No. 861,108. PATENTED JULY 23, 1907.

E. C. GOLDSMITH.

HORN SUPPORTING APPLIANCE FOR PHONOGRAPHS.

APPLICATION FILED OCT. 13, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

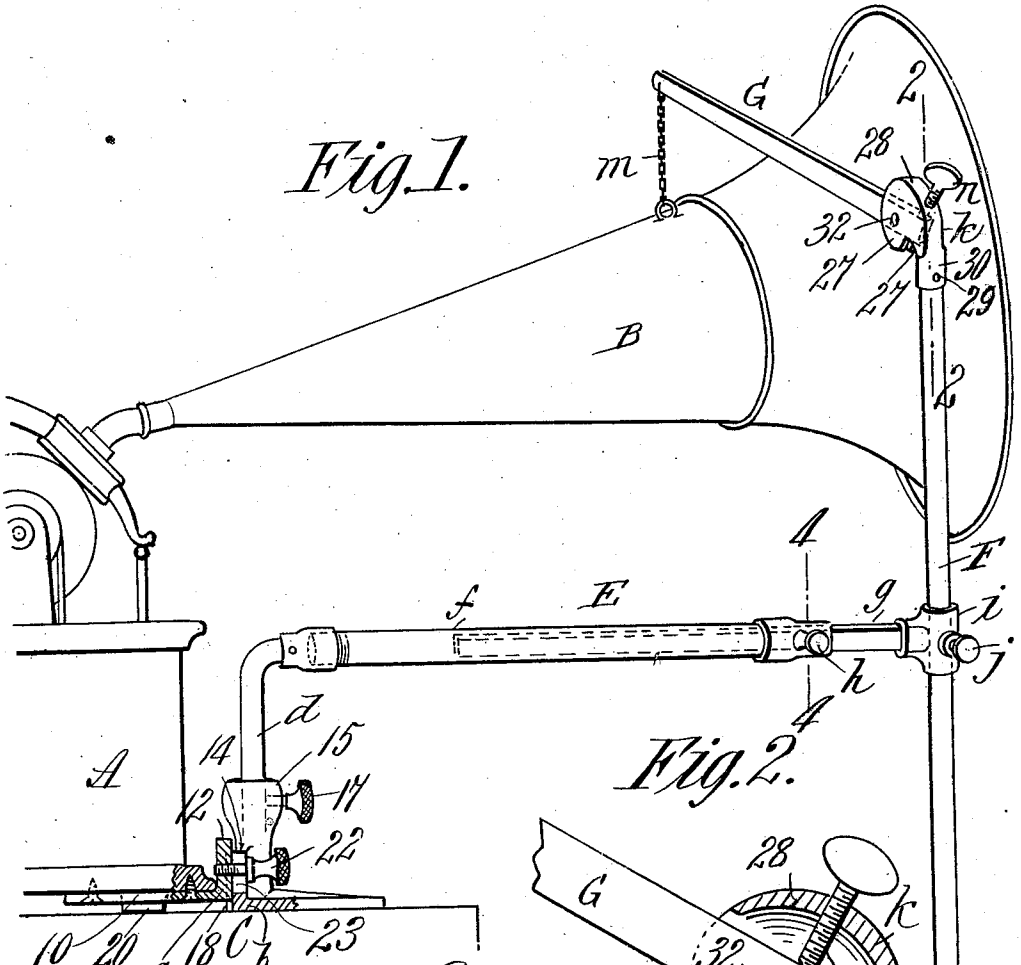


Fig. 2.

Fig. 3.

