

No. 632,924.

Patented Sept. 12, 1899.

J. P. L. NILSON.

WRITING DESK.

(Application filed Aug. 10, 1897.)

(No Model.)

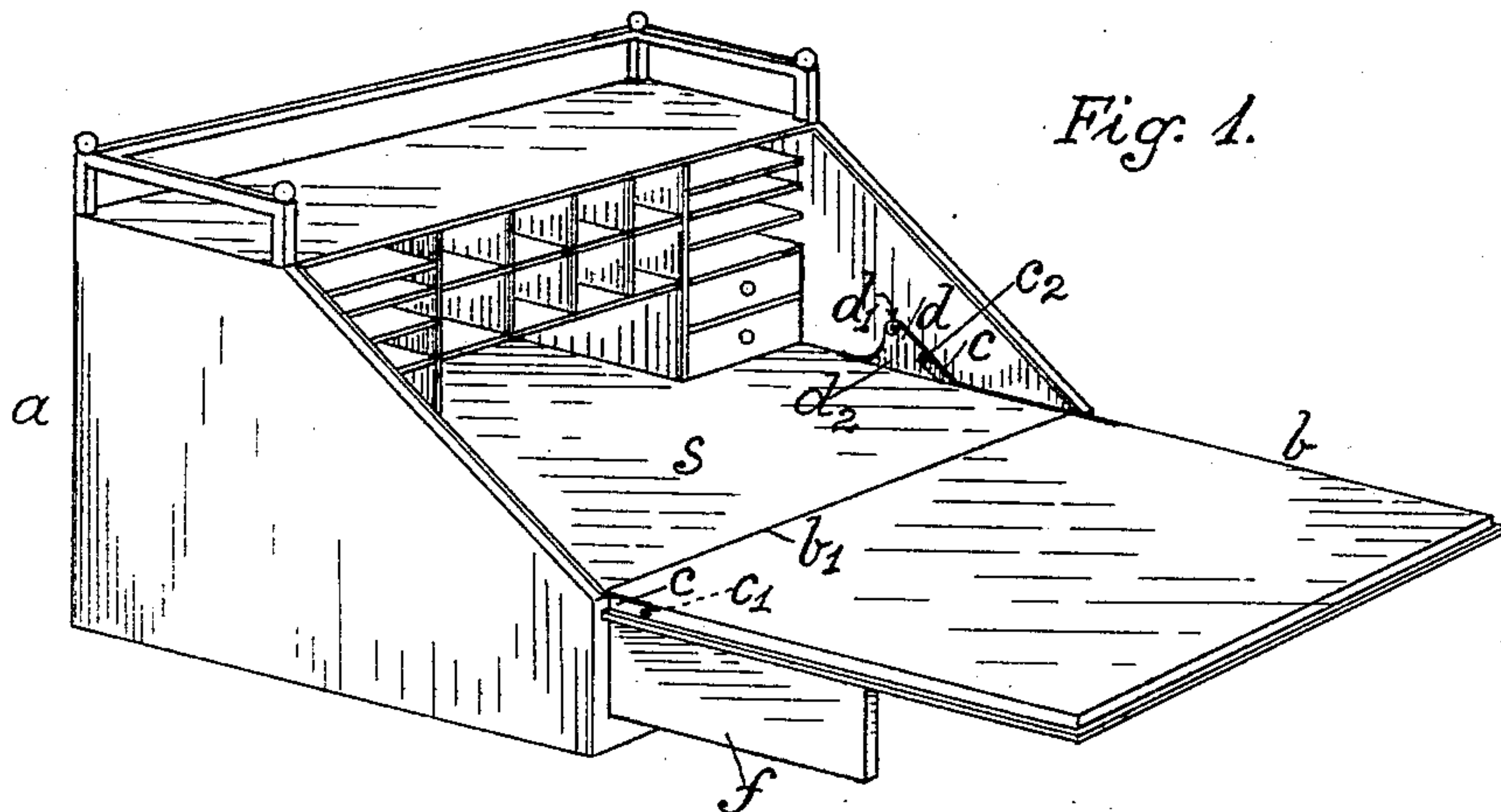


Fig. 2.

