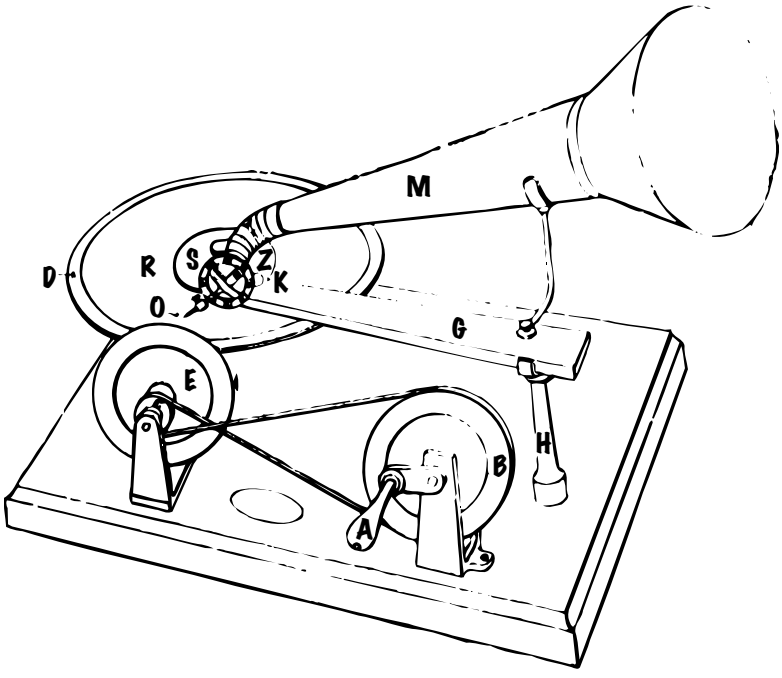

E. BERLINER'S
GRAMOPHONE.

*Directions for Assembling and Operating the
Seven-Inch Hand Gramophone*

BERLINER GRAMOPHONE CO.

1026 & 1028 FILBERT ST.

PHILADELPHIA.....PA., U.S.A.



Directions for Assembling and Operating the Gramophone

1st Take the small handle “A” slip it on the shaft of the wheel “B” being careful that the screw in the handle comes in line with the flattened part of the shaft. With a small screw driver fasten the handle firmly on the shaft. See that the small leather washer is placed on the shaft before placing the handle in position.

2nd Place the elastic cord in the small groove on wheel “C” and in the large groove on wheel “B”. If the elastic is not fairly tight, then tighten it, as the wheels will not move correctly with the elastic cord loose. Be particular and see that the cord is twisted as shown in the illustration.

3rd Place the Revolving Table “D” in the standard, the underside of this table should rest lightly on the small rubber wheel “E” turn the handle and see if the table works easily. If not, the table is either too low or too high. This can easily be regulated with a screw driver by the small screw in the standard, which can be adjusted from the underside of the board. Raise or lower this screw until the table revolves easily by turning the handle.

4th Place the rubber tube part of arm “G” in the standard “H,” resting the other end on the small standard provided for that purpose.

5th Place the tube of the sound box “Z” through the ring at the end of arm “G,” taking care that the small rubber ball “K” rests on top of the hard rubber piece at the end of the arm.

6th Place the small bend “L” over the tube of the sound box “Z” through the hard rubber ring at the end of arm “G.” Be

careful not to press on the spring of the sound box in doing this.

7th Place the horn "M" in the bend "L," resting the other end on the bracket provided for that purpose on arm "G."

8th Place one of the needles in hole "O" so that it lightly touches the rubber on sound box "Z," and fasten same firmly with the thumb screw.

9th Place one of the records "R" on the revolving table "D" and fasten it down firmly with disc "S."

10th Move the arm "G," which now holds the sound box, horn and bend, over until the needle rests either on the outside groove or the groove next to the outside of the rubber disc or "Record."

11th Turn the handle "A" evenly so that the revolving table moves about 70 revolutions in a minute, and the "Gramophone" will reproduce the words or music of the records. Do not get discouraged if the machine does not give best results at once, but go over these instructions again, and after a few minutes practice you will get a perfect reproduction.

Note Carefully.

You will notice that one of the springs is fastened to the sound box by two permanent screws at one end and by a thumb screw at the other end. This thumb screw is for the purpose of tightening or loosening the spring. When it is screwed down tight the sound is weakest, and it must be in this position for using ear tubes, but when the horn is used this thumb screw must be loosened as the further the nut of thumb screw is away from the sound box the louder the sound produced. The average results are obtained when the screw is released enough to make a clear space between the rubber bands on the two

springs. A little practice will enable you to easily adjust this so as to get the best results from the different records.

The handle should be turned with a wrist movement resting the elbow on the table and a uniform speed that will make the turn-table that holds the records revolve at a rate of about 70 revolutions per minute. To acquire this regularity of motion practice it a number of times with the lever and sound box lifted off from the turn-table.

General Remarks.

The standard velocity of the center turn-table for 7 inch plates is about 70 revolutions a minute. A more rapid motion will raise the pitch of and sharpen the sound; a slower motion will deepen the same. *First get the speed and then place the reproducer and needle into the outer groove or the next one.*

The needle points should be firmly set, and must not be removed until worn off – generally after about 12 or more reproductions for 7-inch discs, if the same plate is used many times in succession – because the edged gradually forming might scratch the plate or render the sound less pure.

If then another record plate is taken it may occur that, its groove being of a different width than the last, the somewhat worn needle point will not fit at once, and the reproduction will be less pure than if a fresh needle was inserted.

If a magnifying glass of about 4 diameter power and small Kansas oilstone be handy, the worn needles can easily be reground to the rounded point of a darning needle. In fact, the broken-off ends of darning needles (“Thorpes” No. 14) which are of *the same thickness* as our standard needles, are excellent substitutions.

Very thick points give a louder tone, but will gradually wear the plates; thin needle points will give a weak sound.

The rubber tubing around the center of the springs will, like all rubber, lose its elasticity in the course of time, and produce a thin tone; it must then be replaced by a similar tubing of the same quality *i.e.*, a firm gray rubber for the sound spring and soft quality for the upper or adjusting spring.

When the machine is out of use it is advised to raise the turn-table out of contact with the small rubber friction wheel, by placing a card board or small washer under the turn-table. This will prevent the friction wheel from becoming indented by the continuous depression.

When light rolling sounds are heard from the machine, they may be due to various causes. Either the fly-wheel rests too loosely in its pivot points or the small rubber friction wheel has worn off and is uneven, or the center table may have received a knock and does not run true.

In the case of light rattling or singing metallic sounds, they are always due to loose contacts or loose screws, or chips may have found access into the sound-box, or light articles may be loose on the table near by, or the adjusting lever may touch a metallic bearing.

Hangings and carpets deaden the sound from the horn; turning the latter close against a wall, mirror or window, door, wooden partition, or against the corner of a room will heighten the effect and in particular will enable *the person turning the machine* to hear it well.



