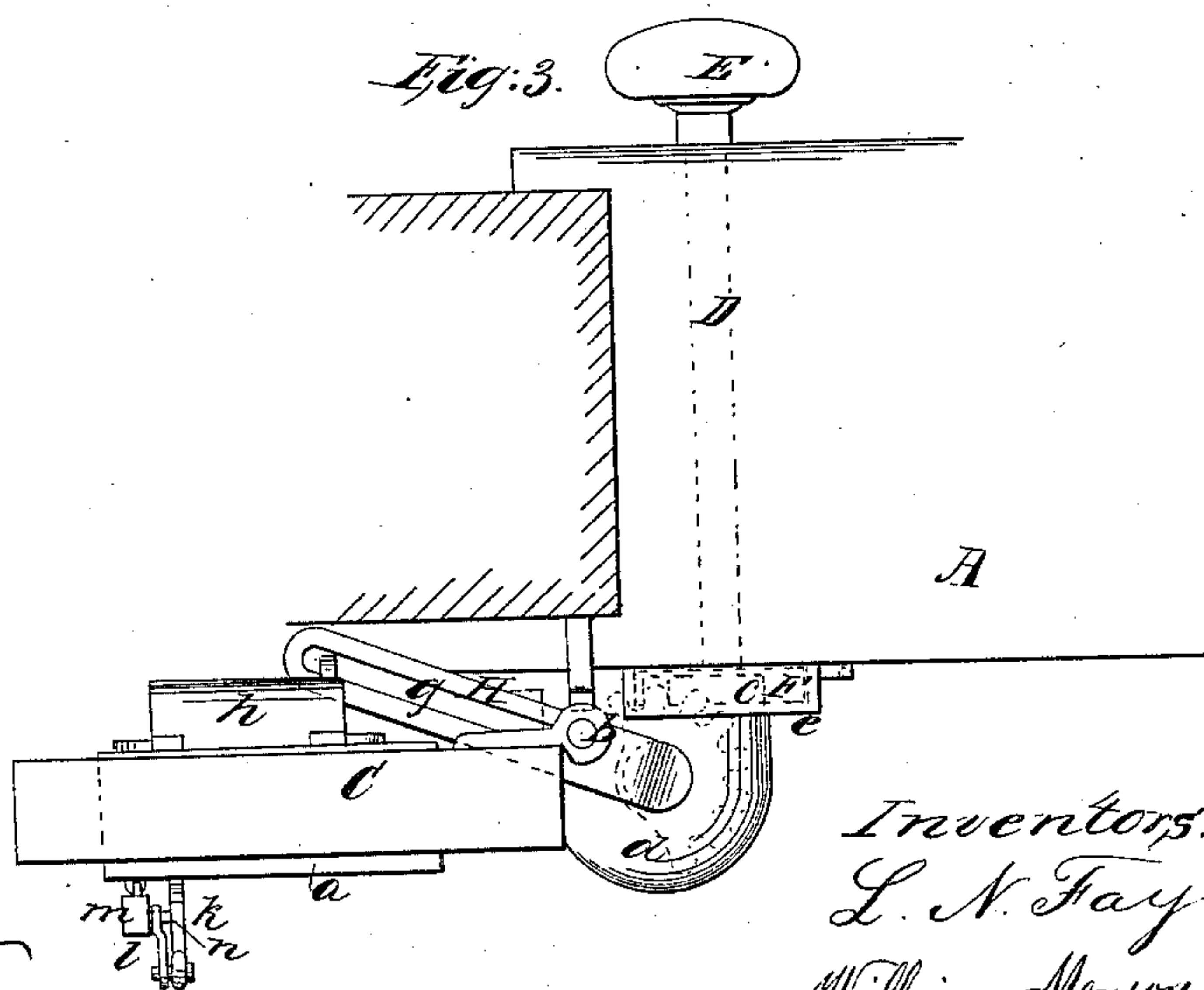