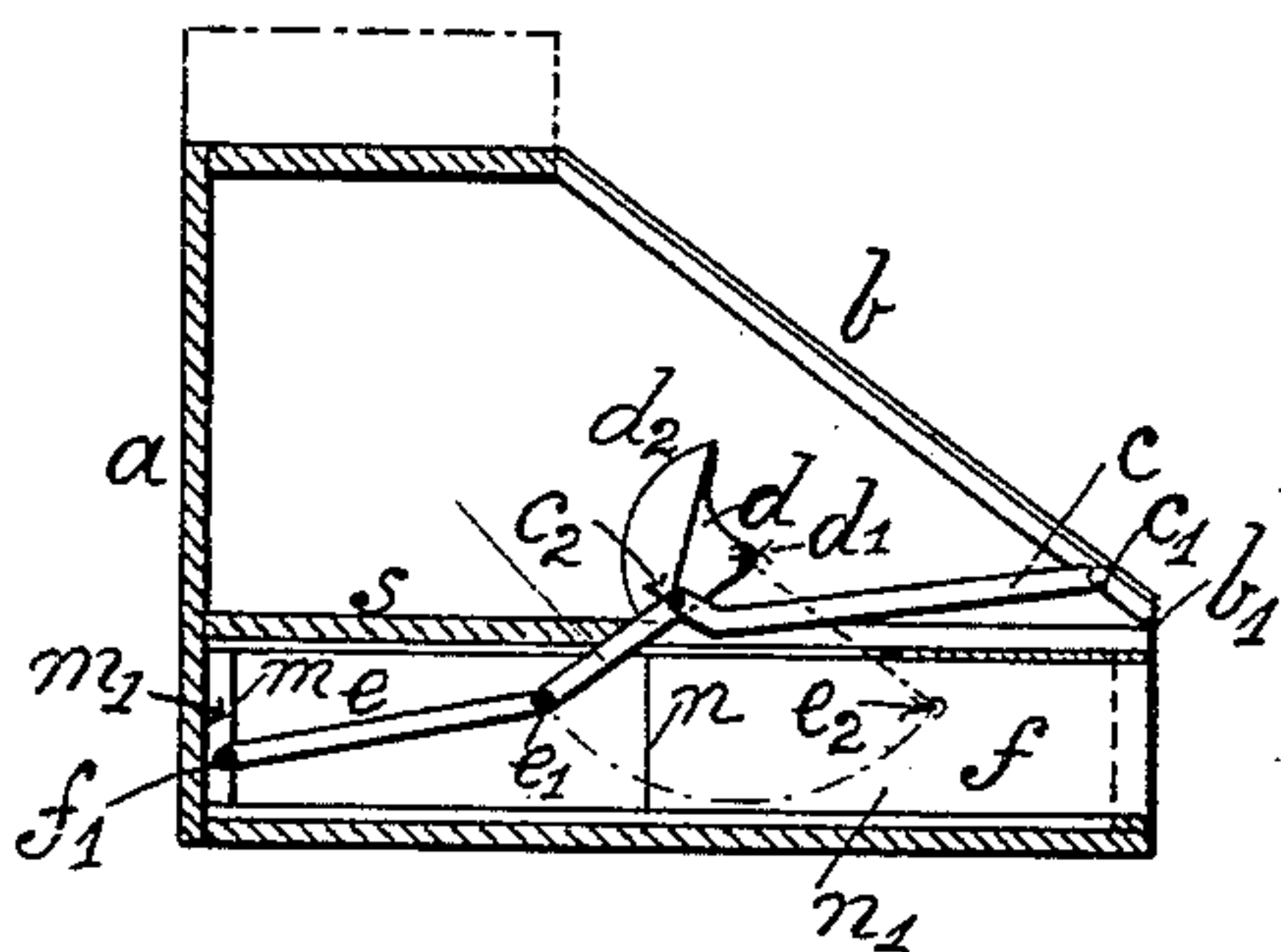


Fig. 4.

