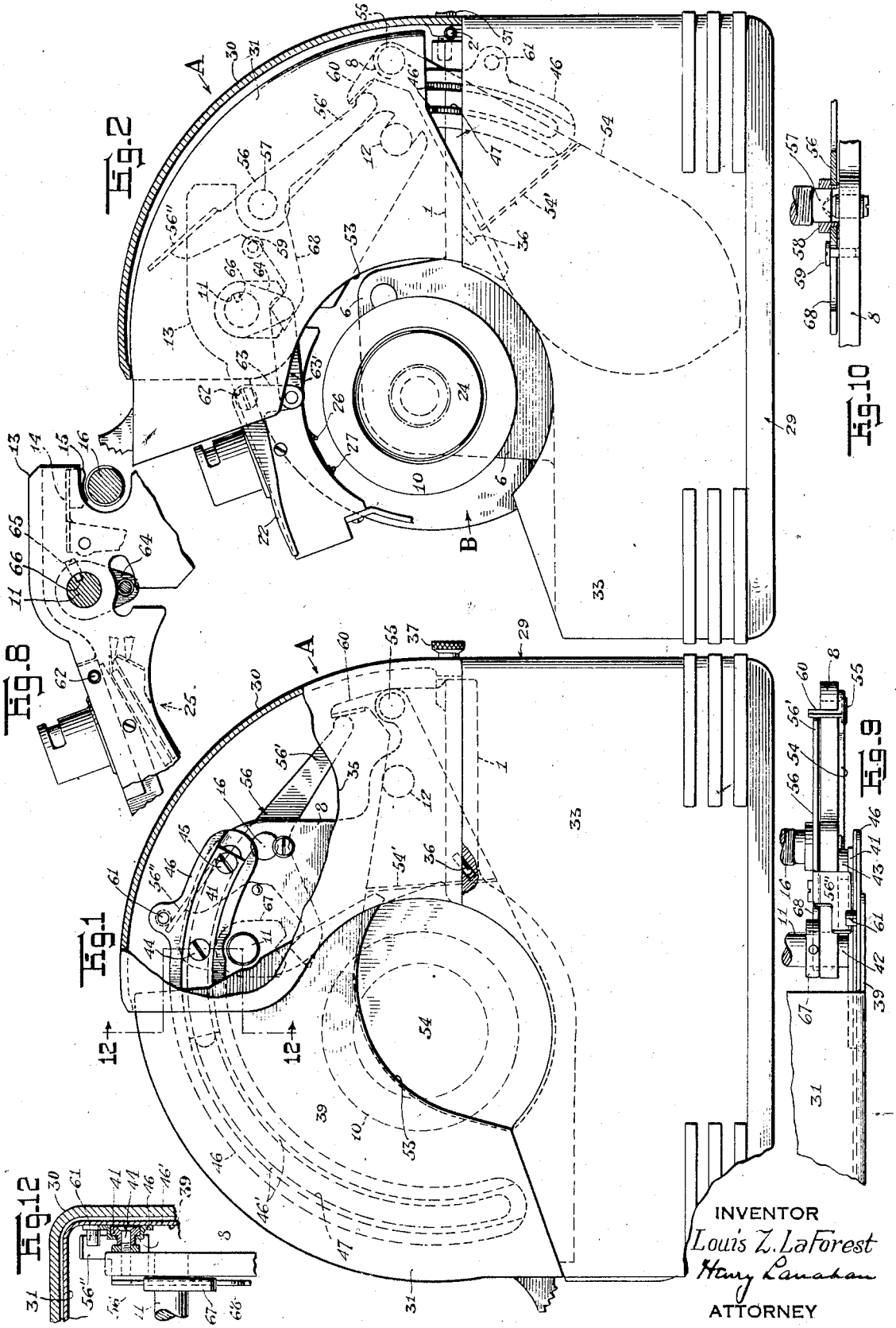
June 4, 1940. L. Z. LA FOREST 2,203,096

PHONOGRAPH

Filed Dec. 21, 1937 3 Sheets-Sheet 1



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PHONOGRAPH

