

No. 695,658.

Patented Mar. 18, 1902.

R. F. W. SMITH.  
OZONE INHALER.

(Application filed May 10, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

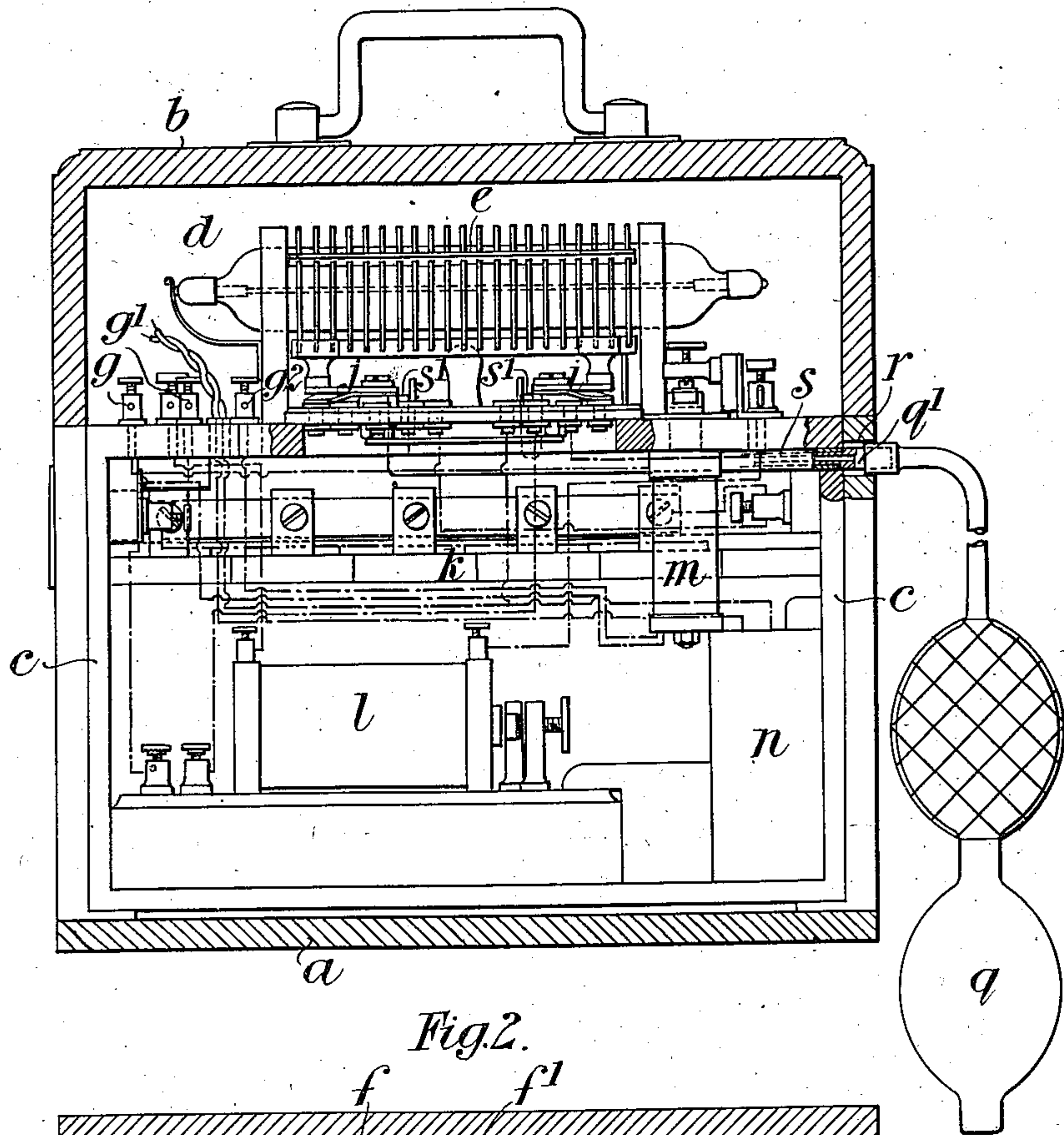
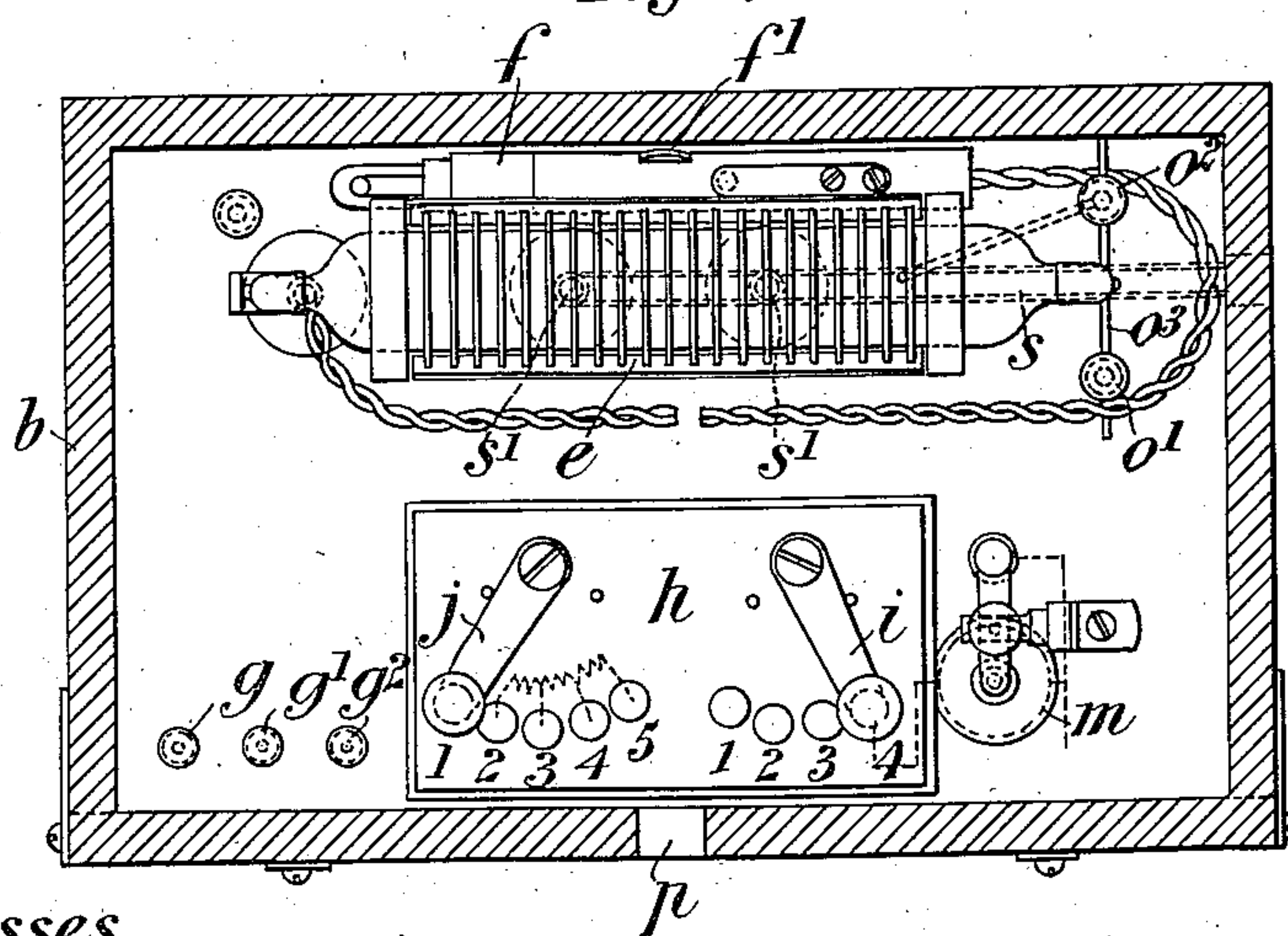


