

A. N. PIERMAN.
PHONOGRAPH.

APPLICATION FILED FEB. 17, 1911.

1,231,061.

Patented June 26, 1917.

2 SHEETS—SHEET 1.

Fig. 1

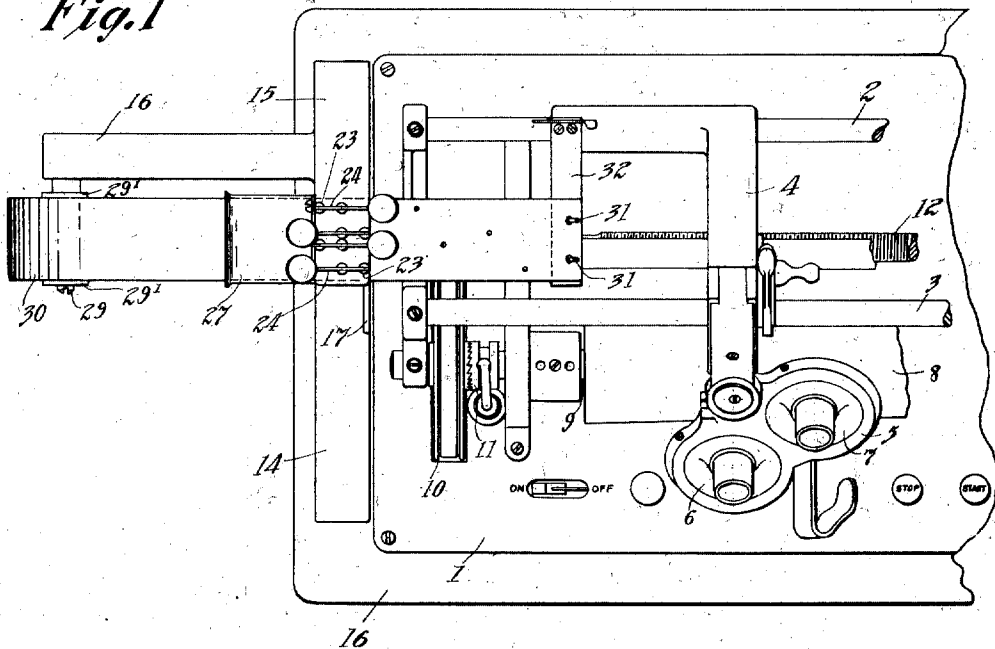
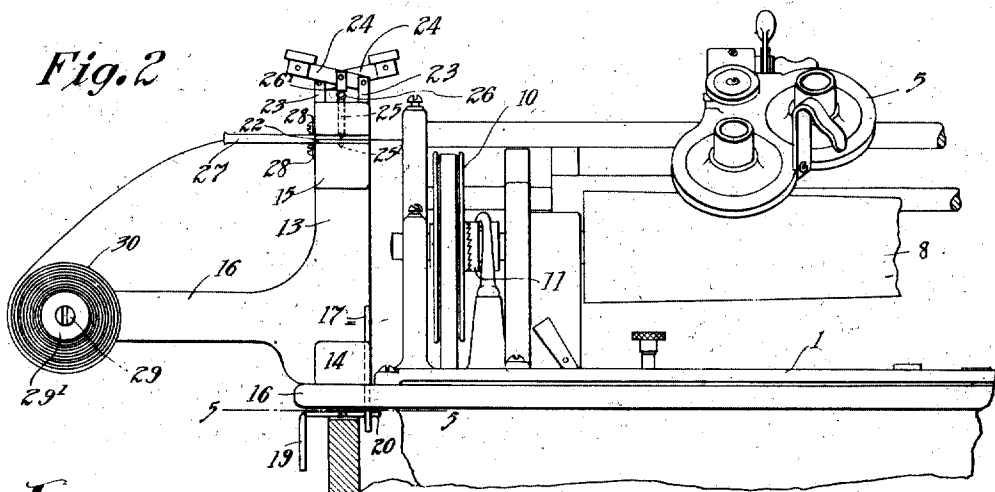


Fig. 2



Witnesses:

Ed. Kraski
Fredrick Bachmann

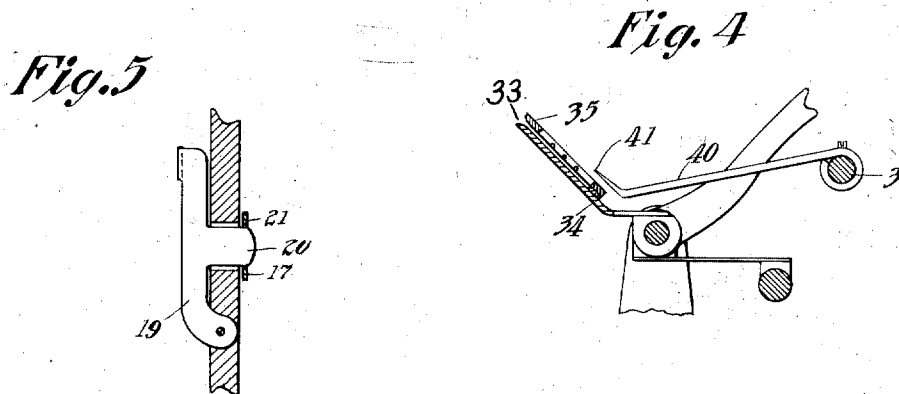
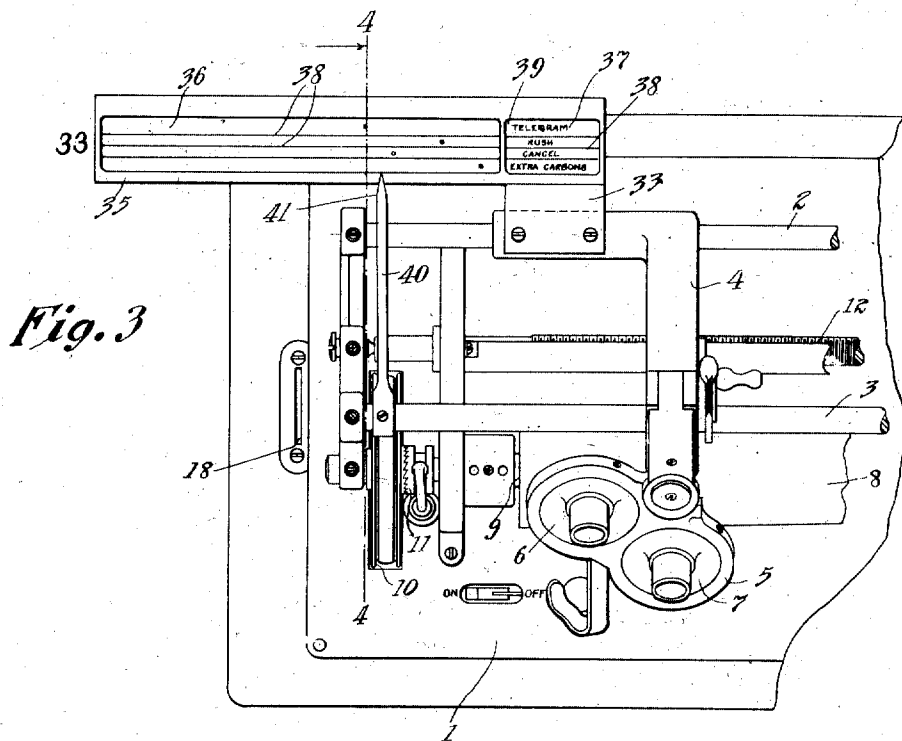
Inventor:

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by *Frank L. Pier*
his Atty.

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 2 SHEETS—SHEET 2.



Witnesses:

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Inventor:

Alexander A. Pierman
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UNITED STATES PATENT OFFICE.

ALEXANDER N. PIERMAN, OF NEWARK, NEW JERSEY, ASSIGNOR TO NEW JERSEY PATENT COMPANY, OF WEST ORANGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

PHONOGRAPH.

1,231,061.

Specification of Letters Patent.

Patented June 26, 1917.

Application filed February 17, 1911. Serial No. 609,085.

To all whom it may concern:

Be it known that I, ALEXANDER N. PIERMAN, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Phonographs, of which the following is a description.