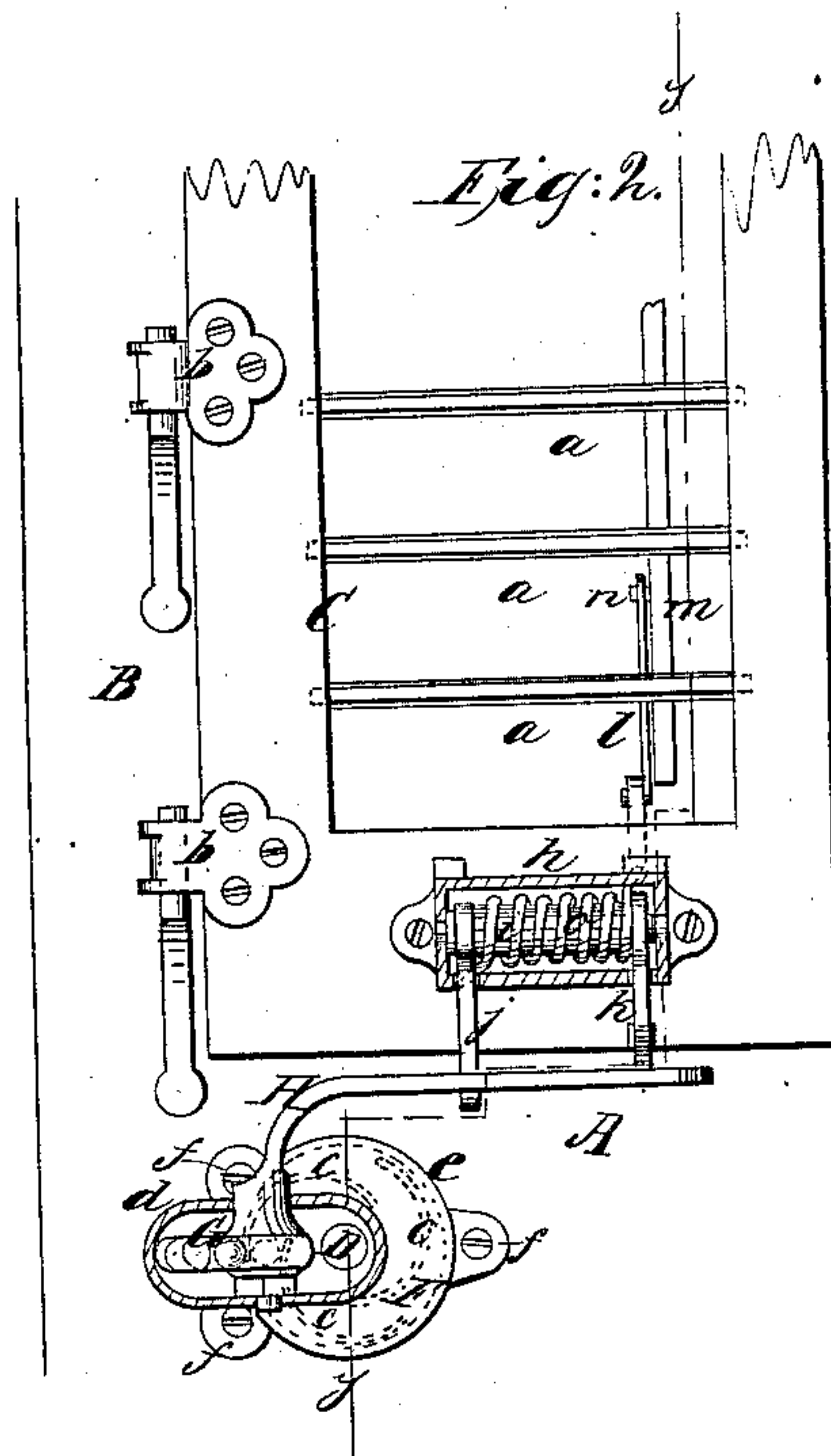
