

(No Model.)

R. CLARKE.
SASH BALANCE.

No. 341,731.

Patented May 11, 1886.

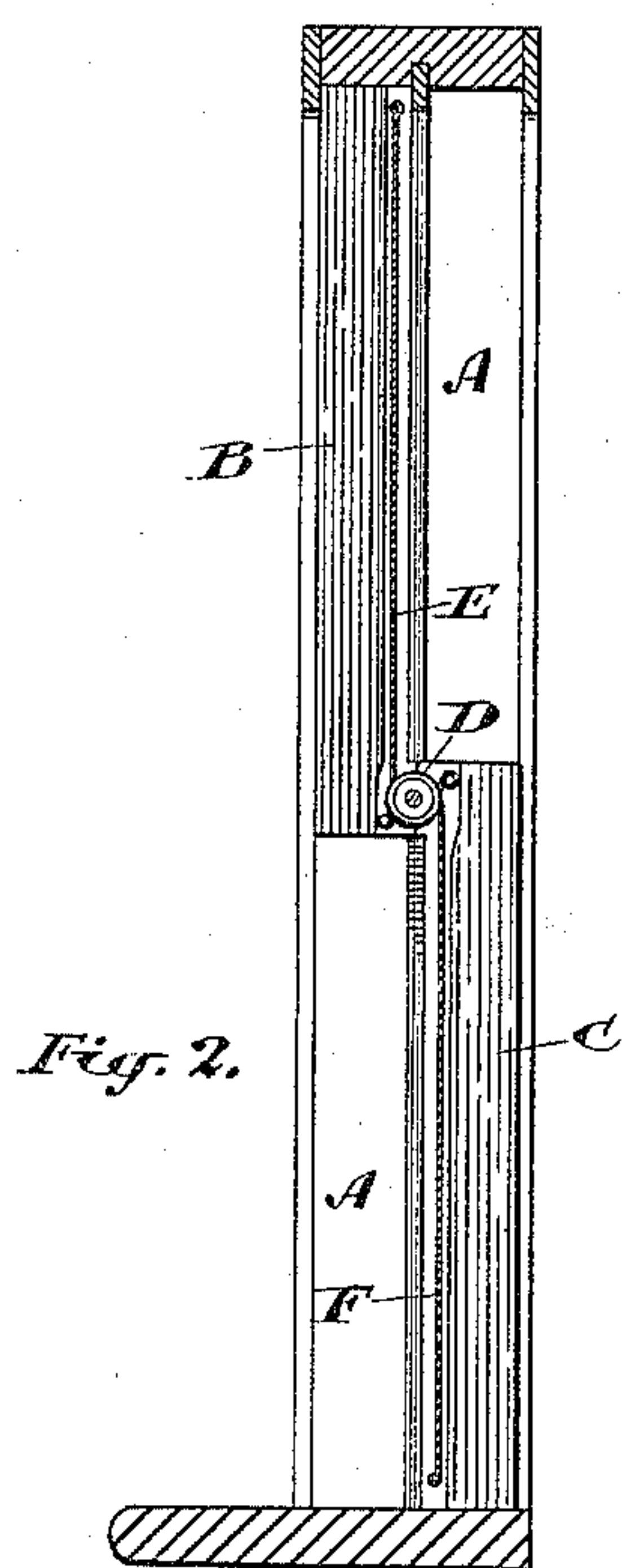
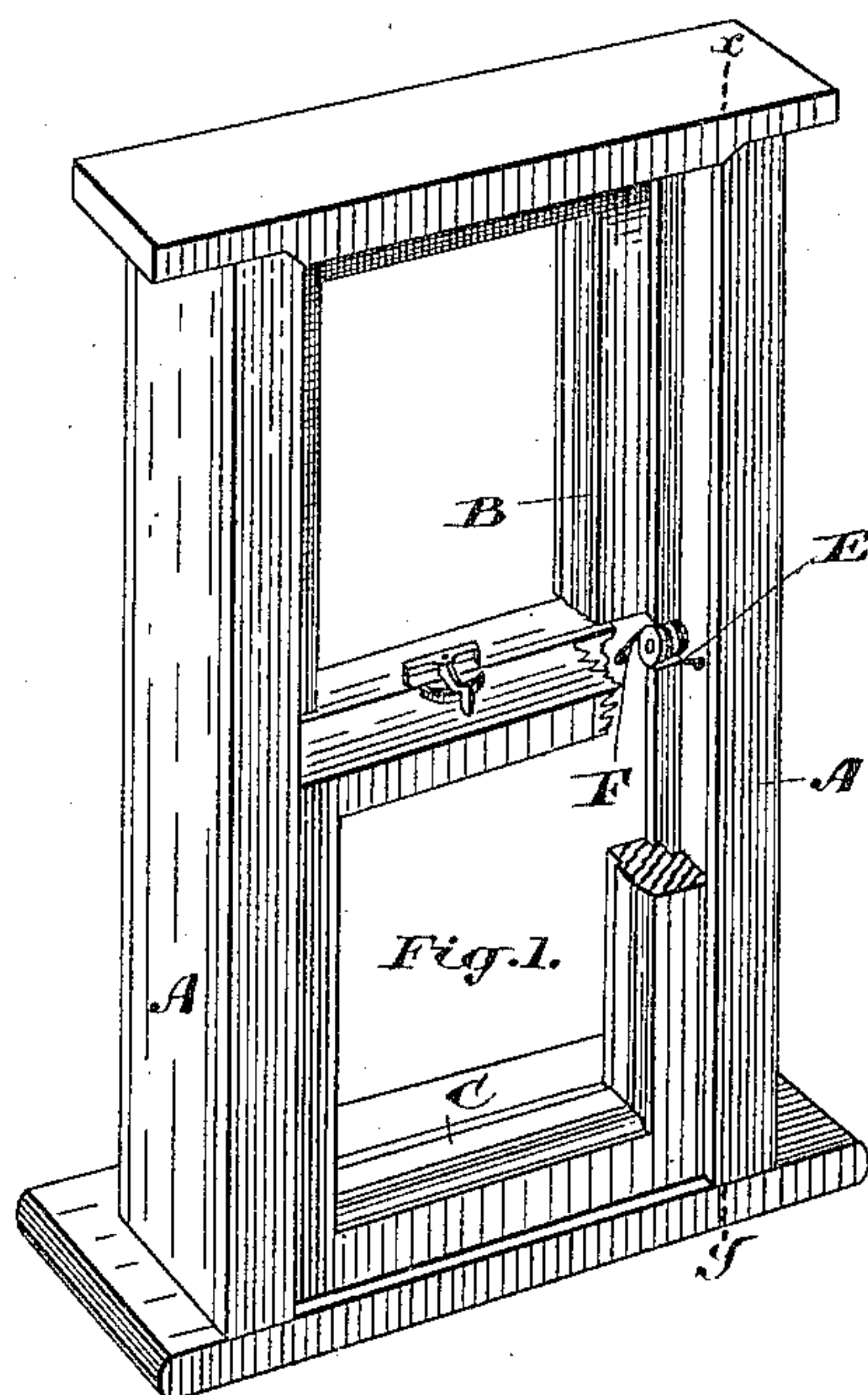


