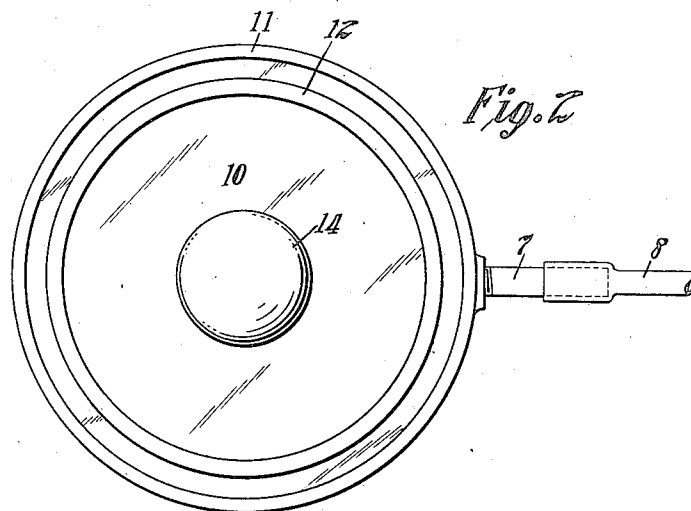
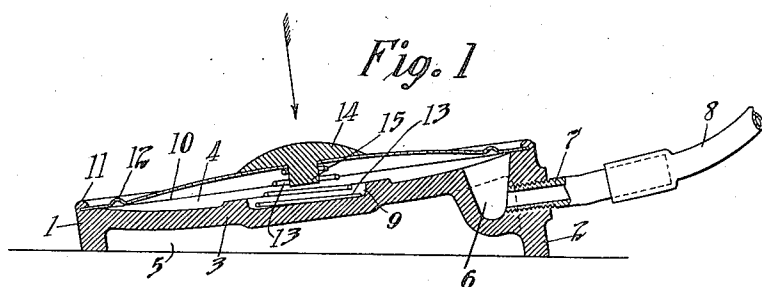


F. H. FAIRWEATHER.
CONTROLLING DEVICE.
APPLICATION FILED MAY 18, 1911.

1,167,487.

Patented Jan. 11, 1916.



Witnesses:

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His Att'y.

UNITED STATES PATENT OFFICE.

FREDERICK H. FAIRWEATHER, OF EAST ORANGE, NEW JERSEY, ASSIGNOR, BY MESNE ASSIGNMENTS, TO NEW JERSEY PATENT COMPANY, OF WEST ORANGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CONTROLLING DEVICE.

1,167,487.

Specification of Letters Patent.

Patented Jan. 11, 1916.

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To all whom it may concern:

Be it known that I, FREDERICK H. FAIRWEATHER, a subject of the King of Great Britain, and a resident of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Controlling Devices, of which the following is a description.

My invention relates to devices for controlling the starting and stopping of mechanism and is particularly designed for use with phonographs, although it is not limited to this use. In the operation of phonographs used for dictation purposes, the operator usually desires from time to time to stop and start the running of the machine, as, for example, when he pauses in his dictation. This starting and stopping, which should be brought about instantly and by an almost unconscious or automatic movement of the operator, is commonly accomplished by a pneumatically operated start and stop mechanism which is connected by a rubber tubing to a device for controlling the air pressure in the start and stop mechanism, the controlling device being placed on the floor and actuated by the foot of the operator.

My invention relates to a pneumatic foot control of this character and my object is to improve such devices in various ways to render the same simpler, more efficient, and more compact.

Other objects of my invention will be more fully pointed out and particularly described in the appended claims.

In order that my invention may be better understood, attention is hereby directed to the accompanying drawing forming a part of this specification and in which—

Figure 1 represents a central vertical section of a controlling device embodying my invention; and Fig. 2 represents a top plan view thereof.

In both of the views like parts are designated by the same reference numerals.

