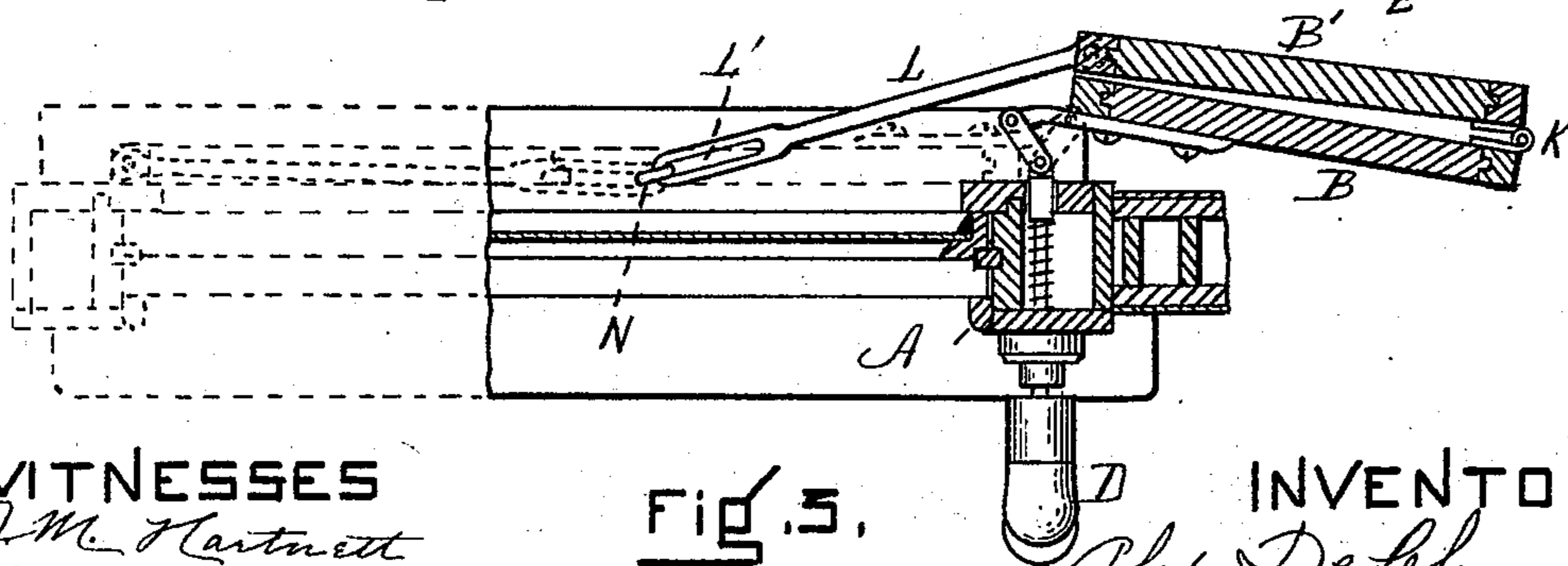
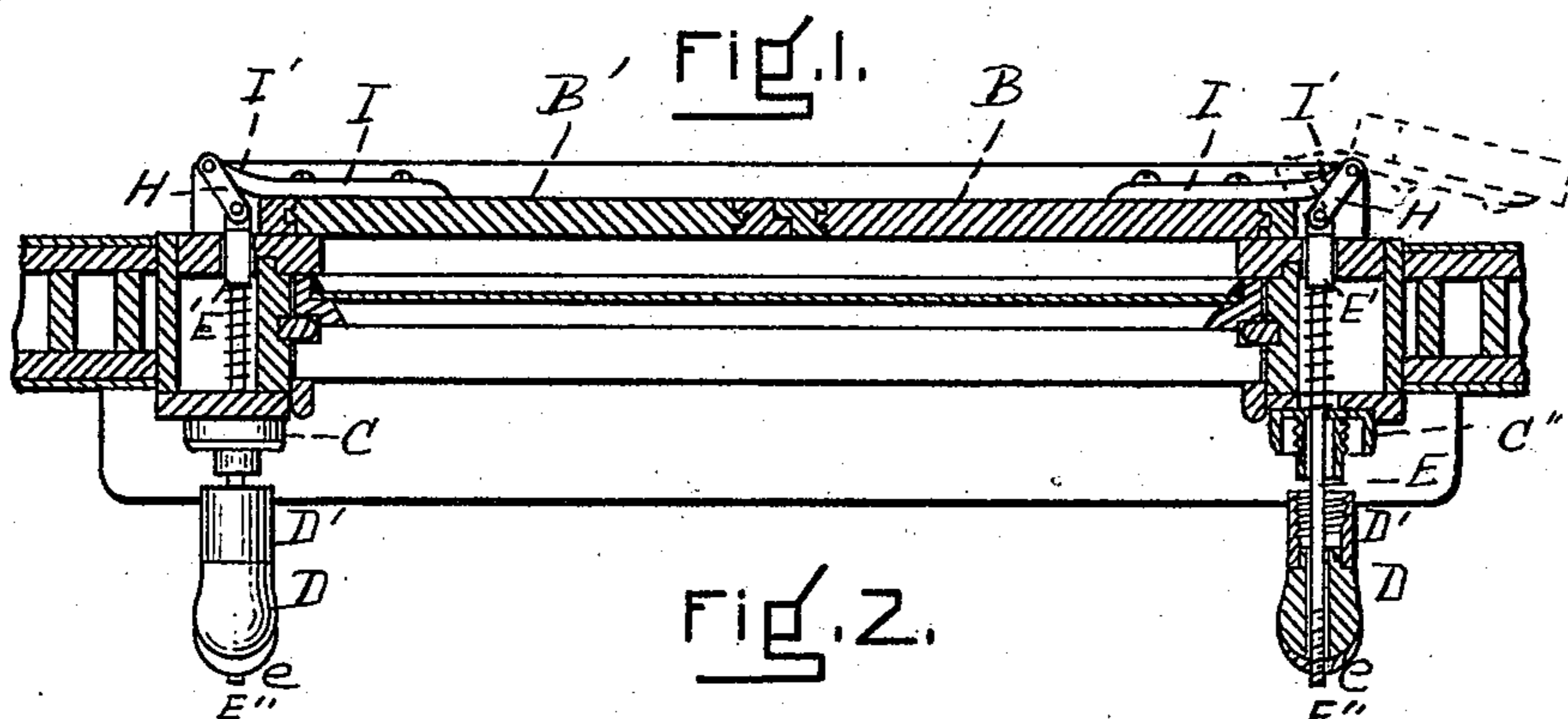
