

J. A. LIEB.
 RECORD DISK FOR TELEGRAPHONES.
 APPLICATION FILED MAR. 25, 1907.

907,383.

Patented Dec. 22, 1908.

Fig. 1.

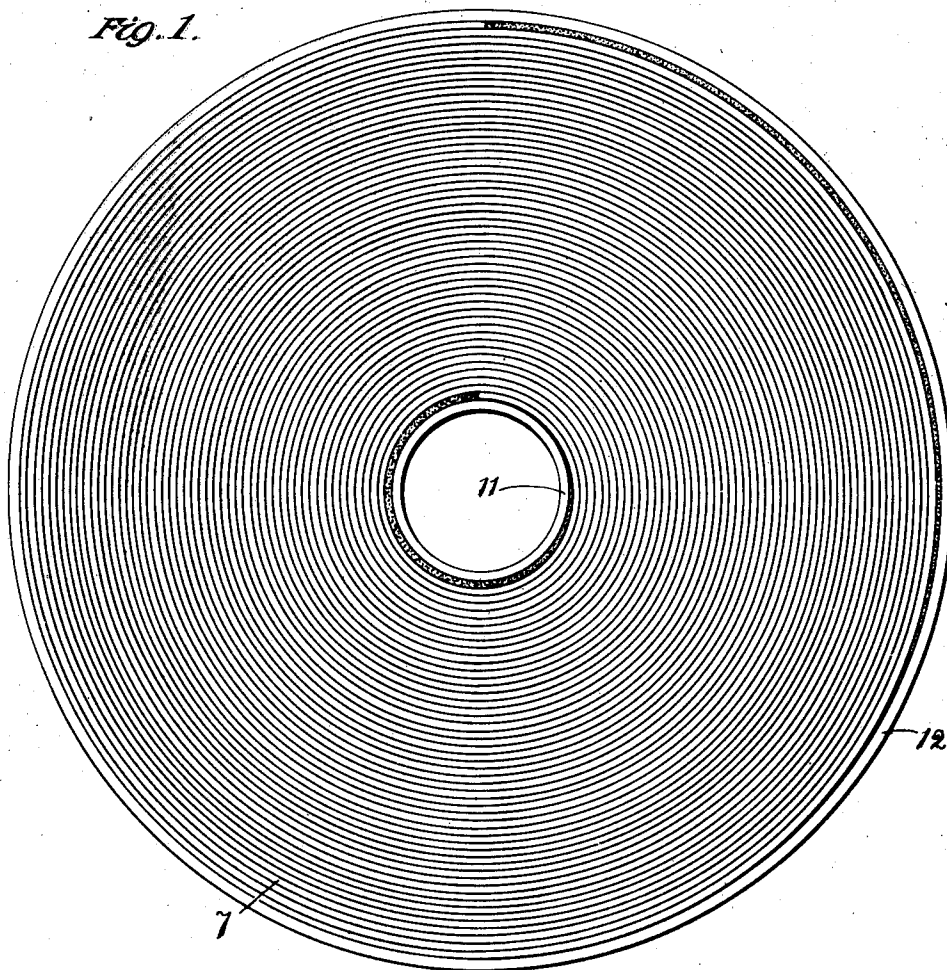
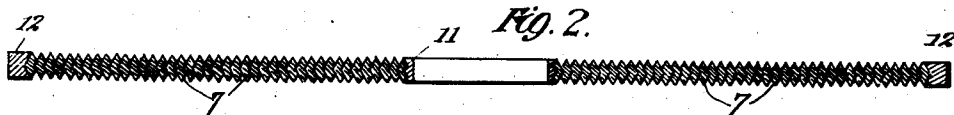
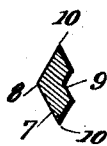


Fig. 3.

Witnesses:
Frank S. Ober.
Arthur

Inventor
John A. Lieb
 By his Attorneys
Rosenbaum & Stockbridge

UNITED STATES PATENT OFFICE.

JOHN A. LIEB, OF NEW YORK, N. Y., ASSIGNOR TO AMERICAN TELEGRAPHONE COMPANY, A CORPORATION OF THE DISTRICT OF COLUMBIA.

