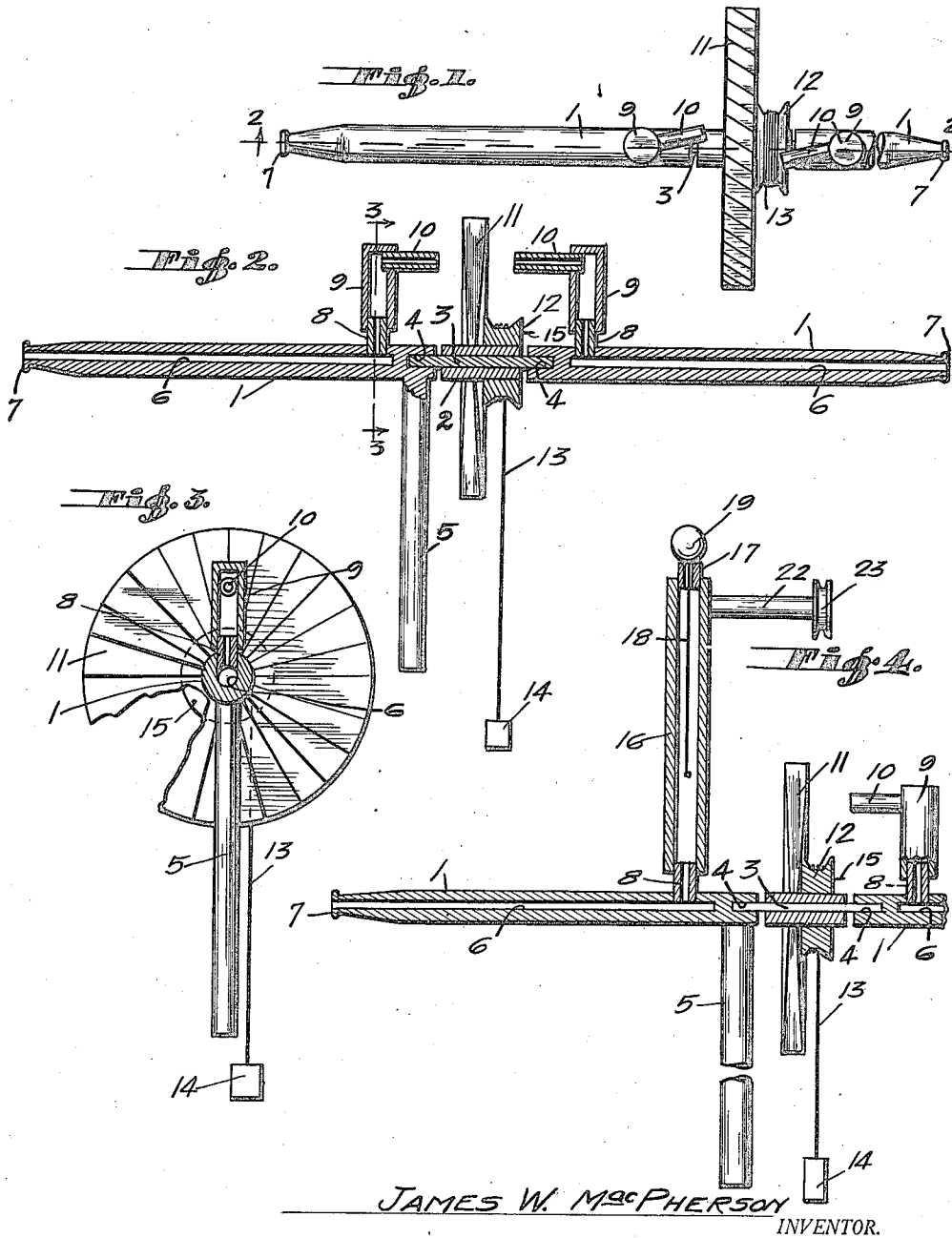


J. W. MACPHERSON.
BREATH EXERCISING DEVICE.
APPLICATION FILED MAR. 31, 1921.

1,424,732.

Patented Aug. 1, 1922.



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JAMES W. MACPHERSON, OF LOS ANGELES, CALIFORNIA.

BREATH-EXERCISING DEVICE.

1,424,732.

Specification of Letters Patent.

Patented Aug. 1, 1922.

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To all whom it may concern:

Be it known that I, JAMES W. MACPHERSON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Breath-Exercising Devices, of which the following is a specification.

This invention is an apparatus for exercising the lungs and provides a structure which will form an amusing toy for children, and which will also form an interesting experimental apparatus for adults.

The invention will be readily understood from the following description of the accompanying drawings, in which—

Figure 1 is a plan view of the device constructed in accordance with the invention.