Fig. 2.



Witnesses

J. K. Moore

*[Signature]*

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Whitaker & Perest

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Fig. 3.

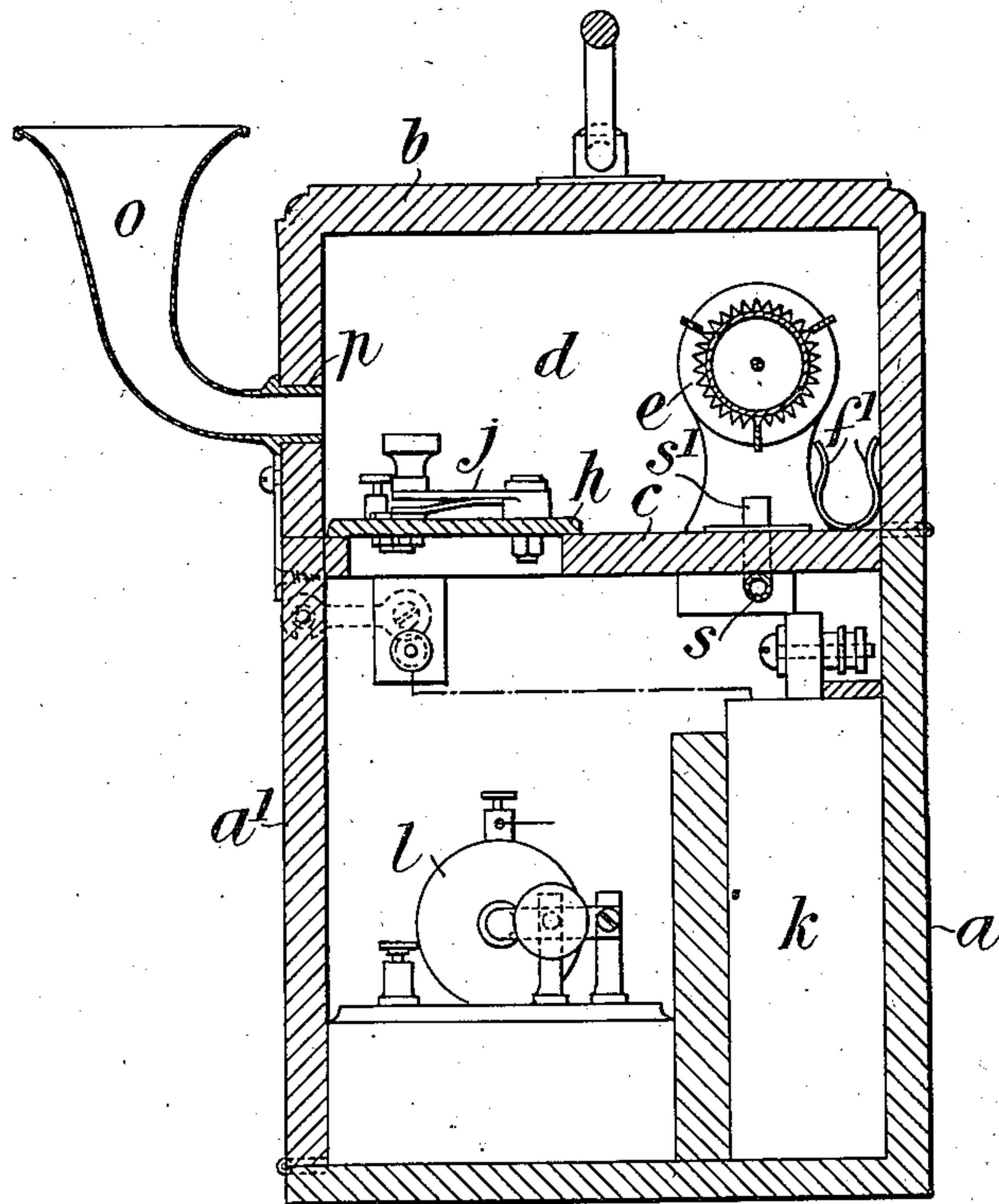
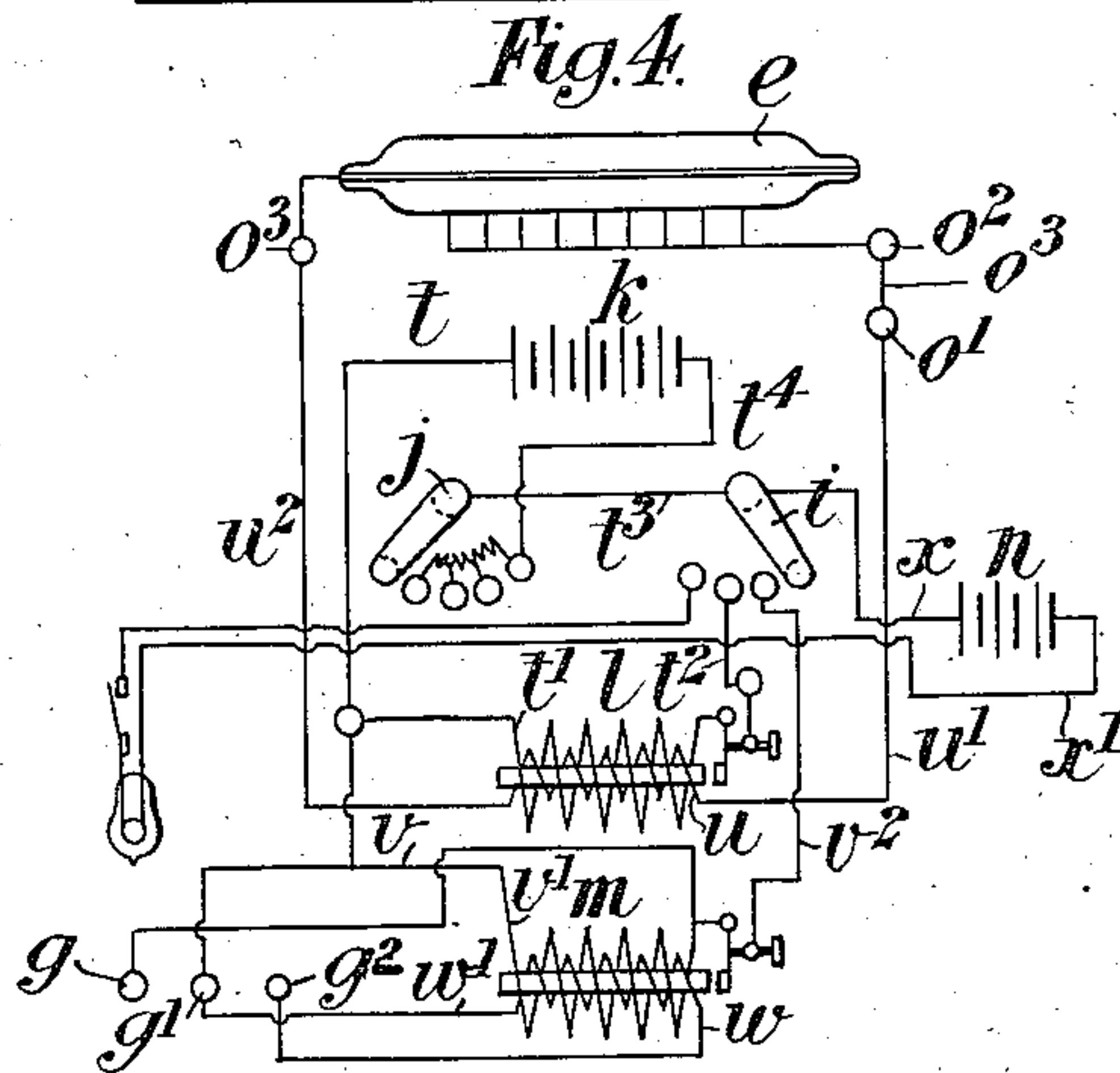