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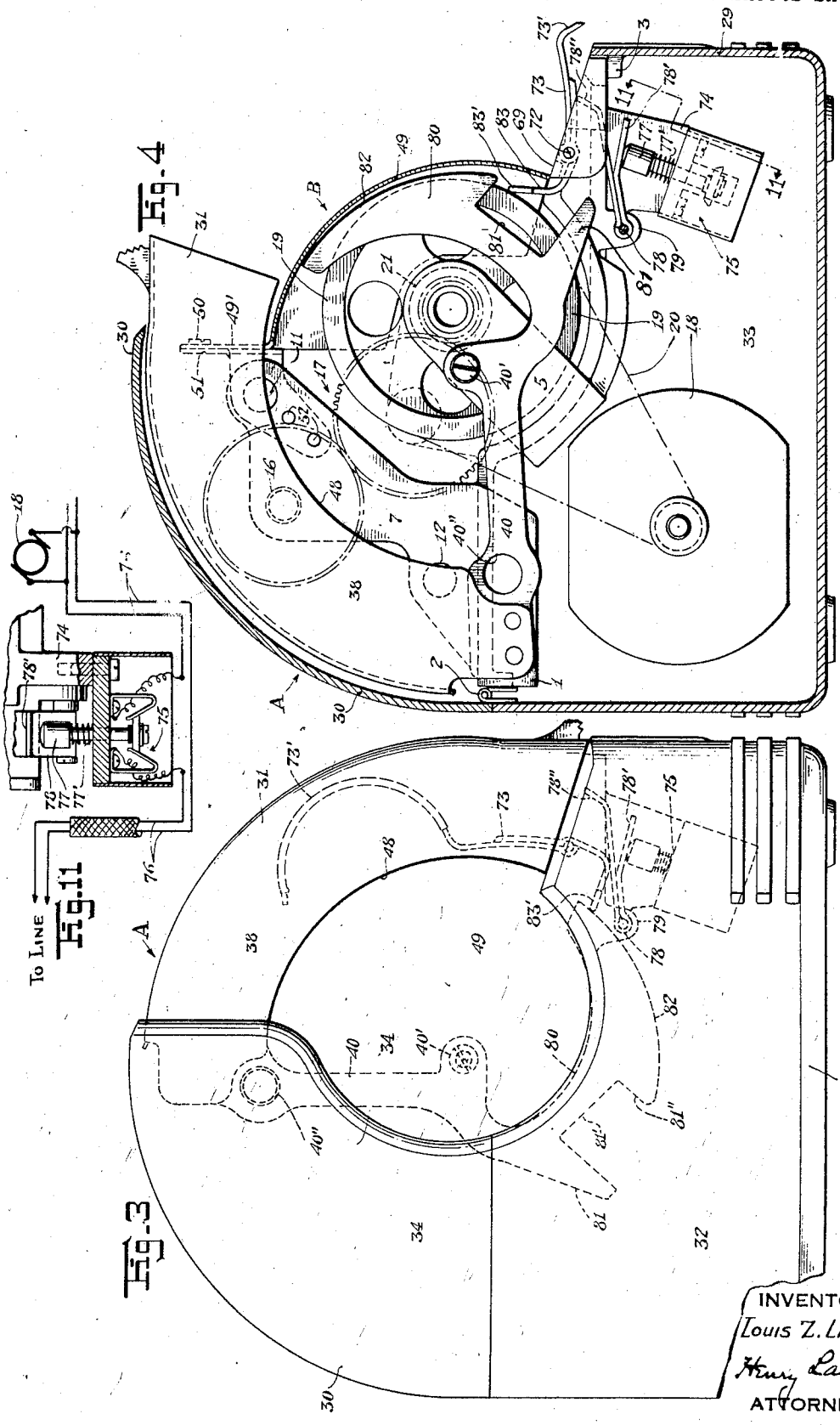


Fig. 4

Fig. 11

Fig. 3

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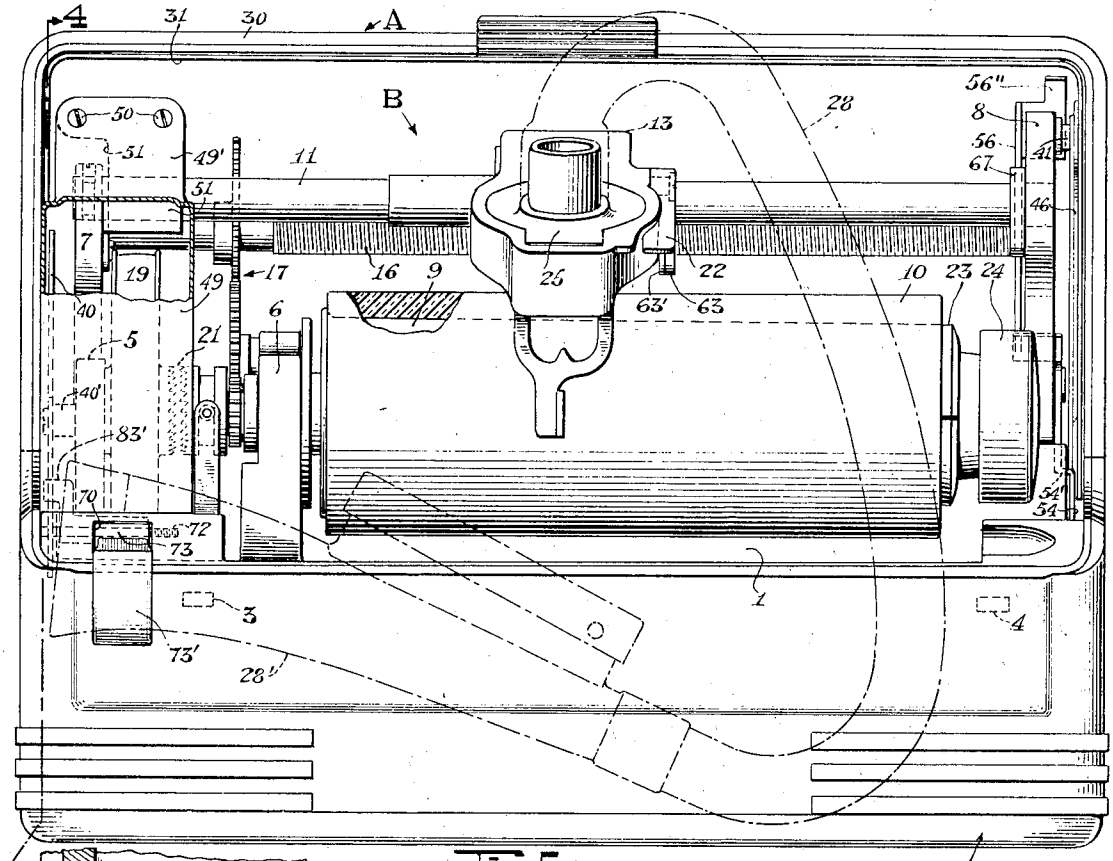


