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SELF RAISING LID FOR ICE CREAM CABINETS.

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1,341,518. **Patented May 25, 1920.**

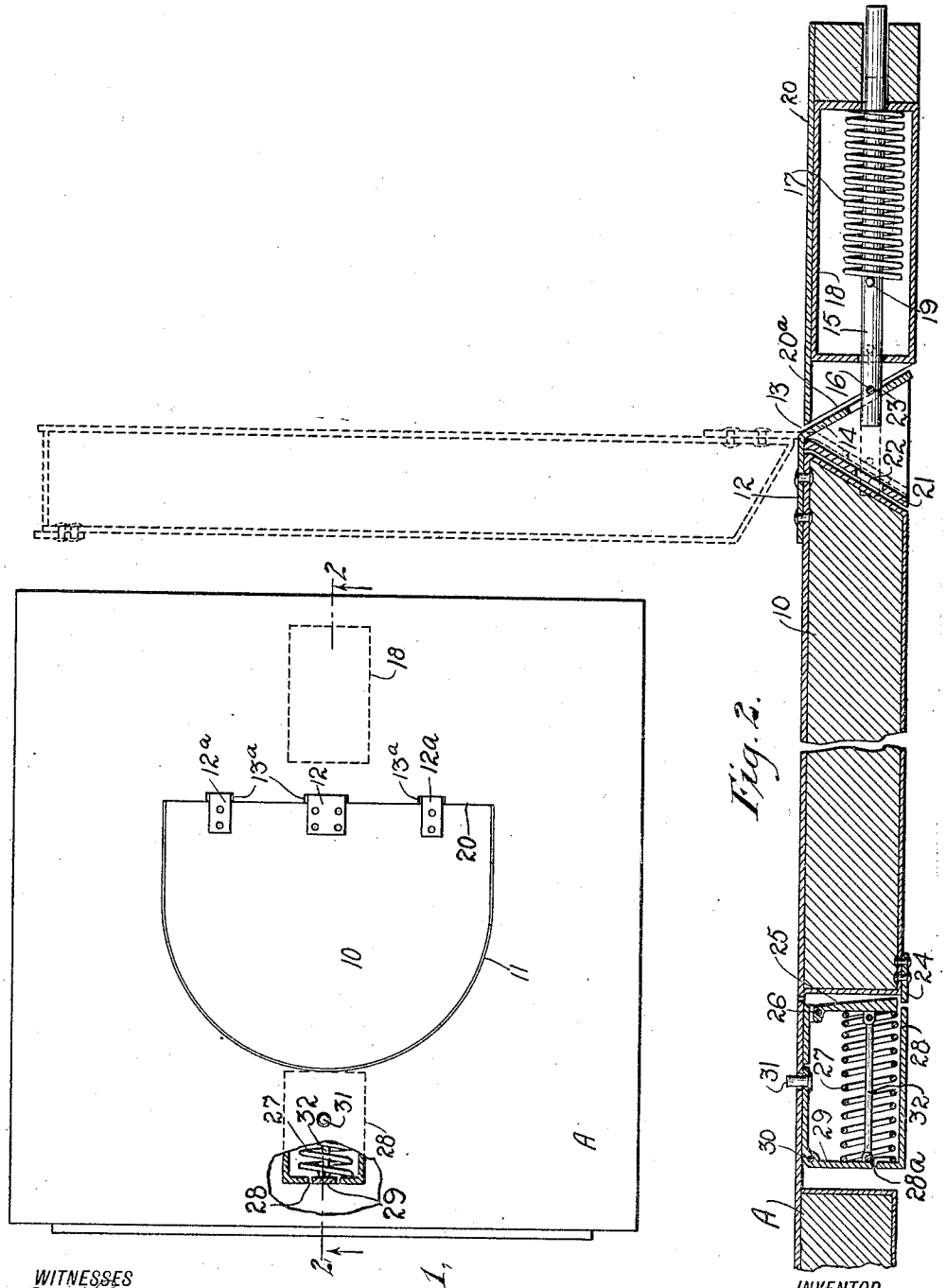


Fig. 2.

Fig. 1.

WITNESSES

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SELF-RAISING LID FOR ICE-CREAM CABINETS.

1,341,518. Specification of Letters Patent. Patented May 25, 1920.

