

No. 737,008.

PATENTED AUG. 25, 1903.

P. E. NICHOL.
LUNG AND VOICE DEVELOPER.
APPLICATION FILED OCT. 16, 1902.

NO MODEL.

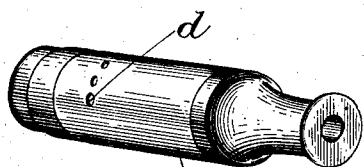


Fig. 1.

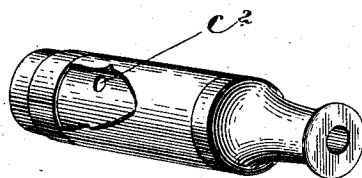


Fig. 2.

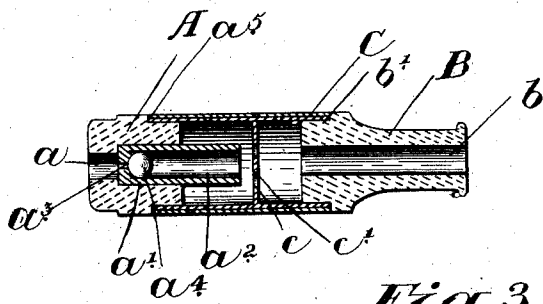


Fig. 3.

Witnesses.

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PETER ELDER NICHOL, OF TORONTO, CANADA.

LUNG AND VOICE DEVELOPER.

SPECIFICATION forming part of Letters Patent No. 737,008, dated August 25, 1903.

Application filed October 16, 1902. Serial No. 127,578. (No model.)

To all whom it may concern:

Be it known that I, PETER ELDER NICHOL, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Lung and Voice Developers, of which the following is a specification.

My invention relates to lung and voice developers; and the object of the invention is to produce a simple device which will not only develop the lungs, but increase the power and improve the quality of the voice and provide an exercise which will serve practically to prevent hoarseness and what is generally known as "clergyman's sore throat" and by which the voice of public speakers generally and singers may be strengthened and kept constantly in condition; and it consists, essentially, of a hollow plug containing a tube and ball-valve, a mouthpiece, a cylindrical casing connecting the same and provided with a central diaphragm and holes and a cylindrical encompassing casing located outside of the aforesaid casing and provided with a series of graduated holes designed to be brought to register with the hole in the casing inside, the parts being arranged and constructed in detail, as hereinafter more particularly explained.

Figure 1 is a perspective view of my improved lung and voice developer. Fig. 2 is a view showing portion broken away to exhibit the hole in the interior casing. Fig. 3 is a longitudinal section.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is a plug provided with a central orifice a , having an inner enlargement a' , within which fits a tube a^2 , closed at one end and provided with a small hole a^3 .

a^4 is a ball which fits within the tube.

The plug A has a reduced inner end forming a shoulder a^5 , as indicated.

B is the mouthpiece, which has a central passage-way or orifice b . The mouthpiece B is tapered and reduced at the outer end, where it fits into the mouth, and also is slightly reduced at b' , so as to form a shoulder.

C is a cylindrical or tubular casing provided with a central diaphragm c , having holes c' . The casing C fits against the shoulders a^5 and b' of the plug A and mouthpiece B, respectively. The casing C is provided with a hole c^2 .

D is a tubular or cylindrical casing which encircles the casing C and is provided with a series of graduated holes d , any one of which may be brought to register with the hole c^2 for a purpose which will hereinafter appear.