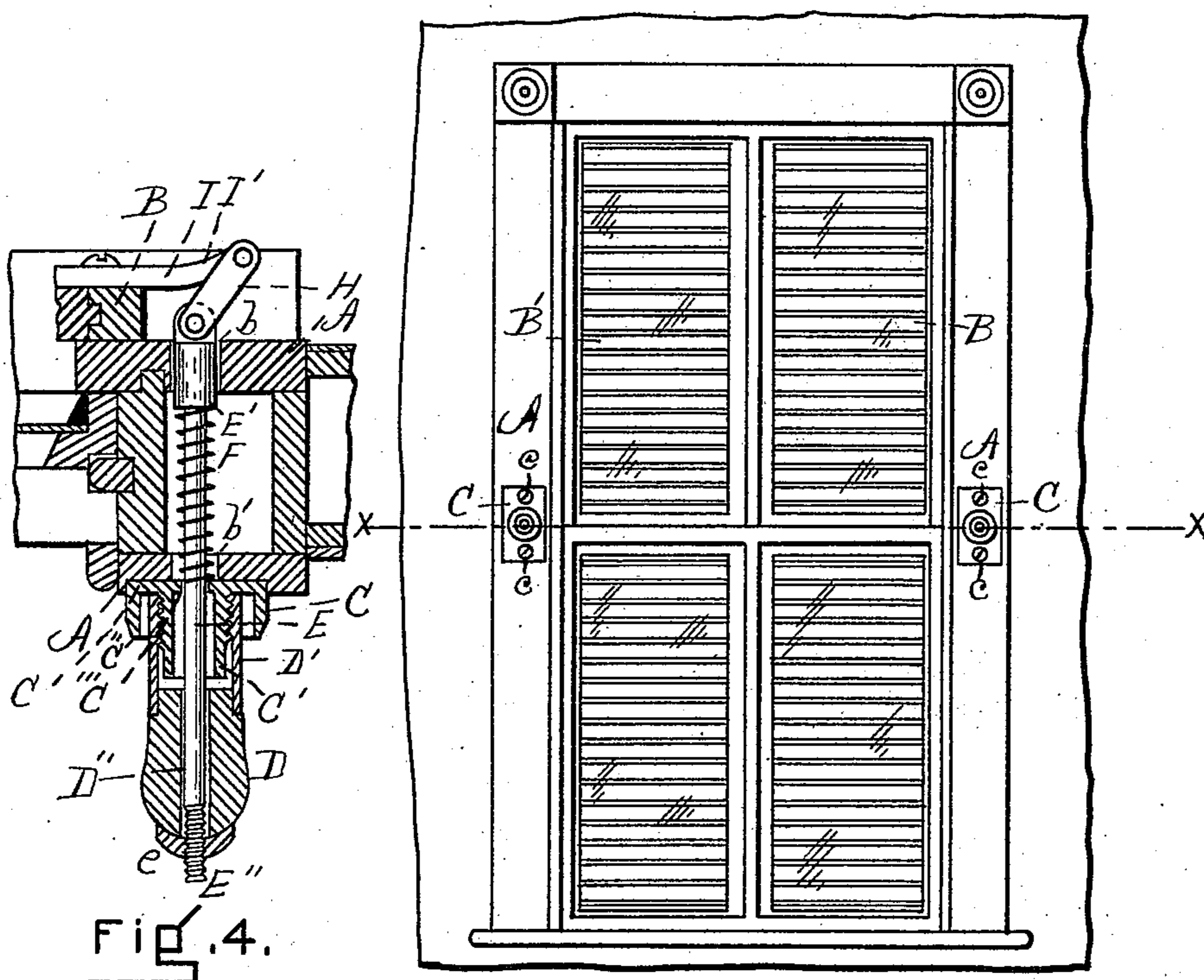


