J. B. CHERNEY.

LID CONTROL MECHANISM.

APPLICATION FILED JAN. 31, 1914.

1,136,865. Patented Apr. 20, 1915.

Fig. 1.

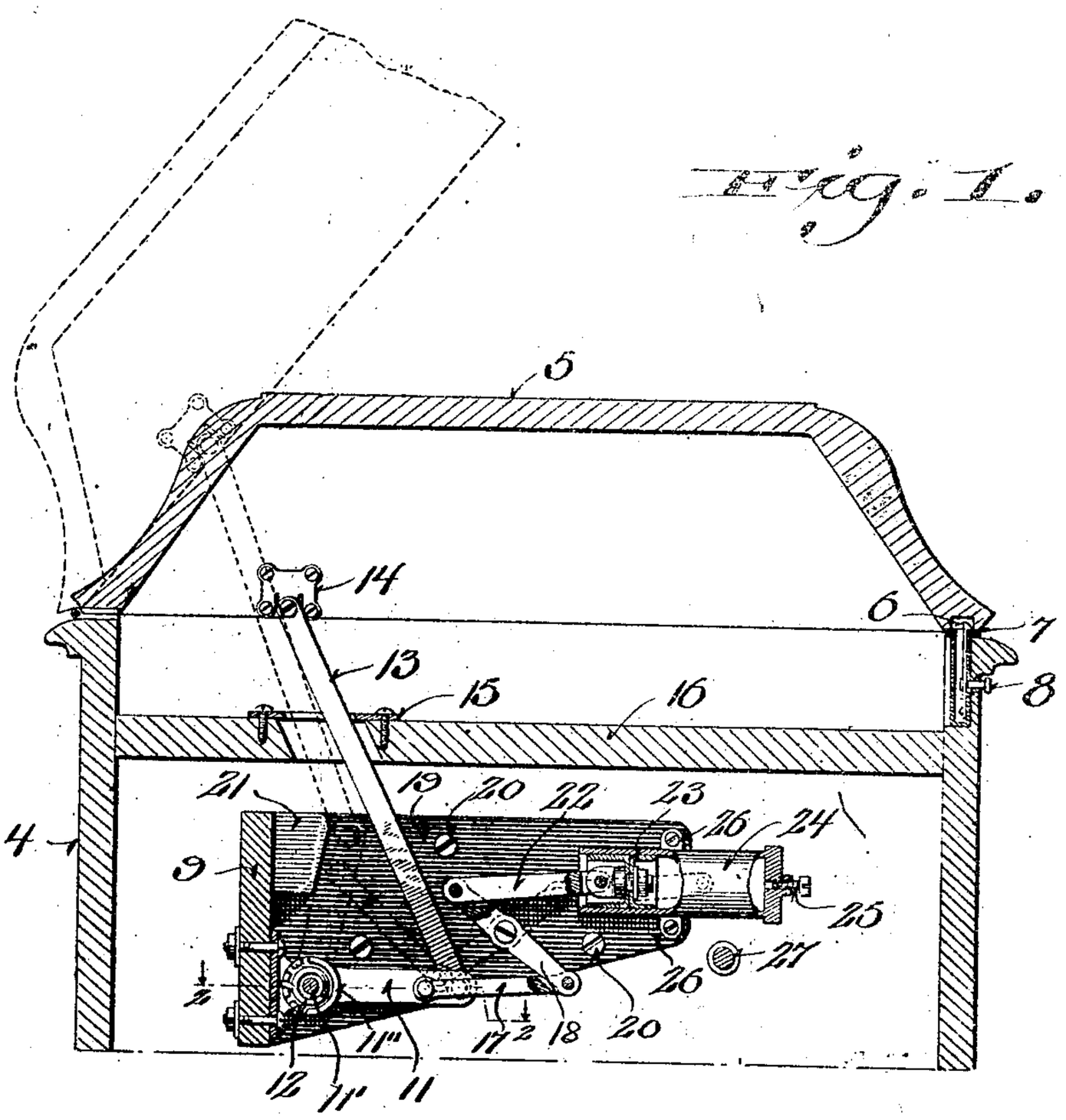


Fig. 2.

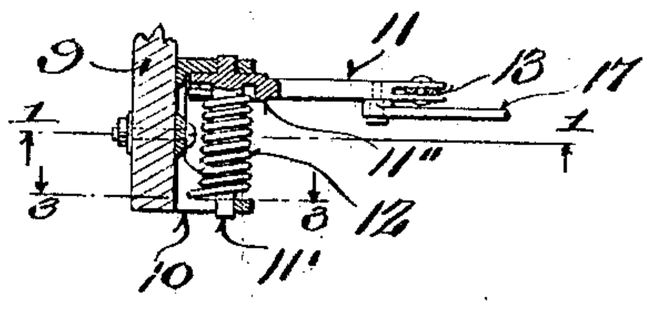
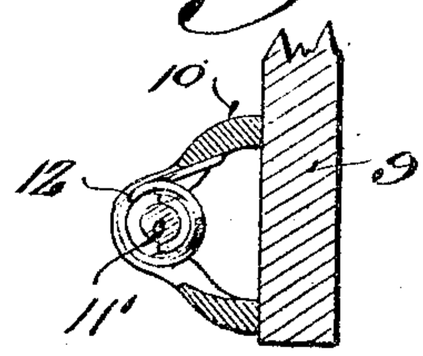


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH B. CHERNEY, OF MILWAUKEE, WISCONSIN.

LID-CONTROL MECHANISM.

1,136,865. Specification of Letters Patent. Patented Apr. 20, 1915.

