H. D. CHANCE.

Improvement in Sash-Balances.

No. 132,631. Patented Oct. 29, 1872.

Fig. 1.

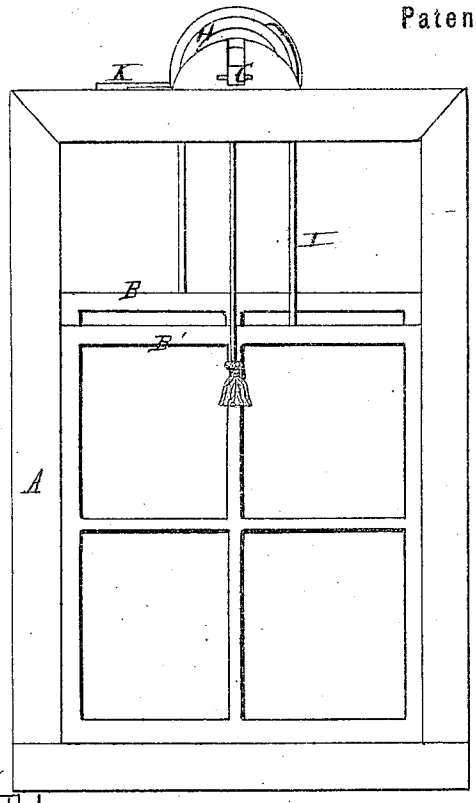


Fig. 3.

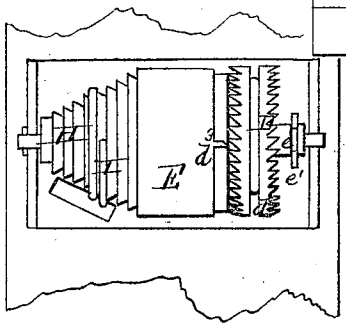
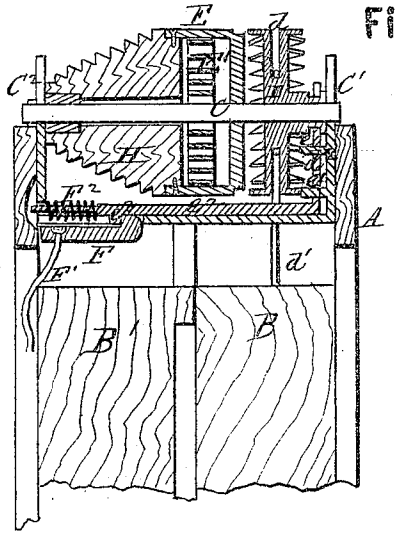


Fig. 2.



WITNESSES.

Phil. C. Hasi

Geo. Ellsham,

INVENTOR.

Hiram D. Chance

Chipman Hosmer & Co

Attys.

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

HIRAM D. CHANCE, OF LLEWELLYN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO HARRY C. CHANCE, OF SAME PLACE.

IMPROVEMENT IN SASH-BALANCES.

Specification forming part of Letters Patent No. **132,631**, dated October 29, 1872.

CASE B.

To all whom it may concern:

Be it known that I, HIRAM D. CHANCE, of Llewellyn, in the county of Schuylkill and State of Pennsylvania, have invented a new and valuable Improvement in Window-Sash Balances; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a window with my sash-balance attached; Fig. 2 is a sectional view of my invention; and Fig. 3 is a top view of my invention.

My invention has relation to window-sash attachments; and consists in providing a double adjustable clutch to operate in conjunction with a volute spring, barrel, and fusee, sliding plate, spring, lever, and cord for raising and lowering the sashes independently of each other, substantially as hereinafter described.

In the accompanying drawing illustrating this invention, A represents a window-frame; B, the upper, and B′ the lower window-sashes. C is a transverse shaft supported upon the top of the frame A by means of standards C^1 C^2. Upon this shaft is placed a double-crown ratchet-wheel, D, having its periphery grooved at *d* to receive a cord, d^1, attached to the upper sash B. The wheel D is loose upon the shaft C, and is adapted to engage at different times with a stud, d^2, projecting from the standard C^1, and with a stud, d^3, projecting from the periphery of a barrel, E, attached to the shaft C, and containing a volute spring, E′, one end of which is connected to the shaft and the other to the barrel. For the purpose of connecting the wheel D with said studs the former is provided with a grooved collar, *e*, which rests on a forked arm, e^1, on the end of a sliding plate, e^2, which is actuated through the medium of a cam-lever, F, having a cord, F^1, attached, and a spring, F^2, encircling a shank on the forward end of said plate. The plate e^2 has a projection, e^3, to allow the lever to catch on. Connected with the barrel E is a fusee, H, which, with the barrel, turns upon the shaft C, the same being stationary. Around said fusee winds a cord, I, attached to the lower sash B′.

These devices operate as follows: The sashes being in their proper position—B up and B′ down—the sash B is raised by a slight push, its weight being balanced by the volute spring E′. To lower the upper sash the cord F^1 is to be pulled, which will engage the wheel D with the barrel E and cause them to revolve together. When the upper sash is at the proper height the cord is released. The wheel D will then slip back and engage with the stud d^2 by the action of the spring F^2, and will thereby hold the sash suspended. The lower sash may be now lowered to its original position. Now, to raise the upper sash the lower sash is to be raised a little higher than the other, the cord F pulled, and the lower sash pulled down. By this means the desired effect will be produced.

K indicates a pivoted dog, which is connected to the wheel D to prevent its turning while the devices are being arranged. The object of the device or pulley H being constructed on the fusee principle is to compensate in leverage for the expansion of the volute spring E′.

What I claim as my invention, and wish to secure by Letters Patent, is—

1. The double adjustable clutch D, in combination with the volute spring E′, barrel E, fusee H, studs d^2 d^3, and sashes B B′, substantially as specified.

2. The sliding plate e^2, spring F^2, lever F, and cord F^1, in combination with the clutch D, barrel and fusee E H, and the sashes B B′, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HIRAM D. CHANCE.

Witnesses:

GEO. SPONSLER,

J. D. DIETRICH.