(No Model.)

O. DE CHAMP.  
SHUTTER WORKER.

No. 529,607.

Patented Nov. 20, 1894.




WITNESSES

J. M. Hartnett  
E. A. Woodbury

Fig. 5.

INVENTOR


 Fred De Champ  
 By his Atty  
 Henry Williams

# UNITED STATES PATENT OFFICE.

OBED DE CHAMP, OF EVERETT, MASSACHUSETTS.

## SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 529,607, dated November 20, 1894.

Application filed March 28, 1894. Serial No. 505,442. (No model.)

*To all whom it may concern:*

Be it known that I, OBED DE CHAMP, a citizen of the United States, residing at Everett, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Shutter-Workers, of which the following is a specification.

This invention relates to an improvement in shutter workers or blind-operators, and consists in the novel construction and arrangement of parts hereinafter described, whereby the blinds may be opened and closed from the inside of the building and locked in either position.

In the accompanying drawings, in which similar letters of reference indicate corresponding parts,—Figure 1 is an elevation of a window and blinds with my invention applied thereto, looking from the inside, and with the blinds closed. Fig. 2 is an enlarged horizontal section on line *x*, Fig. 1. Fig. 3 is a section on the same line with the blinds connected and both operated from one side of the window casing. Fig. 4 is a still larger section on the same line showing the mechanism in detail.

