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ENDLESS SOUND BAND WITH A MECHANICALLY REPRODUCIBLE SOUND RECORD AND METHOD OF PRODUCING SAME

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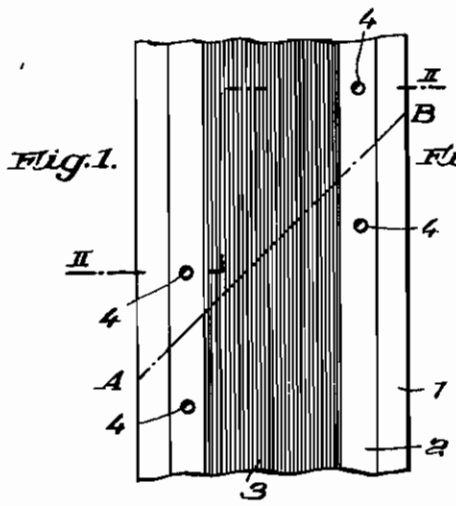

Fig.1.

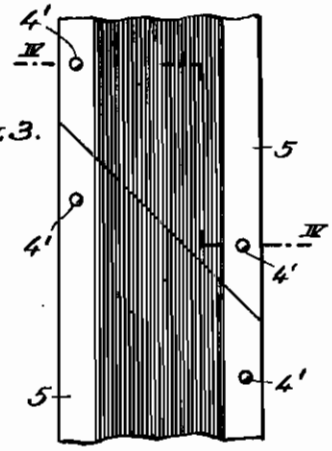

Fig.3.

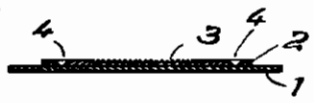

Fig.2.

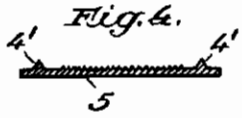

Fig.4.

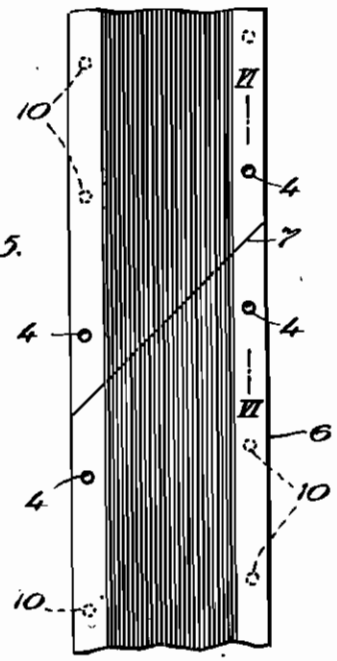

Fig.5.

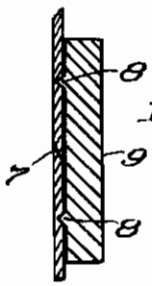

Fig.6.

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ALIEN PROPERTY CUSTODIAN

ENDLESS SOUND BAND WITH A MECHANICALLY REPRODUCIBLE SOUND RECORD AND METHOD OF PRODUCING SAME

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The invention relates to a method of producing endless sound bands, with a number of mechanically reproducible sound tracks running parallel or nearly parallel to the edge of the band, from a bounded matrix made from an endless original sound band, for example a wax band, and further relates to sound bands, particularly endless sound bands, produced according to this method.

In the production of endless sound bands with a mechanically reproducible sound track bundle, it is preferable to produce a bounded matrix from an endless original sound band, for example an endless wax band, then to make impressions of this bounded matrix on bounded thermoplastic bands, or to use this matrix for producing bounded sound bands in series in some other manner, for example by a casting or a spraying process, and finally to connect the ends of the bands with each other. For this purpose, the endless original sound band may either be cut across the sound tracks and be used in its bounded form for producing a bounded matrix band, or there may be produced from the original sound band, which is left in its endless form, a likewise endless matrix band, and this may be cut across the sound tracks. In both cases it is difficult, when the sound tracks have been cut, to connect the ends of the sound bands produced in series so as to ensure a proper alignment of the sound tracks forming the sound track bundles at the two ends of the bands. However, such an alignment is absolutely necessary, in order that the connected sound tracks should enable a continuous reproduction.