Fig. 2 is a longitudinal section on the line 2—2 of Fig. 1.

Fig. 3 is a transverse section on the line 3—3 of Fig. 2.

Fig. 4 is a longitudinal section through the apparatus showing a modified arrangement of the same.

In the preferred form of the apparatus, two tubes 1 extend in opposite directions from a central rotatable member 2 journaled upon a pin 3 and arranged to be received in recesses 4 in the ends of the respective tubes so as to detachably secure the tubes to the central member. One of the tubes is preferably provided with a depending handle 5.

The tubes 1 are hollow members having the bores 6 and are provided at their outer ends with mouth pieces 7. Discharge nozzles 8 extend upwardly from the inner ends of the tubes 1, and discharge tubes 9 are adapted to be mounted thereon and are provided with laterally projecting nozzles 10. The tubes 9 are rotatably adjustable upon nozzles 8 in order to direct the discharge of air from nozzles 10.

A fan comprising blades 11 is fixed upon the rotatable member 2 between discharge nozzles 10, and said fan blades are arranged at such an inclination that air discharged from the respective nozzles against the respective sides of the fan will tend to rotate the latter in opposite directions. It will be noted that the full effect of the air discharged from nozzles 10 against the fan may be obtained by properly pivotally adjusting tubes 9. A pulley 12 is preferably also fixed upon rotatable member 2 along-

side of fan 11, and a cord 13 is secured to said pulley and is adapted to be wound thereon. The lower end of the cord preferably carries a suitable weight 14.

The apparatus as thus described permits of a variety of uses. Thus for example, it may be employed as a means for testing the lungs of two persons as by having the same blow through the respective mouth pieces 7 so as to discharge air against opposite sides of the fan 11. Since the two air discharges tend to rotate the fan in opposite directions, the person blowing with the greatest force will cause the fan to rotate in the corresponding direction.

When the apparatus is used by one person, one of the tubes 1 may be removed and the weighted cord 13 may be allowed to depend from pulley 12. By blowing against fan 11 so as to cause rotation of the same, the pulley 12 will also be rotated, and the weighted cord winding upon the pulley will produce a resistance to the rotation of the fan which the operator must overcome in using the device.

It will be noted that the rim of pulley 12 is provided with retaining means for engaging cord 13, when it is desired to use the device with the weighted cord wound upon the pulley and not depending therefrom as shown in Fig. 2. This retaining means is shown as a pin 15 projecting from the pulley and adapted to be impinged by the weight upon the end of the cord which is preferably of cork.

If desired one of the air discharge mechanisms may be removed from its nozzle 8 and a standard 16 be positioned upon said discharge nozzle. This standard is a hollow tube closed at its upper end by a plug 17 and receiving a guide rod 18 through the same with a float 19 upon the upper end of said guide rod. When this part of the apparatus is employed, the person using the device, by blowing through the tube 1 and standard 16, attempts to raise and revolve float 19 to a predetermined level above the standard and maintain the same in such position by blowing steadily through the apparatus. It will be noted that if air is blowing through the apparatus at varying pressures, that the float 19 will fluctuate, and by observing the float, the person using the apparatus, may note the steadiness with which he can control his breath.

An attachment may also be provided upon

standard 16 in the form of a laterally projecting arm 22 having a pulley 23 upon the end in vertical alinement with pulley 12. When pulley 12 is being rotated by discharge of air against fan 11, as previously described, the depending weighted cord 13 may extend upwardly and over pulley 23 so as to form a pleasing toy for a child as the weight 14 is drawn upwardly over the pulley 23 and the cord is wound upon pulley 12.

The various elements of the apparatus may be combined in various other ways to produce various games and interesting toys, all of which are controlled by the discharge of air through the tubes 1 so as to form means for exercising the lungs while maintaining the interest of the persons using the apparatus.

Various changes may be made without departing from the spirit of the invention as claimed.

What is claimed is:

1. An exercising device comprising a tube

having a mouth piece, an air discharge from said tube, a rotatable fan actuated by said air discharge, a pulley secured to said fan and having a cord adapted to be wound thereon, and a standard extending above said fan and arranged to receive said cord over the same.

2. An exercising device comprising two tubes mounted in a line and having mouth pieces at their outer ends, lateral contacts extending from the inner ends of the tubes and having outlets in opposition to each other, and a fan mounted between the discharges.

3. An exercising device comprising oppositely disposed air discharges, mouth pieces connected to communicate with the air discharges and a fan mounted between the discharges and adapted to be moved one way by one discharge and the other way by the other discharge.

I testimony whereof I have signed my name to this specification.

JAS. W. MacPHERSON.