

(No Model.)

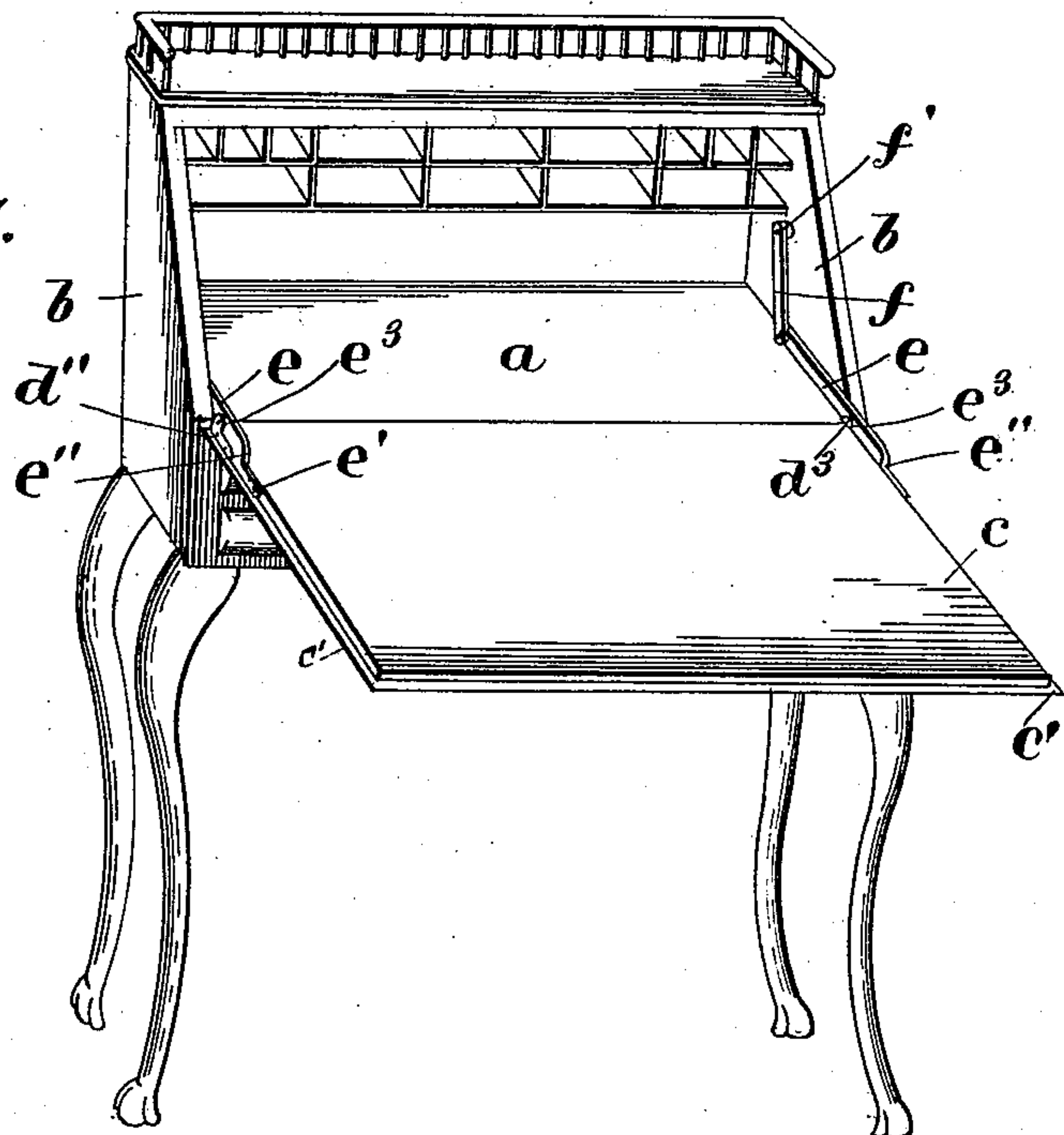
2 Sheets—Sheet 1.

