(No Model.)

T. A. EDISON.

PHONOGRAPH.

No. 575,151. Patented Jan. 12, 1897.

Fig. 1.

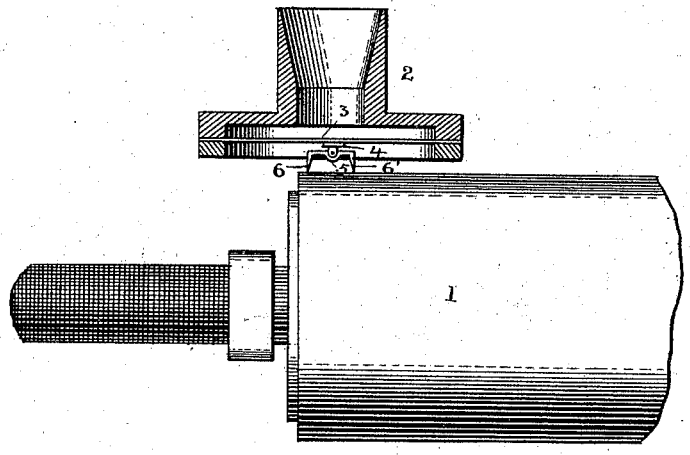
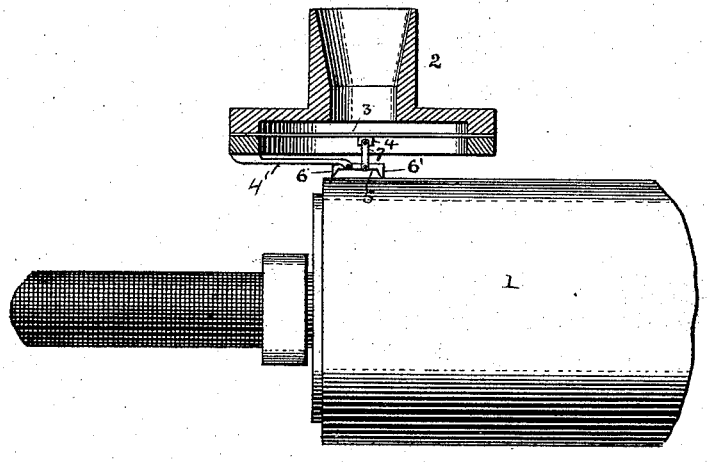


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

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

PHONOGRAPH.

SPECIFICATION forming part of Letters Patent No. 575,151, dated January 12, 1897.

Application filed December 3, 1890. Serial No. 373,406. (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 Phonographs, (Case No. 887,) of which the following is a specification.

My invention relates to improved recording and reproducing devices for phonographs; and the invention consists in a two-point recorder or reproducer adapted to make or travel in a double track on a phonogram-blank or recording-surface; and the invention also consists in certain combinations, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a view of one form of recorder embodying the improvement, and Fig. 2 is a view of a modified form.

1 is the phonogram-blank, adapted to be turned in any suitable manner.

2 is the mouthpiece or speaking-tube, below which is diaphragm 3. To the diaphragm is connected a block or post 4, to which is pivoted the arm 5, carrying at each end a recording-point 6 6′, both points bearing simultaneously on the surface of the blank, but preferably at a slightly-different distance from the pivot, the difference being substantially one-half of the pitch of the feeding-screw.

To use this phonograph, the recorder is set back so that point 6 is near the end of the phonogram-blank. The blank is then turned in the ordinary or any suitable manner, and at the same time the recorder is fed along toward the opposite end of the blank. When the diaphragm is set into vibration by speaking into the mouthpiece, both points 6 6′ are vibrated and both make an independent record of the same sounds on the surface of the blank. A similar two-point instrument is used for reproducing, one point traveling in the record made by point 6 and the other traveling in the record made by point 6′. This apparatus gives a very true record, and the reproduced vibrations give a very clear and well-defined reproduction of the original sounds.

In Fig. 2 the arm 5, having the recording-points 6 6′, is pivoted to an arm 4′, instead of being pivoted directly to the block mounted on the diaphragm. Said arm 5 is, however, connected to the diaphragm by means of the link or yielding connection 7. This recorder also makes two separate records, but it will be clear that one point will move up as the other moves down, and vice versa, instead of moving in the same direction as in the other apparatus.

Having thus described my invention, what I claim is—

1. In a phonograph, the combination with the diaphragm, of two recording or reproducing points arranged to act on the same side of the blank and having a common connection with the center of the diaphragm, such points being located at different distances from said center, substantially as set forth.

2. In a phonograph, the combination with the diaphragm, of two recording or reproducing points arranged to act on the same side of a blank, and carried by an arm pivoted upon a support independent of the diaphragm, said arm having a pivoted connection with the diaphragm whereby the movements of the diaphragm will move the points in opposite directions, substantially as set forth.

3. In a phonograph, the combination with the diaphragm, of two recording or reproducing points carried thereby and arranged to act on the same side of the blank, said points being arranged at different distances from the center of the diaphragm, whereby the points will form, or trace over, two separate and parallel records, substantially as set forth.

This specification signed and witnessed this 1st day of December, 1890.

THOS. A. EDISON.

Witnesses:

JOHN F. RANDOLPH,

W. PELZER.