

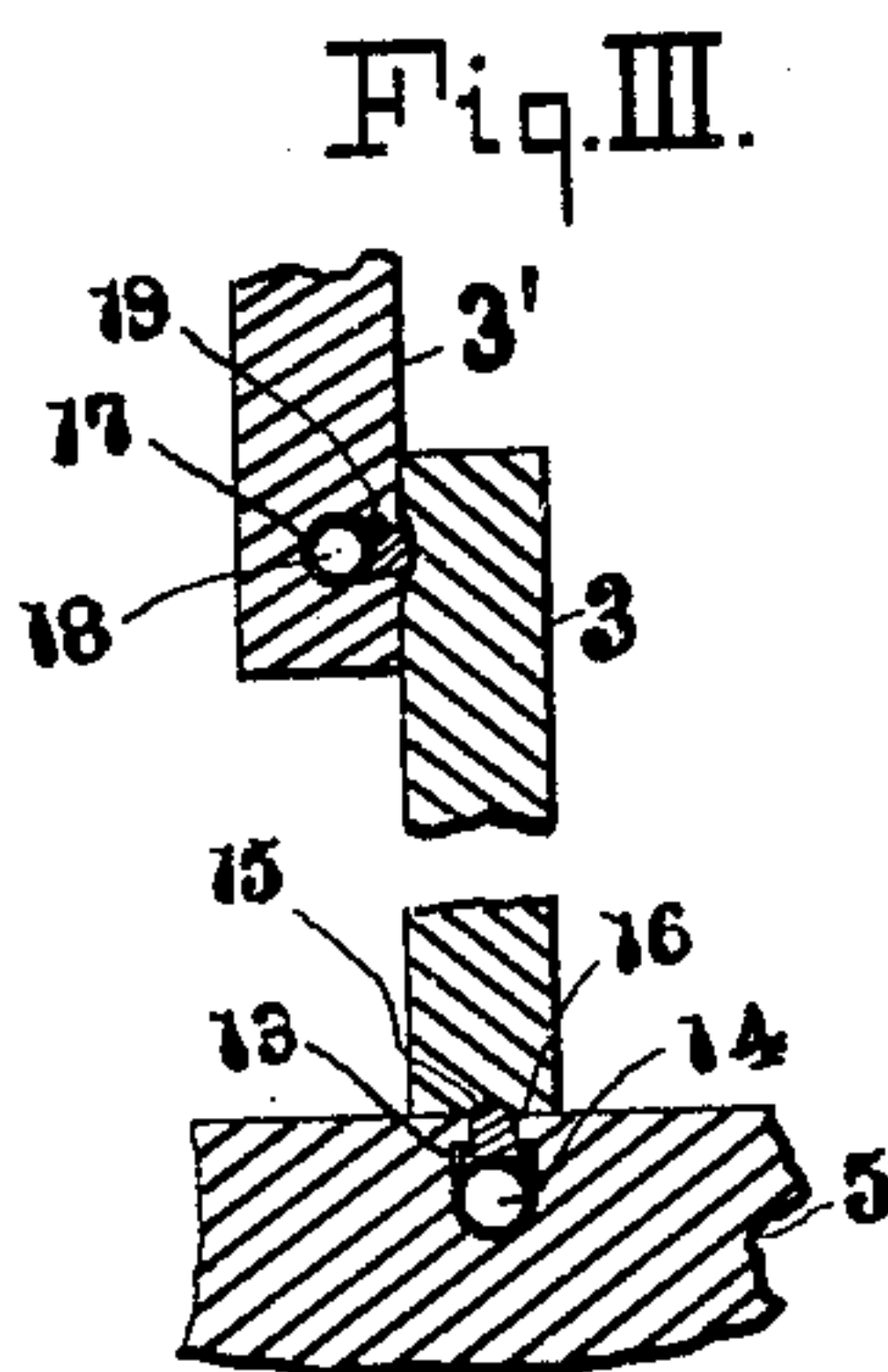
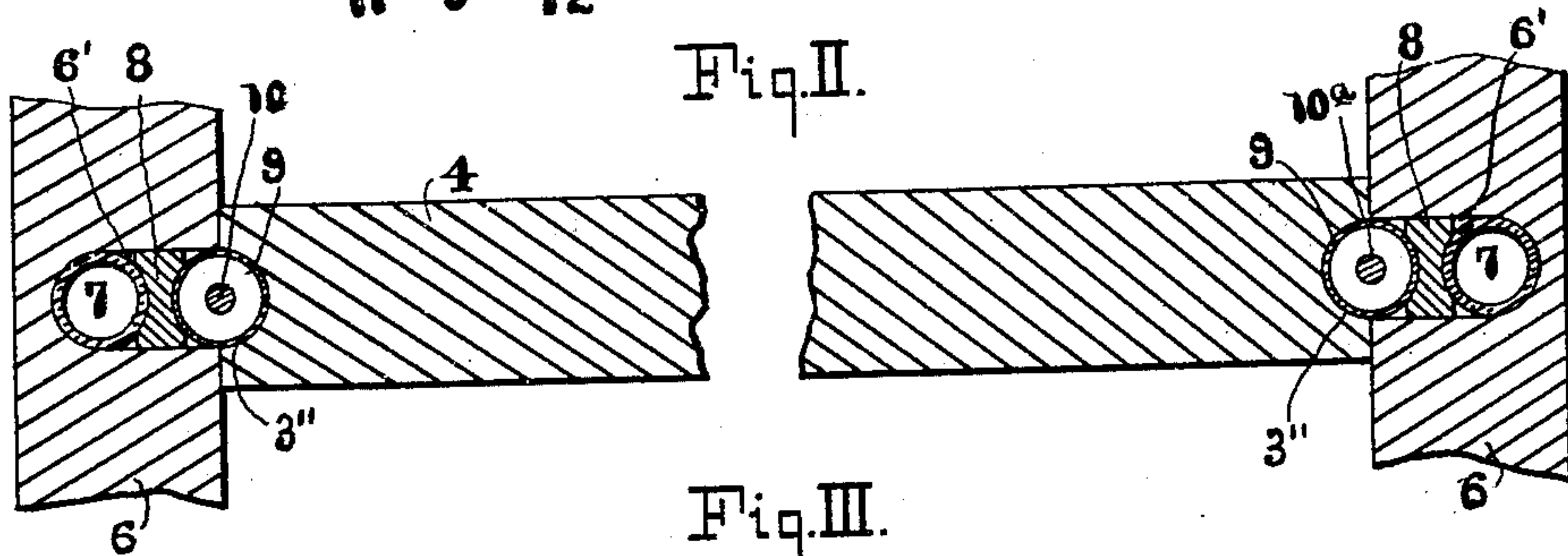