Fig. 5

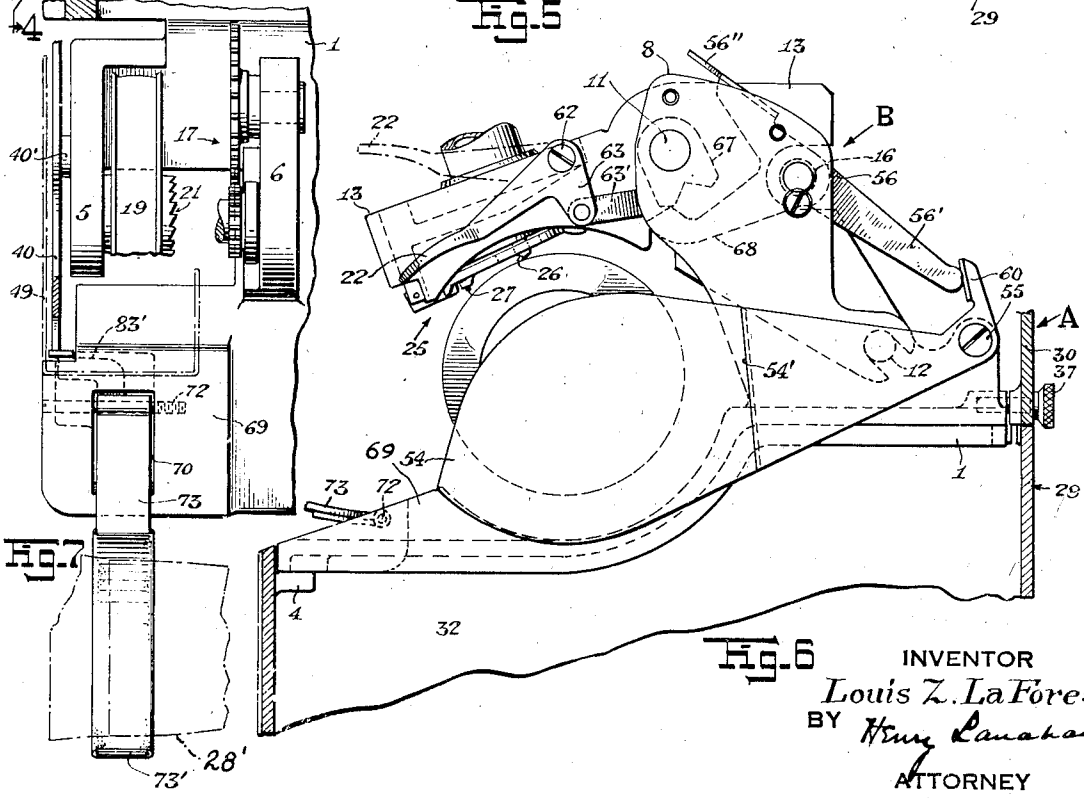


Fig. 6

Fig. 7

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2,203,096

PHONOGRAPH

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Application December 21, 1937, Serial No. 180,940

19 Claims. (Cl. 274—2)

This invention relates to phonographs and more particularly to an improved form of a closely fitting cabinet for a commercial phonograph. In some respects the present invention relates to a phonograph cabinet of generally improved construction over that of my co-pending application Serial No. 177,856, entitled Phonographs, which application was granted April 11, 1939, as Patent No. 2,154,048, and in other respects to the provision of additional means in such a cabinet for facilitating the operation of the phonograph.

There is a distinct need for small phonograph cabinets which may be suitably used on the desk of the operator. When such cabinets are made to completely enclose and closely fit a phonograph of the type commonly used for commercial purposes in recording and reproducing dictation, there are generally encountered difficulties which impede the ease of operation of the phonograph unless suitable means, preferably automatically operated, are provided for circumventing such difficulties.

One of the difficulties encountered in a closely fitting cabinet for the usual form of commercial phonograph is in the provision of a small cover which may be moved to a suitable position to render the phonograph accessible for convenient operation. This is due to the fact that the common form of commercial phonograph must be accessible for operation at its front and end portions, access to the end portion being necessary in order to mount a record, usually of cylindrical form, on a record support or mandrel which extends longitudinally of the phonograph and has its free end adjacent to an end wall of the cabinet. A small cover may provide such access as is necessary to the front portion of the phonograph, but it cannot also conveniently provide suitable access to the free end of the mandrel. In this case it is desirable to use a closure member, separate of the cover, which is movable to provide such access to the mandrel. This member may very desirably be controlled both by the cover and by the control means for adjusting the phonograph, as is described in my aforementioned co-pending application. In the present invention I provide an improved cabinet which has, as one of its features, such general arrangement as will enable the use of a simplified mechanism for coupling the cover and control means to the closure member.

The commercial phonograph is also commonly provided with a speaking tube having a handpiece, and with a suitable support on which the handpiece may be rested, as during inoperative periods in the use of the phonograph. Such a support is commonly coupled to an openable and closeable electric switch for controlling a rotative source of power for the phonograph such, for example, as an electric motor. For this reason the support is resiliently mounted to be moved downwardly, as by the weight of the handpiece, to open the switch and thereby stop the motor during such inoperative periods when the handpiece is placed thereon. In a closely fitting cabinet there is insufficient space for a suitable support for the handpiece. The support may, however, be movable outwardly of the cabinet to a convenient supporting position wherein it may be resiliently mounted to perform the aforementioned functions. During the non-use of the phonograph the support may very desirably be held within the cabinet in a non-supporting position. The movement of the support into such supporting and non-supporting positions may cause the aforementioned switch to be operated, to stop and start the motor, and may be automatically effected with the opening and closing of the cover to facilitate the operation of the phonograph.

It is therefore an object of my invention to provide a cabinet closely fitting and fully enclosing a phonograph which may be conveniently rendered accessible for operation.

It is another object to provide with an improved closely fitting cabinet for a phonograph, automatically operated means for facilitating and safeguarding the operation of the phonograph.

It is another object to provide such an arrangement for a phonograph cabinet as will permit a simplified construction for rendering the phonograph accessible for safe and convenient operation.

It is a still further object to provide a simplified structure for a phonograph cabinet having a pleasing appearance and providing easy access to the phonograph for its servicing and repairs.

Other and allied objects will more fully appear from the following description and the appended claims.

In the description of my invention reference is had to the accompanying drawings, of which:

Figure 1 is a righthand side elevational view of my phonograph cabinet showing the cover in closed position, with a portion broken away to show interior parts.

