

(Model.)

J. S. O'BRIEN.  
Shutter Worker.

No. 238,604.

Patented March 8, 1881.

Fig. 1

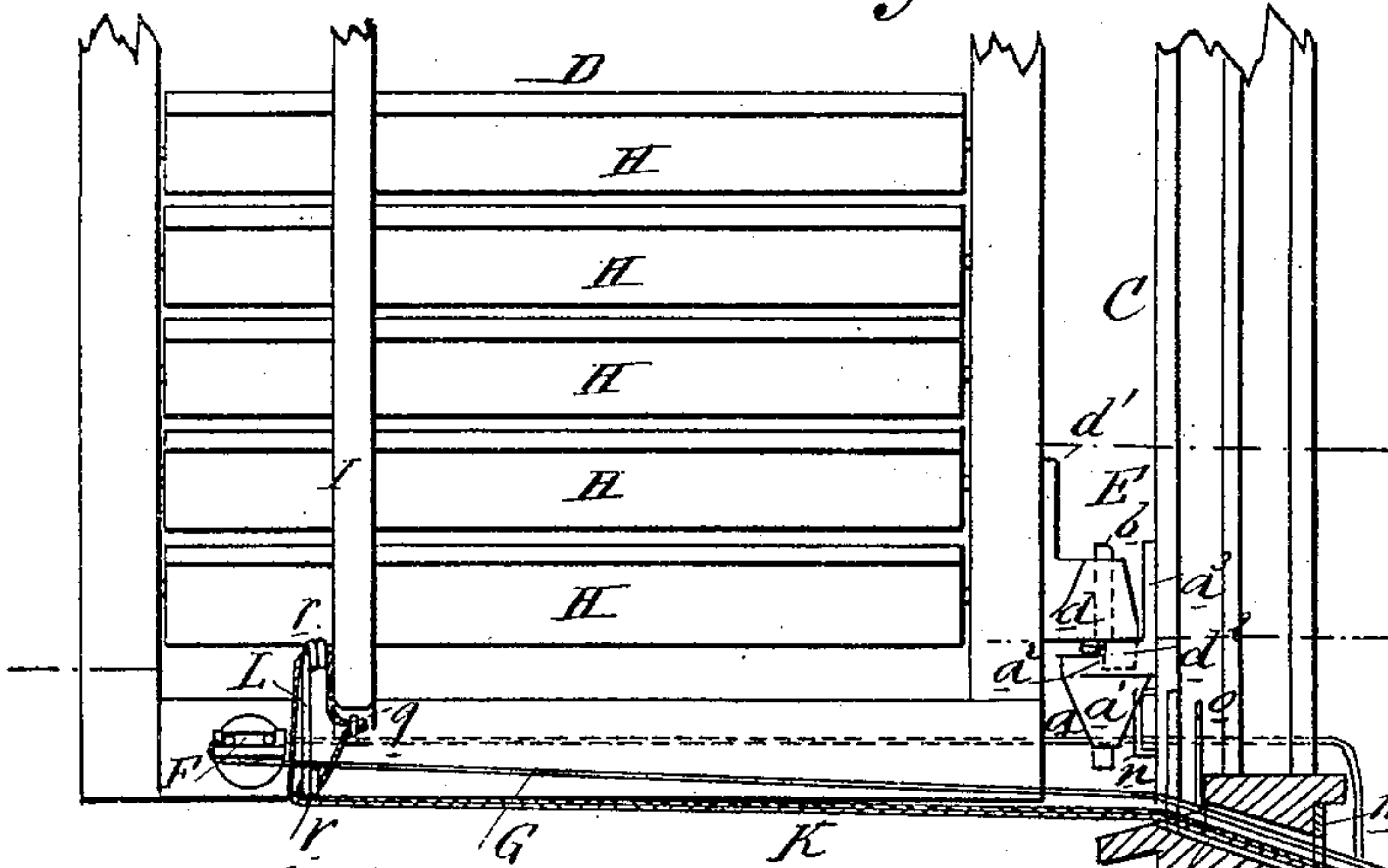


