

C. Cole,

Sash Balance.

N^o 64,492.

Patented May 7, 1867.

Fig: 3.

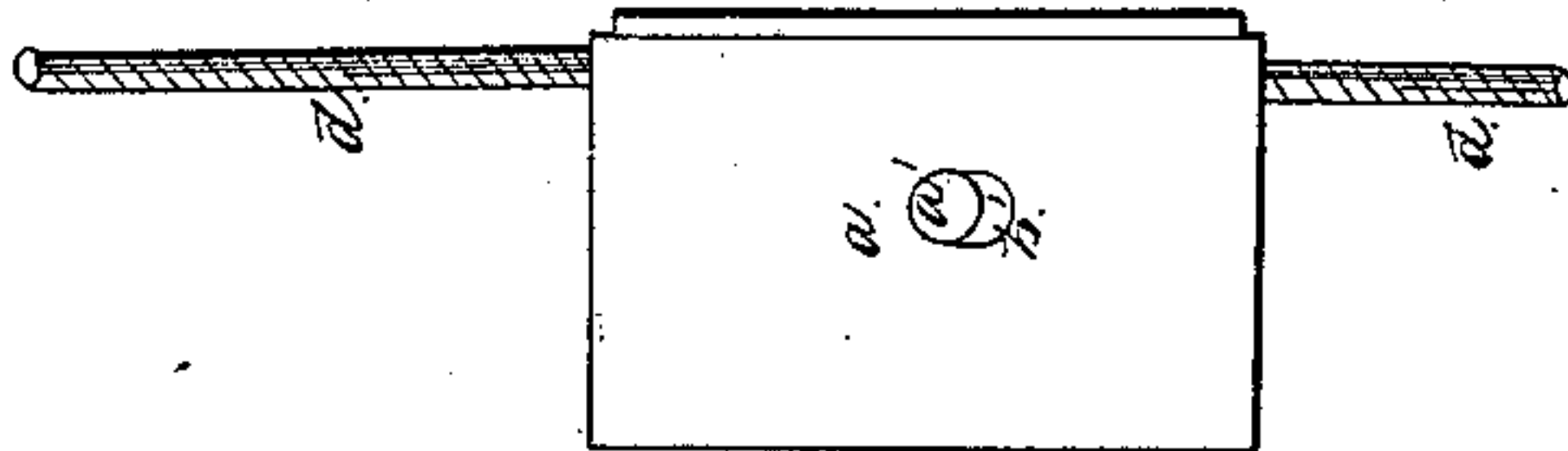


Fig: 2.

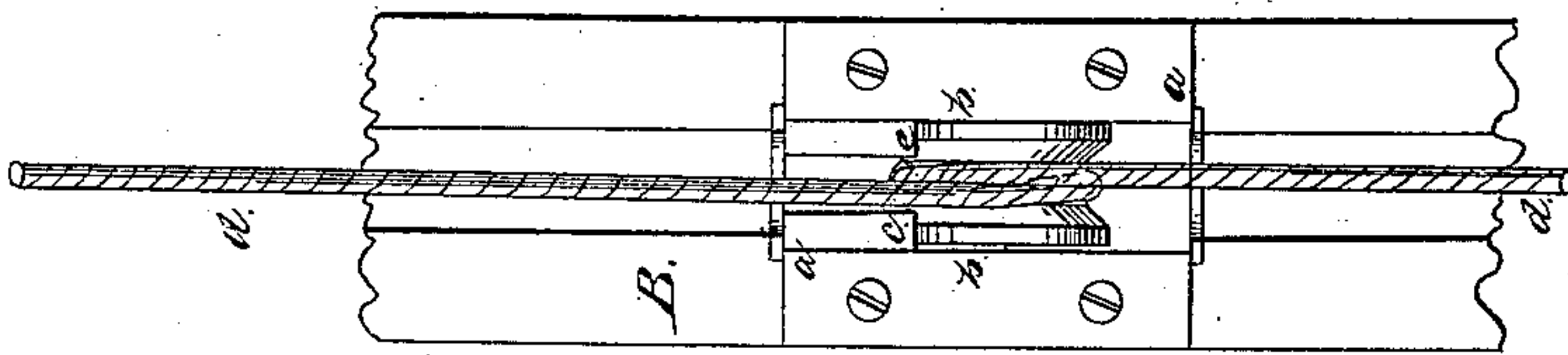


Fig: 1.

