

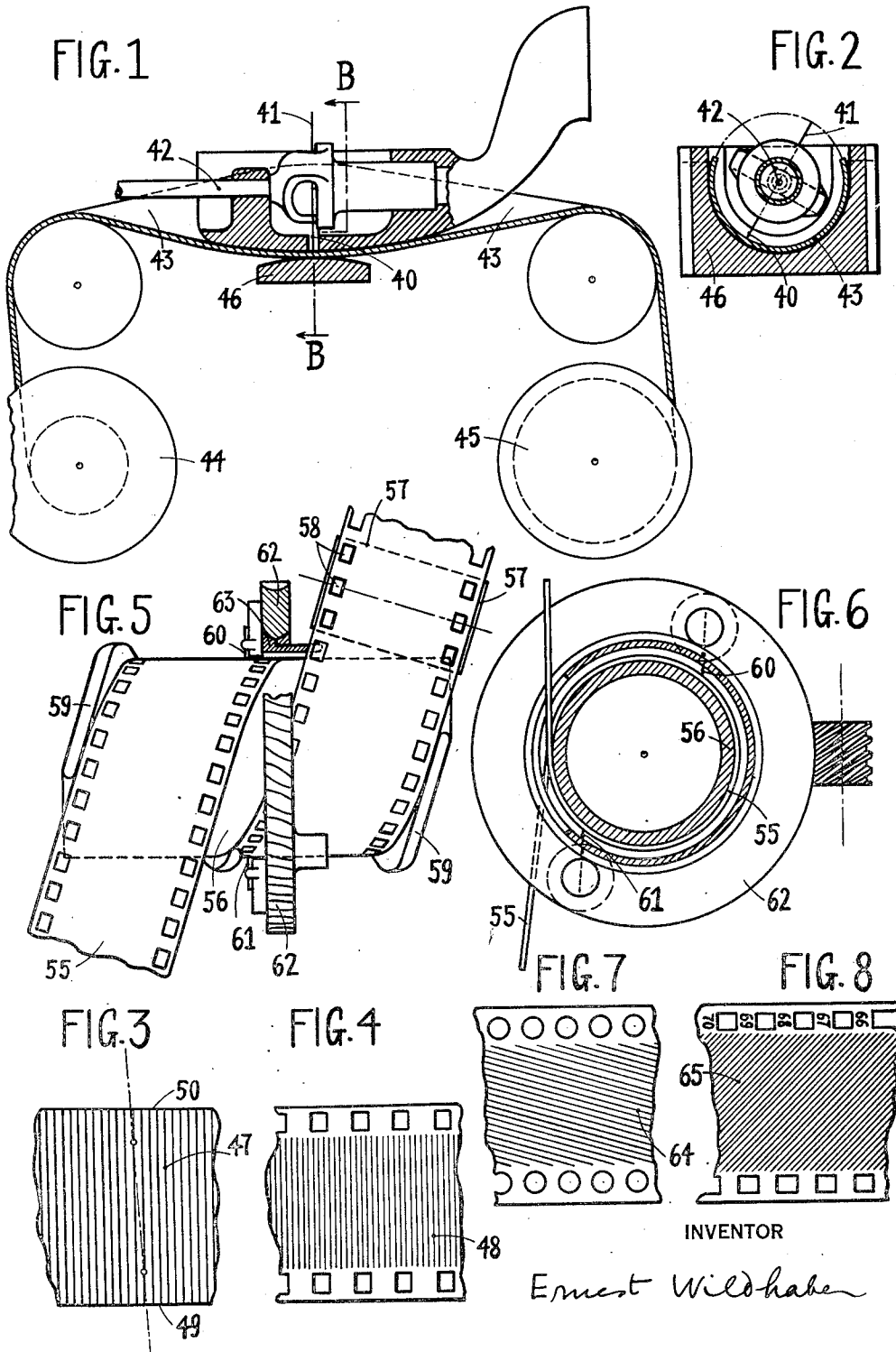
April 2, 1929.

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1,707,243

RECORD FOR REPRODUCING SOUND

Filed April 10, 1925



UNITED STATES PATENT OFFICE.

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RECORD FOR REPRODUCING SOUND.

Application filed April 10, 1925. Serial No. 22,124.

My invention relates to records, on which vibrations or oscillations of sound are registered in any suitable way, such as by grooves having undulated bottoms or sides.