Having now described the principal parts involved in my invention, I shall briefly describe its operation and utility. In order to develop the lungs, the mouthpiece is placed in the mouth, and the largest hole d is preferably placed to register with the hole c^2 of the casing C. A long breath is then drawn through the nostrils into the lungs. Then by standing erect and forcing the air steadily through the small hole d , which necessarily prevents the ejection of the air from the lungs quickly, a tension is produced which develops and strengthens the muscular tissues of the lungs and forces the air into the unused cells, so as to increase the size, breathing power, and activity of the lungs generally. After some practice and as the lungs become accustomed to the exercise a smaller hole may be used over the hole c^2 , which increases the vigor of the exercise, until the smallest hole is reached, which produces an exercise sufficiently vigorous to force the air into every part of the lungs and to serve every practical purpose toward the end in view. In this case of course the air passes out through the opening c' before it reaches the registering openings c^2 and d ; but it will of course be understood that this is not necessarily so, as such openings might be placed to the front side of the diaphragm c . In order to exercise or call into play the abdominal and lower back and side nerves and muscles necessarily involved in producing the highest quality and condition of voice for public speaking and singing and to remove the strain of the voice from the throat and upper chest to the larger and stronger organs mentioned above, and thus produce a strong tireless voice, I employ the following exercise with my instrument. I turn the outer casing D around, so that the hole c^2 is completely covered by a portion of the casing D. I then draw in the air into the lungs through the orifices a^2 and a^3 , thereby

drawing the ball a' up to the inner end of the tube a^2 against the wall c , and the air must necessarily pass through the opening c' and through the passage-way b . I then sharply and vigorously expel the air, which throws the ball on its seat, stopping the passage of the air from the lungs very quickly and sharply, and this, I find in practice, produces an action of the abdominal lower back and side muscles, which establishes in a short time the habit of correct and vigorous breathing, relieves the delicate organs of the throat from all undue strain, and placing the stress of the exercise of public speaking and singing upon the abdominal and allied muscles (with the accompanying lung development) produces a strong resonant tireless voice.

From this description it will be seen that I have produced an instrument which will develop the lungs by providing an exercise by which the whole muscular tissue is called into activity and gradually strengthened and developed and the air gently forced into the minute air-cells in every part of these important organs.

It is a well-known fact that the majority of persons go through life using only a portion of the air-surfaces of the lungs. The result is that a large proportion of the air-cells are not in use and the muscular tissue connecting them remains unexercised, undeveloped, and weak. This is particularly true of people of sedentary habits, where there is nothing in their occupation to induce vigorous breathing. My device, therefore, will be readily appreciated by those who wish to build up a vigorous pair of lungs, a full chest, and an erect form and by that numerous class of persons upon whom there falls the strain of public speaking, teaching, and singing, providing, as it does, conditions through which the blood becomes more highly charged with oxygen, the general life force increased, and the work of their profession undertaken with increased power, enjoyment, and possibilities of success.

From personal knowledge and experience in the matter with my device I have no hesitation in stating that the power of the voice may be increased from thirty to one hundred per cent. in the course of a few weeks, the fatigue of an hour's public speech reduced by one-half, and the bust measurement in-

creased from two to five inches in less than a year.

What I claim as my invention is—

1. A lung and voice developer comprising an end plug, a mouthpiece provided with a suitable passage-way or orifice, a connecting tubular casing provided with an opening, and an encompassing casing independent of the mouthpiece and end block provided with an opening designed to be brought to register therewith when desired as and for the purpose specified.

2. A lung and voice developer comprising an end plug, a mouthpiece provided with a suitable passage-way or orifice, a connecting tubular casing provided with an opening, and an encompassing casing provided with a series of graduated openings designed to be brought to register therewith when desired as and for the purpose specified.

3. A lung and voice developer comprising a mouthpiece, a cylindrical wall projecting therefrom having a closed outer end and an opening in its periphery and an outer cylinder rotatably mounted upon said cylindrical wall and having a plurality of openings of varying size adapted to be brought by the rotation of the cylinder into alinement with the opening in the cylindrical wall.

4. A lung and voice developer comprising a mouthpiece, a plug axially in line therewith, a cylindrical wall connecting said parts, an opening in said plug and an inwardly-opening check-valve controlling said opening, substantially as described.

5. In a lung and voice developer, the combination with a mouthpiece at one end and the plug at the opposite end having a central orifice, and a cylindrical casing provided with a central diaphragm having holes, of a tube fitted into the plug and having the end closed to form a valve-seat and a ball located in such tube and designed to be drawn inwardly against the wall upon the breath being drawn in and forced outwardly upon the expulsion of the breath, so as to close the orifice in the closed end of the tube as and for the purpose specified.

PETER ELDER NICHOL.

Witnesses:

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