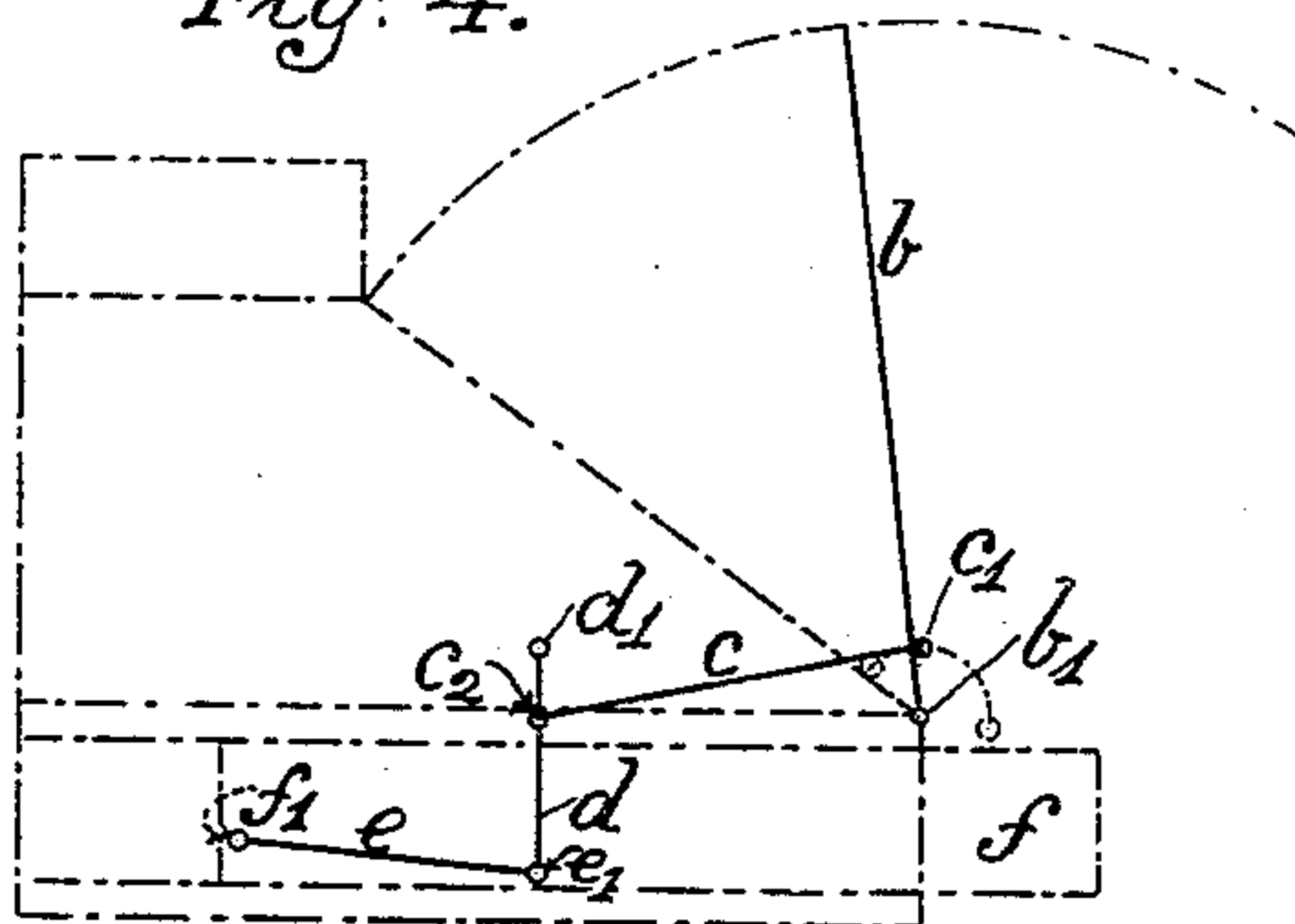


Fig. 5.

