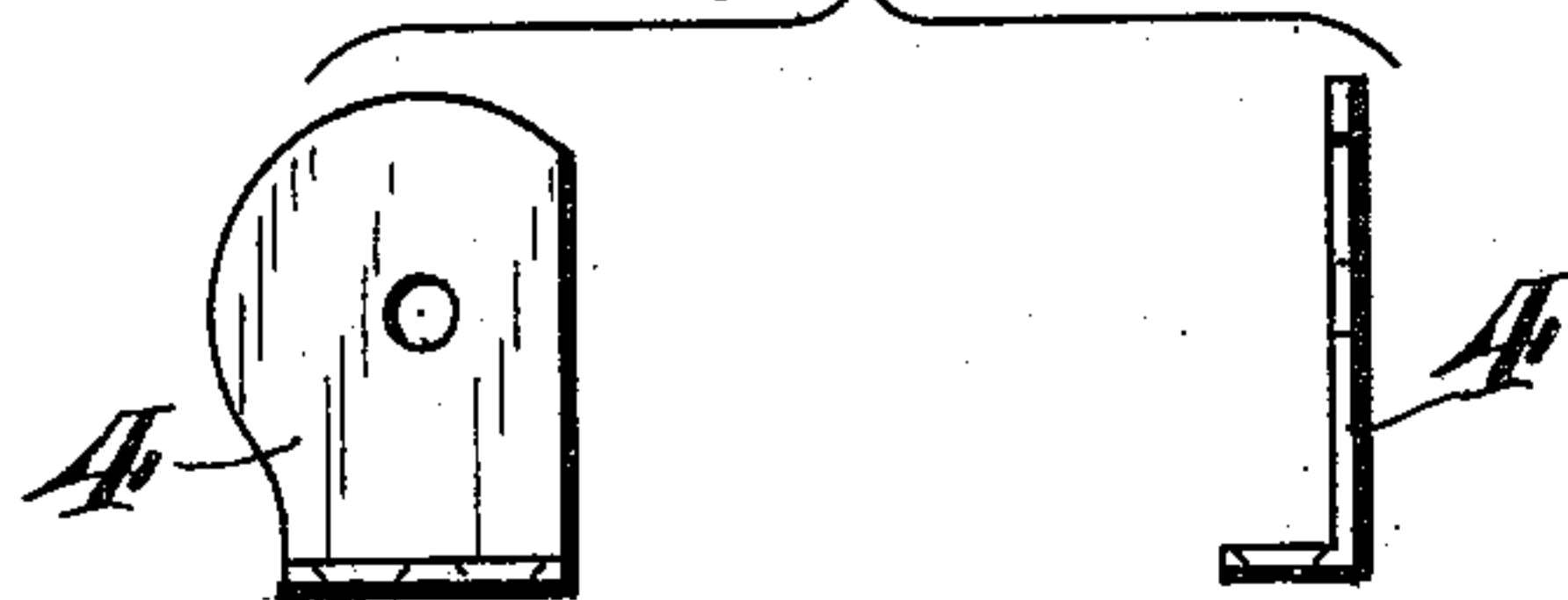


Fig. 6.



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UNITED STATES PATENT OFFICE.

LUDWIG MANELIUS, OF PHILADELPHIA, PENNSYLVANIA.

WINDOW-SCREEN.

975,146.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed June 15, 1910. Serial No. 566,908.

To all whom it may concern:

Be it known that I, LUDWIG MANELIUS, a subject of Finland, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

My invention relates to improvements in window screens, the object of the invention being to provide an improved screen mounted upon a spring roller supported on the sill, the free end of the screen being attached to the lower bar of the sash, so that when the sash is raised, the screen will be drawn from the roller, and when the sash is lowered, the screen will wind on the roller, thus screening the opening regardless of the elevation of the sash.

A further object is to provide an improved mounting for a spring roller on which my improved screen is secured, provide improved means for attaching the screen to the sash, and improved means for holding the roll against turning when detached from the sash and the window frame.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a broken view in front elevation illustrating my improvements. Fig. 2, is a view in vertical cross section. Fig. 3, is a view in longitudinal section of the spring roller. Fig. 4, is a view in vertical cross section, showing the window in closed position, and Figs. 5, and 6, are views of details of construction.