My invention relates to phonographs and more particularly to memorandum attachments for such machines. My object is to provide a new and improved device of this character which will permit the ready marking or indication of instructions for any desired part of the record; and in conformity with this object, my invention in its preferred form comprises means for moving a memorandum tape or other receiver across the record at a speed corresponding with that of the recorder and reproducer and means for marking or indicating on the said tape the desired instructions and the parts of the record to which they refer.

With this and other objects in mind, my invention consists in the features hereinafter set forth and claimed.

In the accompanying drawings forming a part of this specification and in the following description, I have shown and described the preferred form of my invention as applied to the Edison business phonograph; but it is understood that the same may be applied to phonographs of any type whatever.

Referring to the drawings:

Figure 1 is a plan view of a business phonograph provided with a form of my invention adapted for use by a dictator in marking the desired instructions on the memorandum tape;

Fig. 2 is a front elevation thereof;

Fig. 3 is a plan view of a like phonograph provided with a form of my invention for indicating to a transcriber the instructions to be followed in transcribing the record;

Fig. 4 is a section on the line 4-4 of Fig. 3; and

Fig. 5 is a section on the line 5-5, Fig. 2.

In all the views, like parts are designated by the same reference numerals.

The phonograph shown is of the Edison type and comprises the usual body 1 having a back rod 2 and a guide rod 3, on which rods the traveling carriage 4 is slidably

mounted. Pivottally mounted on the front end of the carriage 4 is a frame 5 supporting a recorder 6 and a reproducer 7, the pivotal movement of this frame permitting either the recorder or the reproducer to be brought into operative position. Figs. 1 and 2 show the frame 5 in position for recording; and Fig. 3 shows the same in position for reproducing. The mandrel 8 is mounted on the main shaft 9 which is adapted to be driven from the pulley 10 when operatively connected thereto by the clutch 11. 12 represents a feed screw, which is adapted to be engaged by a nut mounted on the bottom of the traveling carriage to feed the carriage 4 along the record at the desired speed.

Referring to Figs. 1 and 2, my improved memorandum attachment therein shown comprises a frame 13 provided with a lower horizontal arm 14, an upper horizontal arm 15, and an outwardly extending horizontal arm 16 at right angles to the arms 14 and 15. The arm 14 engages the top 16 of the cabinet of the phonograph and is detachably secured thereto adjacent the left hand edge thereof by a plate 17. This plate is secured to the arm 14 and passes through a slot 18 (see Fig. 3) in the top of the cabinet to which last named part it is locked by the lever 19. This lever is pivoted to the cabinet and is provided with an extension 20 adapted to engage the slot 21 in the plate 17. As it is customary to provide phonographs with the slot 18 and the locking lever 19 for securing the cover in place, the frame 13 can be applied to such machines without any change in the structure thereof. The arm 15 is provided with a horizontal slot 22 and has secured to its upper face a plurality of lugs 23 each pivottally supporting a lever 24. Each of these levers has pivoted intermediate its ends an axially movable marking pin or punch 25 passing loosely through the upper part of the arm 15 into the slot 22. These pins and levers are normally held in an elevated position by coil springs 26 surrounding the pins and engaging at their ends the top of the arm 15 and shoulders 26' on the punches 25. A conical seat 25' is provided in the bottom of the slot 22 for each of the pins 25. 27 represents a flat tubular guide provided with flanges 28 whereby it is secured to the arm 15 in register with the

slot 22, and 29 a screw or equivalent bearing secured to the arm 16 and adapted to support a roll 30 of memorandum tape of paper or any other suitable indentable material. 5 29' are washers engaging the sides of the roll 30 to hold the same in place. The memorandum tape is passed through the guide 27 and the slot 22 and is detachably engaged with the pins 31 on the spring arm 32 which 10 is secured to the traveling carriage of the phonograph. Both the bearing 29 and the arm 32 thus serve as supports for the tape. In the operation of my device, the tape 30 is fed past the punches 25 at the same speed 15 as the recorder and reproducer are fed across the record. As shown in Figs. 1 and 2, these punches are located in a line at right angles to the line of motion of the memorandum tape and are mounted respectively above and 20 adapted to mark upon the various parts of the said tape corresponding to the parallel longitudinal instruction spaces shown between the wires 38 in Fig. 3.