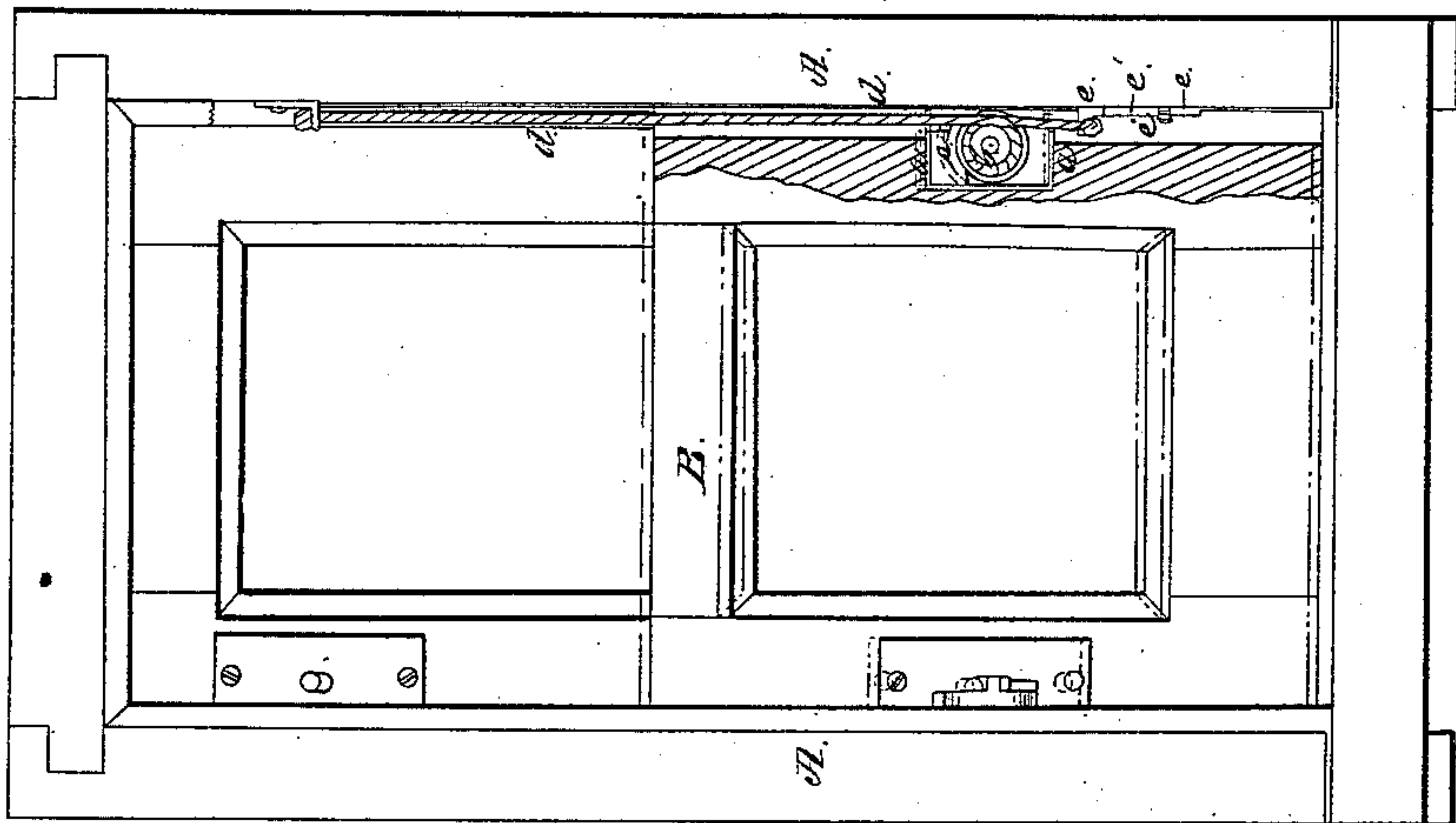
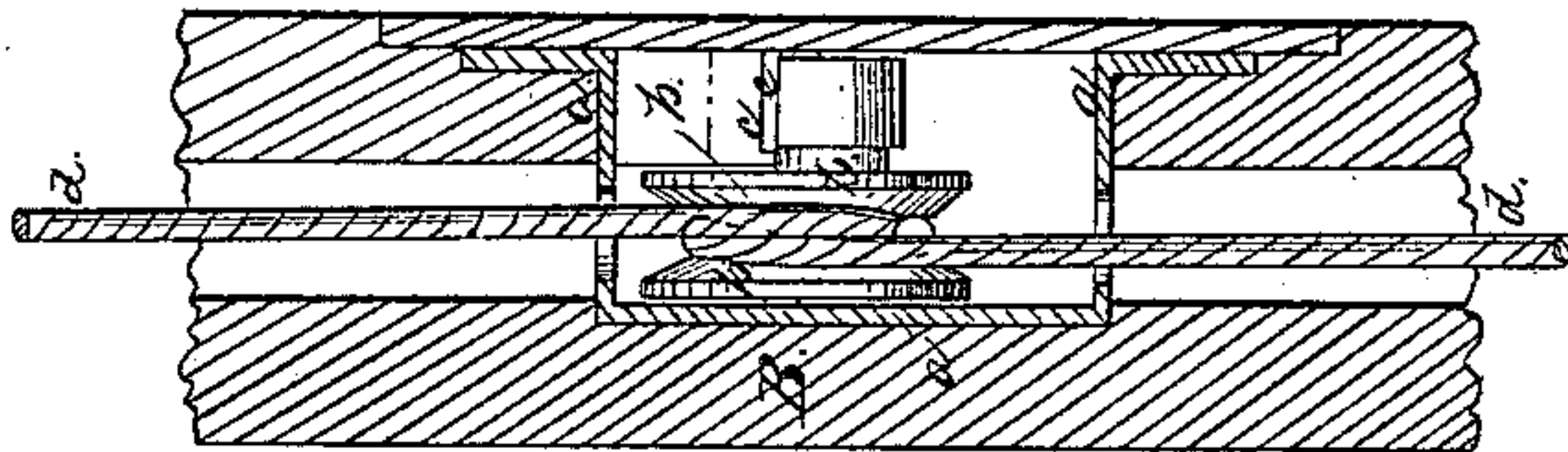


Fig: 4.



