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PATENTED MAR. 21, 1905.

C. L. WOLFE.
WINDOW BAR OR GRATING.
APPLICATION FILED JUNE 26, 1904.

3 SHEETS—SHEET 1.

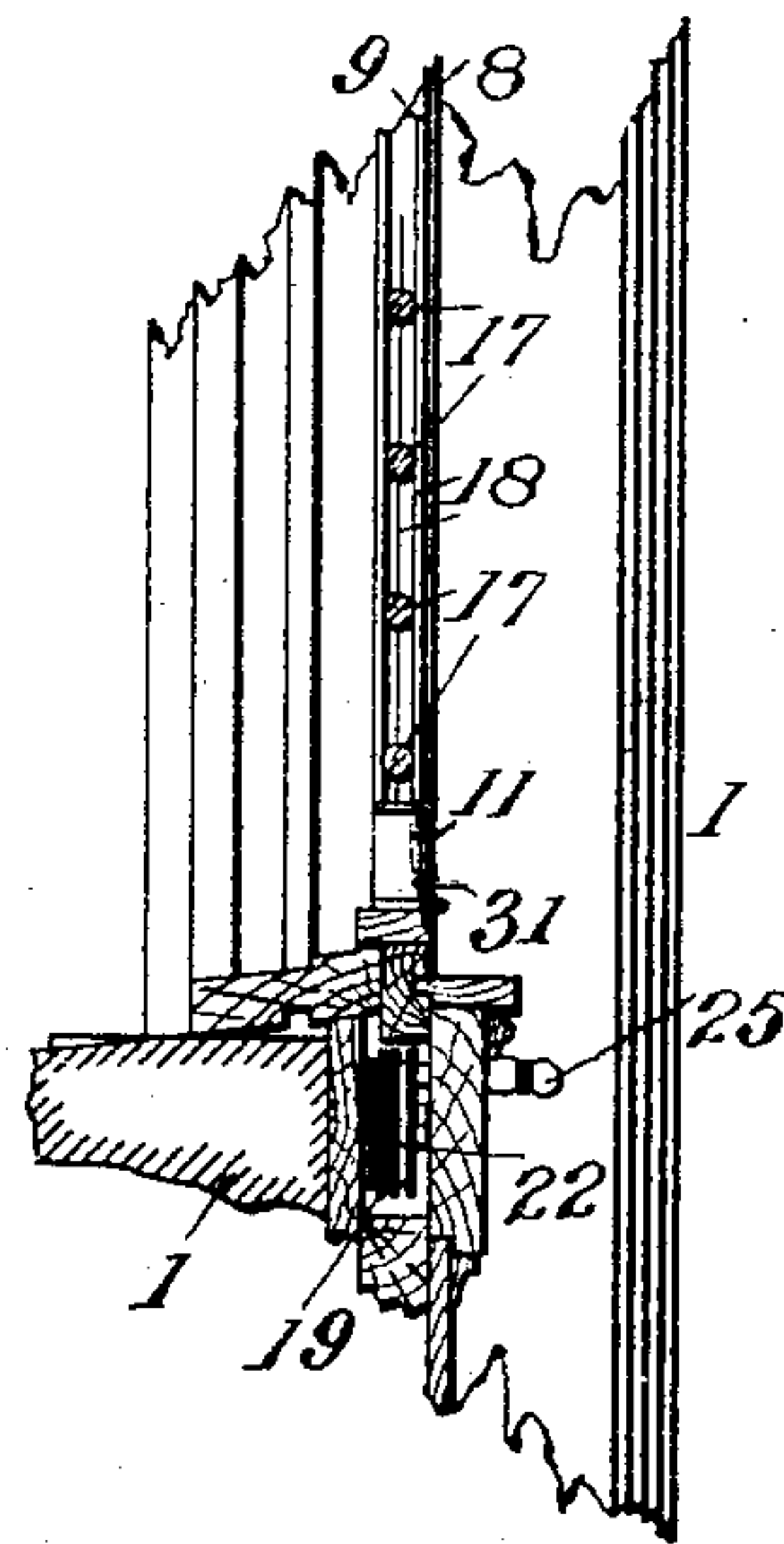
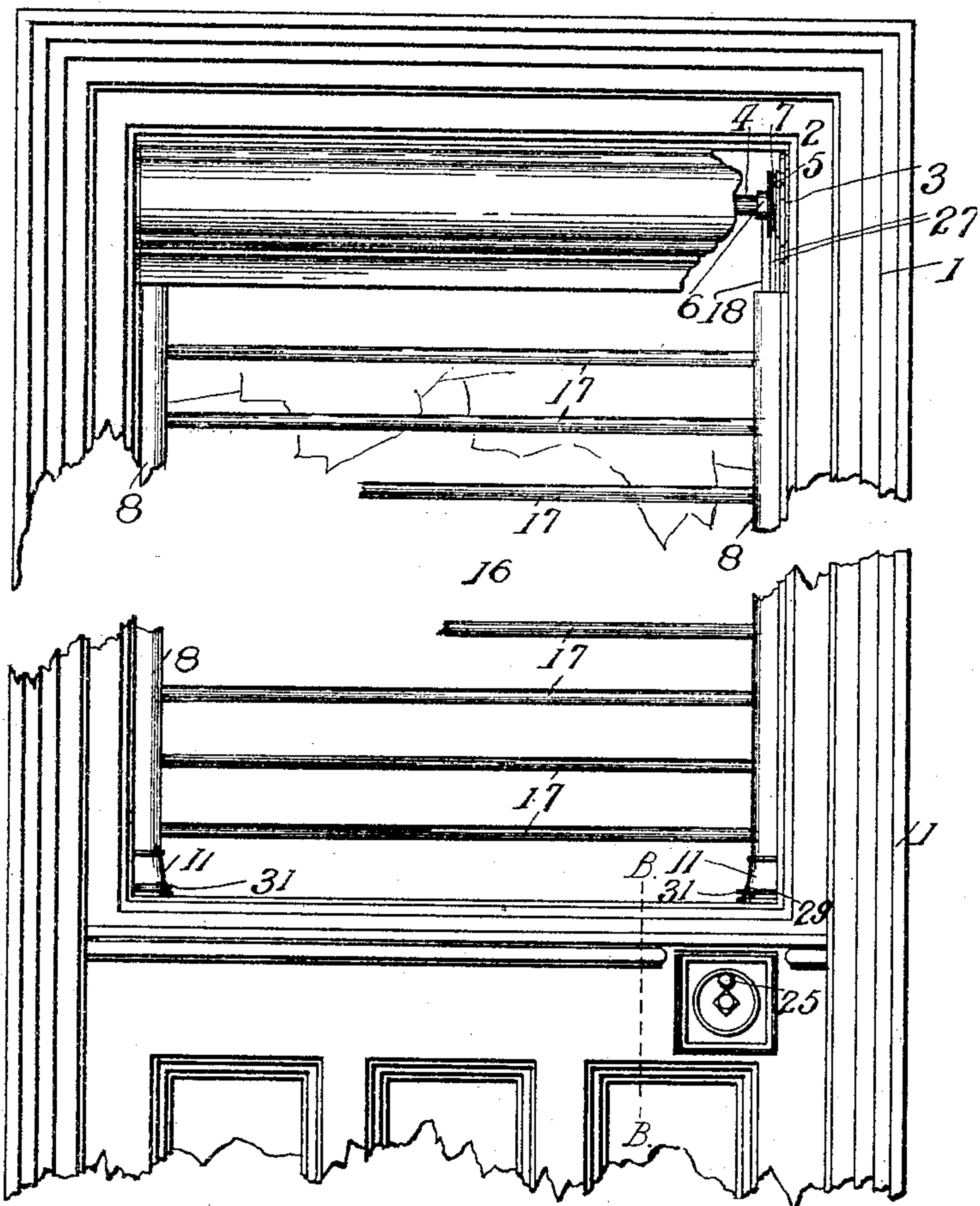