In Figs. 3 and 4, I have shown a memorandum holder 33 preferably made of sheet 25 metal, and secured to and movable with the traveling carriage. This holder preferably comprises a lower sheet metal base 34 secured to the said carriage and an upper frame 35 secured at its front longitudinal edge to the 30 base 34 and provided with two openings 36 and 37. The memorandum tape is adapted to be frictionally held between the base 34 and the frame 35, and in order to divide the said tape into the desired instruction spaces, spaced wires 38 are run longitudinally across the openings 36 and 37 as shown in Fig. 3. A preferably transparent card or plate 39 35 is placed above the opening 37 to designate the various longitudinal spaces. To indicate the part of the record to which the instructions indicated refer, an index 40 provided with a pointer 41 located adjacent to the opening 36 is secured to the cross rod 3. 40

In the operation of my device, the memorandum tape is fed past the punches 25 at a speed corresponding with that of the recorder. The dictator may, therefore, mark thereon any instructions desired relatively 45 to the various parts of the record by simply depressing the proper lever 24. When it is desired to transcribe the record, the transcriber places the tape in the holder 33 bringing it into the same position relatively 50 to the traveling carriage as it held when marked by the dictator. By bringing the pointer 41 to any desired mark on the tape, the part of the record to which the instructions corresponding to this mark refer can 55 be readily found. 60

While I have shown the preferred embodiment of my invention, it is to be understood that my invention is not limited thereto.

65 Having now described my invention what

I claim as new and desire to secure by Letters Patent of the United States is as follows:

1. In a phonograph, a sound recording member and a sound record receiving member, said members being movable with respect to each other, a memorandum receiver in fixed relation with one of said members, and a recording mechanism in fixed relation with the other of said members, said 70 recording mechanism comprising a plurality of devices for indicating different instructions, together with means for operating said devices to cause the same to record upon said memorandum receiver to indicate 75 instructions at certain points on the sound record receiving member. 80

2. In a device of the class described, the combination with a phonograph, of movable tape supporting means connected with said 85 phonograph and adapted to impart to the tape a movement of translation with reference to the fixed parts of the phonograph, and marking means mounted in proximity to the path of the tape, substantially as described. 90

3. In a device of the class described, the combination with a phonograph having a rotatable record support, means for supporting a sound box, and means for producing 95 a relative feeding movement between said first named means and said record support, of a tape support connected with said first named means, substantially as described. 100

4. In a device of the class described, the combination with a phonograph having a rotatable record support, means for supporting a sound box, and means for producing 105 a relative feeding movement between said first named means and said record support, of a tape support connected with said first named means and adapted to impart to the tape a movement of translation with reference to said record support, and marking 110 means mounted in proximity to the path of the tape, substantially as described.

5. In a device of the class described, the combination with a phonograph having a 115 rotatable record support, means for supporting a sound box, and means for producing a relative feeding movement between said first named means and said record support, of a tape support connected with said 120 first named means and adapted to move the tape in the direction of the relative feeding movement between said first named means and said record support, and marking means 125 immovable in the direction of movement of the tape mounted in proximity to the path thereof, substantially as described.

6. In a device of the class described, the combination with a phonograph provided with a rotatable record support, of means 130 for supporting a roll of tape, and means

connected with said phonograph and movable thereby for imparting a movement of translation to the tape, substantially as described.

5 7. In a device of the class described, the combination with a phonograph provided with a rotatable record support, of a guide for a memorandum tape, and means connected with said phonograph and movable
10 thereby for imparting a movement of translation to the memorandum tape through said guide, substantially as described.