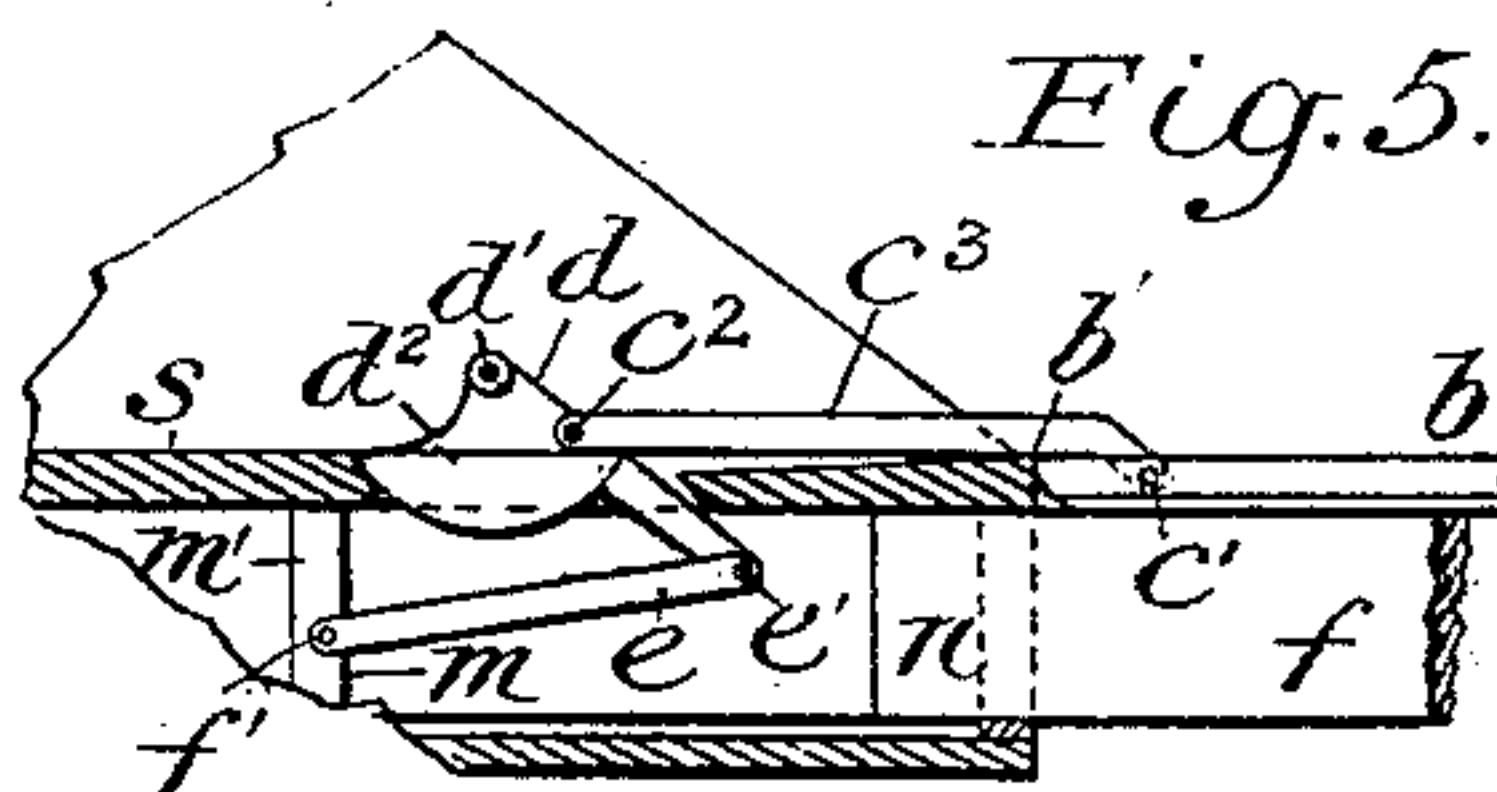