Fig. 4.



Witnesses.

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# UNITED STATES PATENT OFFICE.

ROBERT FRANCIS WOOD SMITH, OF LONDON, ENGLAND, ASSIGNOR TO THE  
ELECTRIC OZONE SYNDICATE LIMITED, OF LONDON, ENGLAND.

## OZONE-INHALER.

SPECIFICATION forming part of Letters Patent No. 695,658, dated March 18, 1902.

Application filed May 10, 1901. Serial No. 59,654. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT FRANCIS WOOD SMITH, a subject of the King of Great Britain, residing at 89 Bartholomew Close, London, England, have invented a new and useful Improvement in Ozone-Inhalers, of which the following is a specification.

My invention consists in the novel features hereinafter described, reference being had to the accompanying drawings, which illustrate one form in which I have contemplated embodying my invention, and said invention is fully disclosed in the following description and claims.

In carrying out my invention I construct a suitable box having a lid and preferably a drop-down front, the said box being provided with a horizontal partition or frame dividing it into an upper and a lower chamber. In the lower chamber are located one or more batteries and in the upper chamber I locate an ozonizer of any suitable construction, but preferably of the Andreoli type. The upper chamber is provided with a discharge-mouth-piece and also with an air-forcing device. In practice I also prefer to provide the lower chamber with one or more induction-coils and the upper chamber with a small electric lamp suitable for use by medical practitioners and to provide electric controlling devices whereby the ozonizer, the lamp, or the coil or coils can be connected with the batteries and the strength of the current regulated. The induction coil or coils and the lamps, however, form no part of my present invention.

To enable the invention to be fully understood, I will describe it by reference to the accompanying drawings, in which—

Figure 1 is a sectional front elevation of apparatus made according to the invention. Fig. 2 is a horizontal section through the lid of the apparatus. Fig. 3 is a sectional end elevation of the apparatus, and Fig. 4 is a diagrammatic view illustrating the electrical connections.

*a* is the box or case, having the drop-down front *a'*, and *b* is the lid thereof.

*c* is the inside rectangular frame, which just fits the inside of the box proper, leaving a space *d* between its upper part and the top of the lid *b*.

*e* is the ozonizer, which is fitted to the top of the frame *c*, this ozonizer being of the Andreoli type.

*f* is the lamp-holder, which when not used is held in the clip *f'*, and *g g' g<sup>2</sup>* are the screws for the terminal wires of the medical coil.