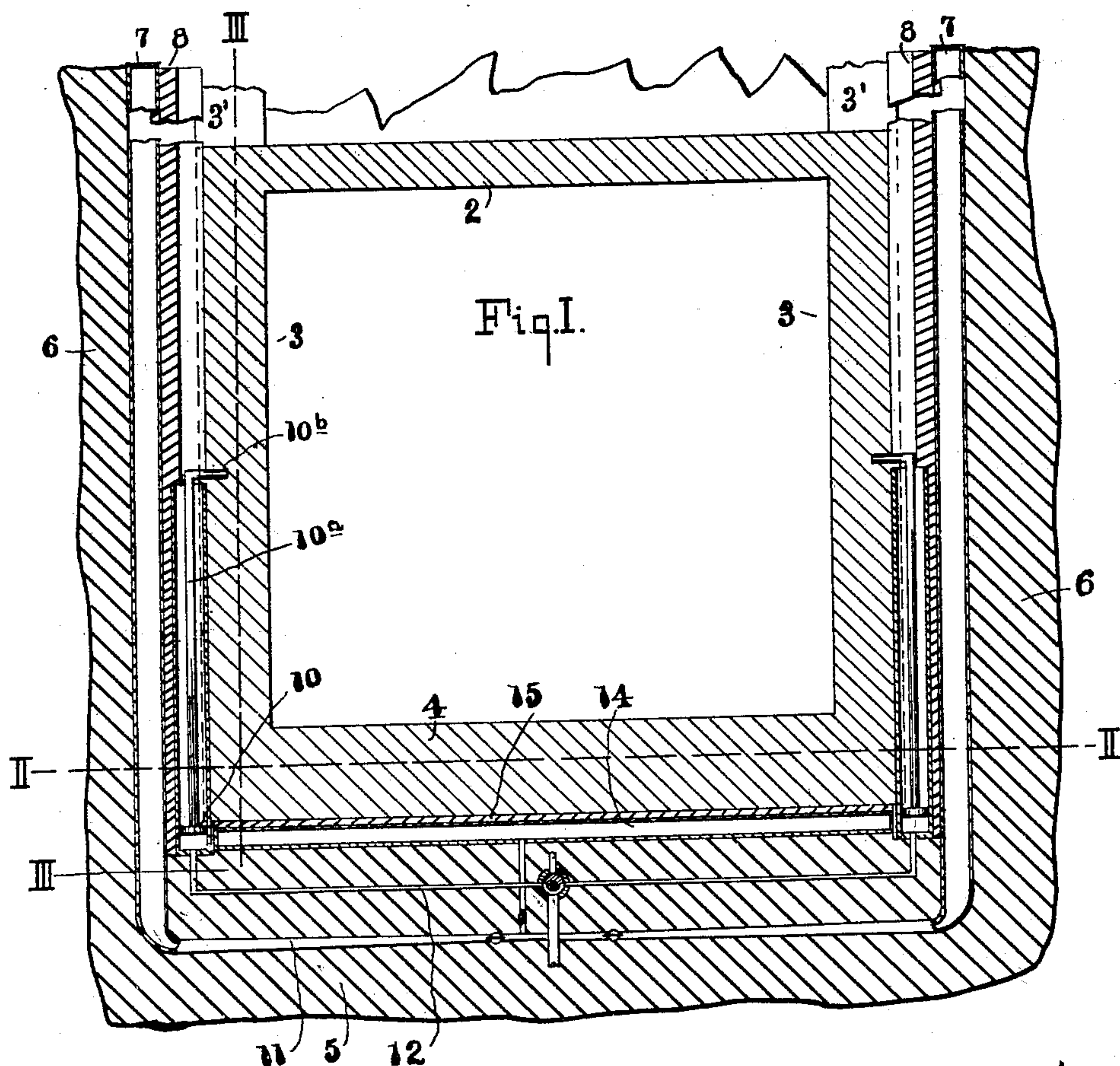
No. 626,615.

