C. E. WILTON.

AUTOMATIC LID SUPPORT.

APPLICATION FILED APR. 17, 1917.

1,298,135. Patented Mar. 25, 1919.

Fig. 1.

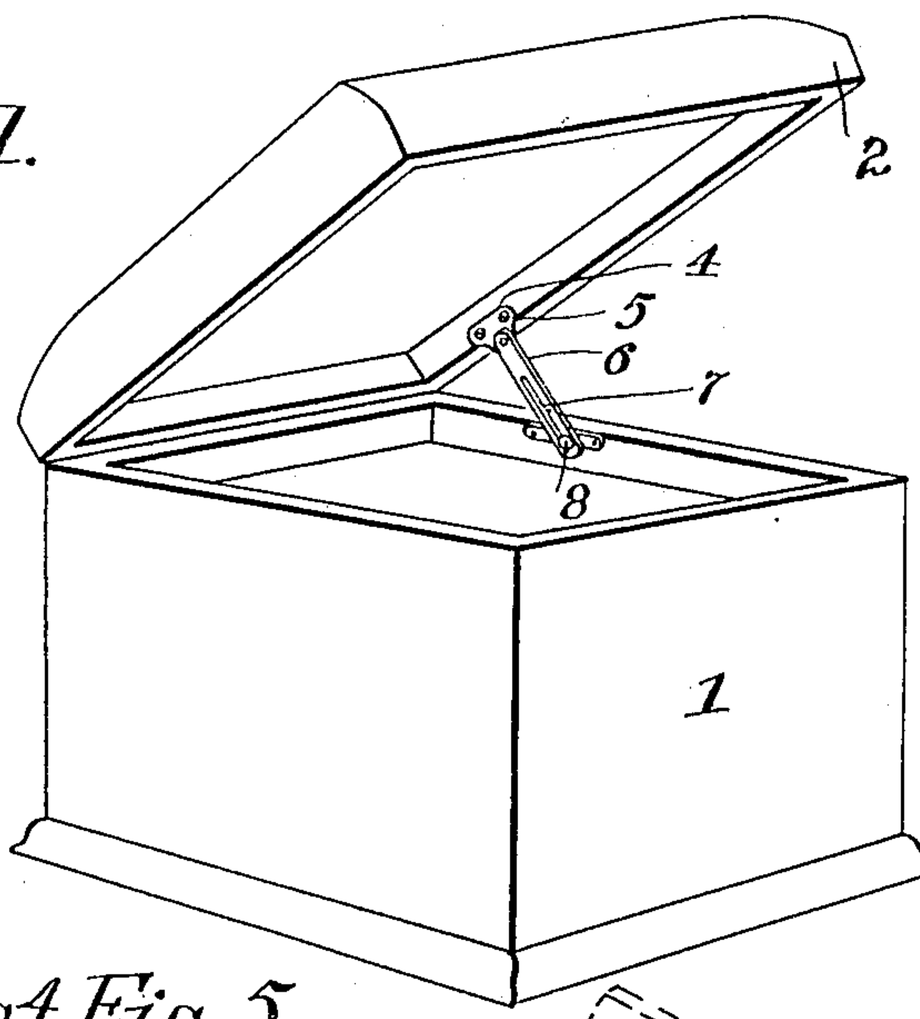
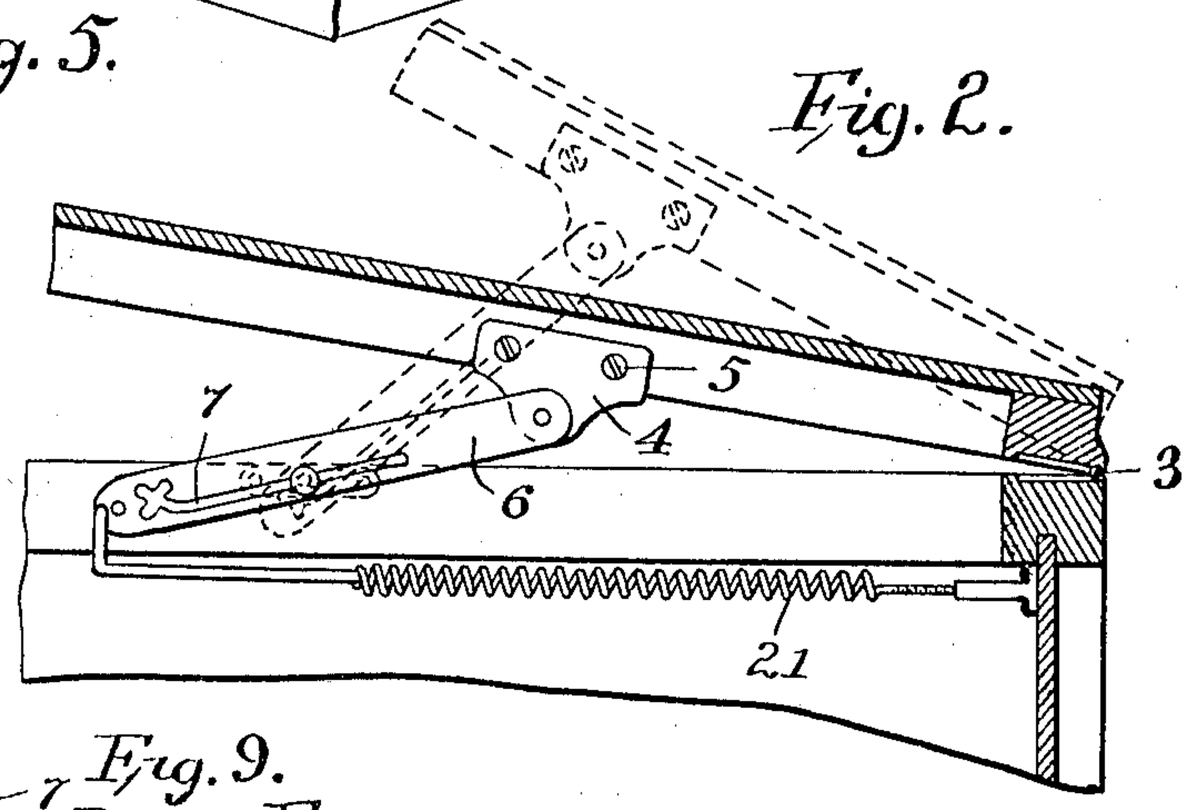