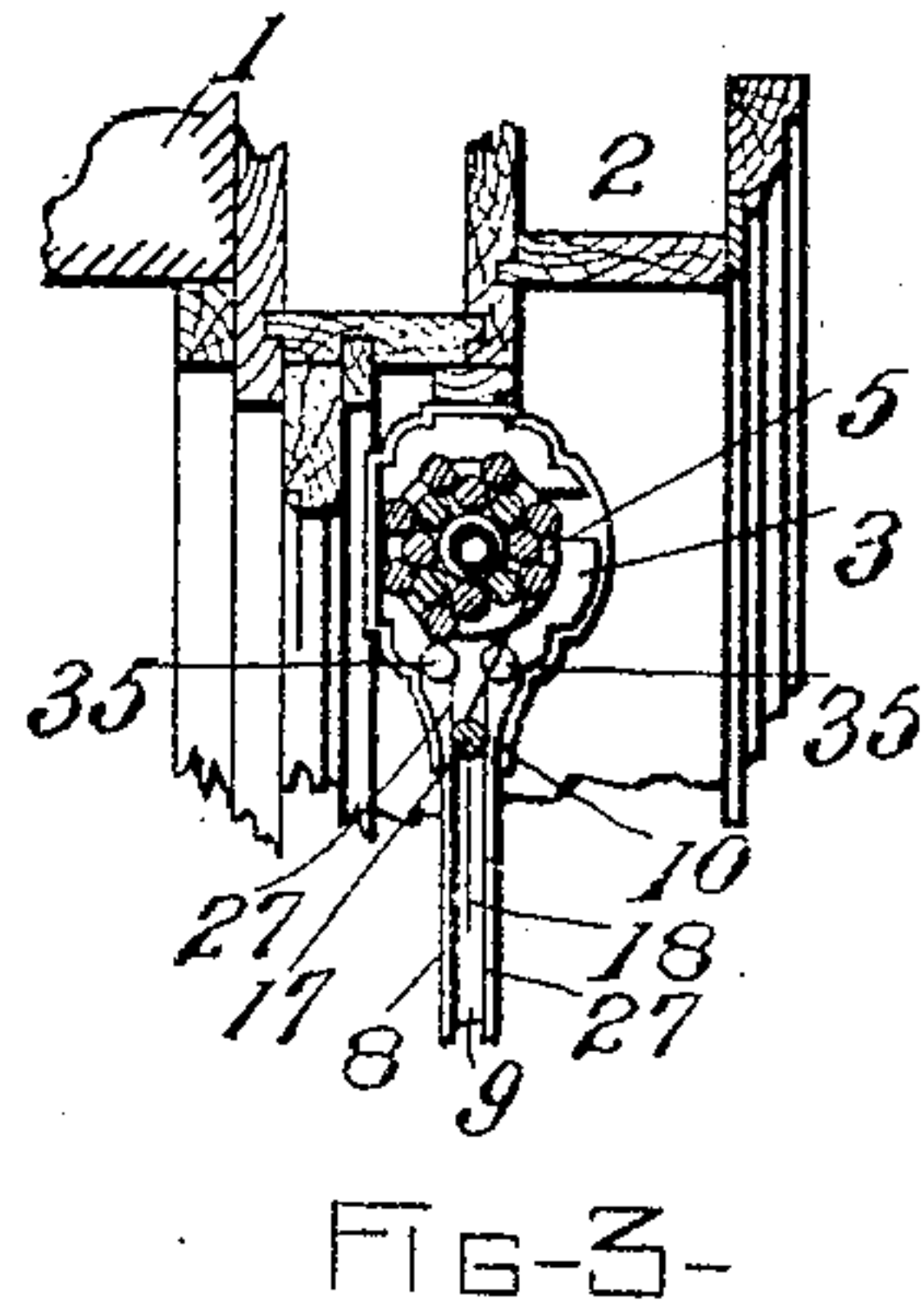
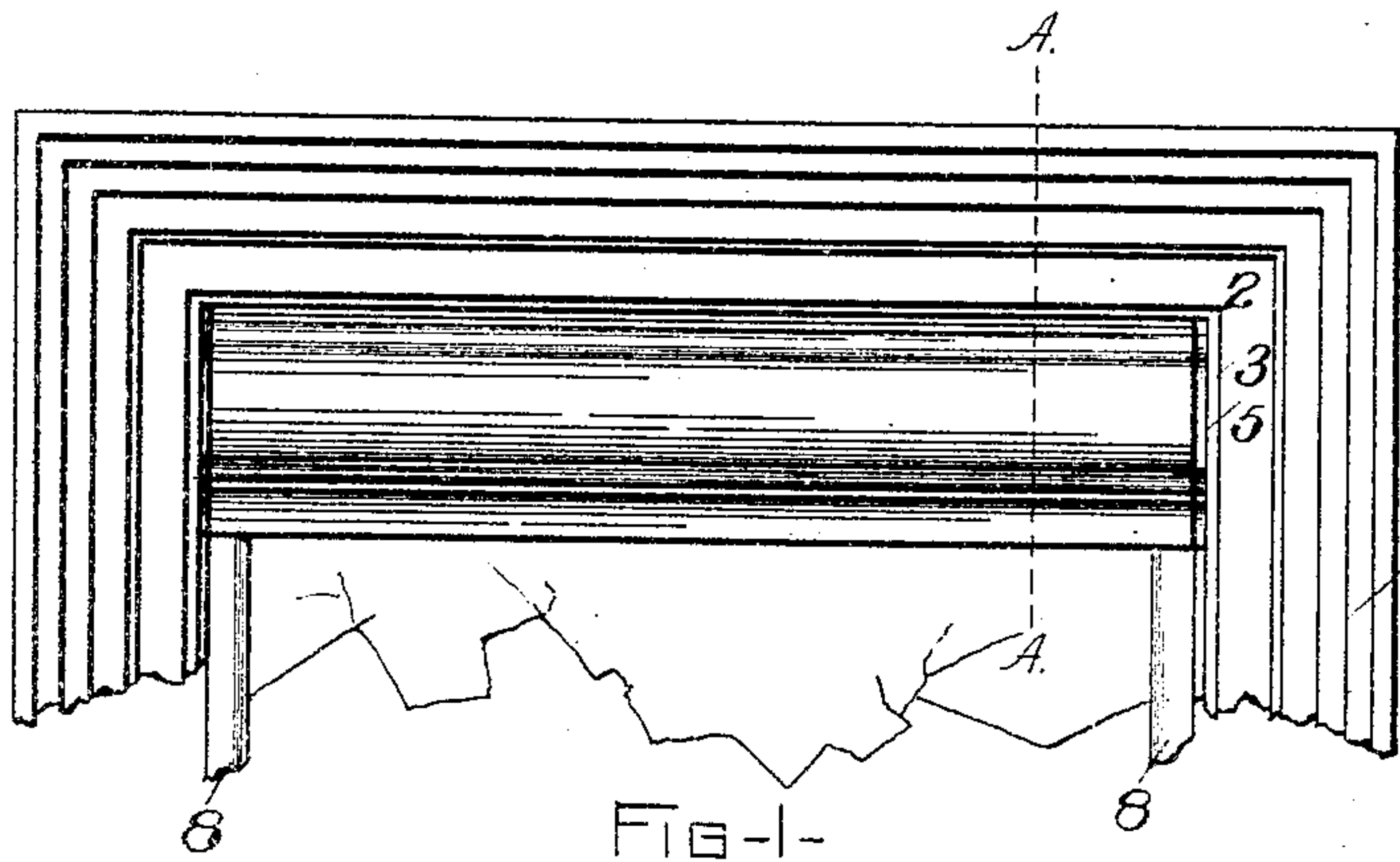


