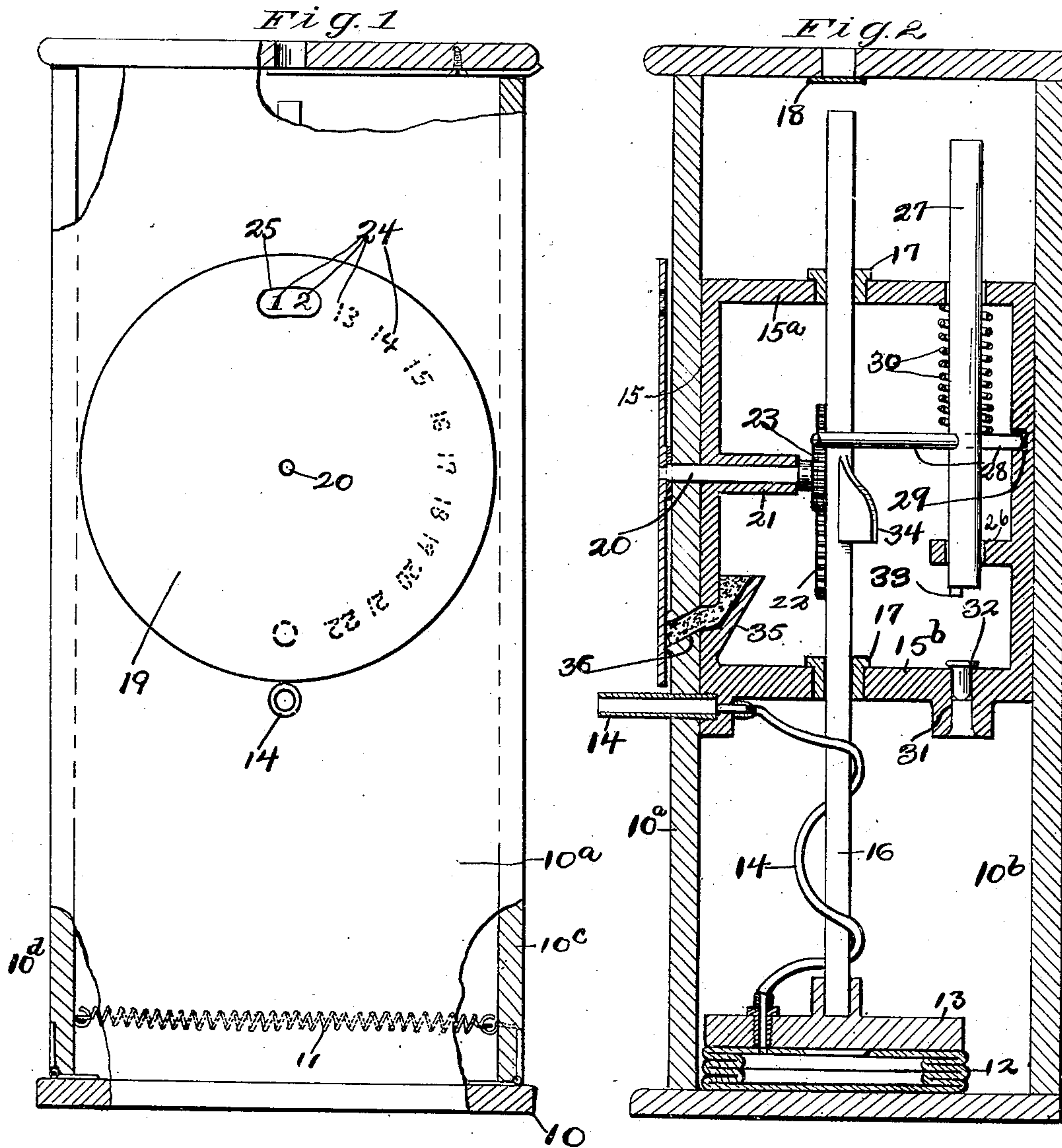


C. B. POST.  
LUNG TESTER AND DETONATING DEVICE.  
APPLICATION FILED JAN. 25, 1908.

955,682.