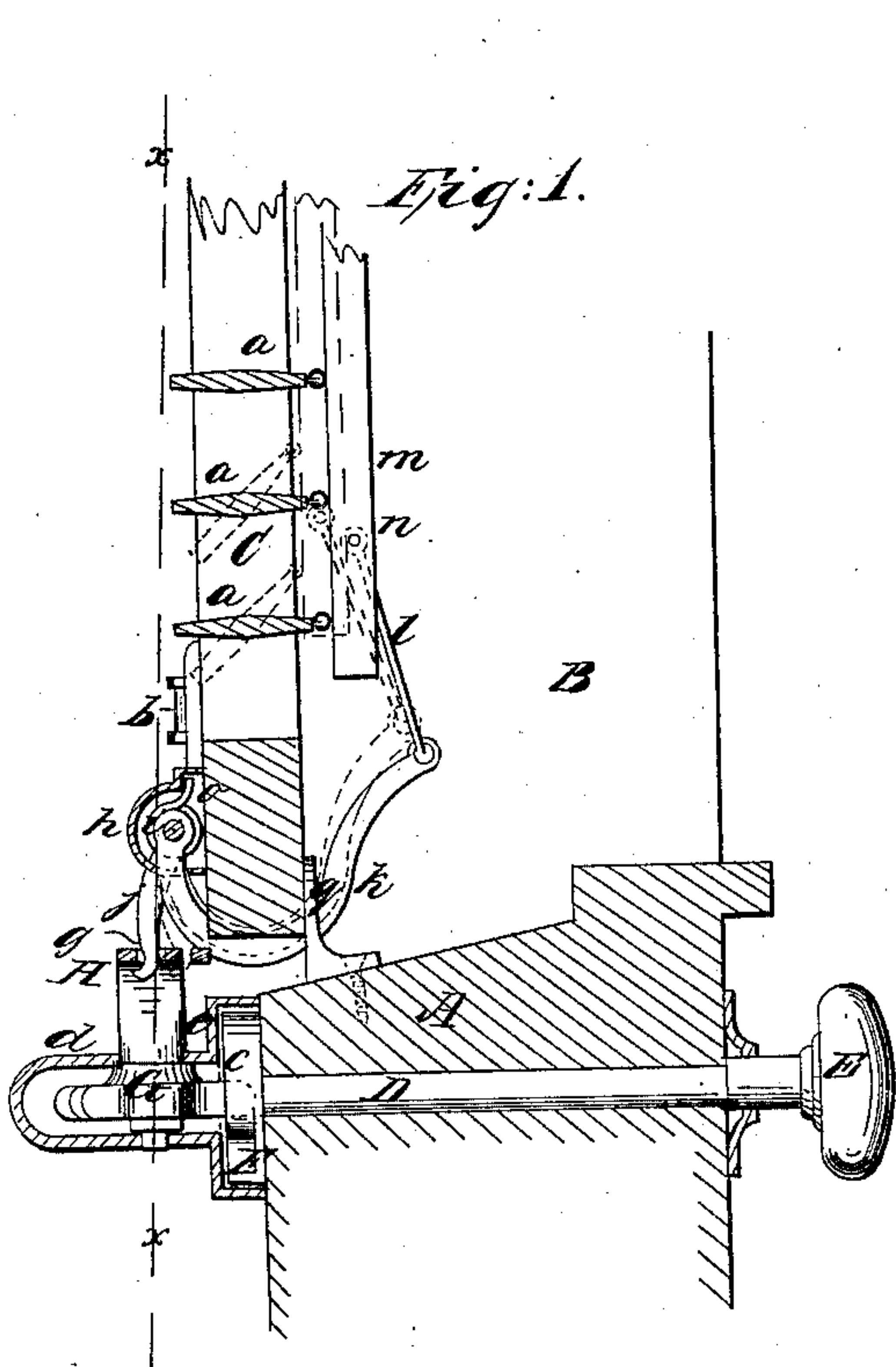


