B. B. BLOOD.

COVER SUPPORT.

APPLICATION FILED JUNE 4, 1917.

1,296,260.

Patented Mar. 4, 1919.

Fig. 1.

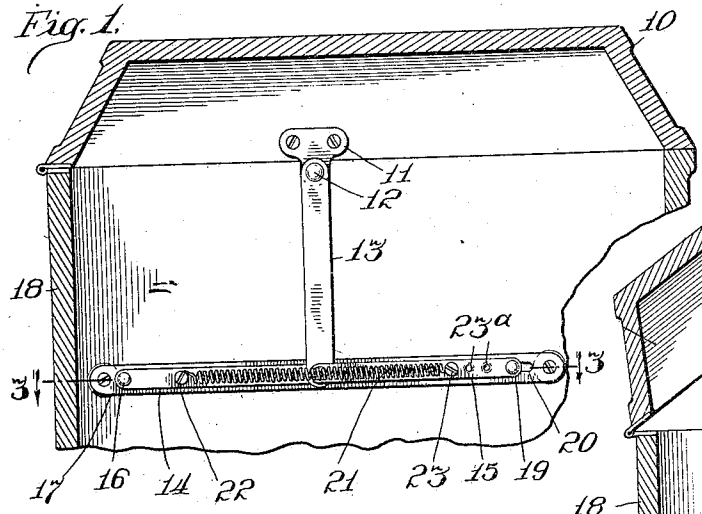


Fig. 2.

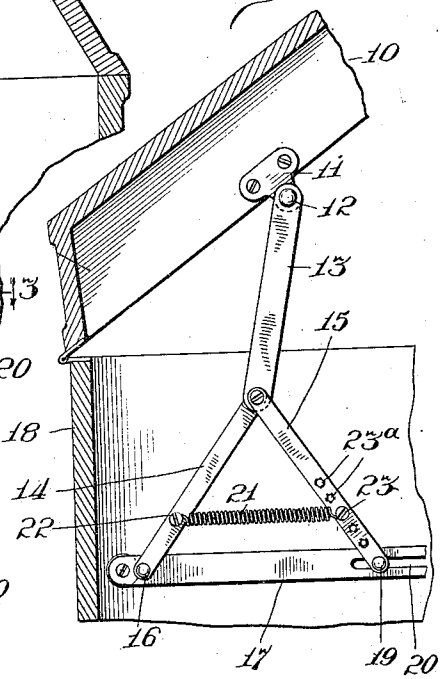


Fig. 4.

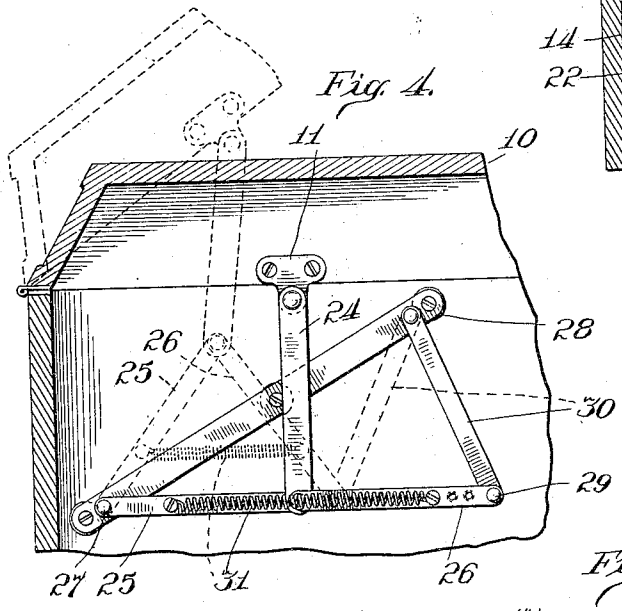
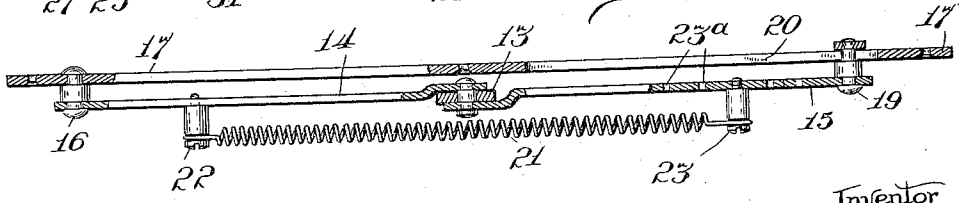


Fig. 3.