E. F. POOLEY.  
LID SUPPORT.

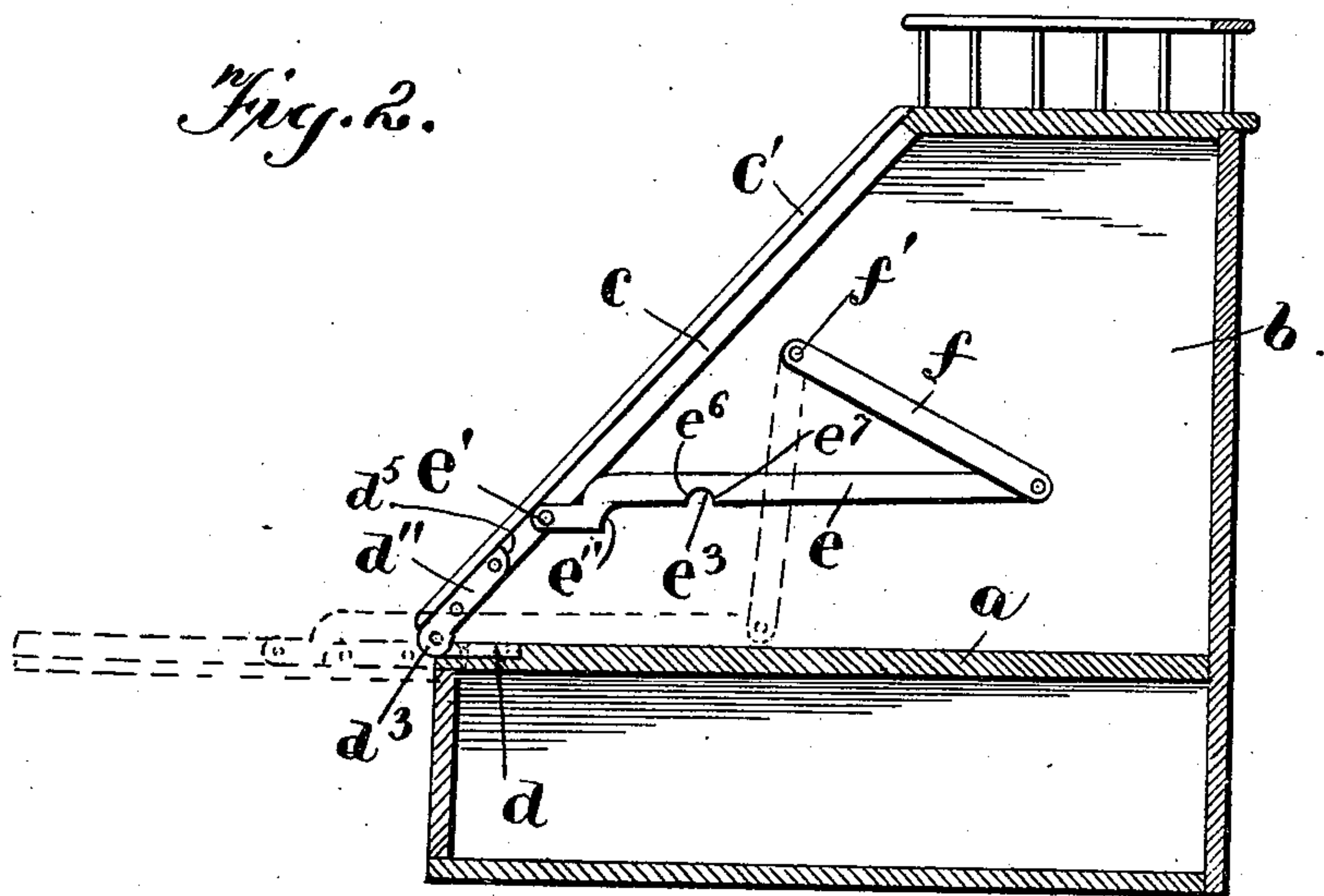
No. 564,574.

Patented July 21, 1896.