Patented Apr. 19, 1910.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES B. POST, OF NEW LONDON, OHIO, ASSIGNOR TO THE WARD-STILSON CO., OF  
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LUNG-TESTER AND DETONATING DEVICE.

955,682.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, CHARLES B. POST, a citizen of the United States, and resident of New London, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Lung-Testers and Detonating Devices, of which I hereby declare the following to be a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to amusement devices and particularly to a device which is ostensibly a lung testing device but which on being used for that purpose will occasion considerable surprise to the unsuspecting user.

More particularly the invention relates to a device of the above character which is so constructed that when the user blows into a suitable air inlet opening in the wall of the casing of the device for the purpose of testing his lungs suitable mechanism on the interior of the device causes a detonating device, such as a blank cartridge or torpedo, to explode with considerable violence. To make the device still more effective means may be provided whereby the compression in the casing due to the explosion will cause a suitably arranged powder or other harmless substance to be thrown in the face of the user, and still further, the sides of the cabinet or casing inclosing the mechanism may be so arranged as to yield or spring outward by the compression, the conclusion being, of course, that the disaster was due to the powerful lungs of the user. Although the device is not limited in its use for any particular purpose or function, it is designed primarily for use in lodge or other society initiations.

More specifically considered the invention includes a suitable cabinet or casing on the interior of which is an expansible or inflatable air receiving member which is connected to an air inlet or mouth piece extending through the casing wall. Suitably supported within the casing is a plunger which is arranged to be released when the air receiving member has been inflated a certain amount, so to strike the detonating device and cause the explosion. The degree of in-

flation is indicated preferably by means of a rotary disk provided with an opening which passes successively before a series of indicating characters on the casing wall. Located on the interior of the casing opposite the disk is a pocket having a passage way leading through the front wall of the casing near the mouth piece. The opening in the disk is so located that it will coincide with the opening in the casing wall after the disk has made a partial revolution. The sides of the casing are preferably movable, and in this instance are hinged to the bottom of the casing and are connected together by a spiral spring. The parts are so arranged and constructed that the plunger is released and the explosion takes place, just as the opening of the disk coincides with the opening which communicates with the pocket on the interior of the casing. The mouth piece is quite short so that it will be necessary for the person desiring to have his lungs tested to place his face close to the casing. After he has blown a certain amount of air into the air receiving member within the casing an explosion of considerable violence will suddenly and unexpectedly take place. The space within the casing being comparatively small, the gas generated will force the sides outward and at the same time air will be forced outward through the opening in the front of the casing and in case the pocket contained a powder or other substance, the latter will be blown directly in the face of the victim.

My invention still further consists in certain novel details of construction and combinations and arrangements of parts, which will be described in the specification and set forth in the appended claims.

For a better understanding of my invention, reference is had to the accompanying drawings in which—

Figure 1 is a front elevation of my improved amusement device, parts being broken away to show more clearly the construction; and Fig. 2 is a vertical side sectional view.

Referring now to the figures of the drawing 10 represents a casing or cabinet having fixed front and rear walls 10<sup>a</sup> and 10<sup>b</sup>, and side walls 10<sup>c</sup> and 10<sup>d</sup> which are preferably



hinged to the bottom and are connected together by a spiral spring 11 for a purpose which will appear more fully hereinafter.

Located at the bottom of the casing is an 5 expansible or yieldable air receiver in this case in the form of bellows 12, having a top or cap 13 which is moved vertically when the bellows are inflated. The cap may be made of metal so that its weight will 10 afford resistance to the inflation of the bellows. The bellows are connected to a flexible tube or tubular mouth piece or air inlet 14 extending outward through the front wall of the chamber.

15 Suitably supported between the front and rear walls of the casing above the bellows is a supporting frame 15 formed preferably of cast metal and having horizontal upper and lower cross members designated 15<sup>a</sup> and 20 15<sup>b</sup> respectively.

Secured to the cap 13 of the bellows so as to be shifted therewith is a vertical rod 16 which passes through bushings 17 in the 25 two cross members of the frame 15 and extends nearly to the top of the casing when the bellows are deflated.

