

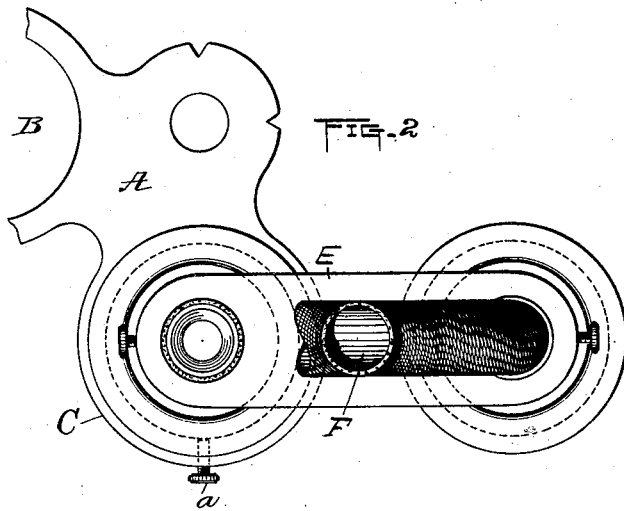
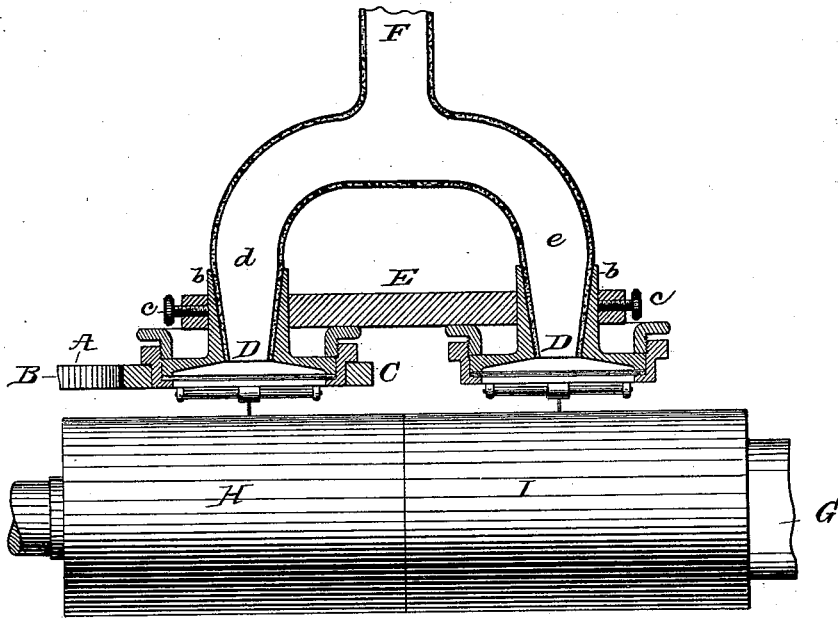
(No Model.)

T. A. EDISON.  
PHONOGRAPH.

No. 437,423.

Patented Sept. 30, 1890.

FIG. 1.



WITNESSES:

*E. J. Rowland*  
*William Rizer*

INVENTOR

*Thomas A. Edison,*

BY

*Dyer & Seelye*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

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

## PHONOGRAPH.

SPECIFICATION forming part of Letters Patent No. 437,423, dated September 30, 1890.

Application filed July 17, 1888. Serial No. 280,208. (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, in the State of New Jersey, have invented a certain new and useful Improvement in Phonographs, (Case No. 790,) of which the following is a specification.

The object I have in view is to provide means for making a double record of matter to be recorded by the phonograph, so that one record can be preserved while the other is sent to the person for whom the matter is intended. To accomplish this, I connect two of my phonograph-recorders together by means of a rigid arm, so that they will be arranged side by side, and I provide a speaking-tube, which is branched at the recorders, so that it will connect with both of them. To mount the double recorder in the machine, one of the recorders is placed in the proper eye of the spectacle-frame and secured therein, as usual, by a set-screw or other means. I use with this double recorder two phonogram-blanks, each one-half the length of the phonogram-cylinder of the machine. These two half-blanks are placed upon the phonogram-cylinder end to end, and the recorders are adjusted to them, so that one recorder will be at the beginning of each blank. The record is then made as usual.

In the accompanying drawings, forming a part hereof, Figure 1 is a vertical section of the double recorder, showing the phonogram-blanks in elevation; and Fig. 2 is a top view of the double recorder with one branch of the speaking-tube broken away.

A is the swinging spectacle-frame of my phonograph, having eyes B C, in which are placed the reproducer and the recorder of the instrument.

My recorder D is carried by an annular frame which fits into the eye C of the spectacle and is held therein by a set-screw *a*. These recorders have rising centrally from them tubes *b*, with which the speaking-tube is connected. I take two of the recorders D and connect them together by a rigid bar E, which has an eye in each end surrounding the tube *b* and is secured to the tube *b* of each of the recorders by a set-screw *c*. The bar E maintains the recorders in the same relative position and enables the user to raise or lower both by a single movement.

The speaking-tube F is branched at its end

into two branches *d e*, which are connected with the tube *b* of the two recorders. One of these recorders is placed in the eye C of the spectacle-frame A and is secured therein, and by means of the rigid bar E the other recorder is supported by it.

The phonogram-cylinder G has mounted upon it two cylinder phonogram-blanks H I, which are each one-half the length of the full blank or other fraction of a full blank less than one-half. These blanks H I are placed on the phonogram-cylinder end to end, and the two recorders act upon them, so as to produce two records of the same matter.

It will be seen that this construction of the double recorder necessitates no change in the construction of my phonograph, but enables a double record to be made by means of a simple attachment which can be placed on the phonograph without changing its construction.

What I claim as my invention is—

1. In a phonograph, the combination, with the phonogram-cylinder adapted to receive two blanks thereon placed end to end, of two recorders mounted upon the machine and acting upon the separate blanks, substantially as set forth.

2. In a phonograph, the combination, with the recorder mounted thereon, of a second recorder having an independent diaphragm and recording-point connected rigidly with the first recorder, whereby the two recorders may be raised and lowered by a single movement, substantially as set forth.

3. In a phonograph, the combination, with a swinging spectacle-frame, of a recorder secured in an eye of said frame and a second recorder rigidly connected to and supported from the first recorder, substantially as set forth.

4. In a phonograph, the combination, with two recorders with separate diaphragms, of a bar or frame connecting such recorders rigidly together, whereby the two recorders may be raised and lowered by a single movement, and a speaking-tube common to both of said recorders, substantially as set forth.

This specification signed and witnessed this 14th day of July, 1888.

THOS. A. EDISON.

Witnesses:

WILLIAM PELZER,  
A. W. KIDDLE.