*Fig. 1.*



*Fig. 2.*



Witnesses  
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By Attorney *Hubert E. Peck*

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

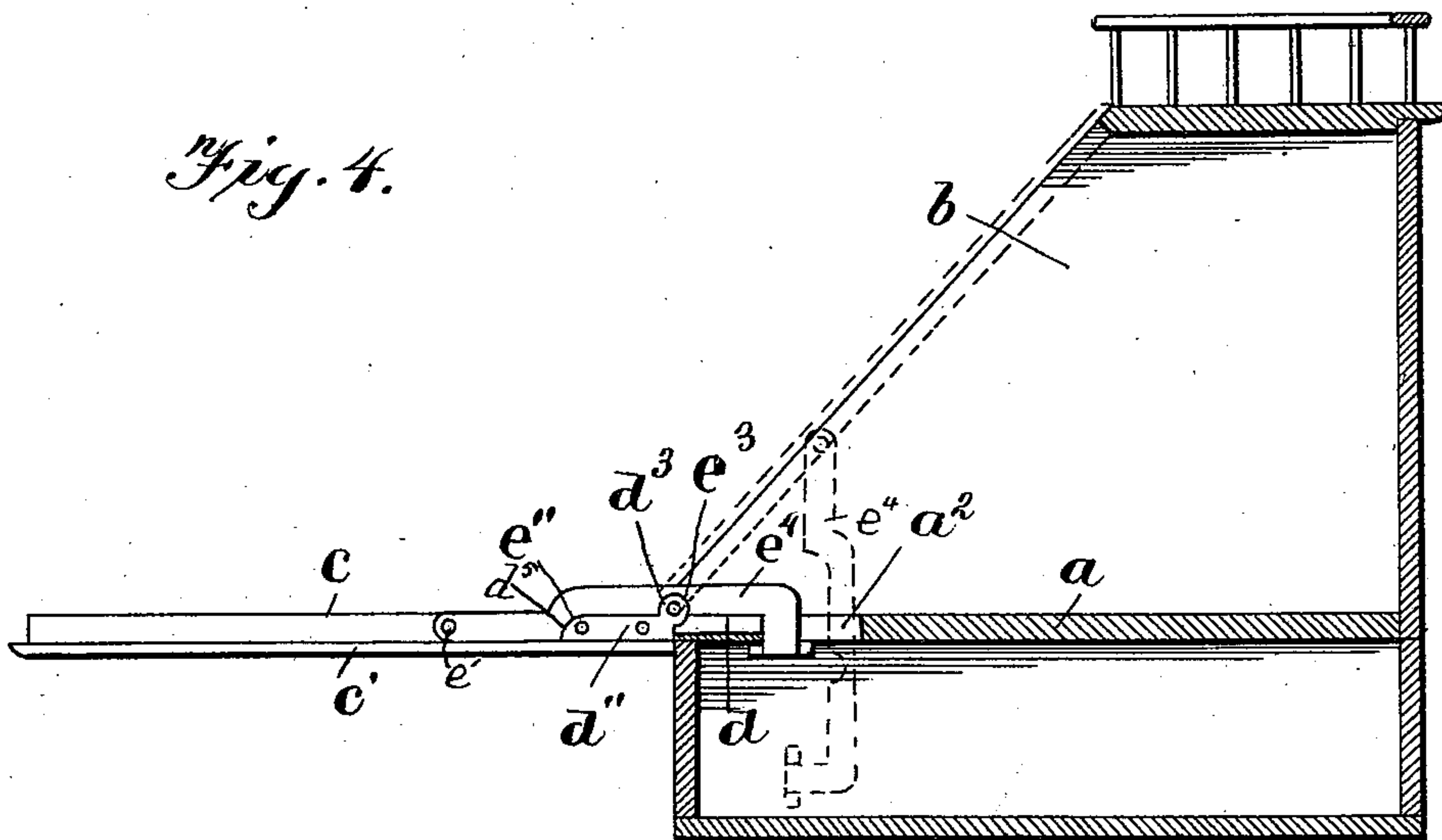


Fig. 5.

