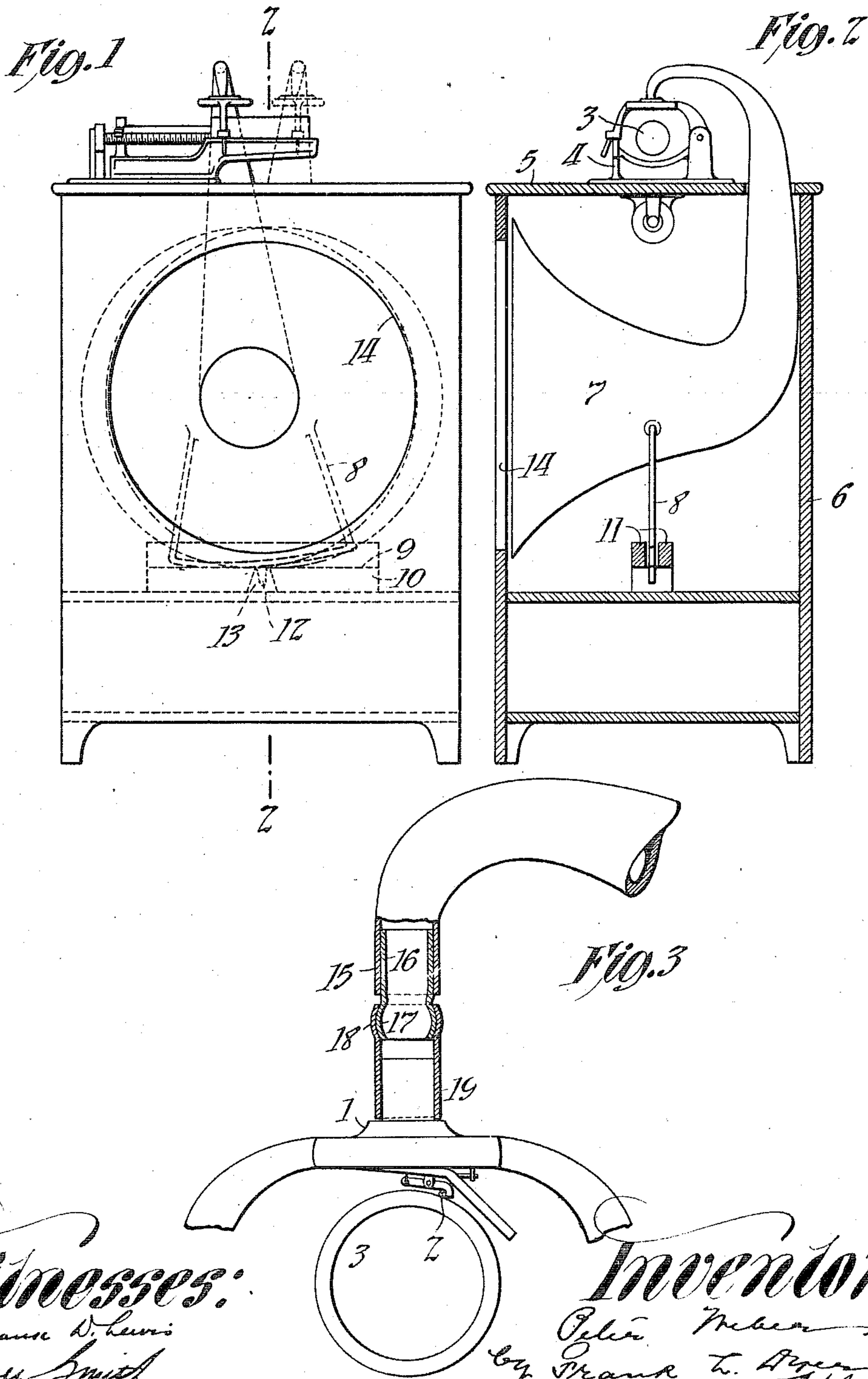


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PHONOGRAPH.

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985,716.

Patented Feb. 28, 1911.



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# UNITED STATES PATENT OFFICE.

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PHONOGRAPH.

985,716.

Specification of Letters Patent.

Patented Feb. 28, 1911.

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*To all whom it may concern:*

Be it known that I, PETER WEBER, a citizen of the United States, and a resident of Orange, in the county of Essex and State of New Jersey, have made a certain new and useful Improvement in Phonographs, of which the following is a description.

My invention relates to phonographs, and the object thereof is the provision of an improved means for mounting the phonograph horn or sound conveying means, whereby the end thereof connected to the neck of the reproducer on the traveling carriage may be permitted to travel with the said carriage in a horizontal line, while the body of the horn or the mouth thereof swings through a small angle. This result is achieved preferably by the provision of a rocking support for the horn so shaped as to accomplish the result desired.

Other objects reside in the construction of parts and combinations of elements hereinafter described and more particularly pointed out in the appended claims.

Attention is hereby directed to the accompanying drawings, forming part of this specification, in which the same reference characters are used throughout to denote corresponding parts, and in which—

Figure 1 is a front view of a cabinet having a phonograph mounted thereon and a phonograph horn contained therein so mounted as to embody my invention. Fig. 2 is a cross section on line 2—2 of Fig. 1, the phonograph and horn being shown in elevation, and Fig. 3 is a detail, partly in section, showing the manner of connecting the horn to the reproducer neck.