FIG-2-

FIG-4-

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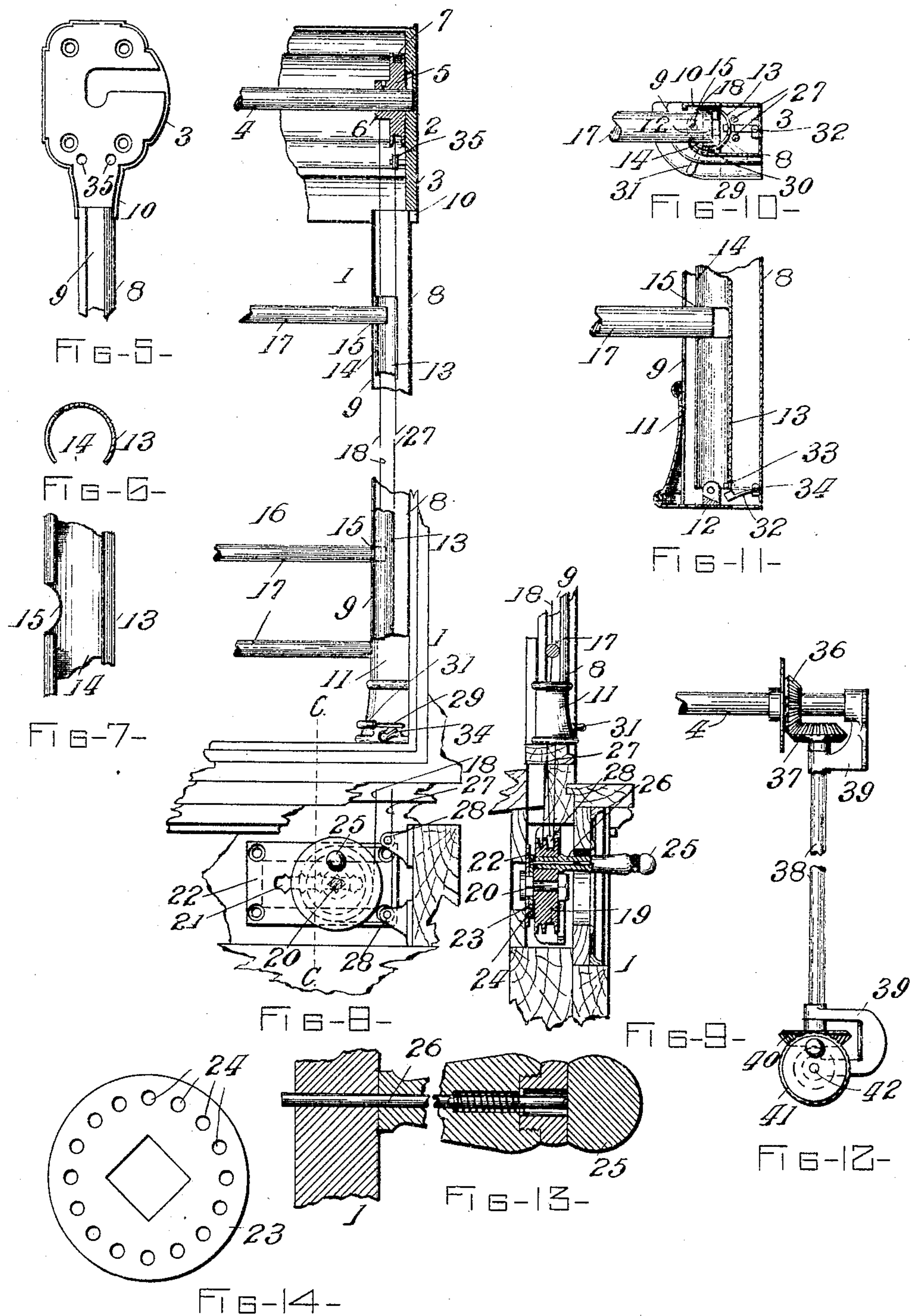
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No. 785,690.

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C. L. WOLFE.
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3 SHEETS—SHEET 2.