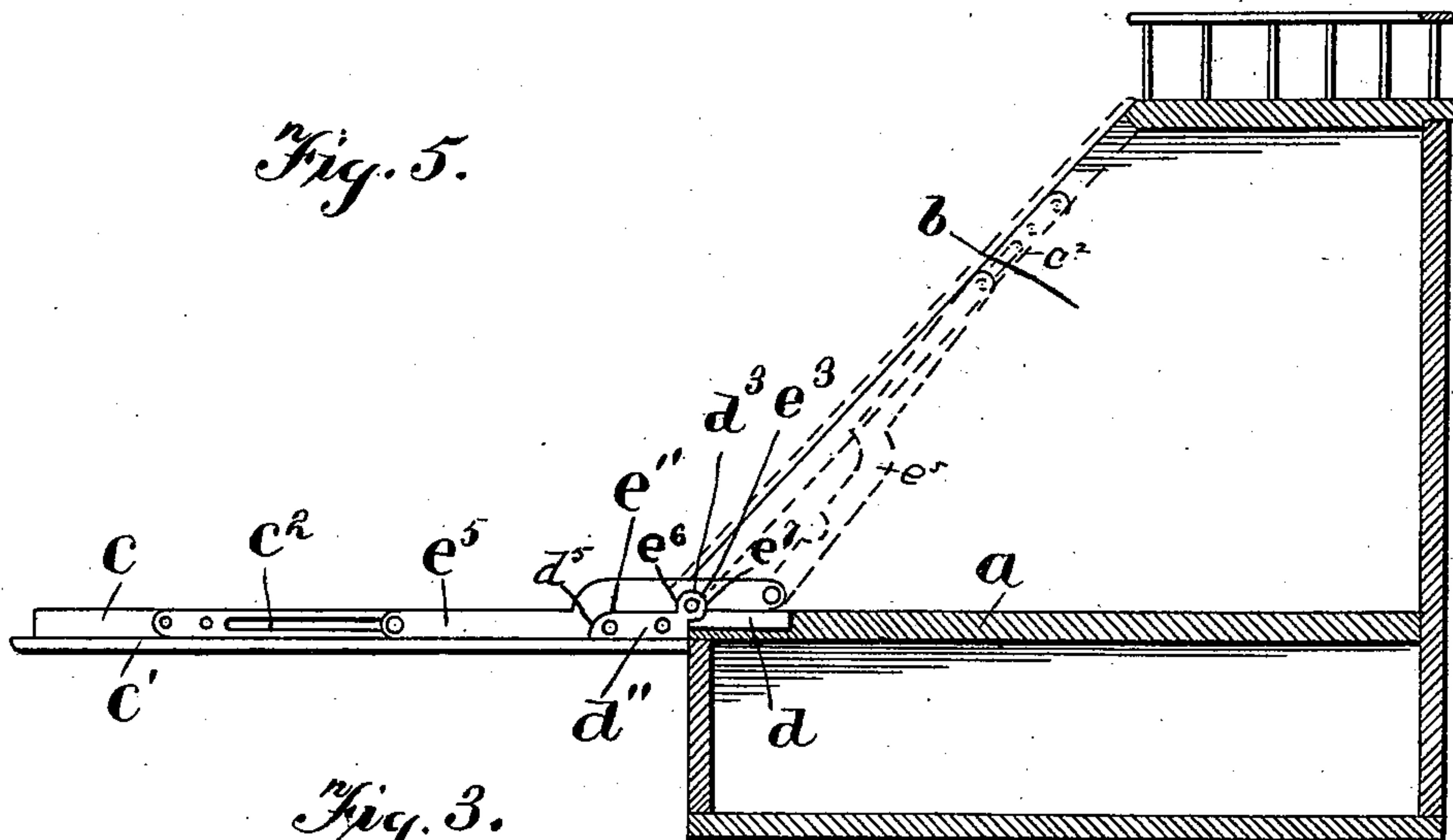