Referring to the drawings, the reproducer 1 provided with stylus 2, is so mounted that the said stylus may engage the record on the mandrel 3, the latter and the other parts of the phonograph being supported as by uprights 4 on the top 5 of the cabinet or casing 6. The horn 7 is attached at its small end to the neck of the reproducer and extends thence downwardly through the top 5 into the cabinet 6, this section of the horn being preferably tapered. The horn is bent at right angles to this section within the cabinet and forwardly directed to its exit or mouth end, the mouth portion of the horn being preferably bell shaped as shown. The horn 7 has affixed thereto the rocker 8 which is supported by the horizontal surface

9 of the supporting member 10. Guides 11 are provided on either side of the rocker 8 and a lug 12 is provided projecting outwardly from the center of the curved bearing surface of the rocker 8 into the recess 13 in supporting member 10, this recess being in the form of an inverted V, whereby overthrow of the rocker is prevented.

The co-acting surfaces comprising the bottom surface of the rocker and the bearing surface 9 are so shaped that the upper end of the horn in its travel back and forth with the reproducer from the position shown in full lines in Fig. 1 to that shown in dotted lines, does not tend to rise or fall above or below a horizontal line. During this movement, the rocker 8 rocks on surface 9, the mouth of the horn oscillating back and forth between the extreme position shown by dotted lines in Fig. 1 past the opening 14 formed in the front of the cabinet. If desired, opening 14 could be made large enough to extend opposite the mouth of the horn in all the positions of the latter, or if made of approximately the same diameter as the mouth of the horn, as shown, guiding means could be employed for smoothly guiding to the opening 14 sounds issuing from the periphery of the horn opposite the closed portion of the front of the cabinet when the horn is in its extreme positions.

The horn 7 is connected to the reproducer 1 by means preferably of a telescoping and a universal joint connection. The horn 7 at its upper end is formed into a cylindrical tube portion 15 within which is slidably mounted the tube 16 formed at its lower end beyond the end of tube 15 with the ball 17, which is mounted to provide universal motion within the socket 18 of the tube 19, which is directly connected with the reproducer 1. By means of the telescoping connection, the reproducer may be lifted from the record in order to change the same, and by means of the universal connection provided, the swinging of the lower end of the horn while the upper end travels in a straight line, is allowed for.

It is obvious that various changes may be made in my invention without departing from the spirit thereof, and accordingly, I wish it to be understood that my invention is limited only by the terms of the appended claims.

Having now described my invention, what



I claim and desire to protect by Letters Patent is as follows:

1. In a phonograph, the combination of an amplifying horn, a rocking support for the same, and a supporting means having a plane surface upon which said rocking support rests, substantially as described.
2. In a phonograph, the combination of an amplifying horn, a supporting means secured to the same having a curved bearing surface, and a support having a coacting bearing surface upon which said curved surface is rockably supported, substantially as described.
3. In a phonograph, the combination of a casing, a reproducer having a traveling carriage mounted upon the top thereof, an amplifying horn connected to the neck of the reproducer and extending within the casing, said casing having an opening opposite the mouth of the horn, and a rocking support for the horn within the casing, substantially as described.
4. In a phonograph, the combination of an amplifying horn having a forwardly extending bell, a rocker attached to said bell and extending in a plane parallel to the mouth of the horn, and a support having a plane surface upon which said rocker rests.
5. In a phonograph, the combination of a reproducer having a traveling carriage, a horn connected to the neck of the reproducer and extending downwardly and forwardly from such connection to its mouth, and means for supporting said horn so that the end thereof connected to the reproducer neck moves in a straight horizontal line with the traveling carriage while the mouth thereof swings in an arc in a plane parallel to the path of the reproducer, substantially as described.
6. In a phonograph, the combination of a reproducer having a traveling carriage, a horn connected to the neck of the reproducer and extending downwardly and forwardly from such connection to its mouth, a rocker secured to said horn and a support upon which said rocker rests, the co-acting surfaces of the rocker and support being so

formed that in the rocking movement of the horn the upper end thereof moves in a substantially straight line, substantially as described.

7. In a phonograph, the combination of an amplifying horn, a rocker secured thereto and a support upon which said rocker rests, the rocker being so placed in relation to the horn that the latter will be substantially in equilibrium in any rocking position, substantially as described.

8. In a phonograph, the combination of an amplifying horn, a rocker secured thereto and a support upon which said rocker rests, provided with guides for said rocker, and means for preventing overthrow of said rocker, substantially as described.

9. In a phonograph, the combination of a reproducer having a traveling carriage, a horn connected to the neck of the reproducer, and means for supporting said horn so that the end thereof connected to the reproducer neck moves in a straight horizontal line with the carriage while the mouth thereof swings in an arc in a plane parallel to the path of the reproducer, substantially as described.

10. In a phonograph, the combination of a reproducer having a traveling carriage, a horn connected to the neck of the reproducer by a universal joint, and means for supporting said horn so that the end thereof connected to the reproducer neck moves in a straight horizontal line with the carriage while the mouth thereof swings in an arc in a plane parallel to the path of the reproducer, substantially as described.

11. In a phonograph, the combination of a reproducer having a traveling carriage, a horn connected to the neck of the reproducer by a universal joint, and a telescoping connection, a rocker secured to the horn, and a support having a surface upon which said rocker rests, substantially as described.

This specification signed and witnessed this 4th day of June 1909.

PETER WEBER.

Witnesses:

CHAS. J. WETZEL,  
DYER SMITH.