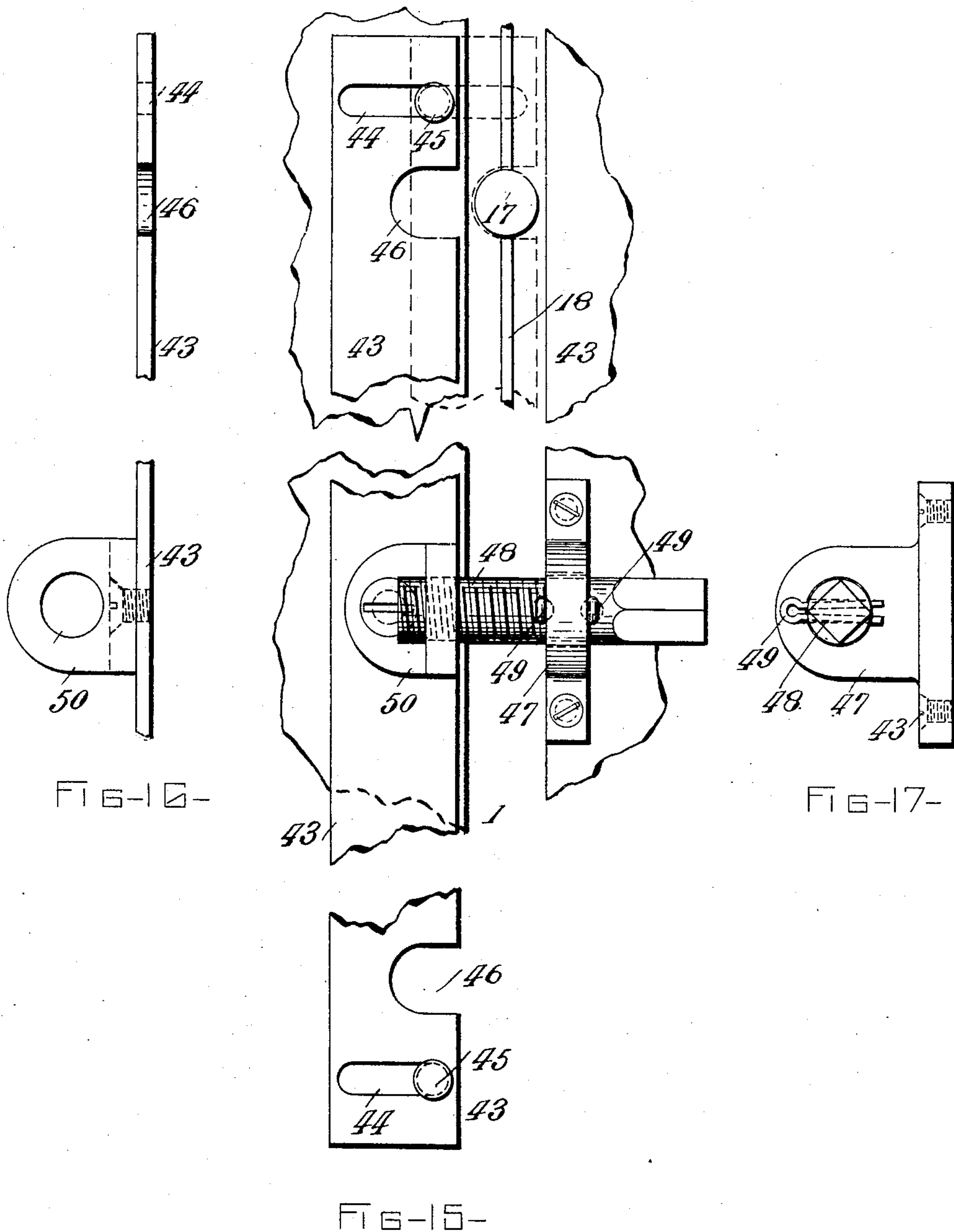


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WINDOW BAR OR GRATING.
APPLICATION FILED JUNE 25, 1904.

3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

CLINTON LEEANDER WOLFE, OF NEW YORK, N. Y.

WINDOW BAR OR GRATING.

SPECIFICATION forming part of Letters Patent No. 785,690, dated March 21, 1905.

Application filed June 25, 1904. Serial No. 214,212.

To all whom it may concern:

Be it known that I, CLINTON LEEANDER WOLFE, a citizen of the United States, residing in the borough of Brooklyn, city of New York, and State of New York, have invented a new and useful Improvement in Window Bars or Gratings, of which the following is a specification.

This invention relates to window bars or gratings; and the principal object is to provide a simple and efficient means for the protection of windows and doors of dwelling-houses, stores, and other similar structures.

Another object of the invention is to so construct the grating that it can be readily raised and lowered and when in its raised position will be practically invisible and when in its lowered position can be locked to secure it firmly against the wrongful removal or manipulation by outside persons.

Other objects of the invention will become apparent upon a more detailed disclosure thereof.

The invention consists of the novel construction and arrangement of the several parts, as will be hereinafter fully described, and briefly stated in the claims.

In the drawings, Figure 1 is a front elevation of the upper portion of a window, showing my improved device in raised or rolled position; Fig. 2, a similar view of a window broken in two, showing the device in lowered or unrolled position; Fig. 3, a transverse section on line A A, Fig. 1; Fig. 4, a similar section on line B B, Fig. 2; Fig. 5, a plan view of one of the brackets in which one end of the roller is journaled; Fig. 6, a transverse section of one of the locking-tubes; Fig. 7, a vertical section of a portion of the locking-tube, showing a recess in which a grating-bar is locked; Fig. 8, a front elevation of one side of a window, partly in section and partly broken away, showing a part of the device in section and a part in full lines; Fig. 9, a transverse section on line C C, Fig. 8; Fig. 10, a detail view, partly in cross-section, of the lower part of the locking-tube inclosed within the casing or outer tube; Fig. 11, a vertical section of the lower portion of the casing or outer tube and the locking-tube inclosed

