(No Model.) 2 Sheets—Sheet 1.

E. F. & F. D. POOLEY.

DESK.

No. 458,487. Patented Aug. 25, 1891.

Fig 1

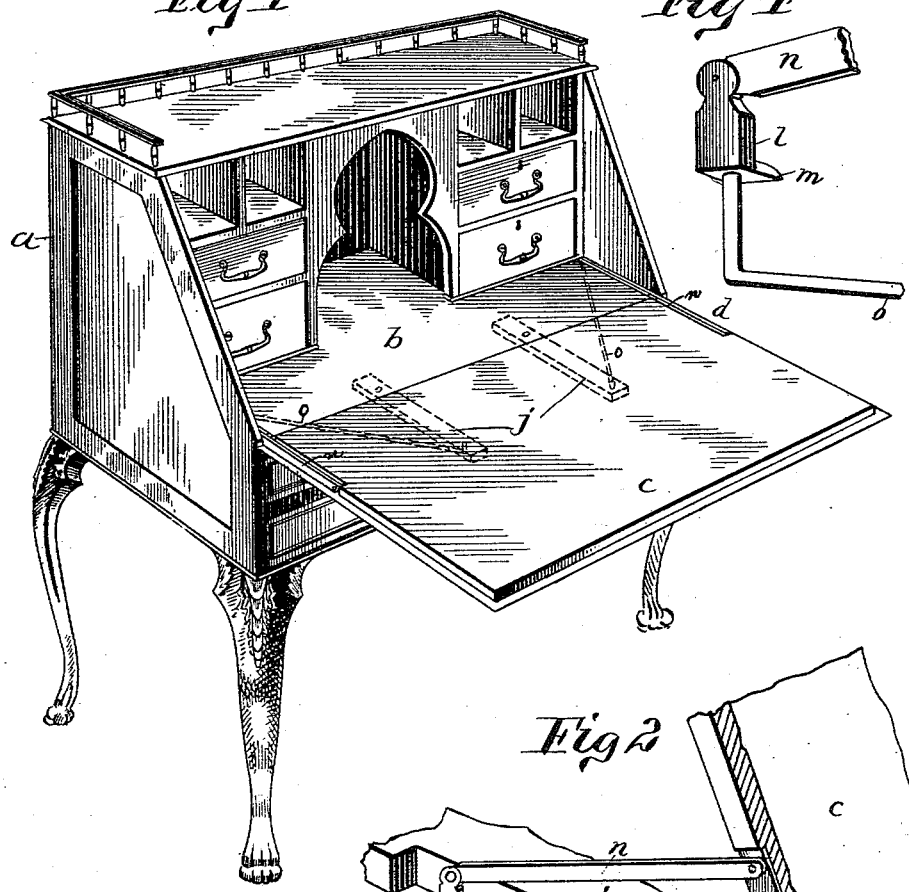

Fig 4

Fig 2

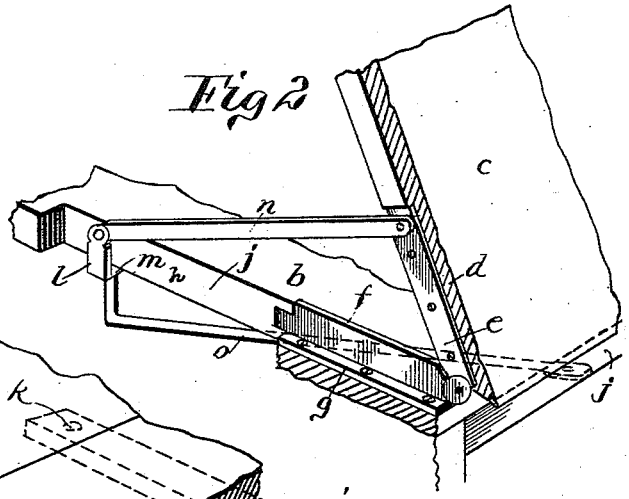

Fig 3

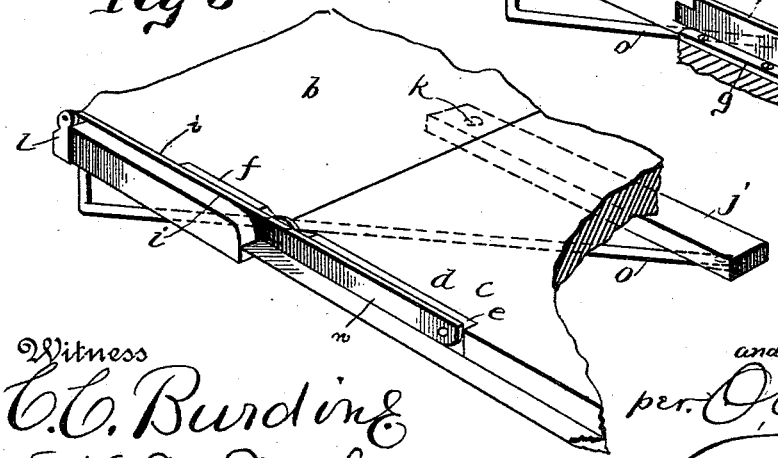

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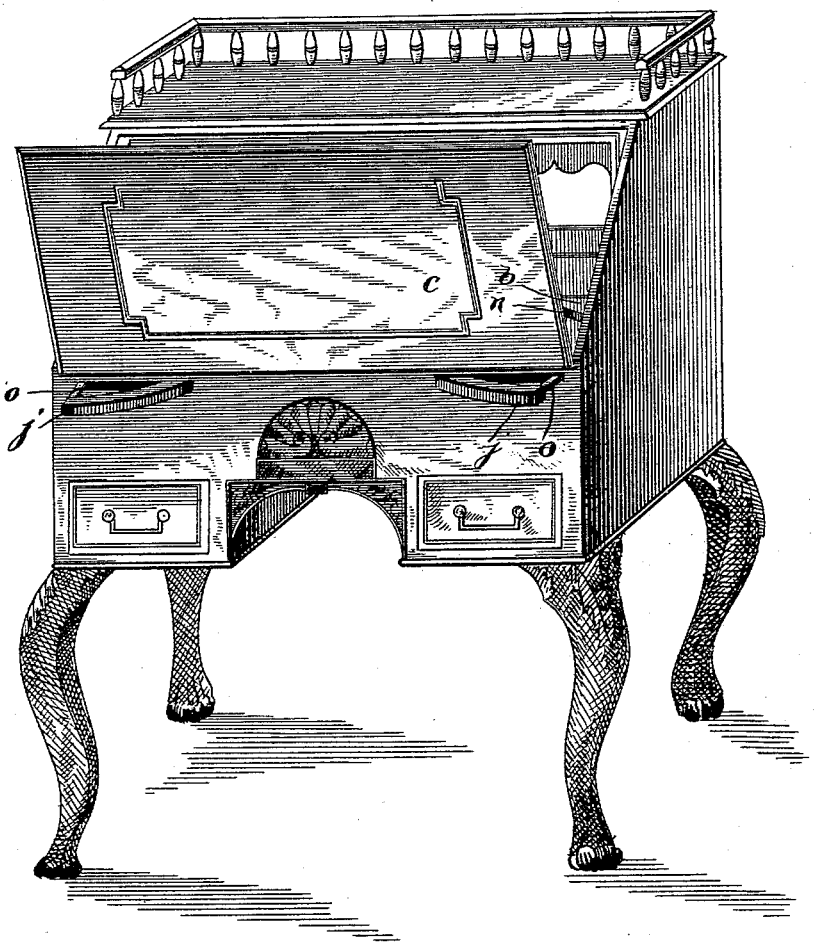
Fig. 5.



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UNITED STATES PATENT OFFICE.

EDWARD F. POOLEY AND FRANK D. POOLEY, OF MEDIA, PENNSYLVANIA.

DESK.

SPECIFICATION forming part of Letters Patent No. 458,487, dated August 25, 1891.

Application filed December 2, 1890. Serial No. 373,349. (No model.)