Figure 2 is a righthand side elevational view, partly in section, of my phonograph cabinet having the cover in open position and showing

a portion of a phonograph having its control lever in inoperative position.

Figure 3 is a lefthand side elevational view of my cabinet showing the cover in closed position, the support for the handpiece and the motor control switch being dottedly shown in their respective non-supporting and open positions.

Figure 4 is a lefthand sectional view taken along the line 4—4 of Figure 5 and showing the cover in open position, the support for the handpiece in a supporting position, and the motor control switch in a closed position.

Figure 5 is a front elevational view of my cabinet, with a portion broken away, showing the cover in open position and the support for the handpiece in its supporting position.

Figure 6 is a side elevational view, partly in section, of a portion of the cabinet and phonograph, showing the control lever in a downward operative position and the side closure member of the cabinet in a closed position, the upward operative position of the control lever being shown with dotted lines.

Figure 7 is a plan view of a portion of the phonograph showing the support for the handpiece in its supporting position.

Figure 8 is a righthand elevational view of a portion of the phonograph.

Figure 9 is a plan view of the mechanism coupling the cover with the side closure member.

Figure 10 is a plan view, partly in section, of the lever coupling the cover with the side closure member.

Figure 11 is a view taken along the line 11—11 of Figure 4.

Figure 12 is a view, taken along the line 12—12 of Figure 1, showing the means coupling the righthand side of the cover to the frame of the phonograph.

Reference being had to the figures there will be seen a cabinet A according to my invention and a phonograph B contained therein of the type commonly used for the recordation and reproduction of dictation. The phonograph B has a base plate 1 which is hinged to the rearward wall of the cabinet about the axis 2 and supported at its front by the respective left and right bosses 3 and 4 provided on the forward wall of the cabinet. The plate 1 may be formed as by casting and provided with suitable reinforcing ribs. It is also provided with suitable standards forming therewith the frame for the phonograph. These standards are usually integral with the plate 1 and are adapted to support the principal parts of the phonograph. These standards comprise a forwardly inclined standard 5 on the lefthand side, an intermediate standard 6 and the left and right upright standards 7 and 8. Within the intermediate standard 6 there is rotatably mounted a record support or mandrel 9 bearing a wax-like or otherwise suitable record 10. In my invention the rearward portion of the plate 1 is located so as to provide sufficient space thereunder for a suitable rotatory source of power for the phonograph; and the central portion of the plate is curved downwardly substantially in an arc about the axis of the record 10 in order that the phonograph parts may be compactly arranged, this central portion also serving as a trough for collecting the shaving chips which arise in cutting grooves on wax-like records, as in the process of recording thereon.

The left and right standards 7 and 8 support the longitudinal rods 11 and 12 on which is slidably mounted a carriage 13. Pivotally connected to the carriage 13 is an arm 14 (see Figure 8) which carries a feed nut 15 adapted to engage a feed screw 16, this screw being rotatably held by the standards 7 and 8. The feed screw 16 is suitably geared to the mandrel 9 by means of a train of gears 17, shown in Figure 5, so that rotation of the mandrel 9 will effect a rotation of the feed screw 16. Such rotation may be effected by any suitable rotatory source of power, as by the motor 18. This motor is coupled to the pulley 19 by the belt 20, the plate 1 being suitably cut away to provide clearance for the belt 20. The pulley 19 may be connected to the mandrel 9, at will, by means of a suitable clutch, such as 21. By the engagement of the feed nut 15 with the feed screw 16 a longitudinal movement, with respect to the record 10, is then imparted to the carriage 13. The arm 14 is suitably coupled to a control lever 22 provided for controlling the engagement of the feed nut 15 with the feed screw 16 and for effecting other adjustments to the phonograph as are subsequently described.

The mandrel 9 may be of any desirable form for removably holding a record, such as 10. For convenience of operation there is usually provided a mandrel of the form described in the United States Patent No. 2,010,717 issued to Heinrich F. Max Gramann on August 6, 1935. This form of mandrel has a chuck 23 at its free end which is adapted to expand in a radial direction when a record has reached an operative position on the mandrel, thereby holding the record in place. For removing the record therefrom, the mandrel is provided with a member 24 which is movable inwardly in an axial direction to cause the chuck 23 to contract, thereby releasing the record so that it may be removed from the mandrel.

The carriage 13 carries a translating device 25 which is adjustable by means of the control lever 22 to an inoperative position or to respective operative positions for recording and reproducing. When adjusted for recording, it is adapted to receive sound waves and impart a movement undulating in accordance with those waves to a stylus 26, and, when adjusted for reproducing, to create sound waves in accordance with any undulating movement imparted to a stylus 27, as by its engagement with a progressive modulated groove on the record 10. These sound waves are conveyed to, and away from, the translating device 25 by means of a flexible tubular member or speaking tube 28 having a handpiece 28' at its far end of a form well known in the art.

The translating device 25 is adjusted for recording and reproducing when the control lever 22 is moved to its respective downward and upward positions. In moving the control lever 22 to each of these operative positions the feed nut 15 is brought into engagement with the feed screw 16. In the recording and reproducing positions the respective styli 26 and 27 are brought into engagement with the record 10 carried by the mandrel 9. When the control lever is moved to a position intermediate of its respective operative positions, each of the styli of the translating device 25 are removed from contact with the record 10, and the feed nut 15 is disengaged from the feed screw 16. The record may then be freely removed from the mandrel 9.

With the control lever 22 in an operative position, any attempt to mount a record on the mandrel 9, or to remove one therefrom, will cause

heavy strain on the translating device and will in every case cause the record surface to be marred. It is consequently a safeguard to the phonograph to have the mandrel automatically rendered inaccessible whenever the translating device is in an operative condition so that the operator is prevented from mounting a record thereon or removing a record therefrom. In my invention I provide such means in simplified form as one of several features of my improved closely fitting cabinet; wherefore this cabinet and means are now described in detail.