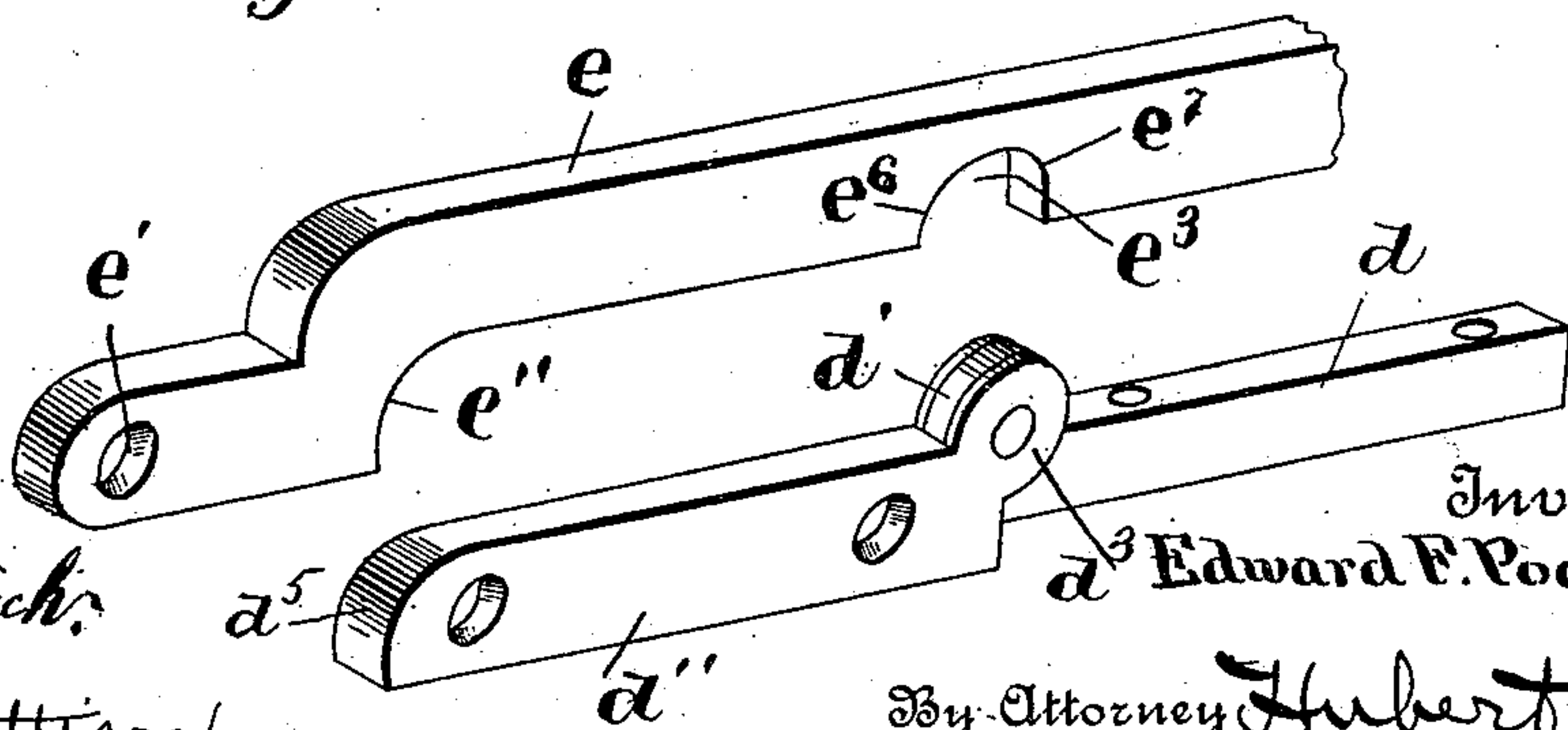