One object of my invention is to provide a record not limited in length.

A further object is to provide a record of large capacity, small dimension and small weight.

Another object is to provide a record for moving picture theaters, which can be easily timed up with a moving picture.

A still other purpose is to provide a flexible record for loud and timed reproduction in moving picture theaters, which is separate from the picture film and which is made of material particularly suited for sound reproduction.

Other objects will appear in the course of the specification and in the appended claims.

My invention is exemplified in the accompanying drawings, in which:

Fig. 1 is an elevational view, partly a section, of a device for reproducing sound in accordance with my invention.

Fig. 2 is a side view of the same, and partly a section along lines B—B of Fig. 1.

Fig. 3 and Fig. 4 are views of records, constructed in accordance with my invention, and adapted to the operation illustrated in Fig. 1 and Fig. 2.

Fig. 5 is a plan view, partly a section, of a further device for reproducing sound in accordance with my invention.

Fig. 6 is a side view and section corresponding to Fig. 5.

Fig. 7 and Fig. 8 are views of further records illustrative of the present invention.

In the device shown in Fig. 1 and Fig. 2, a stylus 40 and a diagonally opposite stylus 41 are rotated about an axis 42, in intermittent engagement with a flexible record 43. The latter is fed from roll 44 to roll 45, in proportion to the rotation of the styles 40 and 41, past a hollow and stationary guidance 46. This guidance is shown in a sectional view in Fig. 2, the section being taken along lines B—B of Fig. 1. In this section, guidance 46 is curved along a circular arc, which follows the path of the styles. The record 43 is bent to this circular arc by suitable further guidances. In the embodiment referred to the two styles 40 and

41 act on the same membrane or diaphragm. My invention can be carried out with styles acting on the same membrane or with styles transmitting sound to separate membranes.

The path or groove followed by a stylus extends substantially along a circular arc in actuality, and substantially along a straight line in development of the record.

Such lines 47, 48, Fig. 3 and Fig. 4, extend across the active width of the record, starting on side 49 and ending on side 50, continuation of reproduction being obtained by the following groove. Inasmuch as a groove is entered by a stylus before the preceding groove is left by its stylus, successive grooves reproduce the same sound at moments, and therefore contain parts of equal phase.

The grooves in the record are produced in a way similar to the reproduction of sound, as well known.

The slots or holes of a record may be of any shape. In Fig. 4 substantially rectangular slots are shown, and in Fig. 7 substantially circular holes are indicated. The record shown in Fig. 3 contains neither holes nor slots, and is not intended for positive feed. The feed of such record may be governed by the styles which engage with it, in analogy to the feed of a tone arm of a phonograph.

Another device suited to use records of my invention is indicated in the Figures 5 and 6. A record 55 is obliquely fed over an outside cylindrical surface 56, positive feed being effected by a toothed wheel 57 engaging with holes 58 of said record. Surface 56 is preferably stationary, and contains lateral guiding rims 59.

Inwardly disposed styles 60, 61 are rotated outside of surface 56, style carrier 62 being rotatably held by a circular and stationary projection 63. The points of the styles follow grooves, which are substantially circular when record 55 is wrapped on cylindrical surface 56, and straight when the surface of the record is developed in a plane.

Fig. 7 and Fig. 8 are separate views of records. The grooves 64, 65 are seen to extend obliquely across the width of a record, substantially along straight lines.

It is understood that such changes and

modifications may be made in my invention, as fall within the limits of the appended claims.

What I claim is:

- 5 1. A record having two parallel sides and containing disconnected straight lines bearing recorded sound, said lines extending in a direction from one of said sides to the other and containing parts of equal phase.
- 10 2. A record having two parallel sides and containing disconnected straight lines bearing recorded sound, said lines extending in an oblique direction with respect to said sides.
- 15 3. A record having two parallel sides and

containing disconnected lines bearing recorded sound, said lines extending in an oblique general direction with respect to said sides, so that the two end points of an individual line lie on a diagonal with respect to said parallel sides. 20

4. A record having two parallel sides and containing disconnected and parallel straight lines bearing recorded sound, said lines extending in a direction from one of said sides to the other, adjacent lines containing parts of equal phase. 25

In testimony whereof I hereto affix my signature.

ERNEST WILDHABER.