The cabinet comprises the lower portion 29 and an upper portion which is substantially arcuately-shaped in cross section, as viewed from the end. The upper portion comprises a rearward closure section 30 and a forward closure section or cover 31. The rearward closure section is detachably connected to the lower portion 29 and the cover 31 is pivoted to the frame of the phonograph so that it may swing upwardly to a position within the rearward section 30. This construction provides easy access to the phonograph for its servicing or repair. Access to the phonograph parts carried above the base plate 1 is had by removing the rearward section 30 and swinging the cover 31 into any suitable position. With the rearward section 30 removed, access to the parts carried under the plate 1 is had by swinging the phonograph upwardly about the axis 2.

The portion 29 has the left and right end walls 32 and 33. These end walls have upper edges substantially conforming with the side edges of the plate 1, the central portion of these edges being curved in an arc substantially about the axis of the mandrel 9. The rearward section 30 and the lower portion 29 may each be suitably formed as by casting. The rearward section 30 is provided with arcuately shaped left and right end walls 34 and 35. In order that this section may be detachably connected to the lower portion 29, it is provided with a downwardly extending side pin in each of the respective end walls 34 and 35, such as the pin 36 for the right end wall 35. These pins engage with suitable apertures, provided in the upper edges of the end walls 32 and 33, to hold the forward portion of the rearward section 30 in place, the section 30 being suitably secured along its rearward wall by means of a pin 37 which threads into a suitable boss provided on the plate 1. When the rearward section 30 is retained in such proper mechanical position, it forms an upward extension of the walls of the lower portion 29, and the inner edges of the arcuately shaped end walls 34 and 35 form an arcuate extension of the curved edges on the central portions of the respective end walls 32 and 33 of the lower portion 29.

By having the upper portion of my cabinet arcuately shaped I provide a cabinet of pleasing appearance, simple construction, and conveniently arranged parts. This feature enables me to use a cover 31 which need not swing outwardly of the cabinet for opening movement, but which may be pivotally mounted by relatively simple means to swing upwardly, within the rearward section 30. In such upward position, the cover can be made to conform closely with the walls of the rearward section 30 and thereby utilize very little of the interior space of the cabinet. Moreover, I am enabled to use a relatively small cover and yet provide sufficient accessibility to the front portion of the phonograph.

The cover 31 is provided with left and right arcuately shaped end walls 38 and 39. It is pivotally connected to the frame of the phonograph so that it may swing upwardly in an arc within the rearward section 30. For effecting such pivotal connection, the cover is provided, on the lefthand side, with an arm 40 which is pivotally connected to the standard 5, as by the pivot 40'. In order that the rod 11 may be slidably removed in a leftwise direction, the arm 40 is provided with an aperture 40'' which is in alignment with the rod 11 when the cover 31 is closed. On the righthand side there must be provided full access to the free end of the mandrel 9, and therefore the cover is effectively pivotally connected about the axis of the pivot 40' by being slidably secured to the upper portion of the standard 8. For making this slidable connection to the standard 8 there is provided a shouldered arcuately shaped block 41 which is suitably located laterally of the standard 8 by means of the spacers 42 and 43 (see Figure 9). The block 41 is secured to the standard 8 by means of screws 44 and 45, which extend through the block and the respective spacers and thread into the standard 8. On the righthand end wall 39 of the cover 31 there is secured, as by welding, an arcuate member 46 having its central portion 46', longitudinally thereof, bent inwardly at right angles and provided with a longitudinal slot 47 which is somewhat narrower than the central portion 46'. The member 46 is extended rearwardly of the righthand end wall 39 of the cover 31. This rearwardly extending portion serves as a means for fitting the block 41 in the portion 46' of the member 46. When the block 41 is so fitted and is secured to the standard 8, it supports and guides the righthand side of the cover 31.

The lefthand end wall 38 of the cover 31 is provided with an inner edge 48 which is curved in an arc about the pivot 40'. The central portion of the lefthand end wall of the cabinet is thus unenclosed by the cover 31 and the rearward section 30. For this portion there is provided a closure member 49 which is bent inwardly so as to conform with the edge 48 of the end wall 38. This inwardly bent portion of the member 49 is suitably shaped, as by stamping, to form also a front closure of the mandrel driving means disposed at the end of the mandrel 9. The means for holding the member 49 in place comprises an upwardly extending arm 49' on the member which is secured, as by the screws 50, to a bracket 51, this bracket being held to the standard 7 by the screws 52.

The righthand end wall 39 of the cover 31 provides a partial closure of the free end of the mandrel 9 when the cover 31 is in a closed position, the inner edge 53 of this end wall being preferably arcuately shaped in a suitable manner such as is shown in Figure 1. For completing the enclosure of the right end wall of the cabinet there is provided a movable closure member 54. This member has its forward portion suitably offset along the line 54' so that it will be adjacent to the end wall 33 and in substantial alignment with the end wall 39 of the cover 31, the upper edge of this forward portion being shaped to conform with the edge 53 of the cover. The member 54 is pivotally connected to the right standard 8, as by the pivot 55, so that it may swing downwardly to an open position, such as shown in Figure 2, to provide access to the free end of the mandrel 9 for mounting a record thereon or removing a record therefrom.

It is highly desirable to have the closure member 54 move downwardly to its open position as

an incident of the opening movement of the cover 31 so that the phonograph will become operatively accessible by the simple operation of opening the cover 31. With my novel form of cabinet I am enabled to provide such automatic operation of the closure member 54 with the use of relatively simple means. Such means comprises the lever 56 which is pivoted to the right standard 8, this pivotal connection being very conveniently made about the right end of the feed screw 16 as is shown in Figure 10. To make this pivotal connection, the right end portion 57 of the feed screw 16 is reduced in diameter and the lever 56 is suitably apertured and provided with a collar 58 which embraces the portion 57. In order that the lever 56 may not slide longitudinally on the feed screw 16, a screw 59 is threaded into the standard 8 and is provided with a flat head overlapping the hub portion of the lever.