Fig. 3. Fig. 4. Fig. 5.

Fig. 2.



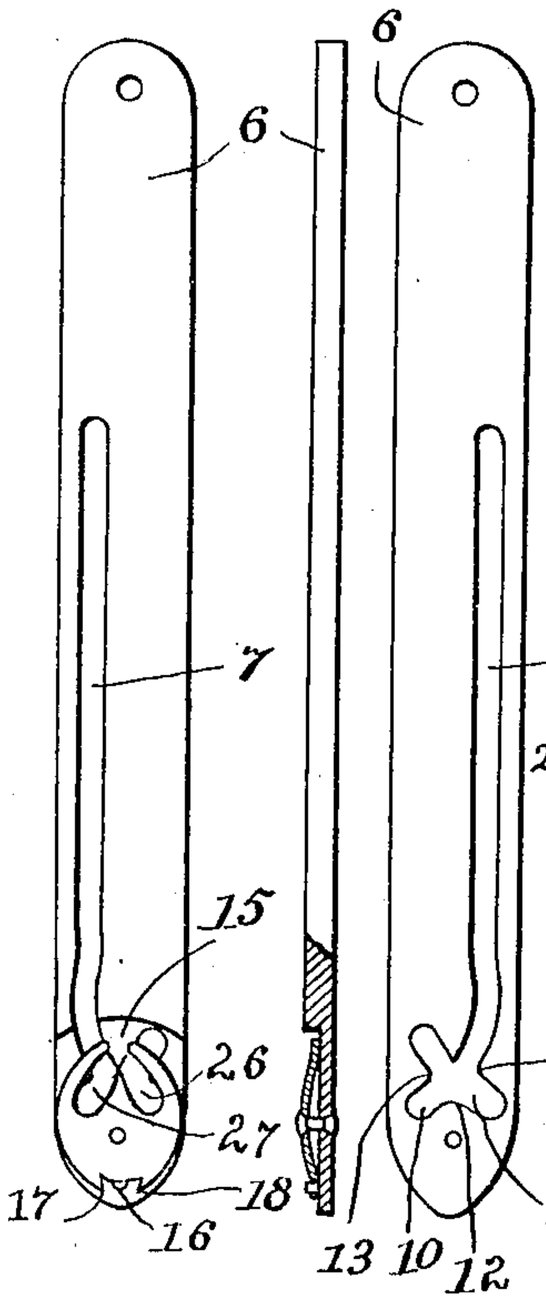


Fig. 9.

Fig. 6.

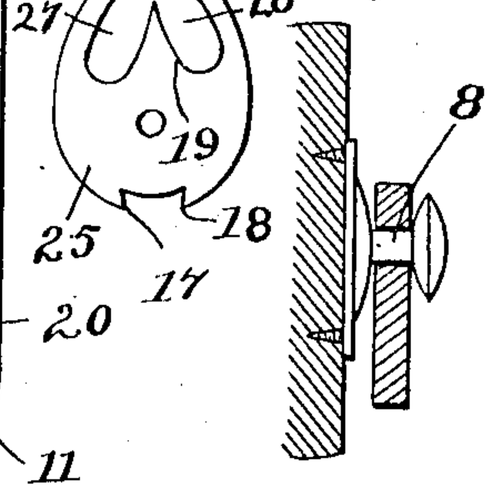
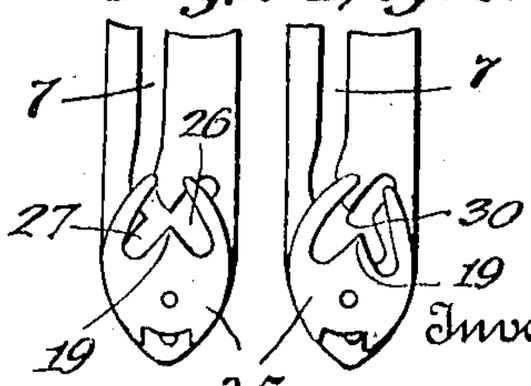


Fig. 7. Fig. 8.



Inventor

Carl Edward Wilton

By Percy H. Moore

Attorney

UNITED STATES PATENT OFFICE.

CARL EDWARD WILTON, OF PHILADELPHIA, PENNSYLVANIA.

AUTOMATIC LID-SUPPORT.

1,298,135. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed April 17, 1917. Serial No. 162,637.

To all whom it may concern:

Be it known that I, CARL EDWARD WILTON, a citizen of the United States of America, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Lid-Supports, of which the following is a specification.

This invention relates to certain new and useful improvements in means for supporting in open position the hinged lids or covers of desks, trunks, boxes, phonograph cabinets and the like.

The object of the invention is to provide an improved device of this character by which upon manually moving the lid or cover of the box or the like, to open position, the same will be automatically maintained in such position.

A further object of the invention is to insure the ready closing of the lid upon slightly raising the lid from its open position.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings:

Figure 1 is a perspective view of a phonograph cabinet with my invention attached;

Fig. 2 is a fragmentary view of a cabinet partly in section with my invention attached showing the lid in adjusted position;

Fig. 3 is a rear side view of the lid prop with guide plate attached;

Fig. 4 is an edge view of same partly in section;

Fig. 5 is a front side view of the lid prop with guide plate detached;

Fig. 6 is a detail view of the stud;

Figs. 7 and 8 are detail views showing the guide plate in different position.

Fig. 9 is a side view of the guide plate detached.