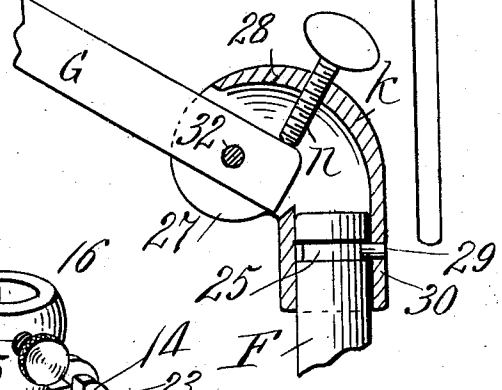
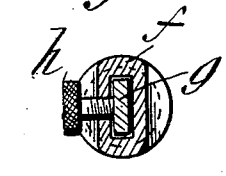
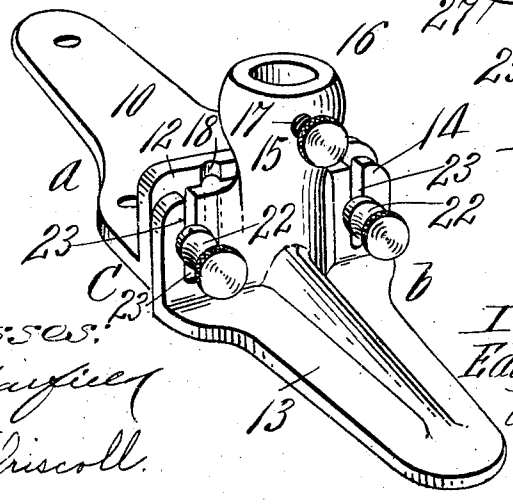


Fig. 4.





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2 SHEETS—SHEET 2.

Fig. 5.

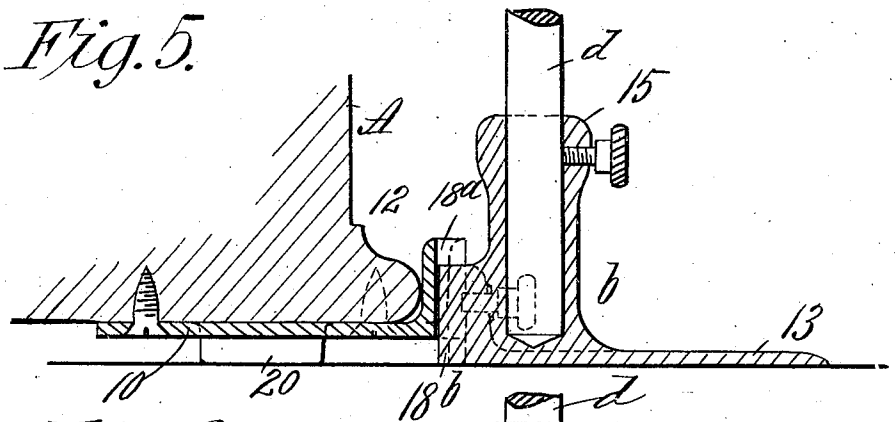


Fig. 6.

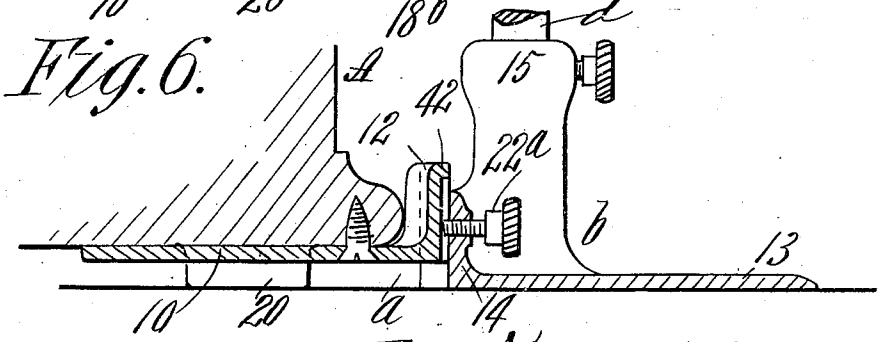
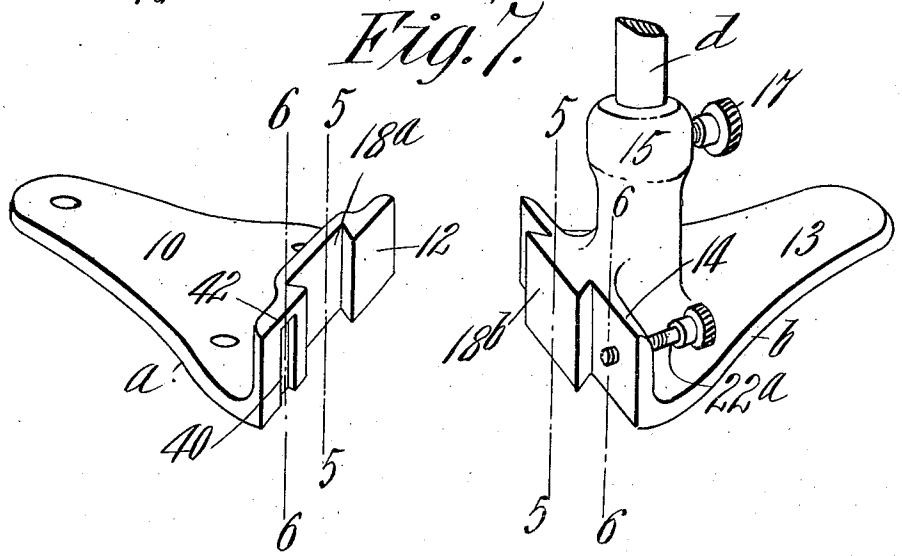


Fig. 7.