1, represents a window frame, 2 a vertically movable sash, and 3 the window sill. On the sill 3 two brackets 4, and 5, are secured and support my improved spring roller 6. The roller is provided at one end with a round trunnion 7, mounted in a circular opening in the bracket 4, and a spring rod 8 located in a recess 9 in the other end of the roller, projects beyond the end of the roller, is rectangular in cross section and is adapted to be positioned in a recess 10 in bracket 5. This recess 10 extends from the outer edge of the bracket inwardly, and the upper wall of the recess is provided with a notch or pocket 11 to receive the angular

end 12 of rod 8. This angular end 12 is smaller than the main portion of the rod, forming a shoulder to limit the longitudinal movement of the roller, but adjacent this shoulder the rod is angular or flat at its sides as shown at 13, for a purpose which will hereinafter appear.

A coiled spring 14 is located in the recess 9 around rod 8, and at its inner end is projected through an opening 15 in the rod. The outer end of the spring is secured to the rod, and the spring is confined within the recess, and the rod is held against longitudinal movement by means of a split disk 16 secured to the end of the roller and located in a groove 17 in rod 8.

18 is the wire screen secured at one end to the roller 6, and wound thereon, and at its free end is secured to a bar 19. This bar 19 comprises two sections triangular in cross section, with the end of the wire netting positioned between them, and the sections secured together. By reason of this means of attachment between the netting and the bar 19, the netting is compelled to lie close to the sash and exclude flies and insects from entering at this point.

Bar 19 is provided with openings 20, adapted to receive hooks 21 on the sash 2, and connect the bar and sash so that when the sash is moved, the screen will also be moved. On one end of this bar 19, a bracket 22 is fixed, and has a bifurcated or forked lower end 23, which latter when the sash is lowered, engages over the angular portion 13 of rod 8, and prevents any turning of the rod. While in this position, bar 19 may be readily disconnected from the sash, and the screen removed without any liability of the tension of spring 9 unwinding. It will therefore be noted, that with my improvements in position, when the sash is raised, the screen will be unwound from its roller to cover the opening in the window frame, effectually excluding flies and other insects. When the sash is lowered, the roller will wind the screen thereon, and hence it is not necessary to attend to the screen at all, as it will automatically prevent any of the flies and other pests from the outside entering the room when the sash is raised.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider

myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. A window screen comprising a spring roller having an angular spring rod, brackets adapted to be secured to a window sill and support said roller, and a screen secured at one end and wound on the roller, of a bar secured to the free end of the screen, and means on said bar constructed to engage said angular rod preventing turning of the latter, substantially as described.

2. In a window screen, the combination with a roller having a recess in one end, of a rod mounted to turn in said recess, a coiled spring around said rod in the recess secured at one end to the rod and at the other end to the roller, said rod projecting out beyond the end of the roller and having an annular groove therein, a split disk secured on the end of the roller and located in said groove, the outer end of said rod being of two diameters, both diameters angular in cross section, a screen secured to one end of said roller and wound thereon, brackets adapted to support said roller, a bar fixed to the free end of said screen and adapted to be connected to a window sash and means on said bar constructed to engage the larger angular diameter of the angular end of said rod and prevent rotary movement thereof when the sash is lowered, substantially as described.

3. In a window screen, the combination with a roller, having a recess in one end, of a rod mounted to turn in said recess, a coiled spring around said rod in the recess secured at one end to the rod and at the other end to the roller, said rod projecting out beyond the end of the roller and having an annular groove therein, a split disk secured on the end of the roller and located in said groove, the outer end of said rod being of two diameters, both diameters angular in cross section, a screen secured to one end of said roller and wound thereon, a trunnion fixed

to the opposite end of said roller, brackets constructed to support said roller, one bracket having a circular opening to receive said trunnion, the other bracket having a recess to receive the smaller diameter of the angular end of the rod, said bracket having a notch in the upper wall of the recess at its inner end, and a bar fixed to the free end of said screen and adapted to be secured to a sash, substantially as described.

4. In a window screen, the combination with a roller, having a recess in one end, of a rod mounted to turn in said recess, a coiled spring around said rod in the recess secured at one end to the rod and at the other end to the roller, said rod projecting out beyond the end of the roller and having an annular groove therein, a split disk secured on the end of the roller and located in said groove, the outer end of said rod being of two diameters, both diameters angular in cross section, a screen secured to one end of said roller and wound thereon, a trunnion fixed to the opposite end of said roller, brackets constructed to support said roller, one bracket having a circular opening to receive said trunnion, the other bracket having a recess to receive the smaller diameter of the angular end of the rod, said bracket having a notch in the upper wall of the recess at its inner end, a bar secured to the free end of said screen and comprising two sections having diagonal meeting faces with the wire netting secured between them, said bar having openings therein to receive hooks on a window sash, and a bracket fixed to said bar and having a forked or bifurcated lower end adapted to straddle and hold the said rod against rotary movement, substantially as described.

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

LUDWIG MANELIUS

Witnesses:

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