Fig. 3

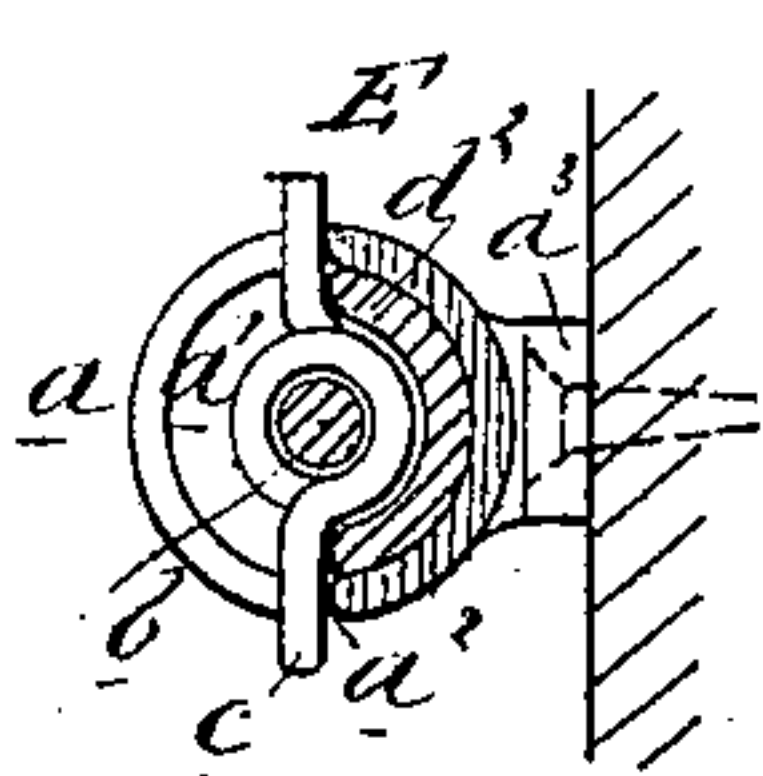
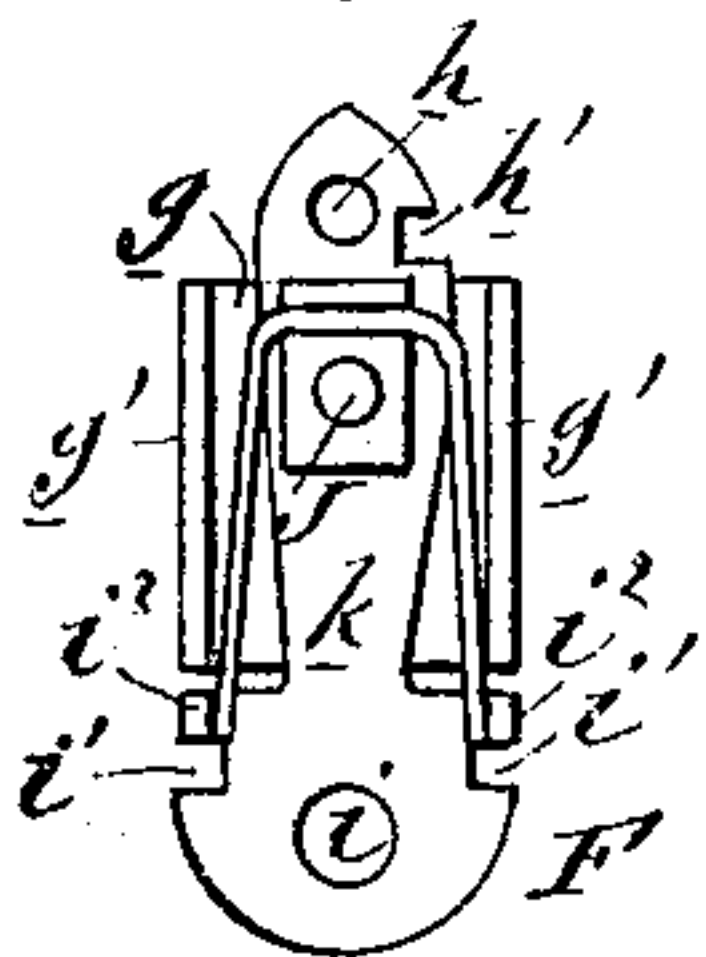