The lower arm 56' of the lever 56 engages with an inwardly extending arm 60 provided on the closure member 54. The member 54 will normally take its lower or open position by reason of the force of gravity acting thereon. However, a counter-clockwise rotation of the lever 56 will cause the closure member 54 to be swung upwardly to its closed position. Such counter-clockwise rotation of the lever 56 is easily effected by providing an inwardly extending pin 61 on the rearward portion of the arcuate member 46. This pin impinges upon an inwardly extending flat portion 56'', provided on the upper arm of the lever 56, to effect a closing of the side closure member 54 as the cover is swung downwardly to its closed position. As the cover 31 is opened this pin 61 is disengaged from the upper arm 56'' of the lever 56 and the closure member 54 will move downwardly to its open position by the force of gravity acting thereon or if desired by the provision of any suitable spring.

In order to safeguard the operation of the phonograph it is highly desirable to have the closure member 54 brought into its closed position whenever the control lever 22 is moved to either of its operative positions so that the operator is prevented from mounting a record on the mandrel 9, or removing a record therefrom, whenever any operating portion of the translating device 25 is lowered to a record engaging position. Such means has been described in my copending application No. 177,856. However, in the present invention I provide very markedly improved means for effecting such control of the side closure member 54, which means will now be described in detail.

As shown in Figure 2, the control lever 22 is pivotally connected to the carriage 13 by means of the pivot 62 and is provided with a downwardly extending arm 63 which is coupled by means of the link 63' to a member 64 slidably mounted on the longitudinal rod 11. This member 64 is, however, keyed to the rod 11, as shown in Figure 8, by means of a screw 65 which is threaded into the member 64 and provided with a reduced-diameter end portion engaging with a longitudinal slot 66 cut into the rod 11. Upward and downward movements of the control lever 22 to its respective reproducing and recording positions will consequently cause the rod 11 to be rocked in respective clockwise and counter-clockwise directions, the rod 11 being rotatably supported by the left and right standards 7 and 8 in any suitable manner.

On the right end of the rod there is secured a cam 67 which has a face with a central V-shaped portion and arcuate end portions. Provided on the lever 56 is an auxiliary arm 68 which is adapted to engage with the central V-shaped portion of the cam 67 when the control lever is in its neutral or inoperative position. In such position the lever 56 rests in its most clockwise position and the closure member 54 is in its most downward or open position. As the control lever 22 is moved to its respective operative positions the auxiliary arm 68 will come into engagement with the respective arcuate portions of the cam 67 to cause the lever 56 to be rotated to its most counter-clockwise position and the closure member 54 to be moved into its closed position. As the control lever 22 is moved to its neutral position from either of such operative positions the arm 67 will again come into engagement with the central V-shaped portion of the cam 67, thereby permitting the closure member 54 to move downwardly to its open position.

In order to facilitate the use of commercial phonographs they are commonly provided with a forwardly extending arm for supporting the handpiece 28' of the speaking tube 28, as during inoperative periods. This support is usually coupled to a switch for opening the motor power supply circuit whenever the handpiece is placed thereon. In a small cabinet which closely fits the phonograph there is insufficient space for an arm which will conveniently support the handpiece therein. It is therefore necessary that this support be movable outwardly of the cabinet to a convenient supporting position. In my invention I provide such a movable support, and to facilitate the operation of the phonograph I couple this support to the cover 31 so that it will be moved outwardly of the cabinet to a convenient supporting position as in incident of the opening of the cover. In such position I have the support resiliently mounted and coupled to a switch controlling the power supply circuit to the motor 18 so that the support will be moved downwardly, as by the weight of the handpiece 28' and the adjacent portion of the speaking tube 28, to open the motor circuit whenever the handpiece is placed thereon. During the non-use of the phonograph, the speaking tube is disconnected from the translating device 25 by any suitable means, after which the cover may be closed. In my invention I have the downward closing movement of the cover 31 to effect a movement of the support for the handpiece 28' inwardly of the cabinet. When the cover 31 has reached its closed position the support is fully within the cabinet in a non-supporting position, and the switch for the motor 18 is operated to an open position, thereby stopping the motor. Thus this supporting means is controlled by the cover 31. It is provided as an additional feature of my closely fitting cabinet for a commercial phonograph wherefore it will now be described in detail.

The base plate 1 is provided with a raised portion 69 at its forward lefthand corner. This portion 69 is provided with an opening 70 and a recess thereunder extending to the left and rear of the opening 70. Extending through the portion 69 is a pin 72 which serves as a pivot for holding a member 73 in the opening 70, this member having a hook shaped arm 73' for supporting the handpiece 28'. This arm 73' may swing upwardly to a non-supporting position within the cabinet A, such as shown in Figure 3 and downwardly to a supporting position wherein it extends forwardly of the cabinet, as shown in Figure 4.

Extending downwardly of the base plate 1 is a standard 74 to which is secured a suitable switch

75. This switch is of a single-pole single-throw type and is arranged for opening and closing the power supply circuit 76 to the motor 18. It may be of any suitable form such as is illustrated in Figure 11. It is provided with a slidably mounted push button 77 which is biased upwardly thereof by means of a spring 77'. The switch is adapted to close the circuit 76 when the button 77 is in its upward position, as shown in Figure 4, and to open the circuit 76 when in its downward position, as shown in Figure 3.

For coupling the member 73 with the switch 75 there is provided a lever 78 which is interposed between the member 73 and the switch 75 and pivotally connected to a boss 79 extending downwardly of the plate 1. This lever 78 has an arm 78' resting upon the push button 77 and an upwardly extending arm 78'' which engages with the member 73 forwardly of the pin 72, about which this member is pivoted, so as to support the member 73 in its handpiece-supporting position. The spring 77' of the switch 75 is selected to have sufficient stiffness to resist the weight of the member 73 and thereby maintain the switch 75 in a closed position. The weight of the handpiece 28' and the adjacent portion of the speaking tube 28 is, however, sufficient to compress the spring 77' and therefore the push button is moved downwardly to open the circuit 76 whenever the handpiece is placed on the supporting member 73.