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

EDWARD F. POOLEY, OF PHILADELPHIA, PENNSYLVANIA.

## LID-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 564,574, dated July 21, 1896.

Application filed January 14, 1896. Serial No. 575,446. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD F. POOLEY, 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 Lid-Supports; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain improvements in desks, and more particularly to improvements in desk-lid supports or braces.

The object of the invention is to provide an improved and effective desk-lid support or brace simple and durable in construction, and which will tend to brace the lid-hinges when the lid is lowered.

The invention consists in certain novel features of construction and in combinations and arrangements of parts, more fully and particularly described and pointed out hereinafter.

Referring to the accompanying drawings, Figure 1 is a perspective of a drop-lid desk provided with my invention, the lid being shown in its lowered position. Fig. 2 is a vertical sectional view through the desk with the lid closed, dotted lines showing the lid lowered. Fig. 3 is a detail perspective view of a hinge with a portion of a brace-link arranged above the same. Fig. 4 is a vertical section taken through a desk with the lid lowered, dotted lines showing the lid closed, a different construction of lid-support embodying the present invention being shown. Fig. 5 is a vertical section taken through a desk with the lid lowered, dotted lines showing the lid closed, a third construction of lid-support embodying the present invention being shown.

In the drawings, *a* is the desk shelf or top; *b b*, the two vertical ends connected at the top, as usual; and *c* is the vertically-swinging lid or drop, at its inner edge suitably hinged to the front edge of the desk-shelf *a*, so that the lid can swing from the lowered open position to the closed position and against the front edges of the ends. If desired, the end and outer edges of the lid can have the lip or projecting edge *c'* to engage the front edges of the desk ends when the lid is closed.

A suitable number of hinges are provided

to properly support the lid and connect the same to the desk-shelf, and I here show two hinges at the opposite end edges of the lid. Each hinge consists of two members *d* and *d''* suitably pivoted together at their adjoining ends, so as to abut beneath the pivot when the lid is lowered. The shelf member *d* extends inwardly from the outer edge of the shelf and is secured flush in a groove in the same by screws passing vertically down through the member into the shelf. The lid member *d''* is secured against the end edge of the lid with its lower edge on lip *c'* and its upper edge flush or approximately flush with the upper surface of the lid and its flat face against the edge of the lid and secured by screws passed horizontally through the same into the lid. The outer end of the member *d''* forms a shoulder *d<sup>s</sup>* rigid with the lid and facing toward the outer edge thereof, and which can be rounded down to the lip *c'*, if so desired.

The adjoining ends of the hinge members *d* *d''* are projected upwardly, forming stops *d'* *d<sup>s</sup>*, respectively, which interlock or are arranged concentrically side by side and through which the hinge-pivot is passed. The upper edges of these stops are preferably, although not necessarily, rounded, as shown.

Although I have specifically described the specific form of hinge shown, yet I do not wish to limit myself to the employment of such a hinge.

Duplicate lid braces or supports are provided at opposite ends of the lid, so that the description of one support will apply to the other.

Each lid-support or link *e* is pivotally joined to the lid at its outer end, and at its inner portion is so confined to the desk as to brace and uphold the lid when in its lowered position, and thus relieve the hinges. Each support is so arranged as to extend above the plane of the shelf and hinges and to swing with the lid in its up-and-down movement.

Various means for securing and confining the supports can be employed. For instance, in Figs. 1 and 2 the inner end of each lid-supporting link *e* is pivoted to the lower end of an upright link *f*, pivotally joined at its upper end to a desk end by a pivot *f'*, so that the upright links *f* swing in and out from their