therein, showing the automatic locking device; Fig. 12, a modified form of the mechanism for raising and lowering the grating; Fig. 13, a longitudinal section of the operating-handle attached to main pulley; Fig. 14, a plan or face view of the adjusting-plate for adjusting the bars of the grating at any desired height; and Figs. 15, 16, and 17, front and side elevations of a modified form of tubelocking device.

In the several views the numeral 1 indicates a window-frame of ordinary construction, preferably provided with a hood or housing 2, in the sides of which are secured brackets 3. Journaled in the brackets is a roller 4, consisting, preferably, of a metal bar, and secured on each end of the roller is a pulley or wheel 5, having a hub 6 and one of said pulleys having a groove 7 in its periphery, as shown in Fig. 8.

Secured to each side of the window-frame in any well-known manner is a tubular casing 8, having a longitudinal slot 9 for a greater part of its length, said slot being open at the top, as shown in Fig. 5. The upper ends of the casing are fitted into a flanged extension 10 of the brackets 3, and the lower ends are provided with a suitable base 11, which is secured to the sill of the window-frame by any suitable means.

Mounted within each casing 8 on a support 12 is a locking member 13, preferably a tube having a longitudinal slot 14 corresponding with the slot 9 in said casing. One of the side edges of the slot 14 is provided with a plurality of recesses or notches 15, the purpose of which will be hereinafter explained.

The numeral 16 indicates a grating composed of a plurality of bars 17, arranged at suitable distances apart on a cable 18, with their ends entered in the slots 9 and 14 of the casing 8 and tube 13, respectively. The upper ends of the cables are secured to the hubs 6 of the pulleys 5, and the lower end of one cable passes through the window-sill and is attached to a double-grooved pulley 19, situated beneath the window-sill. The pulley 19 is loosely mounted on a short shaft or stud 20, adjustably secured in a ratchet-edge slot 21 of a plate 22. Mounted rigidly on the

shaft 20 is a disk 23, having a circular row of perforations 24. Attached to the pulley 19 is an operating-handle 25, which is provided with a spring-restrained locking-rod 26, adapted to lock said pulley to the perforated disk.

Attached to grooved pulley 5 is one end of a cable 27. The other end of said cable passing down through the window-sill and over an idler-pulley 28 is attached to the pulley 19.

When the grating is in its lowered position, it is securely locked by rotating the locking members 13 until the recesses 15 engage the ends of the bars composing said grating and then locking said members. This operation is accomplished by means of the following described mechanism: The respective bases and casings are provided with corresponding horizontal slots 29 and 30, respectively, and the locking members 13 with handles 31, which project through said slots, as shown in Fig. 10. By forcing the handles to one side the recesses in 15 are brought into engagement with the respective ends of the bars, thus securing the grating against an upward or downward movement. In this position the locking members are securely locked by spring-catches 32, which are adapted to engage the recesses or notches 33 in the ends of the locking members, as shown in Fig. 11. When it is desired to raise the grating, each spring-catch is forced out of locking engagement with its locking member by a suitable key inserted through a keyhole 34 in each base 11, as shown in Fig. 11. As each locking member is unlocked it is rotated until its longitudinal slot 14 registers with the slot 9 in the casing and the bars of the grating freed from engagement with the recess 15. When this operation has been effected, the grating is raised by withdrawing the locking-rod 26 and turning the operating-handle to the right, which unwinds the cable 27 from the pulley 5, causing the roller 4 to turn and wind the bars completely therearound. When thus raised, the locking-rod is permitted to enter a perforation in the locking-disk and hold the grating locked in its elevated position. The grating is lowered by turning the operating-handle to the left or opposite direction. One of the brackets, 3, is provided with two idler-wheels 35 35, which serve to guide the cables.

