(No Model.)

A. LINDERS & H. D. LE ROY.

DRAWER GUIDE EQUALIZER.

No. 419,963. Patented Jan. 21, 1890.

Fig. I.

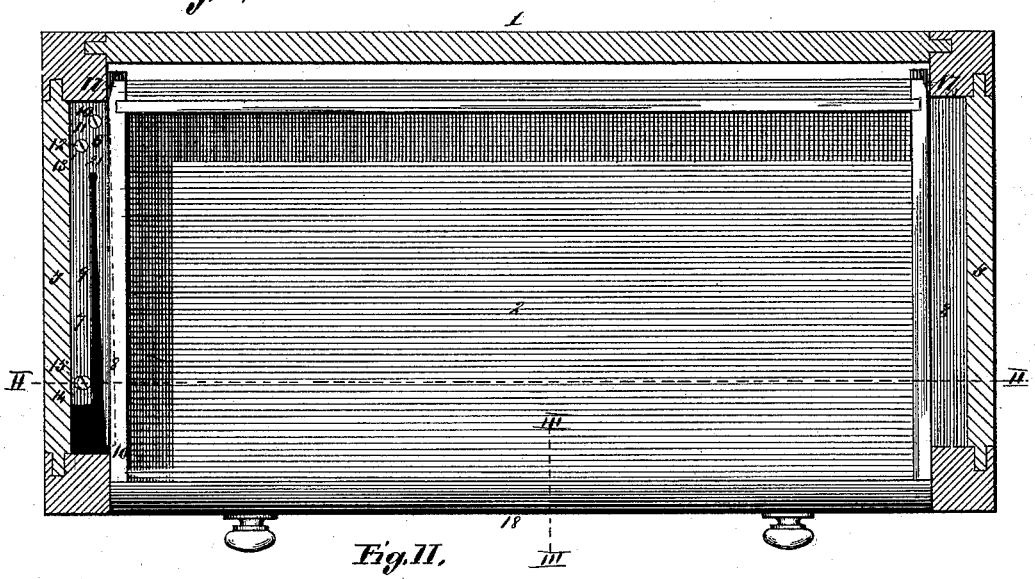

Fig. II.

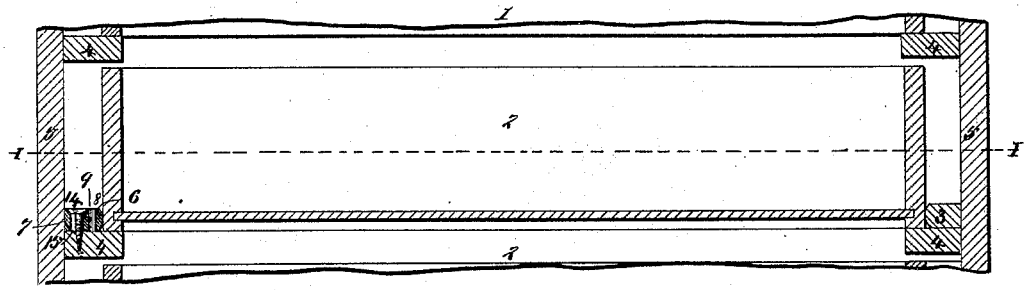

Fig. III.

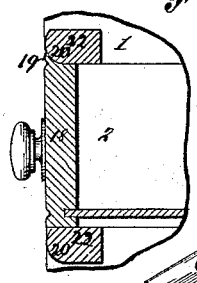

Fig. IV.

Fig. V.

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AUGUST LINDERS AND HENRY D. LE ROY, OF ST. LOUIS, MISSOURI.

DRAWER-GUIDE EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 419,963, dated January 21, 1890.

Application filed June 10, 1889. Serial No. 313,761. (No model.)

To all whom it may concern:

Be it known that we, AUGUST LINDERS and HENRY D. LE ROY, both of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Drawer-Guide Equalizers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a spring equalizing-guide located at one end of the drawer of a bureau, &c., that secures to said drawer in its movements a parallel motion to the position of the stationary guide-piece at the reverse end of the drawer by the elastic lateral pressure of said spring against said drawer, and secures to the action of the drawer a lively elastic movement that prevents its cramping during efforts to withdraw or close the same.

Figure I is a longitudinal horizontal section taken on line I I, Fig. II, and shows the closed drawer with the stationary guide-piece at one end and the equalizing guide-spring at the other end of said drawer. Fig. II is a longitudinal vertical section taken on line II II, Fig. I, and shows the respective positions of the stationary guide-piece at one end of the drawer and the spring equalizing-guide at the other end. Fig. III is a vertical transverse section taken on line III III, Fig. I, and shows the curvilinear upper edge of the front of the drawer that engages with the corresponding curvilinear lower edge of the forward bearer-bar above it to limit the insertion of the front of the drawer to the flush line of the face of the bureau. Fig. IV is an enlarged perspective view of the equalizer guide-spring, and shows the transversely-elongated screw-seats that provide means for the adjustment of the spring; and Fig. V is a transverse vertical section of said spring, and shows said transversely-elongated screw-seat that provides means for the adjustment of the set-screw.