upper ends with the lid-supporting links  $e$  as the lid is raised and lowered, and said upright links  $f$  hold the lid-supporting links  $e$  firmly down on the shelf and lid when the lid is lowered to resist the downward strain on the lid. The outer ends of the links  $e$  are pivotally joined to the end edges of the lid at  $e'$  a distance outwardly from the outer ends of the hinges. Each link is arranged over and parallel with the longitudinal length of a hinge and extending over and above the joint or pivot thereof. Each link at its outer portion is arranged flush with or below the upper surface of the lid when lowered, and at an intermediate portion of its length, opposite the shoulder  $d^5$ , formed by the outer end of the lid member of the hinge, the link is deflected upwardly to pass up over the hinge and form the inwardly-facing shoulder  $e''$  at the under edge of the link. This link-shoulder  $e''$  is arranged opposite the outwardly-facing shoulder  $d^5$ , rigid with the lid, and formed by the lid-hinge member, so that two shoulders  $e''$   $d^5$  will abut when the lid is lowered. Each link is formed to abut against the stops  $d'$  and  $d^3$ , rigid with the shelf and lid, respectively, and formed by the hinge members, and to thereby lock the hinge members together when the lid is lowered. This is accomplished by forming the notch or recess  $e^3$  in the under edge of the link above and formed to receive the said upwardly-projecting stops of the hinge members when the lid is lowered, and so that the under edge of the link closes down and bears on the upper edge of the hinge throughout or approximately throughout its entire length and passes up over the plane of the axis on which the hinge turns, and is here shown bearing down on the hinge-joint and extending beyond the inner and outer ends of the hinge and arranged in the same vertical plane with the hinge, and extending above the plane of the lid, hinge, and shelf. By this arrangement the greater the down strain on the lid when lowered the greater the down pressure of the links on the upper longitudinal edges of the hinges.

When the lid is down, the recess  $e^3$  of a link receives and fits down over both stops  $d'$   $d^3$ , and when down pressure is exerted on the lid the inner portion  $e^7$  of the edge of the recess  $e^3$  abuts against the stop  $d'$  of the shelf-hinge member, and thereby tends to resist outward pull of the link, while the stop  $d^3$  of the lid-hinge member abuts against the outer portion  $e^6$  of said link-recess  $e^3$ , and outward play or movement of the lid is thus resisted. By this arrangement excessive strain on the confining or securing devices at both ends of the links is relieved; also strain on the hinge-pivots and on the fastening means of the shelf-hinge members is materially relieved and the strain is distributed throughout the various parts and fastenings, and the hinges are braced and held in place.

However, I do not wish to limit my invention to employment in lid-desks, nor do I wish

to limit myself to the specific means shown for locking both members of the hinge together by a lid-support, or of causing the support to abut against an outwardly-facing shoulder of the lid member of the hinge, or of causing the links to bear down on the upper edge of the hinge over and above the hinge-joint.

In Fig. 4 the desk-shelf is shown with a vertical slot  $a^2$  therethrough at the inner end of the hinge. The brace-link  $e^4$  in this construction is pivoted to the lid at its outer end and passes up over the hinge and desk-shelf with its inner end bent downwardly to pass through said slot, and at its lower end is provided with a head to bear up against the under side of the shelf.

In Fig. 5 the brace-link  $e^5$  is shown pivoted at its inner end directly to a desk end  $b$ , and from thence extends over the shelf and hinge, and at its outer end has a lateral pin confined in the longitudinal slot of a metal strip  $c^2$ , secured in the lid edge, so that the pin slides therein as the lid is raised and lowered and the outer end of the brace-link swings with the lid. This metal strip forms no part of the hinge.

In this application I make no claim for the various means shown of confining or attaching the inner and outer ends of the brace-links, and these lid-bracing links in all the constructions shown are arranged and constructed to close down on, abut against, and interlock with the hinges as previously described.

Having thus fully described my invention, what I claim is—

1. In a desk, the combination of a shelf, a lid, hinges connecting the shelf and lid, each hinge having both members provided with upwardly-projecting stops, and lid-bracing links connected to the lid at their outer ends and confined at their inner portions to the desk, and formed with shoulders to abut against the outer ends of the hinges, and with recesses to receive said stops and arranged to pass over and rest on the hinges.

2. In a lid-desk, the combination of a desk-shelf, the lid, hinges uniting the same, the hinge members rigid with the lid having outwardly-facing shoulders, and lid-supporting links confined to the desk and at their outer ends pivotally joined to the lid so as to extend above the hinges and shelf, and formed at intermediate points to abut against said shoulders and press inwardly against the same when the lid is lowered.