Application filed January 31, 1914. Serial No. 315,641

To all whom it may concern:

Be it known that I, JOSEPH B. CHERNEY, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Lid-Control Mechanism; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is herein particularly set forth with reference to the accompanying drawings and pointed out in the claims of this specification, its object being to provide for automatic lifting of the lids of cabinets, chests, trunks and other receptacles, as well as to insure of retension of such lids in lifted position against automatic closing, said invention being especially designed for automatic lift of released lids of gramophone and gramophone cabinets, said lids being then supported in lifted position until manually closed.

Figure 1 of the drawings represents a sectional view of a fragment of a graphophone or gramophone cabinet provided with automatic lid-lifting and supporting means in accordance with my invention, the plane of the section being indicated by line 1—1 in the next described illustration; Fig. 2, a detail plan view partly in horizontal section indicated by a line 2—2 in Fig. 1, and Fig. 3, a detail elevation partly in section as indicated by line 3—3 in Fig. 2.

Referring by numerals to the drawings, 4 indicates the body of a graphophone or gramophone cabinet, and 5 the lid of the cabinet in hinge connection with said body. The lid is fastened down in its normal position by any suitable means, the means shown being a spring-latch 6 and a keeper 7 applied to the cabinet-body and said lid respectively. To provide for manual disengagement of the latch from its keeper, said latch is attached to a push-pin 8 that extends outside of the cabinet-body.

Rigidly secured in the cabinet-body, to project at a right-angle to a side wall of the same, is a supporting block 9, and bolted or otherwise suitably fastened to the block is a bracket 10 in which a lateral spindle-end 11′ of a lever 11 is journaled. Connected at its ends to the bracket and lever respectively is a spiral-spring 12 of suitable power surrounding the spindle-end 11′ of said lever. An annular inner flange 11″ of the lever, concentric with the spindle-end of said lever, is radially toothed to provide for the tensioning of the spring 12, the adjacent end of said spring being caught between some two of the flange-teeth.

Pivotally supported at its lower end in a fork of the lever 11 is a link-bar 13, and the upper end of this bar is pivotally secured to a plate 14 fastened by screws or other suitable means in the lid of the cabinet. The link-bar is guided in a slotted plate 15 fastened by screws or otherwise on the bottom 16 of the upper compartment of the cabinet-body over a slot in said bottom.

A link 17 is employed to connect the lever 11 and an extremity of a lever 18 of the first class herein shown fulcrumed on a block 19 that is fastened, by conveniently disposed screws 20, to the aforesaid side wall of the cabinet from which the block 9 projects, both blocks being suitably joined in abutting contact to form a supporting bracket for other parts of the herein described mechanism. Shown in connection with the blocks, at their intersection, is a permanent stop 21 to limit upward movement on the part of the lever 11, but said stop may be sometimes omitted. The other extremity of the lever 18 is connected by a link 22 to a piston 23 in an air cylinder 24, shown as having its vent regulated as to area by the adjustment of a slabbed screw 25, and the cylinder is provided with apertured ears 26 through which fastening screws 27 extend into the block 19.

It is within the scope of my invention, as herein claimed, to omit the block 19 and secure the lever 18 and air cylinder 24 direct to the adjacent wall of the cabinet or other receptacle.

In practice there is contraction of the spring 12, when the lid of the receptacle is lowered, and at the same time the piston 23 is moved in one direction of its play in the air cylinder against partial vacuum resistance to prevent slamming of said lid. The lid being fastened down, the various movable parts of the herein described mechanism remain in the positions shown by full lines in Fig. 1, but said lid being released, the spring 12 reacts to shift said parts to the positions shown by dotted lines in said Fig. 1, there being a gradual automatic lift of the aforesaid lid against compressed-air resistance occurring in the cylinder 24 back of the piston 23.

The part 27 appearing in Fig. 1, is the motor-wind crank-shaft of a graphophone

or gramophone and constitutes no part of my invention.

I claim:

1. The combination of a receptacle having a hinged lid, a block rigid in the receptacle at a right-angle to a side wall of the same, a bracket fast on the block, a lever having a lateral spindle-end journaled in the bracket, a spiral-spring surrounding said end of the lever and tensioned in connection with said lever and bracket, a link-bar in pivotal connection with the lid and lever, means in connection with said lever for checking movement of the same in opposite directions, and means for fastening said lid in closed position.

2. The combination of a receptacle having a hinged lid, a block rigid in the receptacle at a right-angle to a side wall of the same, a bracket fast on the block, a lever having a lateral spindle-end journaled in the bracket, a spiral-spring surrounding said end of the lever and tensioned in connection with said lever and bracket, a link-bar in pivotal connection with the lid and lever, means in connection with said lever for checking movement of the same in opposite directions, a stop extending from said block in the lifting path of the lever, and means for fastening said lid in closed position.

3. The combination of a graphophone or gramophone cabinet having a hinged lid, a fixed plate in the lid, a spring-controlled lever fulcrumed in the cabinet below the bottom of an upper compartment of the same, a slotted plate in connection with said bottom, a link bar guided in the slotted plate and connected to the lever and the other of said plates, means for fastening the lid in closed position, and means in connection with said lever for checking movement of the same in opposite directions.

4. The combination of a graphophone or gramophone cabinet having an upper compartment and a hinged lid; a spring-controlled lever fulcrumed in the cabinet below the bottom of the upper compartment of the same, a link bar connecting the lid and lever and having play in a slot with which said bottom is provided, means for fastening the lid in closed position, and means in connection with the lever for checking movement of the same in opposite directions.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

JOS. B. CHERNEY.

Witnesses:
N. E. OLIPHANT,
M. E. DOWNEY.