

No. 608,173.

Patented Aug. 2, 1898.

F. BRUNO.

WINDOW RAISING AND LOCKING DEVICE.

(Application filed July 30, 1897.)

(No Model.)

2 Sheets—Sheet 1.

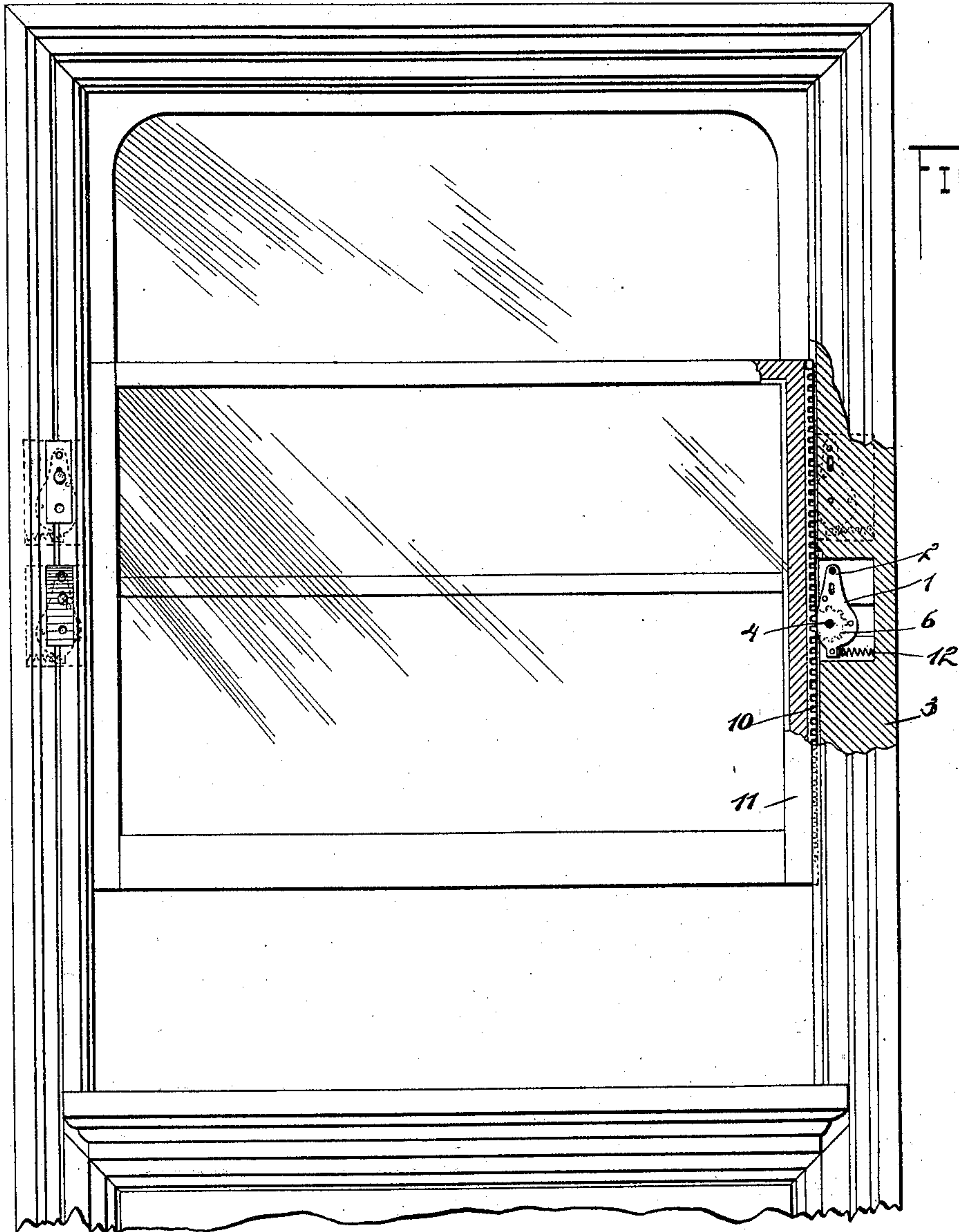
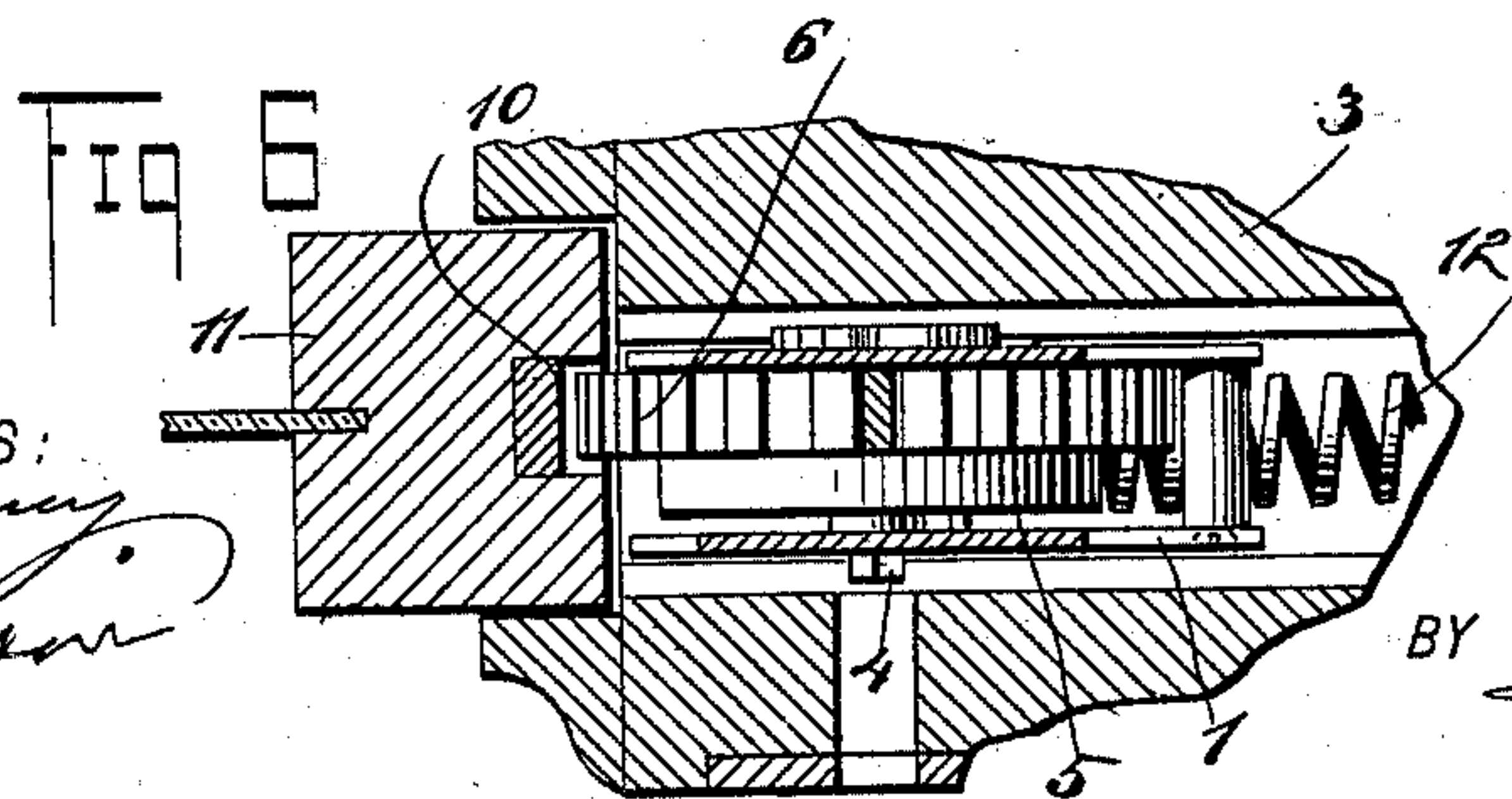