*Fay & Mason,  
Shutter Worker.*

*N<sup>o</sup> 22,172.*

*Patented Nov. 30, 1858.*



*Witnesses:*  
*Francis John Taylor*  
*Millard W. Fay.*

*Inventors:*  
*L. N. Fay*  
*William Mason.*



# UNITED STATES PATENT OFFICE.

L. N. FAY AND WM. MASON, OF WEST WARREN, MASSACHUSETTS.

## BLIND-OPERATOR.

Specification of Letters Patent No. 22,172, dated November 30, 1858.

*To all whom it may concern:*

Be it known that we, L. N. FAY and WILLIAM MASON, both of West Warren, in the county of Worcester and State of Massachusetts, have invented a new and Improved Attachment to be Applied to Window-Blinds; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a section of our invention applied to a window blind, taken in the line *y, y*, Fig. 2. Fig. 2, is a section of ditto taken in the line *x, x*, Fig. 1. Fig. 3, is a plan or top view of ditto.

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

The object of this invention is to obtain a simple device whereby a window blind, by simply turning a knob, may be opened and closed at the inside of a window, and also retained at any desired point, without raising the sash, and the blind slats also adjusted or opened or closed by the turning of the same knob when the blind is in a closed state.

To enable others skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A, represents the sill of a window frame, and B, one of the stiles of the window frame. C, is a window blind constructed in the usual way with pivoted slats *a*. The blind C, is attached to the stile B, by hinges *b*, as usual.

D, is an arbor which passes horizontally through the sill A. This arbor has a knob E, on its inner end, and a circular plate F, is attached to its outer end, said plate being provided on its outer or face side with spiral flanches *c*, the position and form of which are shown clearly by the dotted lines in Fig. 2.

G, is a segment of a worm wheel into which the spiral flanches *c*, of the plate F, gear. This segment wheel is fitted in a metal case or box *d*, and the plate F, is also placed in a box *e*, both boxes being cast together and secured by screws *f*, to the outer edge of the sill, as shown in Fig. 2.

To the upper edge of the segment worm-wheel G, a curved bar H, is attached, said bar passing vertically up through the top of the box *d*, and having its upper part

above said box curved so as to be in a horizontal position, as shown clearly in Fig. 2. The horizontal portion of the bar H, is slotted longitudinally, as shown at *g*, in Figs. 1 and 3.

To the outer side of the blind C, a metallic case *h*, is attached and within this case a rod or shaft *i*, is placed longitudinally. To one end of the rod or shaft *i*, a pendent arm *j*, is secured, the lower end of said arm fitting in the slot *g*. To the opposite end of the rod or shaft a curved arm *k*, is secured, said arm passing underneath the blind, and upward, at its inner side, and having its upper end connected by a rod *l*, with the slat rod *m*, as shown at *n*, Figs. 1 and 2. On the rod or shaft *i*, a spiral spring *o*, is placed, said spring having a tendency to keep the ends of the arms *j*, *k*, out from the blind and the slats *a*, thereof in an open state, as shown clearly in Fig. 1. To the sill A, a stop *q*, is attached, shown clearly in Fig. 1.

The operation is as follows. Suppose, for instance, the blind C, to be in a closed state, as shown in Figs. 1 and 2. The operator at the inner side of the window, in order to open the blind, turns the knob E, from left to right and the spiral flanches *c*, will rotate the segment wheel G, and the arm H, will, in consequence of the arm *j*, fitting thereon, throw open the blind. By turning the knob E, in the opposite direction, viz: from right to left, the blind will close, and when the blind strikes the stop *q*, by still turning the knob E, the arm H, will actuate the arm *j*, and the rod or shaft *i*, will be turned and the arm *k*, actuated to move the slats *a*, the slats being retained in a fully closed or open state or secured at intermediate points without any extraneous appliances. Thus it will be seen that the blind may be readily opened and closed at the inner side of the window without raising the sash, and the blind slats *a*, also rendered capable of adjustment by the turning of one and the same knob E.

The spirally flanchèd plate F, and segment worm wheel G, have been previously used, but arranged in a different way from the plan herein shown and described, said plate F, and worm wheel G, will be found described in Letters Patent granted to us and bearing date August 4, 1857. We therefore disclaim the plate F, and segment worm

wheel G, when considered separately or irrespective of the attachment connected thereto for adjusting the blind slats *a*, but

We claim as new and desire to secure by  
5 Letters Patent—

The spirally-flanged plate F, and worm wheel G, when attached to the sill A, and used in connection with the slotted bar H, stop *q*, and the slat-adjusting device, formed

of the arms *j*, *k*, shaft *i*, and spring *o*, the whole being arranged to operate as and for the purpose set forth. 10

L. N. FAY.

WILLIAM MASON.

Witnesses:

CUTTER MOORE,

Jos. F. HITCHCOCK.