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COVER-SUPPORT.

1,296,260. Specification of Letters Patent. Patented Mar. 4, 1919.

Application filed June 4, 1917. Serial No. 172,576.

To all whom it may concern:

Be it known that I, BURR B. BLOOD, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cover-Supports, of which the following is a description, reference being had to the accompanying drawing, which forms a part of my specification.

My invention relates more particularly to a support for the cover of a phonograph cabinet; having for its object the provision of a construction which will automatically assume a supporting position when the cover or lid has been raised or tilted; the construction at the same time being such that a predetermined degree of pressure on the cover or lid, when it is desired to lower or return same to closed position, will move the support out of supporting position.

The invention may have expression in different mechanical forms without, however, departing from the spirit of the invention; the drawing, however, illustrating what I believe to be the best forms of the invention; the advantages and operation whereof will be more fully comprehended from the following detailed description of the accompanying drawing, wherein:—

Figure 1 is a cross sectional view of the upper part and lid or cover of a phonograph cabinet illustrating my invention in elevation, with the cover in closed position.

Fig. 2 is a similar sectional view illustrating the position of the support when the cover is raised or tilted.

Fig. 3 is a cross-sectional view taken on the line 3—3 of Fig. 1, looking downwardly.

Fig. 4 illustrates a modified form of my invention; the upper part of the phonograph cabinet and portion of the cover being shown in cross section, with my improved cover-support in side elevation; the supporting position of the device being illustrated in dotted lines.

The invention is shown applied to a phonograph cabinet for the purpose of supporting or maintaining the cover or lid 10 in elevated or tilted position, as shown in Fig. 2; the particular exemplification of the invention, as disclosed in the first three figures of the drawing, comprising a bracket-member or lug 11 adapted to be secured to the inner side of the cover or lid 10; the bracket providing a pivotal point at 12 for a depending link or arm 13.

The opposite end of link 13 has pivotally secured thereto, two links 14 and 15, preferably of substantially equal length. The link 14 has a fixed pivotal point at 16 on a fixed horizontally disposed bar 17 which is suitably secured on the inside of the phonograph cabinet indicated at 18. Link 14 is free to oscillate vertically about its pivotal point 16; while the link 15 has slot and pin connection with the bar 17 by means of a suitable pin 19 which is adapted to slide in the slot 20 of bar 17; the pin 19 being at the free end of link 15, as shown in Fig. 2. The slot 20 extends lengthwise of bar 17 for a predetermined distance, to wit to a point slightly to one side of the vertical plane normally occupied by link 13, namely when the device is in non-supporting position, as indicated in Fig. 1.

At a suitable point intermediate of the ends of both links 14 and 15, I provide a retracting coil spring 21; the ends of the spring 21 being secured at 22 to link 14 and at 23 to link 15, preferably at a point in proximity to the ends of the links farthest removed from their pivotal connections with link 13.

I prefer to provide one of the links, as for example link 15, with a series of holes 23^a, see Figs. 2 and 3, adapted to receive the end of the spring 21 or a suitable pin as shown. With one of the links thus provided with a number of securing points for one end of the spring, it is evident that the tension of spring 21 may be regulated so as to induce positive collapsing movement of the toggle lever construction and cause the link 15 to remain in its intimate relation with link 14.

The bar 17 is preferably placed in the same horizontal plane as the lower end of link 13 when the latter is in its normal vertical position. As links 14 and 15 are secured to bar 17, it is apparent that when the device is in normal position, namely when the cover or lid is lowered or closed, as shown in Fig. 1, the links 14 and 15 will extend substantially parallel with bar 17. With the links 14 and 15 in the horizontal or distended condition shown in Fig. 1, the spring 21 is expanded and placed under increased tension; the pull of the spring, however, being in line with the pivotal points of links 14 and 15. Upon lift-

ing the lid or cover 10, link 13 will also lift the adjacent ends of links 14 and 15 so as to move the pivotal point between links 13, 14 and 15 off "dead center" as it were, and therefore also cause the spring 21 to be moved slightly above the "dead center" of the pivotal points of the links which will allow the tension of the spring to immediately come into play, and cause the link 15 to move toward link 14. The tension of the spring 21 will be sufficient to maintain the toggle lever construction in the position induced through the lifting of the lid or cover, as shown in Fig. 2; in other words, the tension of the spring 21 is sufficient to maintain the weight of the cover or lid 10.