Fig. 4



Fig. 5

Fig. 6

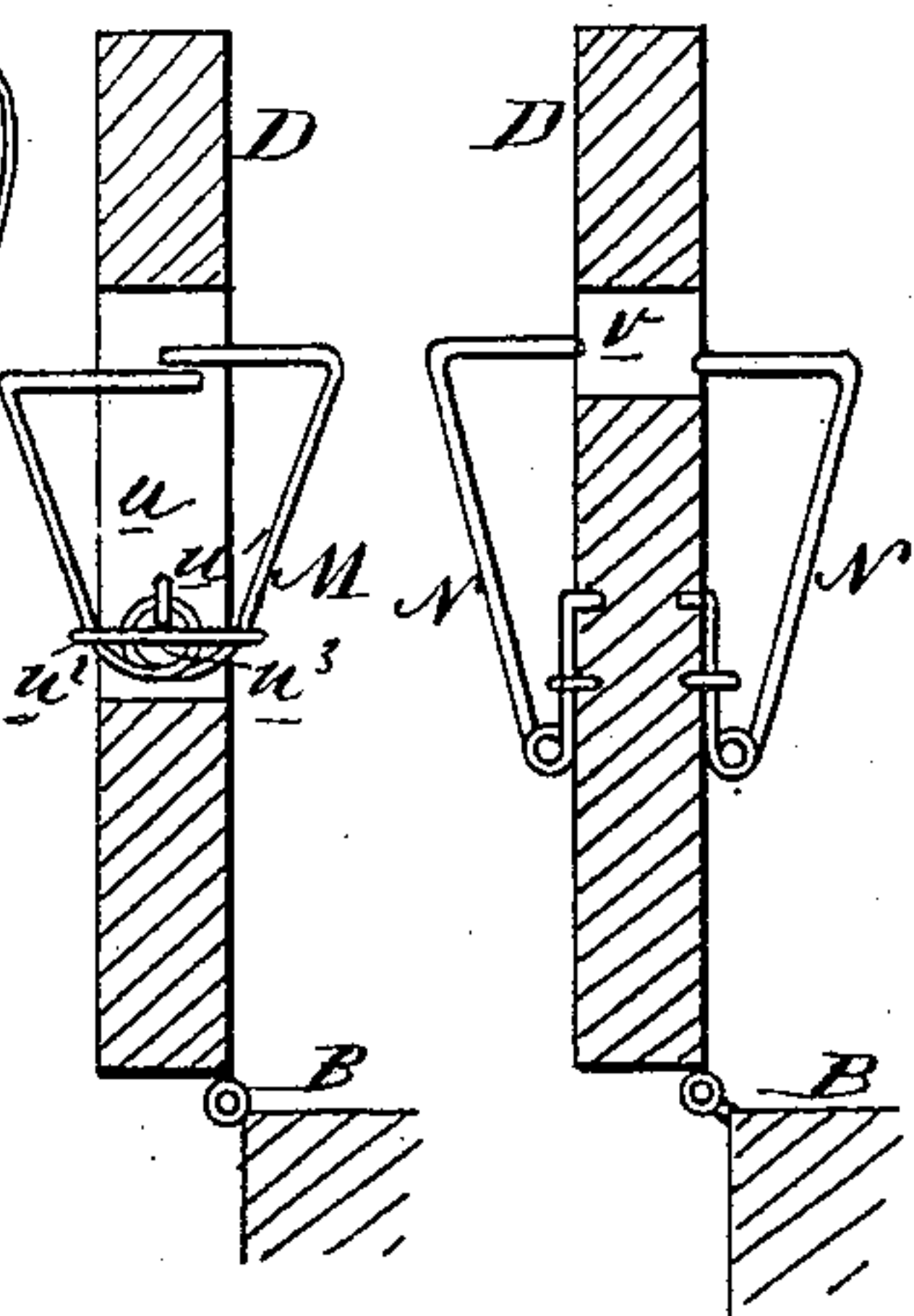


Fig. 2