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UNITED STATES PATENT OFFICE.

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HORN-SUPPORTING APPLIANCE FOR PHONOGRAPHS.

No. 861,108. Specification of Letters Patent. Patented July 23, 1907.

Application filed October 13, 1906. Serial No. 338,754.

To all whom it may concern:

Be it known that I, EDWIN C. GOLDSMITH, a citizen of the United States of America, and a resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Horn-Supporting Appliances for Phonographs, of which the following is a full, clear, and exact description.

This invention relates to improved devices for supporting the amplifying horn of a phonograph, and pertains to the general description of such devices which comprise attachments, for sustaining the horn, which have supporting connections with the phonograph case or cabinet.

The objects of the present invention are to generally improve and simplify the horn supporting devices, rendering them capable of supporting the horn in widely varied lines of extension from the front of the phonograph, to so arrange the parts that the horn support or crane will permit of an unusually wide range of variation in its position without interference by the supporting arrangements, and to make a most suitable and readily acquired connection between the supporting bracket, included in the horn supporting devices, and the case or cabinet, whereby the weight of the horn will be without tendency to forwardly tilt or overbalance the cabinet.

The invention consists in the combinations and arrangements of the parts, and the constructions of certain of the parts, all substantially as hereinafter described and set forth in the claims.

In the accompanying drawings,—Figure 1 is a perspective view of a portion of a phonograph, its horn and the improved horn supporting devices, a part of the bracket being shown in vertical section. Fig. 2 is a vertical sectional view as taken on line 2—2, Fig. 1, on a larger scale, showing parts in detail to be hereinafter more particularly referred to. Fig. 3 is a perspective view of the attachment bracket and base support comprised in the improved appliances. Fig. 4 is a cross sectional view as taken on the line 4—4, Fig. 1. Figs. 5 and 6 are vertical sectional views, taken on different planes, from front to rear, of a slightly modified form of the attachment bracket and base support. Fig. 7 is a perspective view of the separate parts of the last mentioned attachment bracket and base support. The section lines 5—5, and 6—6, doubly shown in the portions of Fig. 7 indicate the planes on which the said sections Figs. 5 and 6 are taken.

Similar characters of reference indicate corresponding parts in all of the views.

The horn supporting appliances as represented in sheet #1 of the drawing will be now described; and thereafter reference will be made to the slight structural differences comprised in the sectionally formed parts illustrated in sheet #2, of the drawings.

In the drawings,—A represents the cabinet or case of a phonograph, and B represents the amplifying horn.

C represents a bracket consisting of sectionally formed rearwardly and forwardly located base members *a* and *b*, one thereof having a horizontal portion 10 to extend under and be secured by screws or otherwise to the forward bottom portion of the phonograph case. The member *a* comprises also a vertically faced front portion 12. The forward member or section comprises a forwardly and horizontally extending foot piece 13, a back portion 14 having a vertical face and an upstanding hub 15 constructed with an upwardly opening cylindrical socket 16 and provided with a set screw 17 penetrating its side and entering to the socket.

The matching and vertically faced portions 12 and 13 of the sectionally formed base members *a* and *b*, have vertical rib and groove engagements as represented at 18, whereby guided adjustments vertically of the forward base sections *b* relatively to the one *a* are acquired; and these parts are confined in their adjustment, so that the foot piece 13 may firmly rest on the table or other phonograph support irrespective of whether the short feet 20 of the phonograph case sustain the latter very slightly or considerably above the top of the table.

The parts *a* and *b* are held in their proper adjusted relations by the shouldered set screws 22, the threaded shanks of which are passed through the vertical slot 23 in the back 14 of section *b* and with a thread engagement in the screw holes therefor in the vertical front 12 of the section *a*.

