

W. Randall,

Sash Balance.

N^o 81,207.

Patented Aug. 18, 1868.

Fig. 1

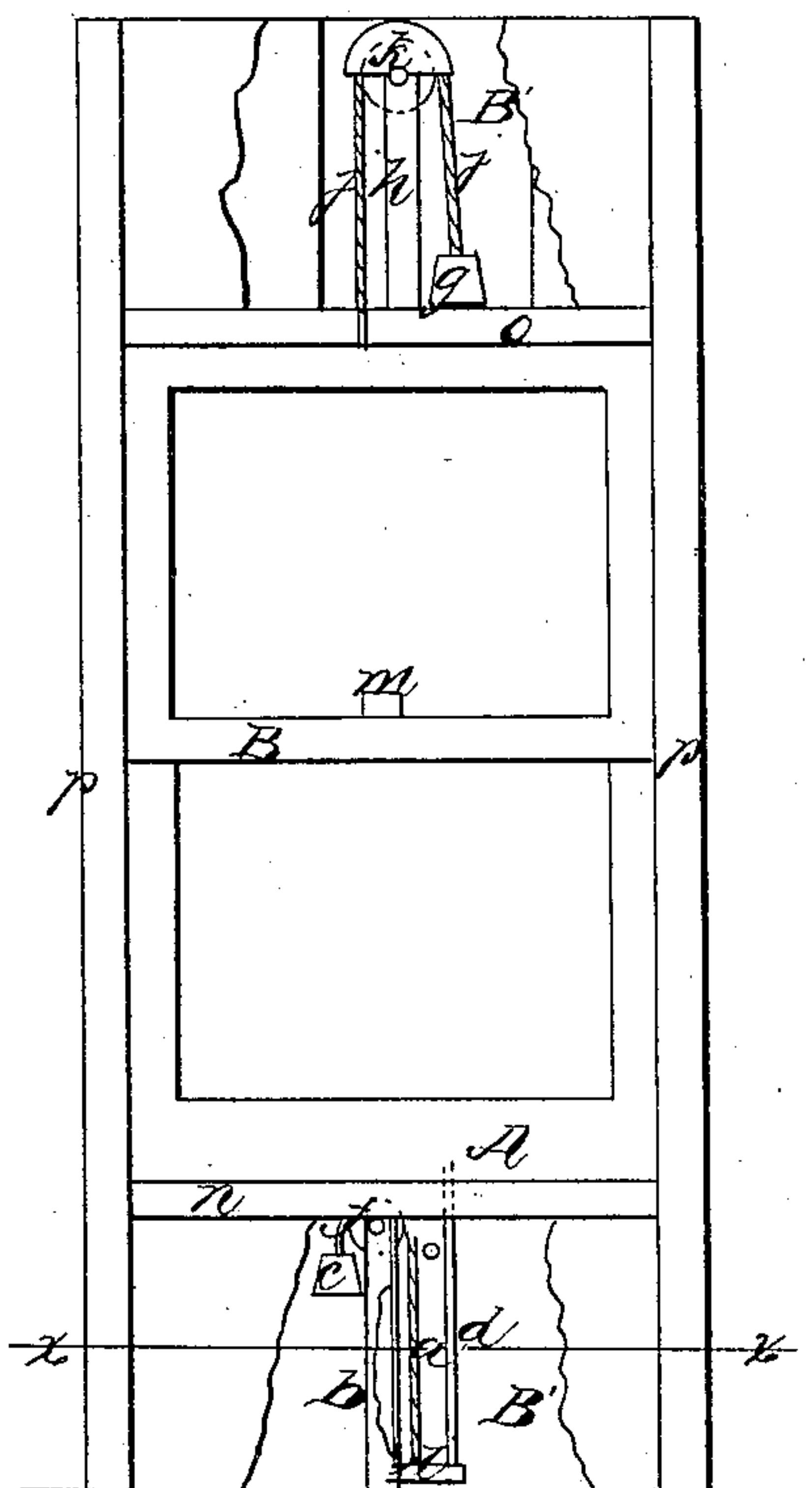
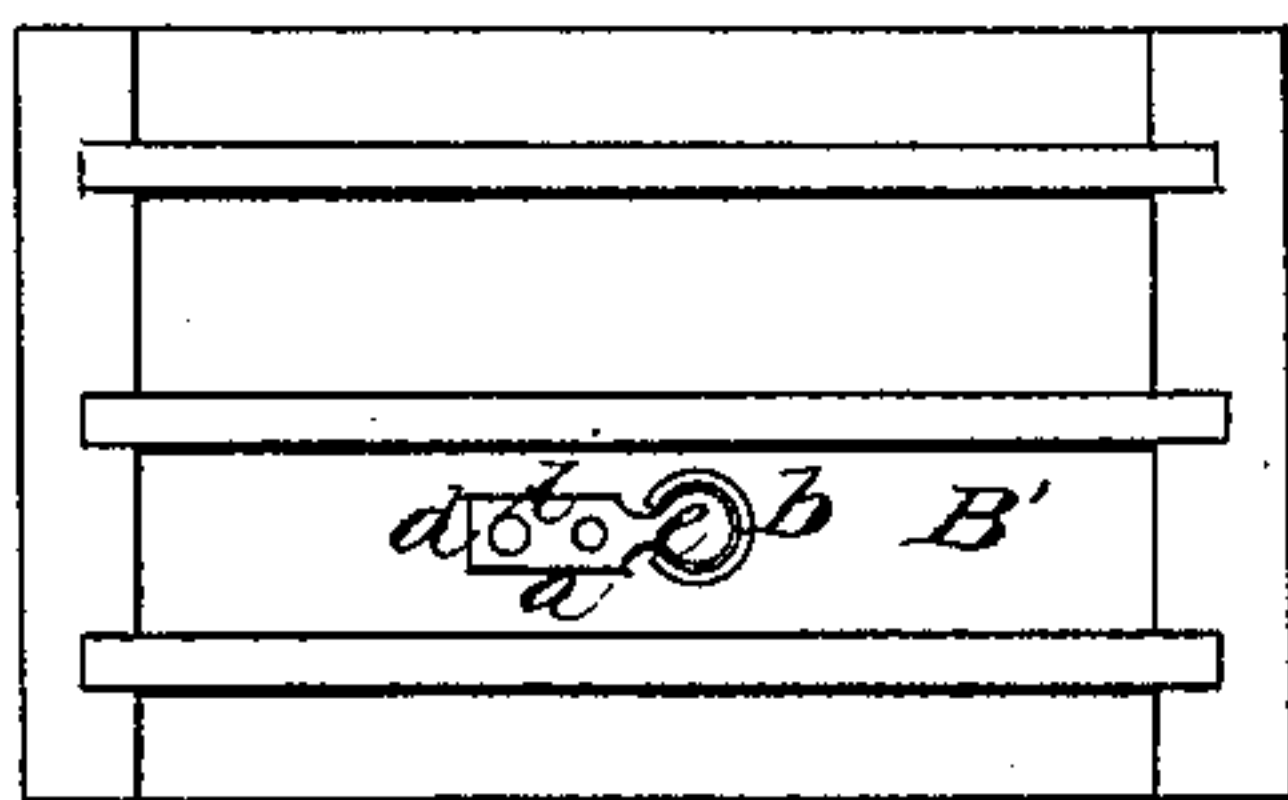