Witnesses:

J. M. Cornaby
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Inventor:

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United States Patent Office.

CALVIN COLE, OF ITHACA, NEW YORK.

Letters Patent No. 64,492, dated May 7, 1867

IMPROVED SASH-STOP.

The Schedule referred to in these Letters Patent and making part of the same:

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CALVIN COLE, of Ithaca, in the county of Tompkins, and State of New York, have invented certain new and useful improvements in Sash-Stops; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a portion of this specification, in which—

Figure 1 is a front view and partial section on a reduced scale of a window fitted with a sash-stop constructed according to my invention.

Figure 2 is a face view of a sash-stop constructed according to my invention taken at right angles to fig. 1; and

Figure 3 is a detached side view of the same looking from the same side as fig. 1.

Figure 4 is a face view corresponding to fig. 2, representing a modification of the invention.

Similar letters of reference indicate corresponding parts in all the figures.

This invention consists in a friction-wheel having a limited sliding movement, a friction bearing or surface, and a sustaining cord so combined with each other that when applied to a window the sash thereof, when raised, may be automatically stopped at any desired height. The invention further consists in a novel means whereby the tension of the sustaining cord may be very readily regulated to insure the most efficient operation of the device in stopping the sash as aforesaid.

To enable others to understand the construction and operation of my invention I will proceed to describe it with reference to the drawings.

A represents the window-frame or casing, and B the sliding lower sash of such window. Inserted in one of the lateral edges of this sash, preferably at or near the centre thereof, is a metallic case, *a*, in which is placed a friction-wheel, *b*, the ends of the pivot *a'* of the said wheel being fitted into vertical slots *b'* formed in the sides of the case *a*, as indicated in fig. 3, in such manner that the wheel may have a slight vertical movement within the said case. This wheel is formed with a circumferential V-shaped groove, as shown more fully in fig. 2; and fixed in the upper part of the case *a*, immediately above the wheel *b*, is a friction bearing or surface, *c*, which may be formed of a piece of leather or equivalent material firmly secured in the said upper part of the case in such manner that when the wheel *b* is moved upward with reference to the said case, its periphery, upon each side of the groove formed therein, will be brought in contact with such friction bearing *c*. The sustaining cord is shown at *d*, and is passed once around the friction-wheel *b* in the V-shaped groove thereof, and has its two extremities attached respectively at the top and bottom of the adjacent inner side of the frame or casing A, in such manner that when the sash B is raised the loop formed around the friction-wheel *b* by the winding around it of the cord *d*, by retarding the upward movement of the wheel, brings it away from or out of contact with the friction bearing *c*, as shown in red outline in fig. 1, the pivot *a'* thereof striking the lower ends of the slots *b'*, in which the ends thereof are situated, whereupon, the upward movement of the sash being continued, the wheel itself is of course also carried upward, being rotated at the same time by the friction of the sustaining cord upon it. When the upward movement of the sash is discontinued, and such sash is relieved from upward pressure, the loop of the sustaining cord retards any tendency of the wheel to be moved downward with the sash, whereupon the weight of the sash causes it to descend until the friction bearing *c* is brought against the periphery of the wheel *b*, and by its friction thereon prevents it from rotating, and the wheel being thus brought into a fixed position, the friction of the surrounding loop of the sustaining cord upon it prevents the further descent of the sash by its own weight alone, it being necessary, in order to lower the sash, to apply a downward pressure thereto sufficient to overcome such friction of the cord upon the wheel. Instead of having the friction bearing act upon the periphery of the friction-wheel, as hereinbefore set forth, the said wheel may be furnished at one side with a cylindrical extension, as shown in fig. 4, the friction bearing *c* acting upon the circumference of the said extension in the same manner and producing the same result as when acting upon the periphery of the wheel itself. Inasmuch as the degree of friction exerted upon the wheel *b* is proportioned to the tension of the sustaining cord *d*, it is desirable that provision should be made for regulating such tension, and to this end the lower extremity of the aforesaid cord is attached to a small metallic plate or piece, *e*, which has a slot, *e'*, formed longitudinally therein, through which is passed the screw *e**, which secures the piece *e* to the side of

the window-frame, so that by adjusting the aforesaid piece higher or lower, as the case may require, the tension of the sustaining cord may be regulated to any desired degree.

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

1. The combination of the friction-wheel *b*, having a limited sliding movement, with the friction bearing or surface *c*, and the sustaining cord *d*, substantially as herein described for the purpose specified.

2. The combination of the slotted adjustable piece *e*, with the sustaining cord *d*, substantially as herein described for the purpose specified.

CALVIN COLE.

Witnesses:

J. W. COOMBS,

G. W. REED.