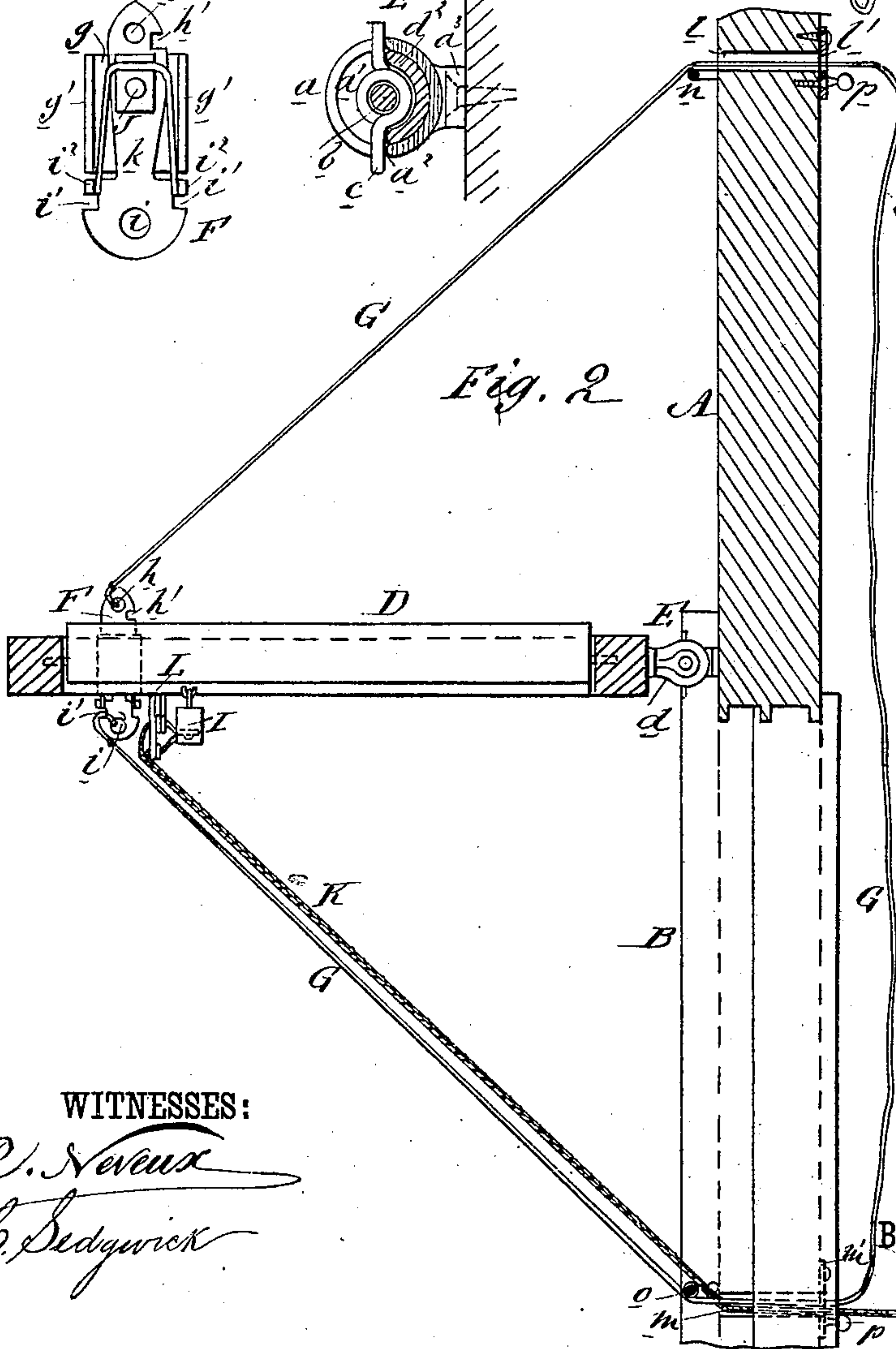
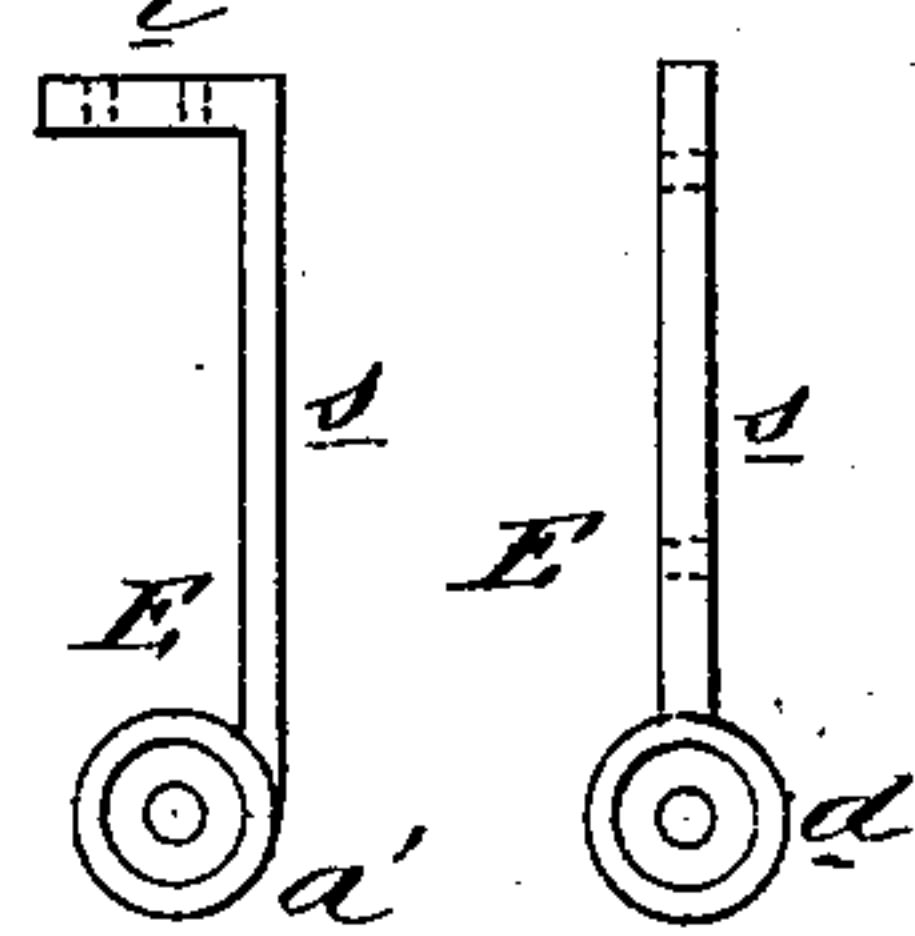


