

(No Model.)

T. A. EDISON.
PHONOGRAM BLANK.

No. 414,761.

Patented Nov. 12, 1889.

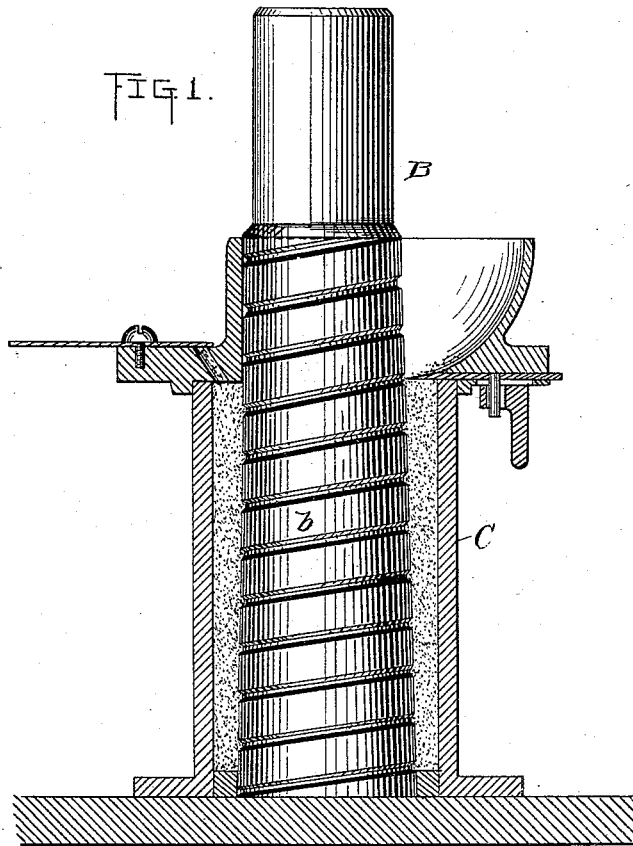
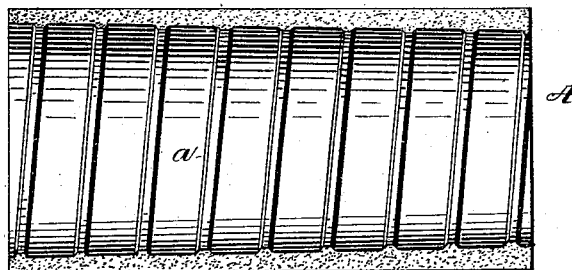


FIG 2.



Witnesses
Ed. Rolando
William P. Felt

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UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF LLEWELLYN PARK, NEW JERSEY.

PHONOGRAM-BLANK.

SPECIFICATION forming part of Letters Patent No. 414,761, dated November 12, 1889.

Application filed August 10, 1889. Serial No. 320,398. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, a citizen of the United States, residing at Llewellyn Park, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Phonogram-Blanks, (Case No. 840,) of which the following is a specification.

My invention relates to cylindrical blanks for receiving sound-records in the phonograph, made of wax or wax-like or similar materials, and designed to be placed on the cylinder of the phonograph for receiving and reproducing the sound-record. Heretofore these cylinders have been made with a smooth inner surface fitting closely upon the cylinder of the phonograph. I have found that several advantages arise from providing the interior of the cylindrical phonogram-blank with ribs, flanges, or projections, and it is in this that my invention mainly consists. This construction makes it easier to remove the molded blank from the mold in which it is formed, enables the injurious effects of contraction or warping of the cylinder to be readily removed, and prevents any bad effect from the accumulation of dust on the cylinder of the phonograph. I prefer to form a spiral rib on the interior surface of the blank.

My invention is illustrated in the accompanying drawings.

Figure 1 is a view illustrating the process of molding the blank, the mold being shown in section; and Fig. 2 is a longitudinal section of the complete phonogram-blank embodying my invention.

Referring to Fig. 2, A is the cylindrical blank, having a tapering bore and a true cylindrical outer surface, and made of a suitable molded material capable of receiving impressions of the recording-point in the phonograph. On the interior of the cylinder is formed a spiral rib *a*. In making such a cylinder I prefer to employ a cylindrical tapering core B, on the surface of which is formed a spiral groove *b*, and which is placed in the mold C, of the kind described in my prior applications and patents, and the material for forming the blank is poured into the mold around the core, so that as it hardens it forms a cylindrical body having a tapering

bore and formed with a spiral rib on its inner surface. I find it easier to remove such a blank from the core than one having a smooth inner surface, since by slightly turning or screwing the same it can be readily withdrawn.

In the process of molding the blank while the material cools it sometimes becomes contracted or warped on its inner surface, so that it does not fit the phonogram-cylinder truly, and in this case it has to be reamed out to remove the irregularities. This has to be allowed for in making the blanks, and when the blank is made with a smooth interior the whole inner surface often has to be cut in order to make it true, and this is a matter of some difficulty and incurs a risk of injury to the blank. Where the blank is formed with an internal rib or ribs and such warping occurs, it is only necessary in order to remove it to cut away the edges of the ribs, and thus a blank having a true inner surface can be formed with less labor and expense and waste of material than where the smooth surface is used. I make the ribs always deep enough to allow for the reaming out of the cylinder. Another advantage is that when the blank is placed on the phonogram-cylinder any particles of dust or other foreign substance which may be on the cylinder enter and remain in the spaces between the ribs, instead of coming between the blank and the cylinder, where they might prevent the blank from assuming a true position and resting evenly thereon.

What I claim is—

1. A tubular phonogram-blank provided with internal ribs or projections, substantially as set forth.
2. A tubular phonogram-blank having an internal spiral rib, substantially as set forth.
3. A tubular phonogram-blank made of molded material and molded with ribs or projections on its inner surface, substantially as set forth.

This specification signed and witnessed this 16th day of July, 1889.

THOS. A. EDISON.

Witnesses:

D. H. DRISCOLL,
WILLIAM PELZER.