Fig. 2



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM RANDALL, OF MAY, MICHIGAN.

IMPROVEMENT IN SASH-SUPPORTERS.

Specification forming part of Letters Patent No. **81,207**, dated August 18, 1868.

To all whom it may concern:

Be it known that I, WILLIAM RANDALL, of May Post Office, in the county of Tuscola and State of Michigan, have invented new and useful Improvements in Operating Window-Sash; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front view of the window-frame and the sash mechanism. Fig. 2 is a cross-section of the same through the line *xx*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to operate window-sash in a cheap and effective manner, and is applicable to all windows where the wall is hollow above and below the window.

The drawing shows a box-frame for containing the weight mechanism for operating the sash within the boxes, a portion of the front of each box being broken away to exhibit the said mechanism.

The sash A and B slide within the stiles *p*, as shown, and, with the parts *n* and *o*, form the window-frame. The projecting ends of the stiles are covered in, as shown, which form the cavities or frame-boxes B' B', which contain the mechanism for operating the window-sash.

The upper sash B, when pulled down, is made to return again to its place, when liberated, by means of a weight, *g*, and cord *j*, the said cord passing over a pulley, *l*, on the top of the upright *h*, as shown, for the cord passes through the part *o*, and is attached to the upper part of the sash.

A hood, *k*, prevents the cord from slipping off from the pulley. This hood surmounts the upright *h*, which latter rises from the part *o* of the window-frame. The lower sash A is raised by means of a weight, *c*, and cord *a*, which latter passes over the pulley *f* at the top of the upright *b*, and is attached to the

sliding arm *i* from the rod *d*, the latter being affixed to the lower part of the sash A, as shown.

The arm *i* is steadied by means of its head *e*, which slides within the slotted tubular upright *b*, as shown. By this device the sash A is raised when free to move.

A spring-catch, *m*, affixed to one of the sash, keeps the latter closed when not required open, and all that is required to open the sash is to lift the said catch, and the lower sash will rise; or, when the upper sash is brought down, the catch will hold it down until liberated.

The frame-boxes B' B' are shown as they would be in practice in many buildings where the wall is hollow, or where there is space between the weather-boarding and the wall.

One pulley and weight are only shown for each sash; but, if it is desired, two pulleys and weights may be provided for each sash, and by placing these at the sides of the frame-box, the cord and rod will not be so observable when each sash leaves its respective position near the ends of the window-frame.

This invention is simple, cheap, and effective, and displaces the complicated arrangement of weights and pulleys heretofore in common use.

I claim as new and desire to secure by Letters Patent—

1. The upright *h*, pulley *l*, cord *j*, and weight *c*, in combination with the upper sash B and part *o* of the window-frame, all constructed and operating together substantially as shown and described, and for the purpose set forth.

2. The slotted tubular upright *b*, cord *a*, arm *i*, rod *d*, and weight *c*, substantially as shown and described, in combination with the lower sash A and part *n* of the window-frame, as and for the purpose set forth.

WILLIAM RANDALL.

Witnesses:

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