FIG 1



WITNESSES:

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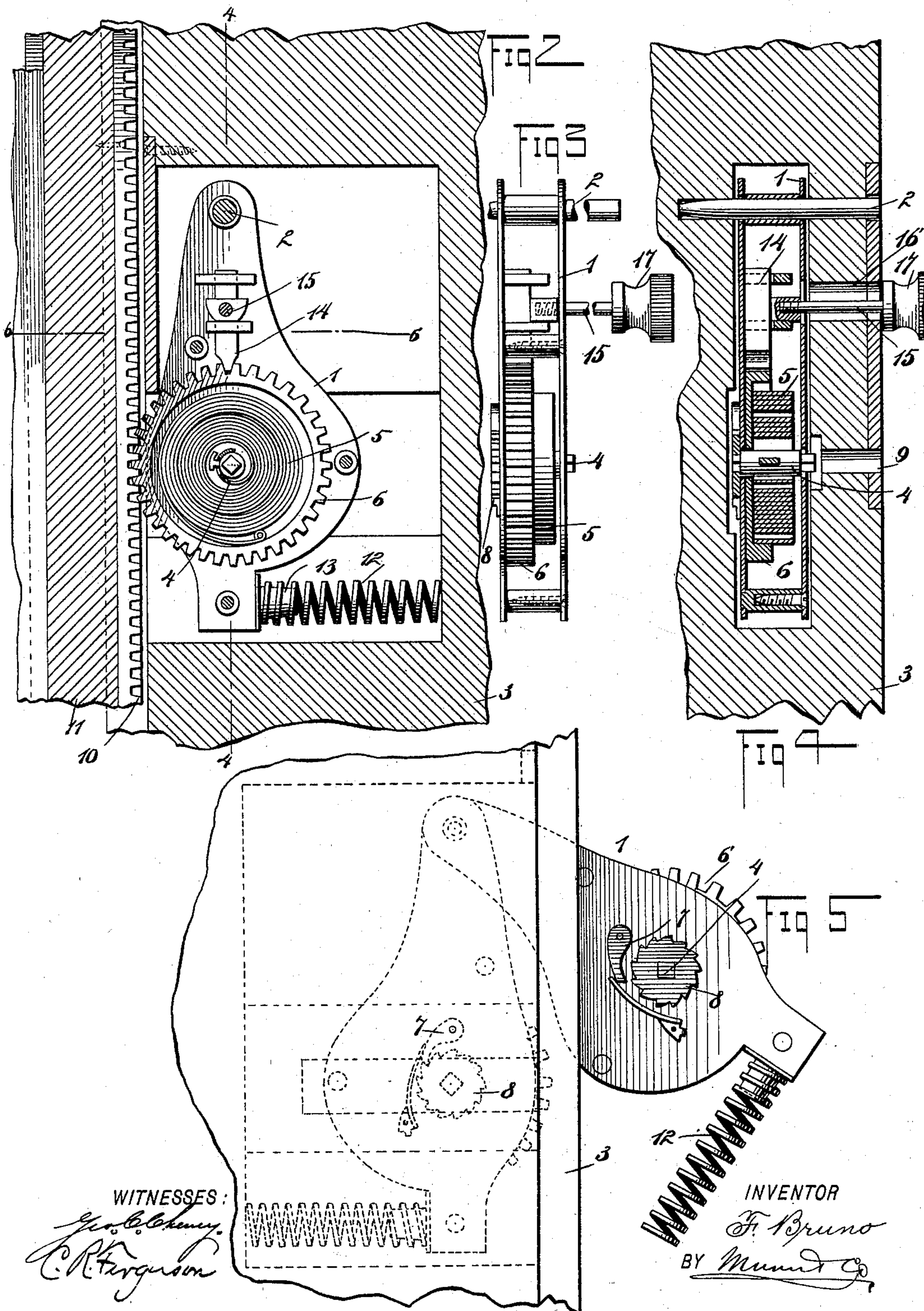
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FRANS BRUNO, OF NEW YORK, N. Y.