RECORD-DISK FOR TELEGRAPHONES.

No. 907,383.

Specification of Letters Patent.

Patented Dec. 22, 1908.

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To all whom it may concern:

Be it known that I, JOHN A. LIEB, a citizen of the United States, residing at the city of New York, in the borough of Brooklyn and State of New York, have invented certain new and useful Improvements in Record-Disks for Telegraphones, of which the following is a full, clear, and exact description.

My invention relates to an improvement in the recording disks which are used with the telegraphone, and in which a magnetic sound record is made by magnetizing the steel in a spiral path under the influence of an electromagnet in a telephone circuit. For this purpose plain steel disks have been used, but it is necessary with a flat or plane disk to have a separate and special guiding means for moving the electromagnet radially over the face of the disk as the latter rotates. It is evident that in case of wear, or certain imperfections in the mechanism, the path traced in the reproduction may not exactly accord to that of the recording operation. Moreover, in case the disk is removed from one machine to be used in another, or in case it is attempted to use a number of records with one machine in succession, the placing and readjustment of the disks may not be properly made. For these reasons it is desirable to have the guiding means on the face of the disk itself. In carrying out my invention I secure this result in a very simple and easy way by spirally winding a steel strip or wire so as to produce a built-up disk with a flat face. This construction has certain additional advantages from the standpoint of efficiency of reproduction, as will be later pointed out.

With these objects in view, the invention consists in the features of construction and combination hereinafter set forth and claimed.

In the drawings: Figure 1 is a front or face view of a magnetic reproduction disk embodying the principles of my invention; Fig. 2 is a sectional view of the same; Fig. 3 is a detail sectional view of the strip of wire employed therefor.

Referring to the drawings in which like parts are designated by the same reference sign, 7 denotes a special form of wire or strip which will be self supporting when wound in a spiral coil. A convenient form for this purpose is that shown in Fig. 3, in which the wire 7 is convex on one side 8, and concave on the other side 9. The side edges 10 of a

wire or strip of this form come substantially to an apex or point, although this is, of course, not essential. With this form of the invention it is merely necessary to obtain a supporting core or member 11, and wind the strip 7 spirally thereabout, until a disk of the required size is produced. This is best done between guiding plates so as to keep the alinement perfect. Finally, when the coil or disk is of the required size, a band 12 of Bab-bitt metal or other material is shrunk about its peripheral edge so as to tightly clamp all of the convolutions into a compact or unitary disk or structure.

With the form of the invention as above described a steel disk is finally produced in which the face has a continuous guiding thread or spiral edge due to the wire convolutions. It is evident that this thread or spiral may be made the guiding means of the recording and reproducing devices in exactly the same way as the spiral grooves of an ordinary graphophone disk are used. The magnetic record is made in the steel wire in accordance with the well known telegraphone principle. In practice the records obtained by a built-up disk of this form are very efficient for the purposes of reproduction, since the successive spirals or convolutions, being separated from one another by an air gap except for a slight imperfect contacting line or area, do not exert a de-magnetizing action on one another.

What I claim, is:—

1. A record-receiving body for telegraphones consisting of wire of magnetic material wound in spiral form with the adjacent convolutions interlocking with each other.

2. A record-receiving body for telegraphones consisting of a wire or strip having opposite concave and convex sides wound into a spiral in which the convex side of one convolution is seated in the concave side of another.

3. A record-receiving body for telegraphones consisting of a wire or strip with sharp edges having opposite concave and convex sides wound into a spiral in which the convex side of one convolution is seated in the concave side of another.

4. A record-receiving body for telegraphones consisting of a wire or strip with sharp edges having opposite concave and convex sides wound into a spiral in which the convex side of one convolution is seated in

the concave side of another, and an outside clamp holding the convolutions together.

5 5. A built-up disk for a telegraphone, comprising spirally coiled steel wire, the various convolutions of which interlock with one another.

6. A built-up disk for a telegraphone, comprising spirally coiled steel wire the various convolutions of which interlock with one

another, and means surrounding the coil for 10 binding the convolutions into permanent engagement with one another.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

JOHN A. LIEB.

Witnesses:

WALDO M. CHAPIN,
MAY BIRD.