*h* is the switch-plate, of xylonite, vulcanite, or other suitable non-conducting material, the said plate being provided with two keys *i* and *j*, respectively. The key *i* can be brought into contact with any one of the plugs or contacts 1 2 3 4, the plug 1 serving to close the lamp-circuit, the plug 2 serving to close the ozonizer-circuit, the plug 3 serving to close the medical-coil circuit, and the plug 4 placing all these devices out of circuit. The key *j* can be brought into contact with any one of the five contacts 1 2 3 4 5, such that when the key is upon the plug 1 no current is passing, the strength of the current gradually increasing as the key is moved from the plug 2 to 5.

*k* is a dry battery of any suitable construction and which supplies the primary coils of the induction-coil *l* and the induction-coil *m* with current, the secondary circuit of the coil *l* containing the ozonizer and the coil *m* being the medical coil.

*n* is a second dry battery which supplies the lamp with current.

When it is required to inhale ozone, the lid *b* of the box is closed, as shown in the figures, so that ozone is generated in the confined space *d* and can issue through the mouth-piece or funnel *o*, which is fitted to the opening *p* in the front of the said lid. With this arrangement it is necessary to force air into the space *d*, and to this end I employ the compressible bulb *q*, the tube or nozzle *q'* of which can be passed through a hole *r* in the side of the box and into a horizontal tube *s*, the said tube having upright branches *s' s'*, passing through the top of the frame *c* underneath the ozonizer.

The various electrical connections can be made in any suitable manner, and the diagrammatic view, Fig. 4, shows an arrangement which I have found suitable. In this arrangement the battery *k* supplies current to the induction-coil *l* through the wire *t*, primary coil *t'*, wire *t<sup>2</sup>*, key *i*, wire *t<sup>3</sup>*, key *j*, and



wire  $t^4$ . The induced current supplying the  
 5 ozonizer  $e$  flows from the secondary coil  $u$   
 through the wire  $u'$  and terminals  $o'$   $o^2$  to the  
 metallic conductor surrounding the ozonizer,  
 the current then passing to the central con-  
 10 ductor of the ozonizer through the terminal  
 $o^3$  and back through the wire  $u^2$  to the in-  
 duction-coil  $l$ . The battery  $k$  also supplies  
 current to the coil  $m$  through the wire  $t$ , wire  
 15  $v$ , primary coil  $v'$ , wire  $v^2$ , key  $i$ , and key  $j$ .  
 The current generated in the secondary coil  
 flows through the wire  $w$  to the screw  $g^2$ ,  
 through the body of the user back to the  
 screw  $g'$  and wire  $w'$ . By connecting the ter-  
 20 minals of the handles to the screws  $g$  and  $g'$   
 the battery can be used direct. The lamp is  
 supplied directly with current from the bat-  
 tery  $n$  through the wires  $x$  and  $x'$ .

If it be desired to use the ozonizer with a  
 25 stronger current from a larger battery and  
 coil, a transformer, or a main alternating-cur-  
 rent supply, the pin  $o^3$  is removed from the  
 terminal screws  $o'$  and  $o^2$ , the said terminals  
 $o'$  and  $o^2$  being then connected with the sec-  
 30 ondary poles of the larger coil or other source  
 of current.

Having now particularly described and as-  
 35 certained the nature of my said invention and  
 in what manner the same is to be performed,  
 I declare that what I claim is—

1. The combination with a portable box pro-

vided with a horizontal partition, forming a  
 chamber above and a chamber below said par-  
 35 tition, of an electric battery located in the  
 lower chamber, an ozonizer located in the up-  
 per chamber, means for electrically connect-  
 ing said ozonizer and battery including a cir-  
 cuit-controller, a discharge-mouthpiece com-  
 municating with said upper chamber, an air-  
 40 forcing device connected to said upper cham-  
 ber, and a movable cover for said box to give  
 access to said upper chamber, substantially  
 as described.

2. The combination with a portable box,  
 45 having a horizontal partition therein forming  
 a battery-chamber below said partition, of an  
 electric battery located in said chamber, a  
 hollow cover hinged to said box and forming  
 an ozonizing-chamber above said partition,  
 50 when closed, an ozonizer mounted on said par-  
 tition, an electric circuit-controller mounted  
 on said partition and connected with the  
 ozonizer and with the battery, a discharge-  
 mouthpiece secured to said cover and com-  
 55 municating with the interior thereof and an  
 air-forcing device communicating with the  
 ozonizing-chamber adjacent to the ozonizer,  
 substantially as described.

ROBERT FRANCIS WOOD SMITH.

Witnesses:

JOHN E. BOUSFIELD,  
 C. G. REDFERN.