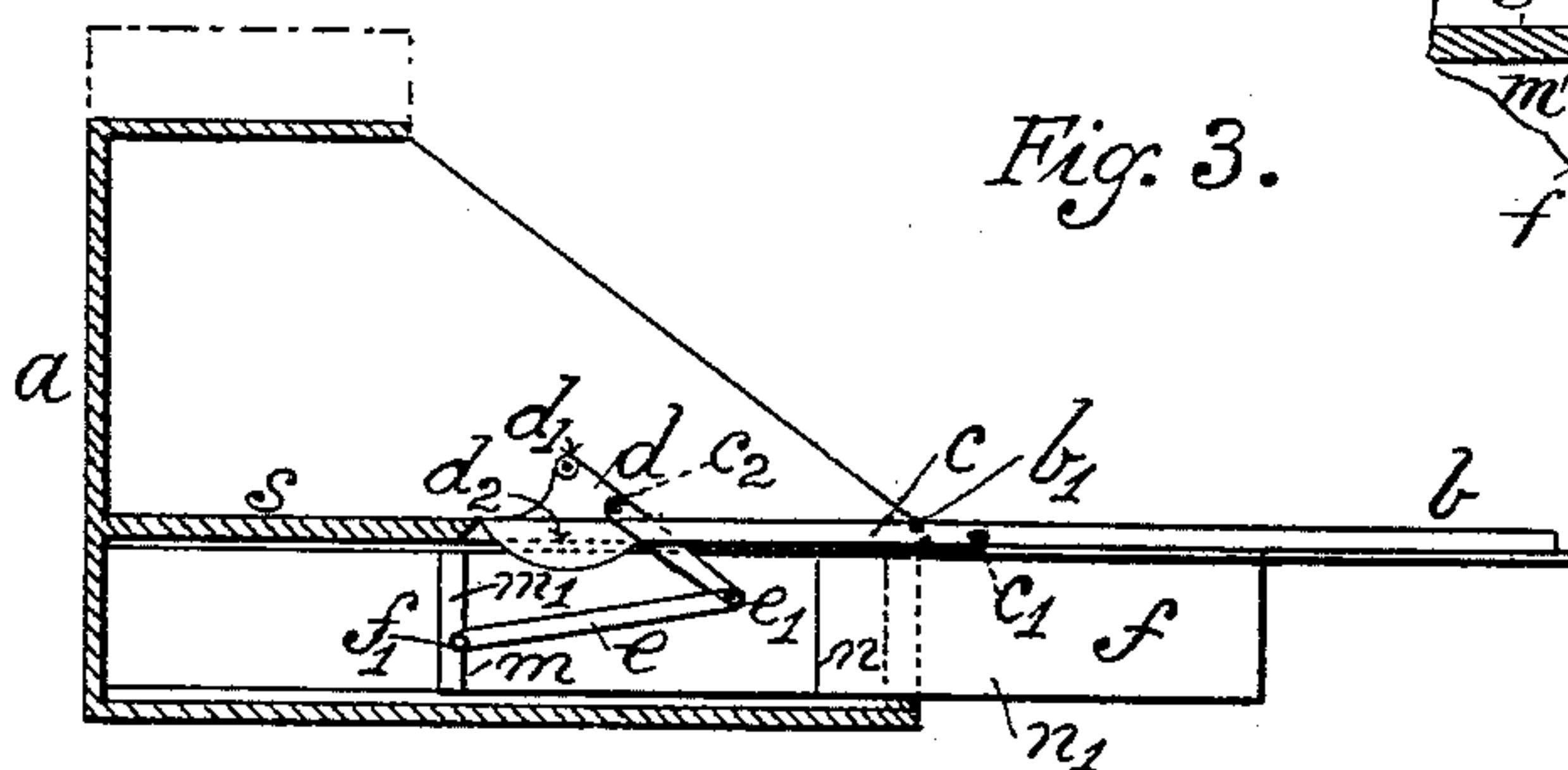