A represents the window casing and B B' the blinds.

*a* is the window. The outer and inner walls of the two sides of the casing are provided with horizontal coincident holes *b b'* respectively, at a convenient height. Secured at *c* to the casing on the inner surface, on each side of the window frame, is a plate C, which is formed up with two concentric walls or flanges C' and C'', the inner wall or shell C' being provided with a screw-thread on its outer surface, and being preferably somewhat broader than the outer one C''. This plate is perforated at C''' (Fig. 4) coincidentally with the perforation *b'*.

D is a knob provided with a sleeve or tube D' internally screw-threaded, as shown in Figs. 2 and 4, and adapted thereby to screw onto the flange C'. This knob is bored centrally at D''. A spindle E extends through the holes D'' C''' and *b'* into the casing, and is enlarged at E', where it lies in the outer wall of said casing. A spiral spring F surrounds said spindle and lies between the shoulder formed by the enlarged portion E' and the plate C. The outer end of the spindle is screw-threaded at E'' to receive a concavo-con-

vex cap *e* which fits over the outer end of the knob D.

At the outer end of the spindle E is an integral extension *e'* which extends into the open air, and to which is pivotally secured one end of a link H whose opposite end is pivotally secured to a horizontal bar I rigidly secured to the outer surface of the blind, the outer end I' of said bar being bent outward slightly as shown. When the tubular extension D' secured to the knob D, is screwed onto the flange C' of the plate C, as shown in Fig. 4, it cannot be reciprocated or moved longitudinally, and the blind is practically locked whether it is open or closed; but as soon as the knob is unscrewed into the position shown in Fig. 2, it can be reciprocated longitudinally, *i. e.*, horizontally. Now, if the blind is to be opened, a quick pull on the knob will draw out the spindle C against the power of the spring F, with the effect of pulling the link H into the hole *b*, and into a line with the spindle; and a quick release of the knob at that moment causes the spindle to return to its former position and the link to continue by its center. The effect is to swing the link H from its outward pointing position shown in Fig. 4 into an inward pointing position, as shown in Fig. 3, and, of course, to swing the blind quickly from a closed into an open position. The same quick withdrawal and release of the knob will swing the blind from an open into a closed position, swinging the link back into the position shown in Fig. 4.

In case it is desired to have but one side of the window casing provided with the device, one blind B may be hinged on its outer edge to the corresponding edge of the blind B', as at K in Fig. 3, and the edge of the blind B' pivotally connected with one end of a rod L whose opposite end is slotted at L' and connected thereby with a staple N or similar attachment secured to the window sill. The blinds thus arranged, being in the position shown in Fig. 3, a quick pull and release of the knob D operate as above described to close the blind B, and the blind B', guided by the rod L, swings into its proper closed position, as indicated by broken lines in Fig. 3.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The herein described improved shutter-  
worker, comprising the plate C provided with  
the screw-threaded flange C', the hollow knob  
D provided with the screw-threaded tubular  
5 extension D', the spindle E engaging with the  
knob at its outer end and extending through  
it and the casing, a spring holding the knob  
and spindle normally inward, the bar I se-  
cured to the shutter and provided with the  
10 outwardly bent end I', and the link H con-  
necting said bar and spindle, substantially as  
set forth.

2. The herein described improved shutter-  
worker, comprising the plate C provided with  
15 the screw-threaded flange C', the hollow knob  
D provided with the screw-threaded tubular

extension D', the spindle E engaging with the  
knob at its outer end and extending through  
it and the casing, a spring holding the knob  
and spindle normally inward, the bar I se- 20  
cured to the shutter B and provided with the  
outwardly bent end I', the link H, connecting  
said bar and spindle, the blind B' hinged to  
the blind B, and the link L connecting said  
blind B with the window sill and accommo- 25  
dating the swing of the blind by a slot L',  
substantially as described.

OBED DE CHAMP.

Witnesses:

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J. M. HARTNETT.