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To all whom it may concern:

Be it known that I, CHARLES REED RAGSDALE, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented a new and Improved Self-Raising Lid for Ice-Cream Cabinets, of which the following is a description.

My invention relates to the lid of cabinets, and more particularly to ice cream cabinets of soda fountains.

The general object of my invention is to provide a lid of the indicated character provided with novel means whereby to automatically throw the lid to the raised position whenever the latch means releases the lid.

More specifically, I have in view to provide an embodiment of the invention reflecting practical considerations with respect to simplicity and durability as well as convenience of installation.

Reference is to be had to the accompanying drawings forming a part of this specification, it being understood that the drawings are merely illustrative of one example of the invention.

Figure 1 is a plan view of an ice cream cabinet having a lid embodying my invention;

Fig. 2 is an enlarged longitudinal vertical section on the line 2—2, Fig. 1.

The lid 10 is here shown as having a straight rear edge and a rounded front edge and arranged to close a corresponding opening 11 in the top of a cabinet A. The cabinet top and lid preferably are formed of wood or equivalent material covered with polished metal. Instead of positively securing the lid to the cabinet by hinges, I provide on the rear edge of the lid a rigid angular tongue 12, said tongue presenting a free portion 14 extending obliquely downwardly from the rear edge of the lid 10, the rear edge of the lid usually presenting a bevel or obliquity the opposite of that of the tongue member 14. Said tongue member is adapted to be passed downwardly through the slot 13 in the cabinet at the back of the opening 11, said slot leading to a downwardly flaring clearance space beneath to accommodate the swinging movement of the tongue member 14 through a limited angle as will appear.

The cabinet at the rear of and adjacent to the opening 11 has mounted thereon a plunger 15 extending longitudinally through a housing 18 and projecting beyond the ends of the same, said plunger having a member or formation 16 here shown as in the form of a transverse pin adjacent to the tongue member 14. Coiled about the plunger 15 is a compression spring 17 that abuts at its rear end against the rear end of housing 18 and abuts at its front end against a pin or equivalent device 19 on the plunger so that when under compression the spring tends to throw the plunger forwardly. The front end of the plunger may extend through a slot 23 in the tongue member 14. The clearance space in which said tongue member moves is defined at the back of the tongue member 14 by a beveled edge 20 on a member rigid with the metal material 20 covering the cabinet top while at the front end the opening is defined by a front metal wall 21, said wall and the edge 20 being convergent toward the top in accordance with the clearance space provided thereby. Said front wall 21 has an opening 22 through which the end of the plunger may project when in the forward position. Besides the tongue 12 additional narrower tongues 12^a are in practice advantageously provided on the lid 10 at opposite sides of the tongue 12 to enter slots 13^a similar to the slot 13.

With the described arrangement the lid having been properly positioned at the opening 11 by passing the tongues 12, 12^a through the respective slots and the tongue member 14 disposed in position to be subject to the plunger 15, if the lid be swung from the raised dotted line position to the closed position, the tongue member 14 will swing rearwardly toward the oblique edge 20 and by engagement with the member 16 of the plunger will force the latter rearwardly, the pin 19 serving to place the spring 17 under compression in the rearward movement of the plunger. Novel latch means as hereinafter described hold the lid in the closed position and when the lid is disengaged from the latch the spring 17 will throw the plunger forwardly, said plunger exerting its forward pressure against the tongue member 14, thereby carrying the same to the forward position and automatically throwing the lid to the raised dotted line position.