Patented June 6, 1899.

J. C. HOOD.
WINDOW.

(Application filed June 14, 1898.)

(No Model.)



WITNESSES:

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JOHN C. HOOD, OF WILKINSBURG, PENNSYLVANIA.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 626,615, dated June 6, 1899.

Application filed June 14, 1898. Serial No. 683,412. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. HOOD, a citizen of the United States of America, and a resident of Wilksburg, county of Allegheny, and State of Pennsylvania, have invented certain new and useful Improvements in Windows, of which the following is a specification.

Figure I is a vertical section of my improvement applied to the lower sash of a window-frame and showing the upper sash broken away. Fig. II is a horizontal cross-section of the same on line II II of Fig. I. Fig. III is a vertical section through the side rail of a window-sash on line III III of Fig. I.

The purposes of my invention, generally stated, are to devise apparatus by which a window-sash or window-sashes may be raised and lowered by the application of pneumatic or water or other liquid or gaseous pressure. A further purpose of my invention is to seal hermetically the frame of the sash in the window-casing.

My invention may be applied to all kinds and variety of windows and to upper, lower, and swinging sashes.

By the use of my invention I can dispense with sash-weights, although the same may be used, if desired, greatly reduce the labor in raising and lowering the window, and make by far closer joints between the respective sash and the window-casing than heretofore it has been possible to obtain.

In the accompanying drawings, which make part of this specification, 2 is the top rail of the lower sash. 3 3 are the side rails of the same sash.

4 is the bottom rail of the sash.

3' 3' are the side rails of the top sash.

5 is the bottom sill of the window.

6 6 are the side posts of the window.

In the side posts of the window-casing I make a suitable vertical recess 6'. This recess or groove extends a sufficient distance to fully cover the movement of the sash. In said recess and at the inner portion thereof I place a rubber or other suitable tube 7. Outside of said tube is a vertical strip 8, capable of a lateral movement in the recess 6'. Partly seated in said recess and partly in a vertical groove 3'' of the side bars of the sash is the vertical cylinder 9. In said cylinder 9 plays the piston 10, having the piston-rod 10^a, provided at its upper end with a pivoting-arm 10^b,

which is inserted into a suitable socket in the side rail of the sash.

11 is a suitable supply-pipe for feeding the flexible tube 7, while 12 is a supply-pipe of the cylinders 9. These pipes are provided with suitable valves. In the lower window-sill and extending longitudinally thereof is a groove 13. In this is located a suitable rubber or other flexible air or water tight tube 14, over which is superposed in the recess a movable strip 15. This projects slightly, so as to fit the longitudinal groove 16 on the under edge of the sash. In the lower part of the top sash and extending across the inner face thereof is another groove 17. In said groove is located a light flexible tube 18, against which presses a movable strip 19. To swivel the window, the sash is raised slightly and the same is turned on the pivotal arm 10^b.

In the operation of my device the tubes 7 7 are kept constantly inflated or filled with liquids under pressure. This makes a tight seal between the window-sash and the side posts 6. To raise the window, a suitable valve is turned, admitting the pressure beneath the piston-head 10, and to lower the window the pressure is released by manipulating a suitable valve, exhausting the pressure. The height to which the window is raised is determined by the amount of air or liquid introduced in the cylinder 9, and when the window is at the proper height the valve is turned closed, locking the window in position.

If desired, the intermediate strip 8 can be omitted and the tube bear directly against the cylinder 9 and against the side rail of the window-sash, and where the window is raised by hand the cylinder 9 may be omitted and the sash bear directly against the tube 7.

Having described my invention, I claim—

The combination of a window-sash; a power-cylinder; a piston in said cylinder; a piston-rod having a pivoting-arm attached to the window-sash; and means for admitting pressure and releasing pressure in said cylinder for raising and lowering said sash.

Signed by me at Pittsburg, Pennsylvania, this 11th day of June, A. D. 1898.

JOHN C. HOOD.

Witnesses:

WILLIAM BEAL,
GEO. H. HARVEY.