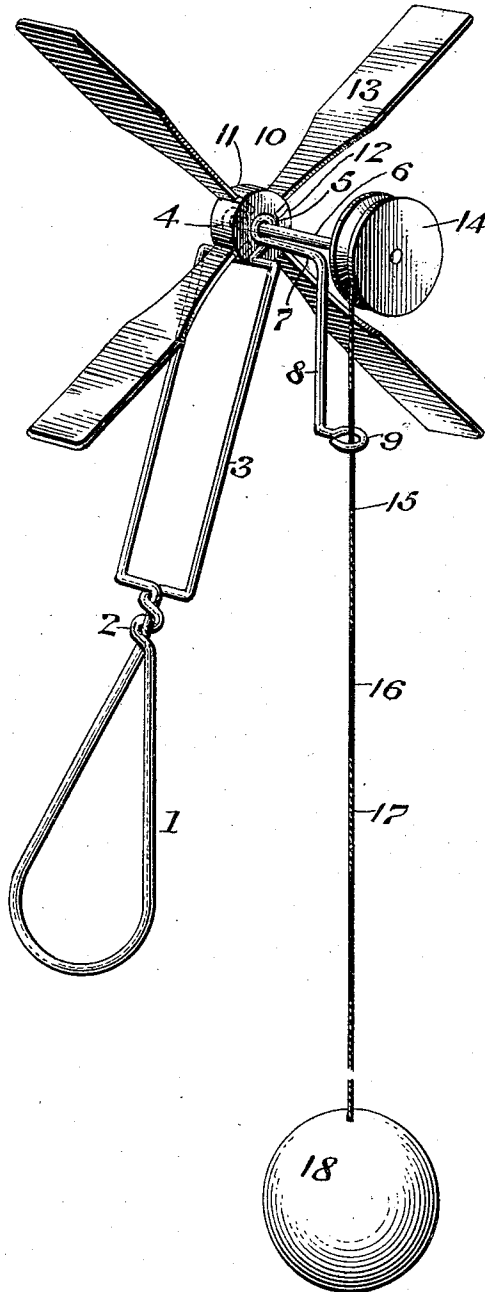


W. ZOLPER.
TOY AND LUNG TESTER.
APPLICATION FILED NOV. 29, 1910.

988,057.

Patented Mar. 28, 1911.



WITNESSES

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WILHELM ZOLPER, OF WILMINGTON, DELAWARE.

TOY AND LUNG-TESTER.

988,057.

Specification of Letters Patent.

Patented Mar. 28, 1911.

Application filed November 29, 1910. Serial No. 594,724.

To all whom it may concern:

Be it known that I, WILHELM ZOLPER, a citizen of the United States, residing at Wilmington, county of Newcastle, State of Delaware, have invented a new and useful Toy and Lung-Tester, of which the following is a specification.

My invention consists of a novel construction of a toy which may also be employed to test the lung capacity of the user.

It further consists of a novel construction of a toy comprising a frame adapted to be manually held and by which is carried a rotatable element, the rotation of which winds up a tape or cable to which latter a weight is secured.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention, I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

In the accompanying drawing I have shown a perspective view of a toy and lung tester, embodying my invention.

The frame of my device is preferably formed of a single piece of material such as for example wire which is folded upon itself to form a grasping handle 1, the wire forming one side of the handle being wound around the other side of the handle one or more times, as indicated at 2, in order to give the same the necessary rigidity. The wire is then deflected to form the rectangular frame or body portion 3. The ends of the wire are then coiled to form journals 4 and 5 within which a shaft 6 is mounted. One end of the wire is longer than the other and is laterally deflected as indicated at 7 and then downwardly as indicated at 8, the wire then being laterally deflected to form a preferably closed guide member 9.

10 designates a fan or wind wheel which comprises a hub 11 fixed to the shaft 6 and provided with slots 12 in which are secured by means of adhesive or otherwise the inner

ends of the blades 13 which may have any desired contour but which I have shown for purposes of illustration as being narrower at their inner ends.

14 designates a pulley mounted on the shaft 6 and to which is secured a tape or cable 15 preferably provided with indicating data such as for example contrasting colors as indicated at 16 and 17.

18 designates a weight having any desired contour and of any predetermined mass and in practice the weight 18 is preferably in the form of an animal or other known object which will attract attention.

In the operation, the user blows against the blades 13 thereby causing the shaft 6 and the pulley 14 thereon to revolve, the result of which will be that the weight 18 will be raised by the winding of the tape or cable 15 on the pulley 14. The height to which the weight is raised and thereby the lung capacity of the user can be measured by the identifying or measuring data or characters carried by or formed on the cable 15, and in the present instance such data consists of lengths of cable of contrasting colors.

The blades, the pulley or the weight may, if desired, be provided with any desired kind of advertising material.

The cable 15 is accurately guided, as is evident, so that it is at all times in proper alinement with the pulley 14.

My device may be economically manufactured and is not liable to get out of order.

The pulley 14 is located in such a manner that the user can readily see the cable 15 and the weight 18.

My device may be employed either as a toy or advertising novelty or as a lung testing or exercising device, as is evident.

It will now be apparent that I have devised a novel and useful construction of a toy and lung tester, which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described a preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

Having thus described my invention, what

I claim as new and desire to secure by Letters Patent, is:—

1. In a device of the character stated, a frame provided with a grasping portion adapted to be manually held to support the device in proximity to the lips of the operator, a shaft journaled in said frame, a wind wheel mounted on said shaft, and adapted to be rotated by the operator blowing there-
10 against, a pulley on said shaft, a cable connected with said pulley, and a weight carried by said cable.

2. In a device of the character stated, a frame provided with a grasping portion adapted to be manually held to support the device in proximity to the lips of the operator, a shaft journaled in said frame, a wind wheel mounted on said shaft, and adapted to be rotated by the operator blowing there-
20 against, a pulley on said shaft, a cable connected with said pulley and provided at predetermined places with contrasting colors, and a weight carried by said cable.

3. In a device of the character stated, a frame formed of a single piece of material and deflected to form a grasping handle, a body portion, journals, and a guide, a shaft mounted in said journals, a wind wheel car-

ried by said shaft and rotatable within said body portion, a pulley on said shaft, a cable secured to said pulley and engaging said guide, and a weight carried by said cable. 30

4. In a device of the character stated, a frame formed of a wire deflected to form a grasping handle, a rectangular body portion, journals, and one end being deflected from the journal nearest thereto to form a guide, a wind wheel mounted in said journals and rotatable within the rectangular body portion, a pulley operatively connected with said wind wheel, a cable secured to said pulley and engaging said guide, and a weight carried by said cable. 35 40

5. In a device of the character stated, a frame adapted to be manually held in proximity to the lips of the operator, a wind wheel mounted in said frame and adapted to be rotated by the operator blowing there-
45 against, a pulley operatively connected with said wind wheel, a cable secured to said pulley, identifying data on said cable, and a weight carried by said cable. 50

WILHELM ZOLPER.

Witnesses:

EDMUND S. HELLINGS,
FRANCES E. HALLMAN.