In Fig. 4, I show a modified form of my invention, wherein the cover 10 is provided with a similar bracket or lug 11 to which is pivotally secured a link 24 similar in construction to link 13. The lower end of link 24 is pivotally secured to links 25 and 26; link 25 preferably having a fixed pivotal point at 27 on a fixed inclined bar 28; the latter being fixedly secured to the inside of the phonograph cabinet. Link 26 has its opposite end pivotally secured at 29 to a link 30 which latter is, in turn, pivotally secured to the fixed bar 28; thus providing a floating connection, as it were, for link 26. Links 25, 26 and 30 are preferably shown as of equal length.

Secured in any suitable manner to links 25 and 26 is a retracting coil spring 31, so secured to links 25 and 26 that the spring will be greatly distended or expanded when the device is in non-supporting position, as indicated in full lines in Fig. 4, at which moment the spring 31 will be exerting its pull or tension in a direction or line parallel with the pivotal points of links 24, 25 and 26, and therefore on "dead center." The spring, like spring 21, may have adjustable relation with one of the links, so as to permit regulation of the tension.

When the cover or lid 10 is lifted, link 24 will lift the adjacent ends of links 25 and 26 with it, and therefore off "dead center," so that spring 31 will immediately come into play and maintain the links 25 and 26 in their raised position. Upon the collapsing movement of links 25 and 26, the latter will be caused to move bodily from the position shown in full lines and thereby induce link 30 to swing through the arc of a circle to the position indicated in dotted lines where the link is substantially parallel with link 25; the positioning of the support being shown in dotted lines. The spring 31, like spring 21 in the previously described construction, is intended to have sufficient tension to maintain the links in their intimate or raised positions and thus hold the cover or lid 10 in its elevated position as shown in dotted lines.

As is evident from both constructions, the cover or lid will normally be held in its raised position, but may be readily lowered to closed position through the application of slight pressure on the cover or lid sufficient to overcome the action of the spring; and as the links and springs are so correlated and secured together, the respective pivotal points of said links and lines of force induced by the retracting action of the spring will all be moved onto "dead center" when the cover is lowered; the device will remain inoperative and the cover remain in closed position.

I have shown and described what I believe to be the simplest and best exemplifications of my invention, which, however, may be modified without departing from the spirit of the invention.

What I claim is:—

1. A cover support, comprising a member adapted to be pivotally secured to the cover and depend therefrom, a pair of members pivotally secured to the lower end of the first member and to the cabinet or device to which the cover is applied so as to swing upwardly, one of said members being slidingly mounted so as to adapt the pivotal end farthest removed from the first mentioned member to move toward the fixed pivotal point of the other member of said pair of members, and yielding means whereby the members of said pair are yieldingly held in their upwardly swung position.

2. A cover support, comprising a member adapted to have pivotal connection with the cover and depend therefrom, a pair of members pivotally secured at one of their ends to the lower end of said first member, while the other ends of both members of said pair have pivotal connection in the cabinet or device to which the cover is secured, with the pivotal connection in the cabinet of one of said last mentioned members being adapted to move toward the other member of said pair of members, and a spring secured to both of the members of said pair of members, the pivotal connections between all of said members and the attachment points of said spring being so arranged that the pull of the spring and the pivotal points will be on "dead center" when the support is in lowered or non-supporting position.

3. A cover support, comprising a member adapted to have pivotal connection with the cover and depend therefrom, a pair of members pivotally secured at one of their ends to the lower end of said first member, a slotted bar adapted to be secured to the cabinet or device to which the cover is secured, one member of said pair of members having a fixed pivotal point on said bar, while the other member of said pair has a sliding pin connection in the slot of said bar, and a spring secured to the said pair of members and adapted to draw said members into closer relation with each other and yield-

ingly maintain the lower pivoted ends of said pair of members in juxtaposition against the weight of the cover.

4. A cover support, comprising a member adapted to be pivotally secured at one end to a cover and depend therefrom, a pair of members pivotally secured at one of their ends to the lower end of said first member, while the other ends of said pair of members have pivotal relation with the cabinet or device to which the cover is applied so as to permit said pair of members to swing upwardly, the pivotal relation between the cabinet and one of said pair of members being at a fixed point, while the pivotal relation with the cabinet of the other member of said pair is such that said member may move bodily toward the first mentioned member of said pair of members when the cover is raised, and means whereby the members of said pair of members are maintained under pressure and yieldingly held in their upwardly swung position.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."