Fig. 2.

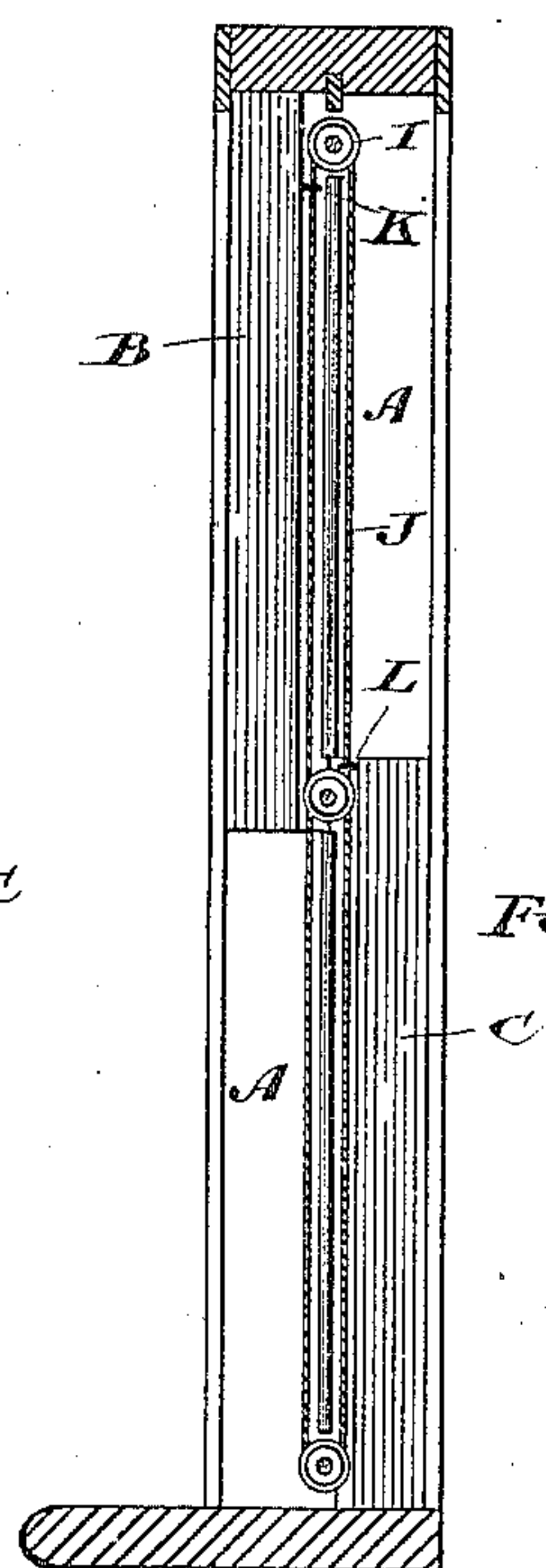


Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

REUBEN CLARKE, OF TORONTO, ONTARIO, CANADA, ASSIGNOR OF ONE-HALF
TO JOHN GRAHAM DARLING AND DANIEL MCFARLANE, BOTH OF SAME
PLACE.

SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 341,731, dated May 11, 1886.

Application filed September 23, 1885. Serial No. 177,916. (No model.)

To all whom it may concern:

Be it known that I, REUBEN CLARKE, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, mechanic, have invented certain new and useful Improvements in the Mode of Balancing Window Sashes, of which the following is a specification.

The object of the invention is to devise a plan by which window-sashes may be balanced without the cumbrous weights now employed for that purpose; and it consists, essentially, in so connecting the top and bottom sashes that the one shall balance the other, substantially as hereinafter more particularly explained.

Figure 1 is a perspective view of a window-frame and two sashes, partially in section, so as to exhibit the pulley and cords connecting the two sashes together. Fig. 2 is an end section through *x y*, showing my device when cords and pulleys are employed. Fig. 3 is an alternative form of Fig. 2.

A represents the window-frame, B the upper sash, and C the lower sash. D is a double-grooved pulley suitably journaled in the frame A. E is a cord leading from the top of the sash B round the pulley D and up to the top of the sash C. F is a similar cord leading from the bottom of the sash C round the pulley D and down to the bottom of the sash B. I have shown the cords and pulley only on one side of the sash; but it will of course be understood that similar cords and pulleys are located on the opposite side thereof. By connecting the two sashes B and C together, as

described, one sash will naturally balance the other, and when the lower sash is raised the upper sash is correspondingly lowered. Consequently a perfect system of ventilation is insured—that is to say, when fresh air is admitted into the room through the bottom sash the warm air escapes through the aperture made by the lowering of the upper sash. From this it will be seen that the raising of the lower sash, C, will cause the upper sash to lower a corresponding distance, and that if both sashes are the same weight one will balance the other. I sometimes provide another pulley, I, at the top of the sash, and make the pulley D a single-grooved pulley. An endless cord, J, runs over both pulleys, and is fastened to the sash B by the pin K in proximity to the pulley I, and to the sash C near the pulley D by the pin L, thus accomplishing the same object as my other devices.

What I claim as my invention is—

The combination, with the sashes B C and double-grooved pulley D, of the cord E, attached at one end to the top of the sash B, and after passing around said pulley is attached at its other end to the top of the sash C, and the cord F, attached at one end to the bottom of the sash C, and after passing over said pulley is attached at its other end to the bottom of the sash B, substantially as described.

Toronto, September 8, 1885.

REUBEN CLARKE.

In presence of—

CHARLES C. BALDWIN,
F. BARNARD FETHERSTONHAUGH.