Referring more particularly to the drawings in which like reference characters indicate corresponding parts throughout the several views 1 designates a phonograph cabinet having the conventional hinged lid 2 to the cabinet as at 3. Secured to the inside of the lid 2 is a small plate 4, screw or other suitable fastening means 5 being employed for this purpose. A prop-bar 6 longitudinally slotted as at 7 adjacent one side edge thereof is pivotally attached at its upper end to the plate 4, the slotted portion 7 of the bar being adapted to slidably receive the headed pin or stud 8 projecting inwardly from the inner side of the cabinet.

The lower end of the slot 7 is inclined at an angle of approximately 45 degrees as at 10, this inclined portion communicating with and bisecting a short oppositely inclined slot 11 for a purpose about to be described.

In order to insure accurate and uninterrupted movement of the stud 8 from the upper to the lower end of the slot 11 and thence directly into slot 7 in effecting closing of the lid I provide a pivoted guide member or plate 25 pivoted to the outer face of the lower end of the prop-bar 6. This guide plate is formed with two oppositely inclined slots 26 and 27 of sufficient size to receive the stud 8 and respectively converging at the common opening 15. A pin 16 on the prop-bar adapted to engage shoulders 17 and 18 limits the movement of the guide plate.

Assuming the lid 2 to be in open position with the stud 8 seated in the upper end of the inclined slot 11 the guide plate will necessarily be in the position illustrated in Fig. 8 with its angular projection 19 blocking the stud 8 against entrance into the inclined end 10 of the slot 7. Hence all that is necessary to close the lid is to slightly raise the same thus causing the stud 8 guided by the angular projection 19 of the guide plate to pass from the upper to the lower end of slot 11, from whence it will ride past shoulder 20 into engagement with the curved wall of the shoulder or projection 30 of the prop 6 and thus be guided into the slot 7, if the lid is permitted to close of its own weight. The shoulder 30 acts as a stop to prevent the stud from reëntering the upper end of slot 11. As the stud enters the slot 7 the guide plate will be shifted to the position illustrated in Fig. 7 and will thus be in position to guide the stud into the inclined end 10 of slot 7 when it is desired to again open the lid. It will of course be understood that the spacing of the shoulders 17 and 18 is accurately gaged to cause one of the slots in the guide plate to register with one of the slots in the prop-bar when the guide plate has been moved in an obvious manner within its limit of movement by the stud 8 during the operation just described.

Assuming the lid 2 to be closed, the manual opening of same will cause a relatively downward movement of the stud 8 into the lower inclined end 10 of the slot 7. It being understood that the guide plate will be in the Fig. 7 position as a result of the previously described closing operation and consequently the angular projection 19 will guide the stud into the lower end 10 of slot 7. If the operator now takes his hand from the lid the latter will move by gravity slightly in a downwardly or closing direction until the stud 8 guided by the shoulder 30 seats in the upper end of the short inclined slot 11. During the movement just described the stud will ride first over the shoulder 12 and then over the shoulder 13 in an obvious manner and the guide plate will be moved to Fig. 3 and Fig. 8 positions respectively.

Any suitable tensioning means (not shown) may be employed to overcome any tendency on the part of the guide member to shift its position when the lid is closed and consequently when the stud 8 is not in engagement with the guide member. In actual practice applicant relies upon the inherent resiliency of the guide member to cause a close frictional contact with the bar 6.

An adjustable buffer spring 21 is preferably employed to eliminate jarring or rattling incident to a too hasty closing of the lid.

What I claim is:

1. An automatic prop for the hinged lid of a box or the like consisting of a slotted plate pivoted to said lid, a projection on the box working in said slot, a guide plate for said projection having a pair of separated slots adapted to be shifted relatively with respect to said first mentioned slot.

2. An automatic prop for the hinged lid of a box or the like consisting of a slotted plate pivoted to said lid, a projection on the box working in said slot, a guide plate for said projection having a pair of oppositely inclined slots, a portion of said guide plate extending between said slots adapted for engagement with said projection to shift the relative position of said inclined slots with respect to said first mentioned slot.

In testimony whereof I affix my signature.

CARL EDWARD WILTON.

Witness:

KATHRINE L. MILLS.