

(No Model.)

C. DORFF.
DESK LID SUPPORT.

No. 513,382.

Patented Jan. 23, 1894.

Fig. 1.

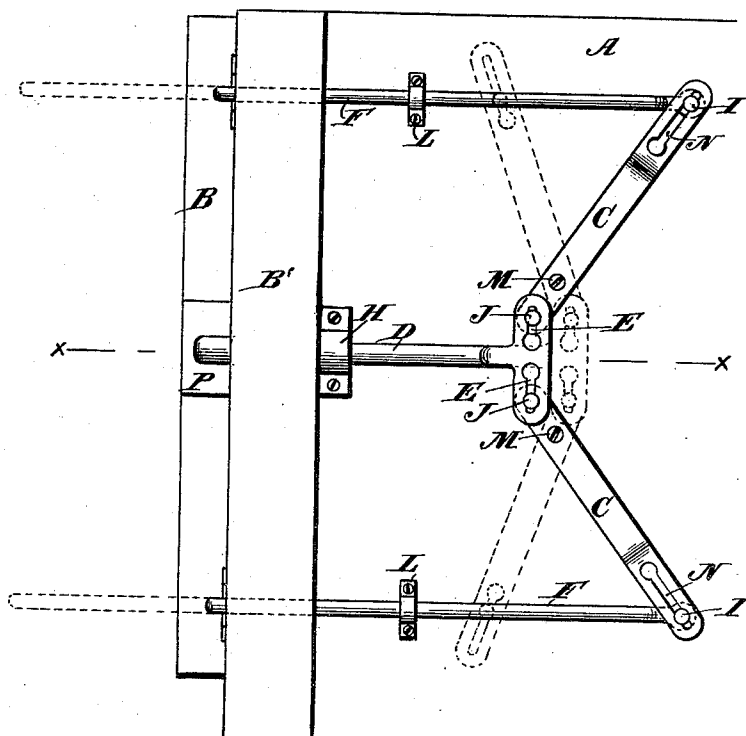
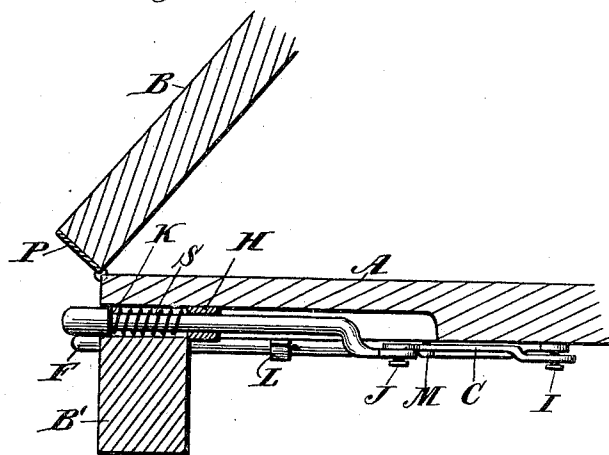


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES DORFF, OF GRAND RAPIDS, MICHIGAN.

DESK-LID SUPPORT.

SPECIFICATION forming part of Letters Patent No. 513,382, dated January 23, 1894.

Application filed May 13, 1893. Serial No. 474,157. (No model.)

To all whom it may concern:

Be it known that I, CHARLES DORFF, a citizen of the United States, residing at the city of Grand Rapids, in the county of Kent and State of Michigan, have invented a certain new and useful Leaf-Supporting Slide, of which the following is a specification.

My invention relates to a new and useful automatic slide for supporting the leaf of a desk or secretary, the same being operated by the letting down of the leaf and by lifting or closing the leaf; the same is peculiarly applicable to the leaf used in connection with secretaries and similar classes of furniture; and the objects of my invention are, first, to form a support for the let-down leaf which can be operated by merely opening and closing the leaf, and,—second, to furnish a support which will always be in position, in order to prevent the breaking of the hinges which attach the leaf to the secretary or desk. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure (1) is a bottom plan view of a shelf having its upper surface on a level with the opened leaf, and Fig. (2) is a sectional view on line X X of Fig. (1), showing a portion of a leaf closed.

Similar letters refer to similar parts throughout the several views.

In the example of my invention shown in the drawings, I have placed the mechanism which operates the automatic slides beneath the table or shelf to which the leaf is attached, this being my preferred form.

In the drawings A represents the shelf which is constructed in the ordinary manner, and B represents the folding leaf which is hinged to the shelf A in the ordinary manner, and which when opened has its upper surface in the same plane as the upper surface of A.

D represents a bolt supported in the sleeve H and in the front cross piece B'; a cylinder may be used surrounding the front end of the bolt D. The sleeve shown by H is used to retain the bolt in position, and also as a bearing or shoulder for the spiral spring hereinafter described. The bolt is provided with a shoulder K which may be constructed in any

suitable form for the purpose of forming a bearing for the spiral spring which is used to extend the bolt when the leaf is opened.

C C represent levers turning on fulcrums M M; these levers are pivoted on bolts J J passing through the slots E E in the T shaped portion of the bolt D. I prefer to make each slot larger at one end in order to facilitate the attachment of the levers by means of the rivets J to the bolt D. The outer ends of the levers C C are provided with slots N N.

The slides F F are attached by means of rivets I I to the levers C C, each rivet I passing through the slot N and having a sliding movement along the slot when the slides are operated. L L are ties or cleats, constructed in any suitable manner for retaining the slides F F in place. The front end of the slides F F pass through the cross piece B' so that each slide F is supported in the cross piece and by the cleat L, giving the slide a longitudinal movement only.

S is a coil spring surrounding the bolt D having a bearing at one end against the sleeve H and at the other end against the shoulder K.

P is a plate attached to the leaf B merely for the purpose of preventing wear when the leaf B is brought in contact with the front end of the bolt D. This plate, however, may be dispensed with, without interfering with the operation of my invention.

The operation of my invention is as follows: Let the leaf B be folded up as shown in the figures. By opening and turning the same upon its hinges the plate P is brought in contact with the front end of the bolt D, shoving back bolt D until it assumes position shown by dotted lines in Fig. (1); this turns the levers C C upon their fulcrums M M bringing forward the two slides F F to the position shown in dotted lines in Fig. (1), so that when the leaf B is opened so that its upper surface is in the same plane as the shelf A, the slides F F are extended so as to support the leaf. In closing the leaf B the bolt D is relieved from the pressure and the spring S immediately throws the bolt D forward to its normal position, withdrawing the slides to the position shown in Fig. (1).

Having thus described my invention, what

I claim to have invented, and desire to secure by Letters Patent, is—

1. In a desk or other analogous piece of furniture, the combination of sliding or extensible supports, a bolt having a longitudinal movement, levers connecting said sliding supports to said bolt, and a leaf adapted to extend the slides automatically upon being opened, and a spring adapted to return the slides to normal position when relieved from the pressure of the leaf, substantially as described.

2. The combination of a folding leaf, a sliding bolt, extensible slide, and a lever connecting said sliding bolt to said extensible slide; said bolt, slide and lever operated by the opening of the leaf, substantially as described.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

CHARLES DORFF. [L. S.]

Witnesses:

ARTHUR C. DENISON,
EDWARD TAGGART.