A comparatively short vertical stem *d* is fitted, and is rotatively adjustable in the socket 16 in the upstanding hub of the base section *b*, the aforementioned set screw serving to confine the stem, when properly set, from turning. The said stem supports a horizontal arm E which comprises sections *f* and *g*, the latter telescoping endwise within the other, and the section *f* is made with a rectangular or otherwise non-circular opening or hole therewithin in which the cross sectionally rectangular or otherwise non-circular section *g* of the arm has a sliding but non-rotative engagement. The section *g* is confined as it may be outwardly distended or inwardly withdrawn by the set screw *h*. The section *g* of the arm E at its outer end has a vertically apertured rigidly affixed collar *i* vertically through which is fitted the rod or vertical support F, the same being held at any desired height by the set screw *j*.

The support or stem F has an annular groove 25 near its upper end, and a member *k* is supported by and has a rotative engagement with the upper grooved end of the rod. The member *k* which most practicably may be made as a casting, comprises separated or opposite cheeks 27, a uniting back portion 28 and a depending sleeve like or socketed lower portion 30 which incloses and fits about the upper extremity of the rod F. The

stud 29 provided through one side wall of the socketed portion 30 and engaging in the groove 25, holds the member *k* against displacement from the rod with allowance, however, for a revoluble or swiveling movement.

G represents an arm for supporting through a chain *m* or the like the large end of the horn, said horn supporting arm being pivotally connected near, but not directly at, the end thereof, which is opposite from the end at which the chain is connected, and the pivot 32 by which this arm is sustained penetrates the opposite cheeks 27 of the casting *k*.

An adjusting screw *n* screw engages through the back 28 of the casting *k* and engages a portion of the horn supporting arm B which extends in one direction beyond its pivot, as clearly shown in Fig. 2, for swinging and varying the height of the other, or horn-supporting, end of such arm.

From the drawings and the foregoing description of the parts it is apparent that the horn may be supported at the front of the instrument with capability of being swung, while at any height, at any angle from the front of the phonograph and without interfering with or interference by the supporting appliances which are capable of practically universal movements.

The supporting appliances are of simple and inexpensive construction, are easily applied to and removed from connection with the phonograph case, are extremely stable for supporting the horn, are not unsightly, and may be very compactly arranged for transportation or when in disuse.

The sectional attachment bracket and base support represented in Figs. 5, 6, and 7, Sheet #2, are in all substantial respects similar to those illustrated in the preceding drawings, but it will be noted that the rib and groove engagement is accomplished by the formation of a vertical dove tail way or groove 18^a within the vertical face of the cast section *a* and a corresponding shaped dove tail projection 18^b on the vertical face at the back portion of the section *b;* and the set screw instead of passing through a vertical slot as shown at 23 in Fig. 3 and with a screw engagement into the rising portion of the section *a* in this case screw engages through the rising portion at the back of the section *b* and endwise bears against the inner wall of a groove 40 within the vertical face 12 of the section *a*. This groove 40 has a stop wall or shoulder 42 at its upper end.

When the bracket sections *a* and *b* are to be engaged together and adjusted, the set screw 22^a is outwardly drawn so that its end does not protrude beyond the rear face of the part 14, and the dove tail rib 18^b is slid down into the dove tail groove 18^a and properly adjusted as to its height to bring the foot member 13 flush with the top of the table. The set screw is then turned to engage against the back wall of the groove 40 whereby the parts *b* and *a* will be firmly interlocked.

It will be explained that although the set screw may become loosened and the bind between the parts *a* and *b* terminated, the section *b* of the bracket even then may not be accidentally displaced from the other section *a*, for, upon any lifting force exerted to raise the section *b* out of engagement with the other section, a resistance will be encountered in the obstruction afforded by the shoulder 42 against the passage in an upward direction of the protruding end of the set screw 22^a; and yet, of course, by outwardly turning the set screw far enough the parts may easily be disconnected.

I claim:—

1. In a horn supporting device, a bracket, for attachment to a phonograph case, a vertical stem supported by said bracket and having a horizontal arm comprising telescopic sections, a vertical rod supported by, and vertically adjustable relatively to, said horizontal telescopic arm and having an angularly extending horn supporting arm, and means for holding said vertical rod in its adjustment in relation to the telescopic arm.