Fig. 7

Fig. 8



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# UNITED STATES PATENT OFFICE.

JOSEPH S. O'BRIEN, OF NORTH WILBRAHAM, MASSACHUSETTS.

## SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 238,604, dated March 8, 1881.

Application filed November 29, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, JOSEPH S. O'BRIEN, of North Wilbraham, in the county of Hampden and State of Massachusetts, have invented a new and Improved Window-Blind Operator, of which the following is a specification.

The invention relates to that class of devices that are designed for opening, closing, and locking blinds and shutters; and it consists of the combination of an improved spring-hinge for throwing the blind out of a locked position, a spring-catch, and attached cord for pulling the blind fully open or closed and locking it in both positions, all of which will be hereinafter described.

Figure 1 is a vertical elevation, partly in section, showing a blind partly open having my improvements attached. Fig. 2 is a partly sectional plan of the same. Fig. 3 is a detailed plan of the spring catch or lock. Fig. 4 is a detailed plan, partly in section, of the spring-hinge. Figs. 5 and 6 are sectional plan views, showing various springs in position on blinds, to be used for the purpose of throwing the blind out of a locked position when the locking device is applied to blinds hung on ordinary hinges. Figs. 7 and 8 are plan views of modifications of the spring-hinge.

Similar letters of reference indicate corresponding parts.

In the accompanying drawings, A represents the wall of a house; B, the window-sill, and C the window-frame.

D is the blind, hung by hinges E to the window-frame C. The hinge E is composed of two parts. The one, *a*, secured to the window-frame C consists of a conical socket, *a'*, shouldered on its upper edge, as shown at *a<sup>2</sup>*, and provided with a vertical shank, *a<sup>3</sup>*, by means of which it is secured in place; and the socket *a'* is provided with a fixed vertical pintle or pin, *b*, which, projecting upward, serves to hold the part *d* of the hinge that is fastened to the blind D. Within the socket *a'* is a spring, *c*, coiled about the pintle *b*, with its ends extending laterally in opposite directions. The part *d* of the hinge E is secured to the blind D by its vertical shank *d'*, and from its socket is a downward-projecting semicircular lip, *d<sup>2</sup>*, which enters the rear of the socket *a'*, and has its vertical edges in contact with the

extended ends of the spring *c*, so that the spring *c* operates or tends, by its pressure upon the lip *d<sup>2</sup>*, to hold the section *d* of the hinge E and the attached blind D at right angles to the window-sill B.