To all whom it may concern:

Be it known that we, EDWARD F. POOLEY and FRANK D. POOLEY, of Media, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Desks; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in desks.

The object of the invention is to provide an improved automatic supporting device or rest for a desk-lid which will more perfectly support the lid and will be cheaper, more simple and durable, and more positive and sure in action than automatic devices heretofore in use.

These and other objects are accomplished by and this invention consists in certain novel features of construction and in combinations of parts more fully described hereinafter, and particularly pointed out in the claims.

Referring to the accompanying drawings, Figure 1 shows the desk in perspective with the lid lowered, parts being shown in dotted lines. Figs. 2, 3, and 4 are detail perspective views of portions of the desk and parts for operating the rests. Fig. 5 is a perspective of a desk having the present improvement, the lid being partially lowered.

In the drawings, reference-letter *a* indicates a desk provided with the shelf *b*.

c is the swinging lid of the desk, hinged to swing as ordinarily. When this lid is closed, it is swung up, as shown in Fig. 2, so as to rest on the upper portion of the desk, and when the desk is open the lid is swung down horizontally, so as to form a continuation of the shelf *b*.

Heretofore in desks of this character sliding rests have been provided to support the lid whenin its horizontal position, and in some instances these rests have been connected by suitable links with the lid, so as to be moved automatically in and out beneath the lid when the lid is raised and lowered. These sliding rests necessarily have to be located at the side of the desk, so as to come beneath the end of the lid. Hence the lid is not supported at the center, and these sliding rests, because of the excessive friction between the extended rubbing-surfaces of the sliding and stationary parts engaged thereby, soon wear, become loose, and consequently rattle and do not move easily in operation.

By our invention we provide swinging rests connected with the lid, so as to swing out from the desk when the lid is lowered beneath the central portion of the lid between its ends, and hence these swinging rests support the center of the lid.

In carrying out our invention the side edges of the lid at their inner ends are rabbeted out at the upper surface at *d*, and leaf *e* of each hinge is screwed to the vertical side of each socket *d*. Opposite each hinged leaf *e* the ends of the shelf *b* are provided with recesses in which the opposite leaves *f* of the hinges are secured. The leaves *f* have horizontal flanges *g* along the outer side of their edges, through which the screws are passed. The ends of the shelf are provided with vertical slots *h*, extending transversely suitable distances across the ends of the shelf. Grooves *i* connect the outer ends of slots *h* with the inner ends of the recesses in which the leaves *f* are secured.

j j are the two swinging-rests located on opposite sides of the desk beneath the inner edge of the lid. Suitable recesses or openings are provided in the front of the desk to snugly receive these rests, (see Fig. 5,) so that when drawn in the rests close said recesses and may, if desirable, represent drawer-heads. These rests are pivoted at their inner ends by vertical pivots *k*, so that the outer ends of the rests can swing laterally or horizontally outwardly toward each other and the center of the lid.

A sliding head *l* is located in each slot *h* to reciprocate back and forth therein without wabbling. Each head has a laterally-extending part *m* at its lower end extending beneath the edge of its slot, so as to prevent the head