In the top of the casing directly over the rod 16 is an opening through which the end of the rod may pass when the bellows are 30 inflated. This opening can be closed so that the upward movement of the rod may be limited, by means of a slide 18 which is preferably pivoted to the underside of the top of the casing and has one end extending out- 35 ward beyond the wall of the same whereby the slide may be turned to close or uncover the opening. The movement of the rod 16 is transmitted to an indicating disk 19 secured to the outer end of a shaft or spindle 40 20 which extends through the front wall of the casing and is rotatably mounted in a boss 21 which extends inwardly from the frame about midway between the upper and lower cross members 15<sup>a</sup> and 15<sup>b</sup>. The 45 spindle 20 and disk 19 are shifted, in this case, by means of engaging rack teeth 22 on the rod 16 and a pinion 23 on the inner end of the spindle. Any other suitable driving connection may be employed how- 50 ever if desired.

The outer side of the front wall of the casing behind the disk is provided with a series of indicating characters 24 arranged 55 in a circle and the disk is provided with an opening 25 which exposes the indicating characters in succession as the disk is rotated.

60 Slidably mounted in aligned openings in the top of the frame 15 and in a lug 26 extending inward from the rear side of the frame is a vertically movable spring pressed plunger or hammer 27 arranged to be released by the upward movement of the rod 16 so as to explode a detonating device. The 65 plunger is provided with a transverse rod

or latch pin 28 one end of which is arranged to engage in a slot 29 in the rear wall of the frame so as to retain the plunger in its upper position and the opposite end of which extends inward adjacent the rod 16. 70

Surrounding the plunger intermediate the upper wall of the frame and the transverse latch pin 28 is a coil spring 30 which is compressed when the plunger is in its upper position and which will force the plunger 75 downward with considerable force when it is released. Directly below the plunger in the bottom of the frame and in a boss on the lower side thereof is an opening 31 forming a firing chamber for an explosive 80 device 32, which as here shown, is a blank cartridge. The lower end of the plunger is provided with a firing pin 33 which strikes and explodes the cartridges. The plunger is released, in this instance, by 85 means of a cam 34 on the rod 16 which is arranged to engage the longer end of the transverse rod or latch pin 28 as the rod 16 is lifted so as to turn the rod or pin 28 and the plunger until the shorter end of the for- 90 mer emerges from the slot 29 in the frame. When this takes place the plunger drops and explodes the cartridge.

On the front wall of the frame is a pocket 35 having at the bottom a passageway 36 95 which extends through the wall of the frame and through the front wall of the cabinet. The passageway in the cabinet wall is directed slightly downward, the outer opening being a short distance above the mouth 100 piece and is so located with respect to the opening in the disk that the latter exactly coincides with the opening in the cabinet wall when the disk is rotated a certain amount in this case 180 from the initial 105 position.

The complete operation of the device will now be explained more fully. The device is placed in condition for use by setting the plunger, supplying the firing chamber with 110 a cartridge, and if desired, by filling the pocket 35 with a powder or other harmless substance. Supposing the device is being used at a lodge initiation, the candidate will probably be informed that he cannot be ac- 115 cepted as a member unless his lungs are in good condition, and that it will be necessary that his lungs be tested on the testing apparatus. In order that the candidate's suspi- 120 cions may not be aroused, one of the initiators can first use the device in the candidate's presence but when he uses the device the opening at the top of the casing will be closed by the slide so that the upper end of the rod cannot pass through the same. Con- 125 sequently the rod cannot move a sufficient distance to release the plunger and explode the cartridge. Before the candidate uses the device, however, the slide is shifted so as to uncover the opening. The candidate 130



then blows into the mouth piece inflating the bellows and shifting the vertical rod and indicating disk. He continues to blow into the mouth piece until the disk has been turned through a half revolution and the opening therein coincides with the opening in the front casing wall just above the mouth piece. At this point the cam on the rod shifts the latch pin out of the slot and the plunger is released and strikes the cartridge with sufficient force to explode the same. The gas compression in the casing due to the explosion is so great that the sides 10<sup>d</sup> and 10<sup>e</sup> of the casing are thrown violently outward, and at the same time air is forced out through the opening in the front of the casing and any substance in the pocket will be thrown in the face of the user. It will be seen that although the device is absolutely harmless its effect upon the victim will be decidedly amusing. The sides 10<sup>d</sup> and 10<sup>e</sup> are returned to place by means of the spring 11, or any suitable spring device.