Referring to the drawing, the numeral 1 represents a flat base of malleable iron, brass or other suitable material having an inclined upper surface. This base is provided with an annular peripheral flange 2 resting upon the floor or other support and also with a depressed preferably cup shaped upper por-

tion 3 forming a recess or chamber 4 in the top of the base, the latter being preferably hollow at the bottom as shown at 5 so as to reduce the weight thereof. A depression 6 in the recess or chamber 4 serves as a means of communication between the said recess or chamber and a hollow nipple 7 which is threaded into an opening in the high portion of the periphery of the base and is connected by the flexible tubing 8 with the start and stop mechanism (not shown) of the phonograph. A recess or depression 9 is formed in the center of the portion 3 of the base for a purpose which will hereinafter appear. A flexible resilient diaphragm 10, having preferably an outwardly arched shape when in its normal unstressed condition, is secured at its periphery to the base 1 in position to be depressed directly by the foot of the operator. As shown in the drawing, and particularly in Fig. 1, the upper outer portion of the base 1 is rolled over the edge of the diaphragm to secure the same into place, the diaphragm being thus inclined in the same direction as the upper surface of the base. A corrugation 12 is formed in the diaphragm near the periphery thereof to permit the same to be more readily depressed. By depressing the diaphragm 10 and releasing the same, the pressure in the chamber 4 and the flow of air through the nipple 7 and tube 8 may be regulated at will to control the operation of a start and stop mechanism.

In order to increase the rapidity of the outward movement of the diaphragm, and also to assist such movement in case the resiliency of the diaphragm should be diminished by overuse of the same, a compression spring 13 having preferably the form of a conical helix is placed in the depression 9 between the diaphragm and the base, the depression 9 serving to retain the spring 13 centrally disposed with reference to the diaphragm. A button 14 of material similar to that employed for the base may be secured to the top of the diaphragm at the center thereof by solder or other suitable means and may be provided with a projection or stud 15 extending through the center of the diaphragm and within the convolutions of the spring 13 thereby serving as an additional means for retaining the spring

in central position relatively to the diaphragm. The projection or stud 15 is adapted to engage the bottom of the depression 9 to limit the downward movement of the diaphragm and thereby prevent distortion of the diaphragm.

It is evident that oil or any other suitable fluid may be used in place of air in connection with my improved device and that many modifications may be made in the specific structure disclosed without departing from the spirit of my invention, the latter being limited only as indicated by the terms of the appended claims.

Having now described my invention what I claim as new and desire to protect by U. S. Letters Patent is as follows:

1. In a device of the class described, the combination of a flat base, said base having a recess or chamber in the top thereof and also an outlet passage extending from said recess or chamber, and a resilient diaphragm secured to said base over said recess or chamber in position to be moved directly by the foot of the operator, substantially as described.

2. In a device of the class described, the combination of a flat base, said base having a recess or chamber in the top thereof and also an outlet passage extending from said recess or chamber, and a resilient outwardly arched diaphragm secured to said base over said recess or chamber in position to be moved directly by the foot of the operator, substantially as described.

3. In a device of the class described, the combination of a flat base, said base having a recess or chamber in the top thereof and also an outlet passage extending from said recess or chamber, and a resilient outwardly arched diaphragm corrugated near its periphery and secured to said base over said recess or chamber in position to be moved directly by the foot of the operator, substantially as described.

4. In a device of the class described, the combination of a flat base having an inclined upper portion, said base having also a recess or chamber and an outlet passage extending from said recess or chamber, and a resilient diaphragm inclined in the same direction as the upper portion of said base and secured to the same over said recess or chamber and in position to be moved di-

rectly by the foot of the operator, substantially as described.

5. In a device of the class described, the combination of a flat base having an inclined upper portion, said base having also a recess or chamber and an outlet passage extending from said recess or chamber through the high portion of said base, and a resilient diaphragm inclined in the same direction as the upper portion of said base and secured to the same over said recess or chamber and in position to be moved directly by the foot of the operator, substantially as described.

6. In a device of the class described, the combination of a flat base having a recess or chamber in the top thereof and also an outlet passage extending from said recess or chamber, and a resilient diaphragm secured to said base over said recess or chamber in an inclined position, whereby the said diaphragm may be readily moved directly by the foot of the operator, substantially as described.

7. In a device of the class described, the combination of a flat base having a recess or chamber in the top thereof and also an outlet passage extending from said recess or chamber, and a resilient diaphragm secured to said base over said recess or chamber in an inclined position, said diaphragm having an outwardly arched shape when in its normal unstressed condition, whereby the said diaphragm may be readily moved directly by the foot of the operator, substantially as described.

8. In a device of the class described, the combination of a flat base having a recess or chamber in the top thereof and also an outlet passage extending from said recess or chamber, a resilient inclined diaphragm secured to said base over said recess or chamber in position to be moved directly by the foot of the operator, and resilient means tending to move said diaphragm outwardly with respect to said base, substantially as described.

This specification signed and witnessed this 16th day of May, 1911.

FREDERICK H. FAIRWEATHER.

Witnesses:

FREDERICK BACHMANN,
ANNA R. KLEHM.