Instead of the mechanism above described for raising and lowering the grating I may employ a system of shafting and gearing such as shown in Fig. 12, in which case the roller 4 is provided with a bevel gear-wheel 36, which meshes with a similar gear-wheel 37, mounted on the upper end of a rotatable shaft 38, journaled in suitable bearings 39 39, secured inside of the window-casing. The lower end of the shaft 38 is provided with a bevel gear-wheel 40, to which power to rotate said shaft is applied by a hand-operated gear-wheel 41, journaled on a short stud 42, secured to the lower bearing. This construction of mech-

anism for raising and lowering the grating is particularly adapted where specially-constructed frames are required.

In Figs. 15, 16, and 17 I have shown a modified form of mechanism for locking the members 13, said mechanism being especially applicable when necessary or desirable to place the device inside of the window or door casing and entirely out of sight. In this form of device the casing or outer tube is dispensed with, as the ends of the bars composing the grating may project through vertical slots made in the respective sides of the window or door frame, as the case may be. The locking members may consist of flat metal bars 43, having horizontal slots 44, into which project rotatable spools 45. One of the edges of the bars is provided with a plurality of recesses 46 to engage the ends of the bars of the grating and lock the same against upward or downward movement. Secured to the window-casing sides is a bracket 47, in which operates a bolt 48, said bolt being held against longitudinal movement by keys 49 49, one on each side of the bracket. The outer end of the bolt is squared to receive a suitable key, by means of which it may be rotated, and the inner end is screw-threaded to engage a screw-threaded aperture in a bracket 50, secured to the locking-bar. When the grating is lowered, it is firmly secured in position by laterally sliding the bars 43 to one side until the recesses 46 engage the ends of grating-bars. This is accomplished by turning the bolts 48, which draw the locking-bars into locking positions.

It will be evident that the device is equally applicable to doors as well as windows and that various modifications and changes may be made without departing from the spirit of my invention or limiting the scope thereof.

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

1. In a grating for the protection of windows and doors, the combination with the sides or casings of the frame, of vertical locking members adapted to engage and confine the ends of the bars composing the grating, and means for laterally moving the locking members into engagement with the ends of said bars.

2. In a grating for windows and doors, the combination with the sides or casings thereof, of vertical locking members adapted to engage and confine the ends of the bars composing the grating, means for laterally moving the locking members into engagement with the ends of said bars, and means for locking the locking members.

3. In a grating for windows and doors, the combination with the sides or casings thereof, of vertical locking members, means for raising and lowering the grating, said locking members being provided with means for en-

gaging the ends of the bars composing the grating, and means for laterally moving the locking members into engagement with the ends of said bars.

5 4. In a grating for windows and doors, the combination with the sides or casings thereof, of vertical locking members, means for raising and lowering the grating, said locking members being provided with means for engaging the ends of the bars composing the grating, means for laterally moving the locking members into engagement with the ends of said bars, and means for locking the locking members to secure the grating.

5 5. In a grating for windows and doors, the combination with the sides or casings thereof, of vertical slotted casings, slotted locking members mounted within the slotted casings, said locking members being provided with recesses adapted to engage the ends of the bars composing the grating, and means for moving the locking members laterally to engage the ends of said bars.

5 6. In a grating for windows and doors, the combination with the sides or casings thereof, of vertical slotted casings, slotted locking members mounted within the slotted casings, means for raising and lowering the grating, said locking members being provided with recesses adapted to engage the ends of the bars composing the grating, and means for moving the locking members laterally to engage the ends of said bars.

ing the locking members laterally to engage the ends of said bars.

7. In a grating for windows and doors, the combination with the sides or casings thereof, 35 of vertical slotted casings, slotted locking members mounted within the slotted casings, said locking members being provided with recesses adapted to engage and confine the ends of the bars composing the grating, means for 40 moving the locking members into engagement with the ends of said bars, and means for locking the locking members to secure the grating.

8. In a grating for windows and doors, the combination with the sides or casings thereof, 45 of vertical slotted casings, slotted locking members mounted within the slotted casings, said locking members being provided with recesses adapted to engage the ends of the bars composing the grating, means for raising and 50 lowering the grating, means for moving the locking members into engagement with the ends of said bars, and means for locking the locking members to secure the grating.

In testimony whereof I have signed my name 55 to this specification, in the presence of two subscribing witnesses, this 4th day of June, 1904.

CLINTON LEEANDER WOLFE.

Witnesses:

ALEX. T. S. WILLIAMS,
EDWIN L. ABBETT.