I do not desire to be confined to the exact details shown but aim in my claims to cover all modifications which do not involve a departure from the spirit and scope of my invention.

What I claim is,—

1. In an amusement device, in combination, a cabinet, an expansible air chamber therein and a movable head therefor, a blowing tube communicating therewith, a reciprocating member secured to said head, said reciprocating member operatively connected with an indicating device, a spring pressed detonating member, means for holding said detonating member in a retracted position, a seat for an explosive body in the path of said detonating member, said detonating member having a parallel movement with said reciprocating member and means operatively controlled by the movements of said reciprocating member for releasing said detonating member.

2. In an amusement device, a casing or cabinet, an expansible pneumatic chamber therein, a blowing tube connected therewith, a longitudinally reciprocating member adapted to move with the expansion of said pneumatic chamber, an indicating device operatively connected with said reciprocating member, a spring pressed detonating member having a parallel movement with said reciprocating member, a seat for an explosive body, a detent for holding said detonating member in its retracted position and means operated by said reciprocating member for releasing said detent.

3. In an amusement device, a casing or cabinet containing a receiver adapted to be expanded by air from the lungs of the user, and a blowing tube for said indicating device, a vertical rod adapted to be shifted by

the movement of the receiver, a spring pressed plunger for exploding an explosive device, means for holding said plunger in its retracted position, and means carried by said rod for shifting said holding means so as to cause it to release the plunger, and an indicating device operatively connected with said vertical rod.

4. In an amusement device, a casing or cabinet containing an expansible air receiver, a blowing tube extending through the front wall of the casing and connected to said receiver, said casing having an opening in the front wall communicating with the interior and adapted to contain a powder, a hammer for exploding a detonating device, means whereby the expansion of the receiver causes the actuation of the hammer and the explosion of the detonating device, whereby the powder will be forced outward through said opening in the front of the casing into the face of the operator, and an indicating device adapted to show the amount of expansion of said receiver.

5. In an amusement device, a casing or cabinet containing an expansible air receiver, a blowing tube therefor, an indicating device at the front of the casing, a hammer within the casing for exploding an explosive device, and means whereby the expansion of the receiver causes a shifting of the indicating device and the actuation of the hammer to cause the explosion.

6. In an amusement device, a casing or cabinet containing an expansible air receiver, a blowing tube therefor, a rotary indicating disk at the front of the casing, means for exploding an explosive device and means whereby the expansion of the air receiver actuates the exploding means and shifts the indicating disk.

7. In an amusement device, a casing or cabinet, containing an expansible air receiver, a mouth piece or inlet extending through the front wall of the casing and connected to said receiver, said casing having an opening in the front wall adjacent the mouth piece adapted to carry pulverized material, a rotary indicating disk at the front of the casing, said disk having a sight opening, means for exploding a detonating device within the casing and means whereby the movement of the air receiver causes the exploding means to operate when the opening in the disk coincides with the opening in the front wall of the casing to project said powder in the face of the operator.

8. In an amusement device, a casing or cabinet, an expansible air receiver therein, an indicating disk on the outside of the casing and having a sight opening, a pocket on the interior of the casing having a passageway extending out through the front wall of the casing, adapted to carry powder, means for exploding a detonating device within the



casing, and means whereby the movement of the air receiver shifts the indicating disk and causes the exploding means to operate when the opening in the disk coincides with the  
5 passageway in the front wall of the casing, whereby the powder will be thrown into the face of the operator.

9. In an amusement device, a casing having movable walls, an expansible air receiver  
10 in said casing, a blow tube whereby air may be forced into said receiver, a detonating device for exploding an explosive device within the casing, an operating spring therefor, a retaining device for said detonating device,

a rod operated by said expansible air receiver, a cam on said rod adapted to engage said detonating device and release the same when the air receiver is expanded and an indicating device mounted upon the casing, and operatively connected with said rod. 15 20

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

CHARLES B. POST.

Witnesses:

C. W. DAY,

E. P. MATTHEWS.