WINDOW RAISING AND LOCKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 608,173, dated August 2, 1898.

Application filed July 30, 1897. Serial No. 646,473. (No model.)

To all whom it may concern:

Be it known that I, FRANS BRUNO, of New York, in the county and State of New York, have invented a new and Improved Window Raising and Locking Device, of which the following is a full, clear, and exact description.

This invention relates to mechanism for raising and locking window-sash; and the object is to provide a simple mechanism comprising a spring-motor that will be automatically wound or set by a downward movement of the sash. When this mechanism is employed, the usual weights will be dispensed with.

I will describe the mechanism embodying my invention and then point out the novel features in the appended claim.

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 inside elevation of a window-sash and frame, with a portion of the same broken away to clearly show the features of my invention. Fig. 2 is a partial section and partial elevation drawn on an enlarged scale and clearly showing the raising and locking mechanism. Fig. 3 is an edge view of the raising and locking mechanism. Fig. 4 is a section on the line 4 4 of Fig. 2. Fig. 5 is a detail showing the raising and locking mechanism swung outward for a purpose that will be hereinafter described, and Fig. 6 is a section substantially on the line 6 6 of Fig. 2.

The raising and locking mechanism comprises a frame 1, mounted to swing on a pivot 2 in a mortise formed in the window-casing 3. On a shaft 4, mounted in the casing 1, is secured one end of a spring 5, the other end of said spring being attached to a gear-wheel 6, loosely mounted on the shaft 4. The shaft 4 is held from rotation in the frame 1 by means of a dog 7, engaging with a ratchet-wheel 8 on the extended end of said shaft, the other end of the shaft being made angular, so as to be engaged by a key when it is desired to rotate the shaft for regulating the tension of the spring. The key may be inserted through a hole 9 in the casing.

The gear-wheel 6 meshes with a rack 10,

secured to the inner edge of the side rail 11 of the sash, and the wheel will be held yieldingly in engagement with said rack by means of a spring 12, engaging at one end with a lug 13, extended from the lower portion of the frame 1 and bearing at the other end against the inner wall of the mortise or recess formed in the casing, as is plainly indicated in Fig. 2.

A holding and locking device is provided for the wheel 6. As here shown, this holding and locking device consists of a pin 14, mounted to slide in guideways secured to the inner side of one side portion of the frame 1. From the slide-pin 14 a releasing-rod 15 extends outward through a slot 16 in the casing, and at its outer end the rod 15 is provided with a finger-piece 17.

As before stated, the shaft 4 is designed to be rotated when it is desired to adjust the tension of the spring. It may be rotated in one direction by applying a key through the hole 9. When, however, it is necessary to lower the tension or strength of the spring, the window-sash must be moved outward or wholly removed from the casing, and then after removing the face-plate the frame 1, carrying the spring and gear-wheel, may be swung outward, as indicated in Fig. 5. When in this position, the dog 7 may be moved out of engagement with the ratchet-wheel 8, so that the parts will rotate to adjust the spring. As indicated in Fig. 1, a raising and lowering device will be arranged one on each side of the window.

In operation when it is desired to raise the sash the holding-pins 14 must be moved upward out of engagement with the wheels 6. This may be done by pushing upward on the finger-pieces 17. When the wheels are thus released, the springs will operate to rotate the wheels, and this rotary movement of the wheels will raise the sash through the medium of the racks. The sash may be locked at any desired opening by simply allowing the pins 14 to fall into engagement with the gear-wheels.

When the sash is moved downward, it is obvious that the wheels 6 will be rotated to wind the springs, and thus the springs will be placed in proper tension for again opening or moving the sash upward when desired.

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

5 A window-raising mechanism, comprising a rack on a window-sash, a spring-operated gear-wheel for engaging with said rack, a frame in which said wheel is mounted and a pivot extended across a mortise in the window-casing, the said pivot passing through a

hole at the upper portion of the casing arranged in the mortise and whereby the lower portion of the frame may be swung wholly out of the mortise as and for the purpose specified. 10

FRANS BRUNO.

Witnesses:

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C. R. FERGUSON.