A novel latch adapted to be released by

the depression of a pushbutton is provided as follows to engage the lid 10 at the front: a suitable catch member 24 projects beyond the front edge of the lid 10 at the bottom and is adapted when the lid is closed to be engaged by a vertically disposed latch 25 pivoted at its upper end as at 26 on the cabinet adjacent to the opening 11. A compression spring 27 in a housing 28 abuts at its forward end against the latch 25, tending to maintain the same in latching position, said spring abutting at its rear end against the rear end of the housing 28. A bellcrank lever 29 is pivoted at its angle as at 30, beneath the metal covering 20 of the cabinet, and presents a horizontal arm beneath the said material 20 and provided with a pushbutton 31 extending above the top surface of the cabinet to be conveniently depressed. The other, depending arm of the lever 29, is accommodated in a slot or opening 28^a in the rear end of the housing 28. The slot 28^a and the tongue 29 are of comparatively narrow width and the coiled compression spring 27 is of sufficiently large diameter to abut against the end of the housing at the sides of the slot and tongue so that the end of the housing and not the lever 29 takes the thrust of the spring. The depending arm of the lever 29 is connected by a link 32 with the pivoted latch 25, whereby the depression of the pushbutton 31 will so rock the lever as to throw its depending arm rearwardly and through the link 32 draw the latch 25 rearwardly against the action of the spring 27, thereby releasing the catch 24 and permitting the spring 27 and plunger 15 to automatically throw the lid 10 to the raised position. The described manner of swingably disposing the lid 10 and maintaining it at its hinged end in proper engagement with the cabinet without the employment of a positive hinge connection is of such a character that the lid can be readily removed if desired for repair or the like, simply by pressing the plunger 15 sufficiently rearwardly to permit of disengagement of the tongue member 14.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of my invention, I do not limit myself strictly to the mechanical details herein illustrated, since manifestly the same can be considerably varied without departure from the spirit of the invention as defined in the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. The combination with a receptacle and a lid thereon adapted to be raised or lowered; of a wing rigid with said lid and projecting therefrom, to be swung through an arc in the raising or lowering of the lid, a compression spring mounted on said receptacle independently of said lid and adapted to be compressed by arcuate movement of said wing in the lowering of the lid, the reaction of the spring serving to lift said lid.

2. The combination with a receptacle, of a lid having a wing rigid therewith and projecting from an edge thereof into swingable engagement with the cabinet in a manner to prevent accidental displacement of the lid, said structure being formed with a clearance space and a slot leading thereto to accommodate said wing, said space permitting swinging of said wing in the raising and lowering of the lid; together with a spring adapted to raise the lid, and means to cause the spring to be stressed by the swinging of said wing with the closing movement of the lid.

3. A lid raising device including a reciprocating plunger, means to mount the same on a structure adjacent to the lid thereon to be shifted by said lid, means on the plunger engageable with the lid part in the reverse movement of the plunger, and a spring compressible by movement of the plunger in the closing of the lid, said spring being adapted to react on the plunger to raise the lid.

4. The combination with a cabinet and lid thereon, of a wing rigid with the lid, said wing projecting angularly from the lid and extending into swingable engagement with the cabinet, of spring means adapted to be compressed by said wing with the lowering of the lid and to react on the wing to throw the lid to the raised position.

5. The combination with a cabinet, and a lid thereon, said cabinet having a space adjacent to the lid and flaring downwardly, an angular wing extending downwardly from the lid at the rear edge through the top of the cabinet into said space, a reciprocating plunger mounted on the cabinet and extending into said space, a spring adapted to be compressed by the rearward movement of the plunger and adapted by its reaction to throw the plunger forwardly, means to cause engagement of the plunger and wing for automatically raising the lid by the reaction of the spring and causing a rearward movement of the plunger and compression of the spring by the wing with the lowering of the lid, and means to limit the forward and reverse movements of the plunger and wing in the raising and lowering of the wing.

6. The combination with a lid and a structure on which said lid is mounted to be raised or lowered, of a depending latch pivoted at its upper end on said structure adjacent to the free edge of the lid and adapted to engage the latter in its lowered position, a spring tending to maintain the

latch in latching position, a pushbutton on the structure extending through the top of the same adjacent to the latch, and connections between the pushbutton and the latch adapted to swing the latter to the unlatched position and stress said spring.

7. The combination with a lid and a structure on which said lid is mounted to be raised or lowered, of a depending latch pivoted at its upper end on said structure adjacent to the free edge of the lid and adapted to engage the latter in its lowered position, a compression spring housing the latter, the spring abutting at its forward end against the latch and at its rear end against said housing, a bell-crank lever at the rear end of the housing, a link extending through said spring and connecting one arm of said lever with said latch, and a pushbutton on the other arm of said lever and extending through the top of said structure.

8. The combination with a lid and a structure on which said lid is mounted to be raised or lowered, of a depending latch pivoted at its upper end on said structure in position to engage said lid in the lowered position of the latter, a spring tending normally to maintain the latch in latching position, a lever connected with said latch to throw the same to the unlatched position and in opposition to the spring, means to actuate said lever and extending through the top of said structure for convenient operation.

CHARLES REED RAGSDALE.