In order that the member 73 will be moved into supporting and non-supporting positions by the respective opening and closing movement of the cover 31, I provide an extension 80 on the member 40 which supports the lefthand side of the cover. This extension has a tooth 81 and a cam face 82 between which there is provided a suitable notch 81' such as is shown in Figures 3 and 4. Provided on the member 73 is a rearwardly extending arm 83 which has an end portion 83' projecting into the path of the cam face 82, the central portion of the arm 83 being curved downwardly so that this portion impinges upon the lever 78 to operate the switch 75 to an open position as the member 73 is swung upwardly to its non-supporting position. The end portion 83' slidably engages the cam face 82 as the cover is moved between its open and closed positions. When the cover 31 is in its closed position the portion 83' engages with the far end of the cam face 82 to maintain the member 73 in its non-supporting position and the switch 75 in its open position, as shown in Figure 3. As the cover 31 is moved through the first portion of its upward travel the member 73 may be maintained in its non-supporting position by having the cam face 82 concentric about the pivot 40'. As the cover 31 approaches its open position the portion 83' slides off of the cam face 82 and is impinged upon by the tooth 81, thereby causing the member 73 to swing downwardly to its supporting position. As the cover 31 is moved downwardly from such open position the portion 83' impinges upon the end face 81'' of the notch 81' to impart an upward swinging movement to the member 73. When the member 73 has swung to a position fully within the cabinet the end portion 83' of the member 73 engages with the cam face 82. The cover 31 is then free to move downwardly to its closed position. Thus by the manipulation of the cover 31 I operate the side closure member 54 between its open and closed positions, and the supporting member 73 for the handpiece 28' between its respective supporting and non-supporting positions.

From the foregoing description it is seen that the member 73, while serving as a support for the handpiece 28', may be termed a phonograph-controlling means since the member 73 is operable so as to control the operation of the phonograph. When the member 73 is in its non-supporting position (wherein it is in a non-projecting position with respect to the cabinet A) the phonograph is put out of operation; whereas when the member 73 is in an outwardly projecting position with respect to the cabinet A, it serves not only as a support for the handpiece 28' but also as a means for starting and stopping the operation of the phonograph.

I have herein described a preferred embodiment of my invention, but it is to be understood that this embodiment is subject to many changes and modifications without departure from the scope of my invention which I now undertake to express according to the following claims.

I claim:

1. In a phonograph provided with a cabinet and having a mandrel pivotally supported at one end and open at the other to receive a record: an end wall having an opening adjacent to and partially exposing the open end of said mandrel; a pivotally mounted closure member for said opening; a pivotally mounted front cover having an end wall section defining a portion of the edge of said opening; and means, connecting said cover with said closure member, for causing said closure member to be moved into its open and closed positions as said cover is moved to its respective open and closed positions.

2. In a phonograph provided with a cabinet and having a control lever movable to operative and inoperative positions and a mandrel pivotally supported at one end and free at the other to receive a record: an end wall of said cabinet having an opening adjacent to and partially exposing the free end of said mandrel; a movable closure member for said opening; a movable cover having an end wall section defining a portion of the edge of said opening; and means operatively connecting said cover with said closure member for causing said closure member to be moved into open and closed positions as said cover is moved to its respective open and closed positions, when said control lever is in said inoperative position.

3. In a phonograph provided with a cabinet and having a control lever movable to operative and inoperative positions and a mandrel pivotally supported at one end and free at the other to receive a record: an end wall of said cabinet having an opening adjacent to and partially exposing the free end of said mandrel; a movable closure member for said opening; a movable cover for said cabinet having an end wall section defining a portion of the edge of said opening; and means, operable when said cover is in open position, for causing said closure member to be moved into closed and open positions as said control lever is moved to its respective operative and inoperative positions.

4. In a phonograph provided with a cabinet and having a control lever movable to operative and inoperative positions and a mandrel pivotally supported at one end and free at the other to receive a record: an end wall of said cabinet having an opening adjacent to and partially exposing the free end of said mandrel; a movable closure member for said opening; a movable

cover for said cabinet having an end wall section defining a portion of the edge of said opening; means maintaining said closure member in a closed position when said control lever is in an operative position; and means operable when said control lever is in said inoperative position, for causing said closure member to be moved into open and closed positions as said cover is moved to its open and closed positions.

5. In a phonograph provided with a cabinet and with a speaking tube having a handpiece: the combination of an electric switch for controlling the operation of the phonograph; a support for said handpiece movable into and out of supporting positions; a cover for said cabinet movable to respective open and closed positions; means, operated by said cover, for causing said support to be moved into and out of said supporting positions as said cover is respectively opened and closed; and means connected between said support and said switch, for operating said switch by movement of said support.

6. In a phonograph provided with a cabinet and with a speaking tube having a handpiece: the combination of an openable and closeable switch for controlling the operation of the phonograph; a support for said handpiece movable relative to the phonograph into and out of supporting positions; closure means movable to render said phonograph accessible for operation and to enclose the same; and means, operatively interconnecting said closure means and switch and support, for causing said support to be moved into said supporting position and said switch to be closed as said phonograph is rendered accessible for operation.

7. In a phonograph provided with a cabinet and comprising a speaking tube having a handpiece: the combination of a support for said handpiece movable outwardly of said cabinet to a supporting position; a cover for said cabinet having end wall sections and pivoted to swing upwardly for opening movement; a side member adjoining an end wall section of said cover and movable to an open position to expose an end portion of said phonograph; and means, operatively connecting said cover with said support and side member, for causing said support to be moved to said supporting position and said side member to be moved to said open position as said cover is opened.