Fig. 3.



WITNESSES

C. E. Winterrass.

Louise Davis

INVENTOR:

J. P. Ludwig Nilson



# UNITED STATES PATENT OFFICE.

JONAS P. LUDWIG NILSON, OF PHILADELPHIA, PENNSYLVANIA.

## WRITING-DESK.

SPECIFICATION forming part of Letters Patent No. 632,924, dated September 12, 1899.

Application filed August 10, 1897. Serial No. 647,768. (No model.)

*To all whom it may concern:*

Be it known that I, JONAS PETTER LUDWIG NILSON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Desks, of which the following is a specification.

My invention has relation to a lever arrangement combined with the lid and the supporting-slides of a writing-desk in order to produce an automatic motion to the said supporting-slides when opening or closing the lid or cover.

The object of my invention is in each side of a writing-desk to apply a lever arrangement so combined with the lid and supporting-slide that its range of action may have the smallest possible extension, thus making it possible to place it in a desk almost filled with shelves, still giving ample motion to the supporting-slides.

Stated in general terms, my invention consists of an oscillating lever pivoted by its upper end to the sides of the desk a little above the shelf of said desk and having connection with the lid by a first and with the slides by a second connecting-rod, the whole producing an automatic and multiplied motion to the slides when opening and closing the lid.

The nature and scope of my invention will be more fully understood from the following description and accompanying drawings, forming part thereof, and in which—

Figure 1 is a perspective view of the upper part of a desk. Fig. 2 is a sectional side view of the same, the lid closed. Fig. 3 is a sectional side view of the same, with the lid open. Fig. 4 is a diagram of the arrangement showing the position when the lid is only half opened. Fig. 5 is a sectional view with the lid open, in which the bar  $c^3$  is bent down with its front end so as to be lodged above the writing plane of the desk.

Referring to the drawings,  $a$  is the main body of the desk, Figs. 1, 2, and 3.

$b$  is the cover, and  $c$  the first connecting-rod.

$d$  is the oscillating lever,  $e$  the second connecting-rod, and  $f$  the supporting-slide.

Fig. 1 shows the general appearance and

position of a desk with the above arrangement, the lid being open and in position for writing.

The joints or pivoting-points of the different parts are as follows:

$b'$  is the hinged joint of the swinging-lid,  $c'$  the jointed connection between the lid and the first connecting-rod  $c$ , and  $d'$  the pivoting-point of  $d$ .  $c^2$  is likewise the jointed connection between the same rod  $c$  and the oscillating lever  $d$ .  $e'$  is at last the jointed connection between the swinging end of lever  $d$  and the second connecting-rod  $e$  and  $f'$  the pivoting-point between rod  $e$  and slide  $f$ .

When the lid  $b$  is opened from the position represented in Fig. 2, the joint  $c'$  will evidently draw the rod  $c$  forward, and this rod  $c$ , likewise having connection with the lever  $d$  at  $c^2$ , will now manifestly cause the lever  $d$  to oscillate forward till its lower end  $e'$  will reach the point  $e^2$ , Fig. 2,  $e^2$  being the point reached when the lid is full open. Then, again,  $e'$  being connected with the rod  $e$ , and this again with the slide  $f'$ , this last will evidently be so much drawn outward as the distance from  $e'$  to  $e^2$ . This position is clearly shown in Fig. 3, where the desk is represented opened. When the lid is closed, the opposite action of the one above-described is evidently taking place.

$d^2$  is an arc-shaped projection from  $d$ , the arc having its center at the point  $d'$ , and  $d^2$  is produced for the purpose of covering the opening provided in the shelf of the desk for the swinging of the lever  $d$ . The rod  $c$  is preferably made to come in level with the shelf  $s$  when the lid is open, as is shown in Fig. 3; but it may also be bent down at its outer end, so as to get a position above shelf  $s$ , as is indicated in Fig. 5, the bar here marked  $c^3$ .

From the line  $m$  to line  $n$  on the outside of the slide  $f$  so much is cut into the wood as is necessary to make room for the lever  $d$  with its second connecting-rod  $e$  to move freely between the slide  $f$  and the outside wall of the desk. The full thickness  $m'$  and  $n'$  of the slide  $f$  will serve to guide it in its sliding-groove.

In the diagram in Fig. 4 the lid  $b$  is shown half closed, and the lever  $d$  and the slide  $f$  are therefore in their middle position.

I am aware that somewhat similar arrange-

ments have been done before, but those are not, like my combination, adapted to be placed in a modern writing-desk where the motion is to be produced in a small place in  
5 the upper part, where at the same time the front side is slanted off at about forty-five degrees, and, further, almost all room is taken up by shelves and drawers.

Having thus described the nature and ob-  
10 ject of my invention, what I claim as new, and desire to secure by Letters Patent, is—

At each side of a desk with automatic sliding lid-supports: the combination of an oscillating lever having a segment-shaped upper

body with a first and a second connecting-rod, 15  
said lever pivoted by its top end to the side wall of the desk; the first connecting-rod joined by one end to the middle portion of the said lever and with the other end to the lid of the desk; and the second connecting- 20  
rod joined by one end to the lower end of the said lever and with the other end to the sliding lid-support, substantially as and for the purpose described.

J. P. LUDWIG NILSON.

Witnesses:

C. E. WINTERRAS,  
TONE DEVINE.