pulling out of the slot, and to the upper end of each head the inner end of the flat metal link *n* is pivoted to allow vertical swing of the link. The outer end of each link is pivoted to the outer face of each leaf *e*. Push-rods *o* are located in the spaces beneath the shelf and in rear of the swinging rests, and the outer end of each push-rod is pivoted to the inner side of its respective rest between its free end and pivotal point, so as to allow horizontal swing of the push-rod. The inner end of each push-rod is bent upwardly and journaled in its respective head *l*, so that its push-rod can swing laterally and will move with the head. When the lid is in its closed position, the heads *l* are located at the inner ends of their respective slots with the links diagonally extending from said heads to the upper end of horizontal leaves *e* and with the push-rods holding the rests swung into their respective recesses. When the lid is swung down, the links are drawn forwardly and downwardly with it to assume the horizontal position, thereby drawing the heads *l* forwardly in their respective slots, and hence moving the push-rods forwardly and throwing the outer ends of the swinging rests outwardly and around beneath the lid, so that by the time the lid reaches its horizontal position the swinging rests are there to support it. When the lid has assumed its horizontal position, the links also lie horizontal and parallel with and against the outer faces of the hinge-leaves, with their upper edges flush with the upper edges of said hinge-leaves and with the upper surfaces of the shelf and lid. When in this position, the links are lying in the grooves *i*, which are of such dimensions as to snugly receive said links with their upper edges flush with upper surface of desk-shelf. By varying the pivotal points between the push-rods and the swinging rests longitudinal of said rests the rests can be made to swing out under almost any portion of the lid. These swinging rests are pivoted within the openings in the desk-front, so that when operated one end of each swings in beneath the desk-shelf as the outer end swings out, so that the rests form firm supports for the lid, and the strain is not on the pivots. There is a minimum amount of friction and consequent decrease of wear and noise. The push-rods materially assist in supporting and upholding the outer ends of the swinging rests when upholding the lid, said rods being held rigid or supported by the sliding heads and their lateral portions bearing up against under side of the desk-shelf, and between their ends preferably supported by and resting on the desk-front at the bottoms of the rest-openings, whereby a strong firm support for the lid is formed, which is automatically swung in and out with a minimum amount of friction.

The attachments are applied to the extreme ends of the lid, and when the lid is in its horizontal position all parts of these attachments lie below or flush with the upper surfaces of the shelf and lid, so that said surfaces are level and free from all obstructions. The extreme simplicity and other great advantages of this construction are obvious.

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

1. In a desk, the combination of the desk-shelf, the vertically-swinging lid, a horizontally-swinging rest pivoted to the desk to swing horizontally in and out beneath said lid, a horizontally-swinging push-rod beneath the shelf, pivoted to a free end of said rest to draw the same in and out and assist in upholding the outer end thereof, a vertically-swinging link pivotally connected to the lid and to the inner end of said rod to operate the same with the lid, and a guide for the link and rod.

2. In a desk, the combination of the shelf, the vertically-swinging lid, the horizontally-swinging rests for said lid, horizontally-swinging push-rods pivotally united to and controlling said rests, sliding heads to which the inner ends of said push-rods are each pivotally joined, guides for said heads, and vertically-swinging links pivotally joined to the lid and to said heads.

3. In a desk having a shelf and a vertically-swinging lid and a horizontal opening beneath the lid, the combination, with the swing-rest fitting and at one end pivoted in said opening, of a horizontally-swinging push-rod beneath the shelf, at its outer end pivotally joined to the under edge of the free end of said rest, whereby said rod upholds the outer end of the rest, means, substantially as described, preventing upward movement of the inner end of said rod, and a vertically-swinging link loosely connecting the inner end of said rod and the lid to operate the rest with the lid.

4. In a desk, the combination of the vertically-swinging lid, the desk-shelf having the transverse slots, the desk-front having the two horizontal openings, the two horizontal swing-rests at their inner ends pivoted in the inner ends of their respective openings, so as to swing beneath the central portions of the lid when down, the heads confined to slide in said slots by projections bearing against under side of shelf, the horizontally-swinging push-rods pivoted to the free ends of said rests, having their inner ends bent up and journaled in said heads, and the vertically-swinging links pivotally uniting the upper ends of said heads with said lid, as and for the purposes set forth.

5. In a desk, the shelf having the openings through its end edges and slots therefrom to its outer edge, the vertically-swinging lid, hinges uniting the shelf and lid, each comprising a flat plate secured to the end edge of the lid and the plate screwed in said slot, the swing-rests and the sliding heads in said

openings pivotally connected with said rests to operate the same, as set forth, and the vertically-swinging flat metal links at their outer ends pivoted to the outer side of said lid-plates of the hinges and at their inner ends pivoted to said heads, all operating substantially as and for the purposes described.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

EDWARD F. POOLEY.
FRANK D. POOLEY.

Witnesses:
JAMES H. WOLFE,
THEO. D. RAND.