3. In a lid-desk, the combination of a shelf, a lid, hinges uniting the shelf and lid, each lid-hinge member forming an outwardly-facing shoulder, and lid-bracing links at their inner ends confined in the desk and at their outer portions arranged in the plane of the desk-lid when lowered and pivotally joined thereto at their outer ends, each link at an intermediate point deflected upwardly to abut against the lid-hinge member shoulder and



pass up over the hinge, substantially as described.

4. In a lid-desk, the combination of a shelf, a lid, hinges uniting the lid and shelf, and swinging lid-bracing links, each link confined in a desk beyond the inner end of a hinge and pivotally joined to the lid outwardly beyond a hinge, and intermediate of its length arranged in the same vertical plane as the hinge and formed to close down on the upper edge of the hinge throughout its entire length and over and above the hinge pivot or joint, and to extend above the plane of the lid and shelf, substantially as described.

5. In a lid-desk, the combination, of a swinging lid, hinges securing the lid to the desk, and a lid-bracing link confined to the desk inwardly beyond a hinge and at its outer portion outwardly beyond the hinge pivotally joined to the lid so as to swing with the same, and at an intermediate point extending above and formed to interlock with both members of a hinge and thereby lock said members together against separating strain, substantially as described.

6. In a lid-desk, the combination of a swinging lid, hinges securing the lid to the desk, and lid-bracing links swinging with the lid and pivotally joined thereto at their outer ends outwardly beyond the hinges and confined in the desk at their inner ends, and arranged above the hinges, each link and both members of a hinge being so relatively formed with a recess and stops as to interlock at or near the hinge joint or pivot, substantially as described.

7. In a desk, the combination of a shelf, a lid, hinges uniting the lid and shelf and projected upwardly at their joints, and lid-supporting links confined in the desk and pivotally joined to the lid to swing therewith, and each having a recess in its under edge to close down on and receive a hinge-joint when the lid is lowered, substantially as described.

8. In a desk, the combination of a shelf, a swinging lid, hinges uniting the lid and shelf, and a swinging-lid support at its outer end pivotally secured to the lid and at its inner end confined to the desk and extending above the plane of the lid and shelf and arranged above and in the same vertical plane with both members of a hinge and directly over and

above the pivot or joint of the hinge and to bear down on the hinge in the direct line of strain from the pivot or joint of the hinge, substantially as described.

9. In a desk, the combination of a shelf, a lid, hinges uniting the shelf and lid, each hinge having a shelf member set flush in the shelf with stop  $d'$  at its front end, and a lid member with its flat side against the lid edge and with stop  $d^3$  at its inner end, a pivot passed through said lid and shelf-member stops, the adjoining ends of the members abutting beneath the pivot, and a lid-bracing link pivotally joined to the lid at its outer end and confined in the desk at its inner end, and passing over and bearing down on the shelf-member stops and longitudinally on the upper surface of the shelf member when the lid is lowered, substantially as described.

10. In a lid-desk, the combination of a shelf, a swinging lid having an outwardly-facing shoulder rigid therewith, and a lid-supporting link confined in the desk at its inner end and at its outer end pivotally joined to the lid outwardly beyond said shoulder so as to swing vertically with the lid, said link formed at an intermediate portion of its length to close down behind and abut against said shoulder rigid with the lid and resist the outward strain on the lid and relieve the strain on the pivot at the outer end of the link, substantially as described.

11. In a lid-desk, the combination of a shelf, a swinging lid, said lid and shelf having stops rigid therewith and near their adjoining edges, and a lid-bracing link swinging vertically with the lid and at its inner end confined in the desk beyond said stops and at its outer end pivotally joined to the lid outwardly beyond said stops, said link at an intermediate portion of its length formed to close down over and to abut against said stops and thereby lock them together to brace the lid and relieve strain on the securing means at the ends of the link, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD F. POOLEY.

Witnesses:

WILLIAM F. WAGNER,  
GEO. F. KAUCHEY.