The object of the invention is to obviate this difficulty. This is achieved by providing the original sound band or the matrix band by means of a gauge with marks on both sides of the separating line passing across the band, which marks are moulded in the duplicating process, and by bringing the moulded marks of the duplicated band with the aid of the gauge into the position ensuring the proper alignment of the sound tracks of the sound track bundle at both ends of the band.

The marks are preferably made outside and on both sides of the sound track bundle, and advantageously consist in grains formed on the original sound band.

The idea of the invention is not only applicable to the production of endless sound bands, i. e. in connecting the free ends of freshly produced bounded bands, but also in repairing torn bounded or endless sound bands by sticking them together or the like. For this purpose, the invention proposes to provide the sound band on its entire length at the side of the sound record with marks distributed at certain distances, which, when the band gets torn, may be brought by means of a gauge into the relative position in which the sound tracks at both ends of the band are properly aligned.

The method according to the invention is illustrated by way of a constructional example in the accompanying drawing, in which:

Fig. 1 is a view of a portion of an endless original sound band;

Fig. 2 is a section on the line II—II of Fig. 1;

Fig. 3 is a view of a portion of the matrix band produced from the original sound band according to Fig. 1; the portion corresponds to that shown in Fig. 1;

Fig. 4 is a section on the line IV—IV of Fig. 3;

Fig. 5 is a view of a portion of a ready sound band produced from the matrix band according to Fig. 3; and

Fig. 6 is a section through the sound band according to Fig. 5 on the line VI—VI, showing the sound band and also the connecting gauge applied in connecting the ends of the band.

The original sound band illustrated in Figs. 1 and 2 consists of a carrier layer 1 of nitrocellulose covered with a wax layer 2. It is recorded in its endless form, the sound grooves 3 being cut by means of a stylus into the wax layer, which sound grooves run parallel or nearly parallel to the edge of the band and represent a continuous helically shaped sound track.

It is supposed that in producing an endless matrix band from the original sound band, the latter is cut along the line A—B. Before this cut is effected, the marks 4 are made in the sound record layer by means of a gauge which marks, in the constructional example illustrated, consist of grains in the wax layer.

After making the marks 4 on the original sound band, which is cut across the sound tracks, a bounded matrix is produced. Such a matrix is illustrated in Fig. 3, showing the two free ends of the matrix band 5. On these ends of the band the hollowed out marks 4 of Fig. 1 appear as projections at 4'.

The sound bands 6 (Fig. 5), produced from the matrix band 5 by a pressing, stamping, casting, or spraying process, have on their recorded surface the hollowed out marks 4. For connecting the free ends of the sound band 6, the latter is chamfered as shown at 7, and the grain points 8 of the connecting gauge 6 are inserted in the

grains 4. Consequently, the free ends of the band exactly occupy the position corresponding to the alignment of the sound tracks of the sound track bundles at the two ends of the band, so that, when the ends of the band are stuck together in this position, it is certain that the sound tracks of the duplicated band exactly occupy the position of the sound tracks in the original sound band before the cut A—B was made.

If the cutting across the sound tracks is effected in a matrix band which was first produced as an endless band, it will be sufficient to make the alignment marks on the matrix band.

The aligning marks are not only advantageous for the proper connection of the free ends of a bounded band in producing an endless band, but also in repairing torn endless or bounded sound bands. For this purpose, it is advisable to provide the sound band on its entire length at the side of the sound tracks at certain distances with aligning marks. When such a band gets torn at a place, the proper connection of the ends of the band may be easily and securely effected by bringing a connecting gauge to engage the marks adjacent to the place where the band is torn. In Fig. 5 the additional marks provided at certain distances along the sound band are indicated at 10.

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