8. In a device of the class described, the combination with a phonograph provided with a rotatable record support, of means for supporting a roll of tape, means movable by said phonograph for imparting a movement of translation to the tape, and marking means connected with said phonograph and mounted in proximity to the path of the tape, substantially as described.
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9. In a device of the class described, the combination with a phonograph provided with a rotatable record support, of a guide for a memorandum tape, means connected with and movable by said phonograph for moving the tape at a uniform speed through said guide and marking means mounted in proximity to the path of the tape, substantially as described.
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10. In a device of the class described, the combination with a phonograph provided with a rotatable record support, of means for supporting a roll of memorandum tape, means movable to feed the tape in a direction at right angles to the direction of rotation of the record support, means for guiding the tape in such movement, and marking means mounted in proximity to the path of the tape, substantially as described.
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11. In a device of the class described, the combination with a phonograph having a rotatable record support, means for supporting a sound box, and means for producing a relative feeding movement between said first named means and said record support, of a tape support connected with said first named means and adapted to be moved thereby at a speed corresponding with that of the relative feeding movement between said first named means and said record support, substantially as described.
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12. In a device of the class described, the combination with a sound record supporting member and a sound recording member in operative relation thereto, said members being movable with respect to each other, of a memorandum device comprising a memorandum receiver, and means for recording on said receiver to indicate transversely of the same a plurality of different instructions, said memorandum receiver and recording means being movable with re-
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spect to each other to permit said recording means to record upon said memorandum receiver instructions for certain points on a record carried by said record support, substantially as described.

13. In a device of the class described, the combination with a sound record supporting member and a sound recording member in operative relation thereto, said members being movable with respect to each other, of a memorandum device comprising a memorandum receiver, and recording means comprising a plurality of devices for indicating different instructions on said memorandum receiver, said memorandum receiver and recording means being movable with respect to each other to permit said devices to record upon said memorandum receiver instructions for certain points on a record carried by said record support, substantially as described.
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14. In a device of the class described, the combination with a sound record supporting member and a sound recording member in operative relation thereto, said members being movable with respect to each other, a memorandum receiver in fixed relation to one of said members, and a recording mechanism in fixed relation with the other of said members, said recording mechanism being arranged to indicate transversely of said memorandum receiver different instructions for certain points on a record carried by said record support, substantially as described.
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15. In a device of the class described, the combination with a sound record supporting member and a sound recording member in operative relation thereto, said members being movable with respect to each other, of a memorandum device comprising a memorandum receiver, and recording means comprising a plurality of punches for indicating different instructions on said memorandum receiver, said memorandum receiver and recording means being movable with respect to each other to permit said punches to record upon said memorandum receiver instructions for certain points on a record carried by said record support, substantially as described.
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16. In a device of the class described, the combination with a sound record supporting member and a sound recording member in operative relation thereto, said members being movable with respect to each other, of a memorandum device comprising a memorandum receiver, and recording means comprising a plurality of axially movable devices for indicating different instructions on said memorandum receiver, said memorandum receiver and recording means being movable with respect to each other to permit said axially movable devices to record upon said memorandum receiver instructions
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for certain points on a record carried by said record support, substantially as described.

17. In a device of the class described, the combination with a sound record supporting member and a sound recording member in operative relation thereto, said members being movable with respect to each other, of a memorandum device comprising a memorandum receiver, recording means comprising a plurality of devices for indicating different instructions on said memorandum receiver, said memorandum receiver and recording means being movable with respect to each other to permit said devices to record upon said memorandum receiver instructions for certain points on a record carried by said record support, and means tending to retain each of said devices in inoperative position, substantially as described.

18. In a device of the class described, the combination with a sound record supporting member and a sound recording member in operative relation thereto, said members being movable with respect to each other, of a memorandum device comprising a memorandum receiver, and recording means for indicating instructions in different parallel lines extending longitudinally of said receiver, said memorandum receiver and recording means being movable with respect

to each other to permit said recording means to record upon said memorandum receiver instructions for certain points on a record carried by said record support, substantially as described.

19. In a device of the class described, a sound recording member and a sound record receiving member, said members, being movable with respect to each other, a guide for a memorandum tape in fixed relation with one of said members, and means connected with the other of said members and movable thereby for imparting movement to the memorandum tape through said guide, substantially as described.

20. In a device of the class described, a sound recording member and a sound record receiving member, said members being movable with respect to each other, tape supporting means, means movable by one of said members for imparting movement to the tape, and marking means in fixed relation to the other of said members and in proximity to the path of the tape, substantially as described.

This specification signed and witnessed this 15th day of February, 1911.

ALEXANDER N. PIERMAN.

Witnesses:

FREDERICK BACHMANN,
ANNA R. KLEHM.