F is a catch, pivoted at J in a rectangular box, *g*, which box *g* has raised edges *g'* *g'*. Said catch F extends in both directions beyond the box *g*, and has a small pointed end provided with a vertical hole, *h*, and a side notch, *h'*, and a larger end provided with a vertical hole, *i*, side notches, *i'*, and shoulders *i<sup>2</sup>*. A bent wire spring, *k*, is held between the edges *g'* *g'* of the box *g*, with its ends made fast on the shoulders *i<sup>2</sup>* of the catch F, thereby tending to hold said catch F centrally in the box *g*. This catch F and its attachments are fixed in a corresponding socket in the lower strip of the blind D, with its point extending outward and its larger end extending inward, as shown in Fig. 2.

Through the wall A of the house is a hole, *l*, guarded on the inner face of the wall by a perforated plate, *l'*, and through the sill B is a hole, *m*, guarded on the inner face by a perforated plate, *m'*. Through these holes *l* *m* a cord, G, is passed outward, and one end of said cord G is made fast in the outer end of the catch F, and the other end of said cord G is made fast in the inner end of said catch F. By pulling at the one end of said cord G from within the house the blind D is drawn back fully open, and the notch *h'* of the catch F caught upon a staple, *n*, that is driven in the outside of the house-wall A. Then, in order to close the blind D, the other end of the cord G is pulled upon with the effect of disengaging the catch F from the staple *n*, and the spring *c* of the hinge E then operates to throw the said blind D off from the wall A to such an angle that a continuous pull upon the said cord G will easily draw said blind D closed, when a notch, *i'*, of the catch F will engage on the vertical pin *o* in the sill B, and thereby lock the said blind D closed. By pulling on the opposite end of the cord G the catch F may be disengaged from the pin *o*, when the springs *c* of the hinges E will operate to throw said blind D open at such an angle that it may be easily fully opened by a continuous pull on said cord G. The blind D may be held in any



position between the closed and fully opened positions by making the cords G fast about the studs or pins  $p\ p$ , that extend inward from the wall A and sill B, respectively.

5 H are the slats, pivoted in the usual manner in the stiles of the blind D, and having the usual adjusting-bar I secured on them.

In order to facilitate the opening and closing of the slats from the inside, I have shown  
10 a cord, K, passed through the eyes  $r$  in a cord-guide, L, and its ends attached to a staple,  $q$ , on the lower end of the bar I, while the bight of the said cord K is passed inward through the hole  $m$  in the sill B, so that by pulling  
15 upon one or the other end of said cord K the slats H may be opened or closed, as the case may be, the cord K being of sufficient length to permit this operation whether the said blind D be closed or open.

20 In Figs. 7 and 8 is shown a modification of the hinge E, wherein the modification relates solely to the shanks of the two parts thereof, the said shanks  $s$  being in the same horizontal planes with the sockets and the shank of that part shown in Fig. 7, which part is de-  
25 signed to be fastened to the wall of the house, having its end  $t$  bent at right angles, while that part shown in Fig. 8, which is designed to be fastened to the blind D, has a straight  
30 shank.

In Figs. 5 and 6 are shown springs M N, respectively, that may be used on blinds D when said blinds D are provided with hinges of the ordinary construction.

35 In Fig. 5 the lower edge of the blind D has a mortise,  $u$ , made through it from side to side, and in the mortise  $u$  the spring M is held by a staple,  $u'$ , and clamp  $u^2$ , which clamp  $u^2$  is to restrain the bent arms of the said spring

M from spreading too much. This spring M 40 has a central eye,  $u^3$ , through which passes the staple  $u'$  that holds it in place, and its arms are inclined outward on opposite sides of the blind D, and have their ends then bent inward into the mortise  $u$  at right angles. 45 When a blind, D, provided with either of these springs M N is unlocked said springs tend to throw it out from wall or sill at such an angle that it may easily be closed or opened.

In Fig. 6 the mortise  $v$  in the blind D is 50 smaller than the mortise in the blind in Fig. 5, because only the ends of the springs N are designed to enter it, said springs N being fastened on the opposite faces of the blind D, but operating in the same manner and to the 55 same effect as the spring M.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a window-blind operator, the combination, with the blind D, adapted to be held 60 at right angles to the window-sill, and the cord G, of the catch F, provided with side notches,  $h' \ h'$ , and spring  $k$ , substantially as and for the purpose set forth. 65

2. In a window-blind operator, the combination, with the blind D, of the spring-hinge E, constructed substantially as herein shown and described, the spring-catch F, the operating-cord G, and the staple and pin  $n\ o$ , attached 70 respectively to the house and to the window-sill, substantially as and for the purpose set forth.

JOSEPH S. O'BRIEN.

Witnesses:

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