Referring to the drawings, 1 represents a detail of a bureau or chest of drawers in which our spring-guide equalizer is used, and 2 are the drawers that run in said chest.

3 represents the stationary guide-piece at one end of the drawer, which is preferably secured by glue to that one of the two end bearer-bars 4 that supports that end of the drawer and to the inside of the corresponding end piece 5 of the chest-frame.

6 represents the guide-spring equalizer, which is preferably constructed of wood, and is formed with a rear attachment portion 7 and a forward tapered spring portion 8, and is provided with a tapered cut-away 9 between the attachment portion 7 and the spring portion 8 of said equalizer, at the inner end of which, or the point of the taper, is provided a circular perforation, that adds elasticity to the spring and prevents the splitting apart of the material of which said spring-guide equalizer is made, which is preferably of wood, but may be of any other suitable material.

10 represents a pivotal screw which passes through the perforate screw-seat 11 in the solid end of the spring-guide equalizer and is screw-seated in the bearer-bar 4 beneath it. A re-enforcing screw-attacher 12 passes through a transversely slightly-elongated perforate screw-seat 13, and is also screw-seated in the bearer-bar 4 beneath it. The adjustable set-screw 14 passes through the transversely-elongated perforate screw-seat 15 at near the front end of the attachment-bar 7 of the spring-equalizer, and is screw-seated in the aforesaid bearer-bar 4. The point of the taper equalizer-spring 8 is beveled at 16 on the outside, so as to receive the drawer on its initial presentation and act as a lateral spring-buffer that retires before the pressure of the inserted drawer, instead of as an abutting buffer as would be presented by a square stub point.

The position of the point of the equalizing guide-spring when the drawer is withdrawn is shown in broken line in Fig. I. The drawer is preferably constructed about an eighth of an inch shorter at the back than at the front, and the back extension of the end pieces have outer bevel terminals 17, which, together with said slight reduction in the length of the back of the drawer, both facilitates its initial entrance as also its movements in both closing and opening.

18 represents the front pieces of the drawers, which have curvilinear lips 19, that surmount the top edges of said front pieces and fit the curvilinear lower edges 20 of the front bearer-bar 22 of the drawer above, and in the top drawer fits the like edge of the top of

the chest, so as to limit the insertion of the drawer and prevent its passing the flush line of the face of the bureau or chest.

Now it will be seen that as the drawer is moved either in closing or opening the long laterally-operative spring 8, acting as it does across the whole extent of the end of the drawer with a lively and easy elastic pressure of said spring, retains the respective positions of both the ends of the drawer, the one end against said spring and the other end against the stationary guide-piece 3, so that the ends of the drawer have thus maintained for them a parallel position with the adjacent parts in contact with which they move, and even should they be either closed or opened by the unequal pressure or draft being applied alone to the handle at one end the moving drawer will not cramp and become set in any unequal position consequent upon the unequal pressure, as would a drawer that was unprovided with means for equalizing the movements of its respective ends. The spring secures for the drawer a laterally-buoyant movement that elastically overcomes the uneven pressure or draft that is exercised on the drawer when operated unevenly.

We have shown and described the upper front edges of the drawers with curvilinear lips engaging with the curvilinear lower edge of the front bearer-bar or top of the chest; but we do not confine ourselves to said curvilinear form of said parts, as they may be made square in rectangular form in accordance with the usual construction.

Our guide-spring equalizer is also applicable to any ordinary chest of drawers or other furniture in which drawers constitute a part thereof.

We claim as our invention—

1. In a drawer-equalizer, a substantially straight guide-spring fixed at its inner end, the outer end being entirely free and having a tongue with a beveled end, substantially as set forth.

2. In a drawer-equalizer, a guide-spring having a rear attachment portion and a forward tapering spring portion with a tapered cut-away between said portions, substantially as set forth.

3. In a drawer-equalizer, a guide-spring having a rear attachment portion 7 and a forward tapering portion 8, provided with a beveled end, with a tapering recess between said portions, substantially as set forth.

4. In a drawer-equalizer, the combination of the stationary guide-piece at one end of the drawer and the guide-spring at the other end of said drawer, constructed of an attachment portion 7 and a tapering spring-bar 8, the said parts being integral at one end and having a tapering cut-away between said parts 7 and 8, the point of which tapering cut-away terminates in a circular perforation 21, to add to the elasticity of the spring and to prevent the splitting apart of said portions, substantially as described, and for the purpose set forth.

5. In a drawer-equalizer, the combination of the stationary guide-piece at one end of the drawer, the guide-spring 8, and the attaching-bar 7, with which it is integral at one end, at which end is the vantage ground from which the spring works, the screw 10, that pivotally secures the spring and its attachment-piece to the bearer-bar 4, on which the adjacent end of the drawer runs, the re-enforcing screw-attacher 12, that is provided with a transversely slightly-elongated perforate seat in the attachment portion of the guide-spring equalizer, and the adjustable set-screw 14, that operates in a transversely-elongated perforate seat that provides means for grading the elastic-pressure adjustment of the equalizing guide-spring, substantially as described, and for the purpose set forth.

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In presence of—
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