2. In a horn supporting device, a bracket, for attachment to a phonograph case, a vertical stem supported by, and vertically adjustable in, said bracket, and a set screw for holding said stem adjusted in the bracket against rotation, and said stem having a horizontal arm comprising telescopic section, a vertical rod supported by, and vertically adjustable relatively to, said horizontal telescopic arm and having an angularly extending horn supporting arm, and means for holding said vertical rod in its adjustment in relation to the telescopic arm.

3. In a horn supporting device, a bracket for attachment to a phonograph case, a vertical stem supported by said bracket and having a horizontal arm comprising telescopic sections, one of said sections having an angular sided opening therein, in which the other section has a non rotative, and sliding engagement, and a set screw for locking said sections against relative endwise movements, a vertical rod supported by, and vertically adjustable relatively to, said horizontal telescopic arm and having an angularly extending horn supporting arm, and means for holding said vertical rod in its adjustment in relation to the telescopic arm.

4. In a horn supporting device, a bracket, for attachment to a phonograph case, a vertical stem supported by said bracket and having a horizontal arm, a vertical support, carried by said horizontal arm, having an angularly extending horn supporting arm, pivotally connected, near an end thereof, to said vertical support, and a screw adjustable through an upper portion of said vertical support, and engaging a portion of said horn supporting arm which extends in one direction beyond its pivot, for swinging and varying the height of the other, horn supporting end, of such arm.

5. In a horn supporting device, a bracket, for attachment to a phonograph case, a vertical stem supported by said bracket and having a horizontal arm, a vertical support, carried by said horizontal arm and having at its upper portion a rotative member, an angularly extending horn supporting arm, pivotally connected, near an end thereof, to said rotative member of the vertical support, and a screw adjustable through a portion of said rotative member, and engaging a portion of said horn supporting arm which extends in one direction beyond its pivot, for the purposes set forth.

6. In a horn supporting device, a bracket, for attachment to a phonograph case, a vertical stem supported by said bracket and having a horizontal arm, a vertical rod, carried by said horizontal arm having an annular groove near its upper end, a member comprising opposite separated cheeks, a uniting back portion and a depending socketed lower portion which fits about the upper grooved end of said vertical rod, a stud provided to said socketed portion and engaging in said groove, a horn supporting arm pivotally connected, near an end thereof, to and between said cheeks, and a screw adjustable through the back of said socketed and cheek provided member, and engaging a portion of said horn supporting arm which extends in one direction beyond its pivot, for swinging and varying the height of the other, and horn supporting, end of such arm.

7. In horn supporting appliances for a phonograph, a bracket consisting of sectionally formed rearward and forward base members, one thereof being adapted for attachment to the forward portion of a phonograph case, and the other section being vertically adjustable relatively to the rearward section, and to be positioned at the level of the table or support for the phonograph, means for confining the forward section in its adjusted relation to the rear section, and upwardly and outwardly extending horn-supporting members carried by the said bracket.

8. In horn supporting appliances for a phonograph, a bracket consisting of sectionally formed rearward and forward base members, one thereof being adapted for attachment to the forward portion of a phonograph case, said sections having rib and groove engagements one with the other, and the forward section being vertically adjustable relatively to the rearward section, and to be positioned at the level of the support for the phonograph, means for confining the forward section in its adjusted relation to the rear section, and upwardly and outwardly extending horn-supporting members carried by the said bracket.

9. In horn supporting appliances for a phonograph, a bracket consisting of sectionally formed rearward and forward base members, one thereof having a horizontal member to extend under and be secured to the forward portion of a phonograph case, and the other section being vertically adjustable relatively to the rearward section, and to be positioned at the level of the support for the phonograph, said sections having rib and groove engagements one with the other, and the forward section comprising a foot piece, and an upwardly open socketed hub, a set screw for confining the forward section in its adjusted relation to the rear section, a stem supported in said socketed hub and arms and extensions carried by said stem, and for supporting a horn.

10. In a horn supporting device, a bracket for attachment to a phonograph case, a vertical stem supported by said bracket and having an arm horizontally extended at a level below the horn, a vertical rod supported by and vertically adjustable relatively to said horizontal arm, and a substantially horizontal horn supporting arm mounted on said vertical rod, one of said horizontal arms comprising telescopic sections, means for confining the sections in adjusted relative positions, and means for holding said vertical rod adjusted in relation to the first named horizontal arm.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

E. C. GOLDSMITH.

Witnesses:
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WM. S. BELLOWS.