8. In a phonograph provided with a cabinet and comprising a speaking tube having a handpiece: the combination of a support for said handpiece movable outwardly of said cabinet to a supporting position and inwardly of said cabinet to a non-supporting position; a cover pivoted to open and close a front portion of said cabinet; a pivoted member movable to positions to respectively open and close an end portion of said cabinet; and means, operatively connecting said cover with said support and pivoted member respectively, for causing said support to be moved to said supporting position and said member to be moved to said open position as said cover is opened, and for moving said support to said non-supporting position and said member to said closed position as said cover is closed.

9. In a phonograph provided with a cabinet and comprising a speaking tube having a handpiece: the combination of an openable and closeable switch for controlling the operation of the phonograph; a cover movable to open and close a front portion of said cabinet; a support for said handpiece movable relative to the phonograph outwardly of said cabinet to a supporting position and inwardly of said cabinet to a non-supporting position; and means, operatively associating said cover with said switch and support respectively, for causing said switch to be closed and said support to be moved to said supporting position as said cover is opened, and for opening said switch and moving said support to said non-supporting position as said cover is closed.

10. In a cabinet for a phonograph, having a front cover and a side closure member respectively swingingly movable downwardly and upwardly for closing movement: an arm secured to said closure member; an extension provided on said cover; and an lever having a portion engaging with said arm and another portion engaging with said extension whereby said closure member is closed as said cover is closed.

11. In a cabinet for a phonograph, having a front cover pivoted to swing upwardly and downwardly to open and close the cabinet at its front and a side closure member pivoted to swing downwardly and upwardly to open and close the cabinet at its side, said closure member being normally gravitationally held in said downward position: an arm secured to said closure member; a lever having a portion engaging with said arm; and an extension provided on said cover, said extension engaging with another portion of said lever for causing said closure member to be closed as said cover is closed and for permitting said closure member to open as said cover is opened.

12. In a phonograph having a cabinet and a pivotally mounted control lever movable to operative and inoperative positions: a movable cover for the front portion of said cabinet; a pivotally mounted closure member for an end portion of said cabinet, said member being normally gravitationally held in an open position; an arm secured to said closure member; a cam rotatably connected to said control lever; and a lever having a portion contacting said arm and another portion engaging said cam, whereby to cause said closure member to move to open and closed positions as said control lever is moved to said inoperative and operative positions.

13. In a cabinet for a phonograph having a mandrel for supporting a record and driving means for said mandrel: a single closure member simultaneously forming an exterior portion of the end wall of the cabinet and a front closure for said driving means; means for connecting said closure member to said phonograph; and an openable cover for said cabinet having an end wall section fitting said exterior portion to complete the closure of said end wall of the cabinet.

14. In a phonograph having a cabinet and a mandrel pivotally supported at one end and free at the other end to receive a record, said cabinet having an opening adjacent to and exposing the free end of said mandrel: the combination of a cover for said cabinet having open and closed positions; and means for closing said opening comprising a wall section carried by said cover and partially closing said opening when said cover is closed, and a movably mounted closure on said cabinet for completing the closing of said opening.

15. In a phonograph provided with a cabinet and comprising a speaking tube having a handpiece: the combination of an openable and closeable switch for controlling the operation of the phonograph; a support for said handpiece movable to control said switch; a cover for said cabinet movable into open and closed positions; and

means, operatively connecting said cover with said support, for moving said support to cause the opening and closing of said switch as said cover is moved into its respective closed and open positions.

16. In a phonograph provided with a cabinet and comprising a base plate and a speaking tube having a handpiece: the combination of a support for said handpiece pivoted on said base plate to swing downwardly out of said cabinet into a supporting position and upwardly into said cabinet into a non-supporting position, said support being gravitationally biased into said supporting position; a cover for said cabinet movable into open and closed positions; and means, operated by said cover when the cover is moved to closed position, for moving said support into said non-supporting position.

17. In a phonograph provided with a cabinet and comprising a speaking tube having a handpiece: the combination of a support for said handpiece pivoted to swing outwardly of said cabinet into a handpiece-supporting position and inwardly of said cabinet into a non-supporting position; closure means pivoted on said cabinet for movement into open and closed positions; and means, comprising a member applied to said cover and a member applied to said support and directly coacting, for causing said support to be moved into said handpiece-supporting and non-supporting positions as said cover is respectively moved into open and closed positions.

18. In a phonograph provided with a cabinet: the combination of control means for the phonograph having start and stop positions; a manipulatable member projecting outwardly of said cabinet and movable from one projecting position to another into respective operative and inoperative positions; means, operatively connecting said manipulatable member with said control means, for causing said control means to be moved into start and stop positions as said manipulatable member is moved into said operative and inoperative positions; an openable and closeable cover for said cabinet; means, operatively connecting said cover with said manipulatable member, for moving said manipulatable member relative to the phonograph into said cabinet as said cover is closed; and means, connected with said manipulatable member, for causing said control means to be retained in stop position when said manipulatable member is in the cabinet.

19. In a phonograph provided with a cabinet and having a speaking tube with a handpiece: the combination of control means operable to start and stop the phonograph; a support for said handpiece movable relative to the phonograph from a non-supporting position within said cabinet into a supporting position wherein said member extends outwardly of said cabinet; biasing means for moving said support upwardly from said supporting position into a raised supporting position when said handpiece is removed therefrom, said support being moved downwardly into supporting position by the weight of said handpiece when the handpiece is placed thereon; means, operatively connecting said support with said control means, for placing said control means in stop position when said support is in either said supporting or non-supporting position, and for causing said control means to be placed in start position when said support is in said raised supporting position; an openable and closeable cover for said cabinet; and means, operatively connecting said cover with said support, for causing said support to be moved into said raised supporting and non-supporting positions as said cover is opened and closed.

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