

E. S. ALLEN.  
ELECTRICALLY CONTROLLED GAS IGNITING AND EXTINGUISHING DEVICE.  
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958,574.

Patented May 17, 1910.

Fig. 1.

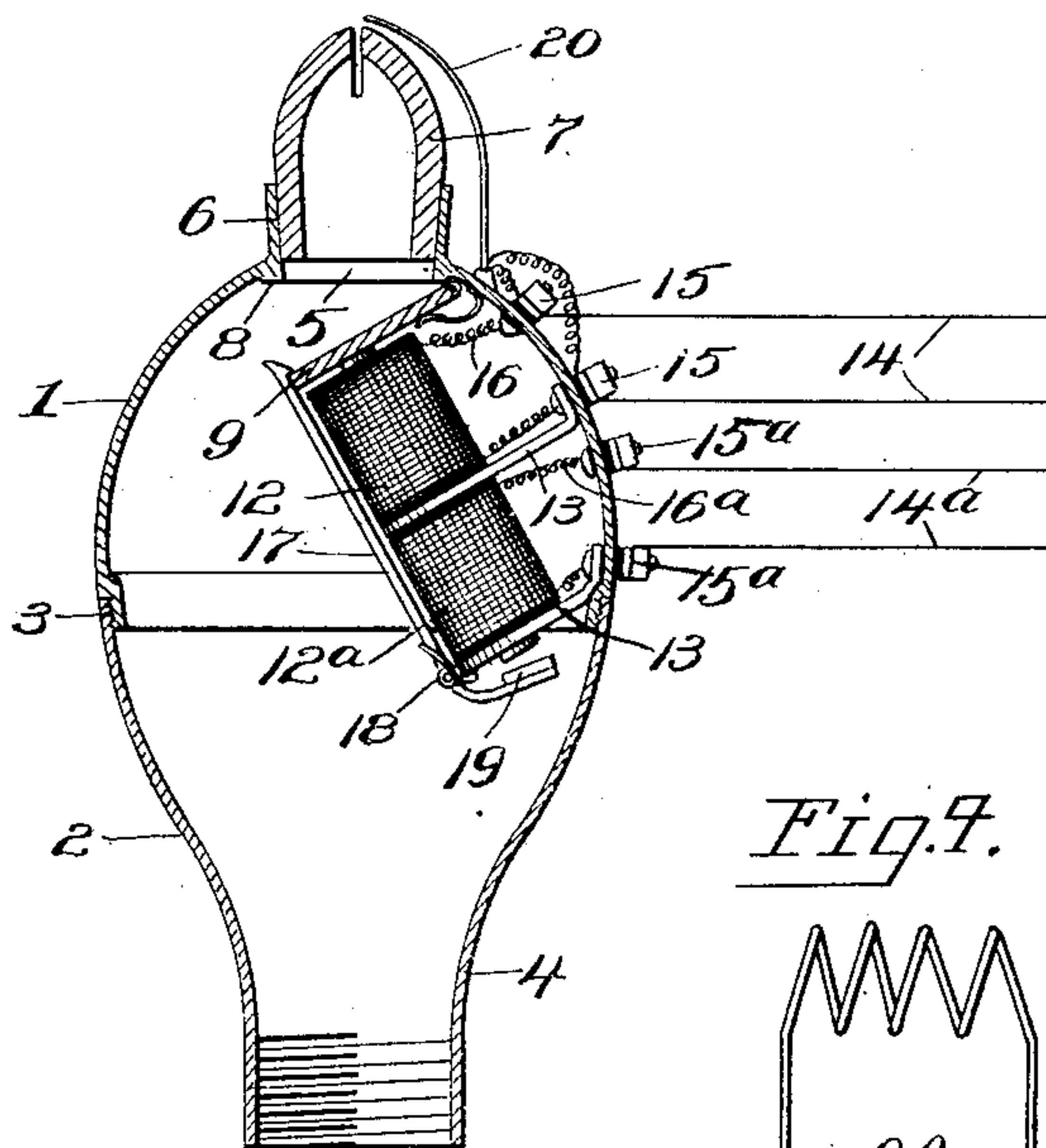


Fig. 2.

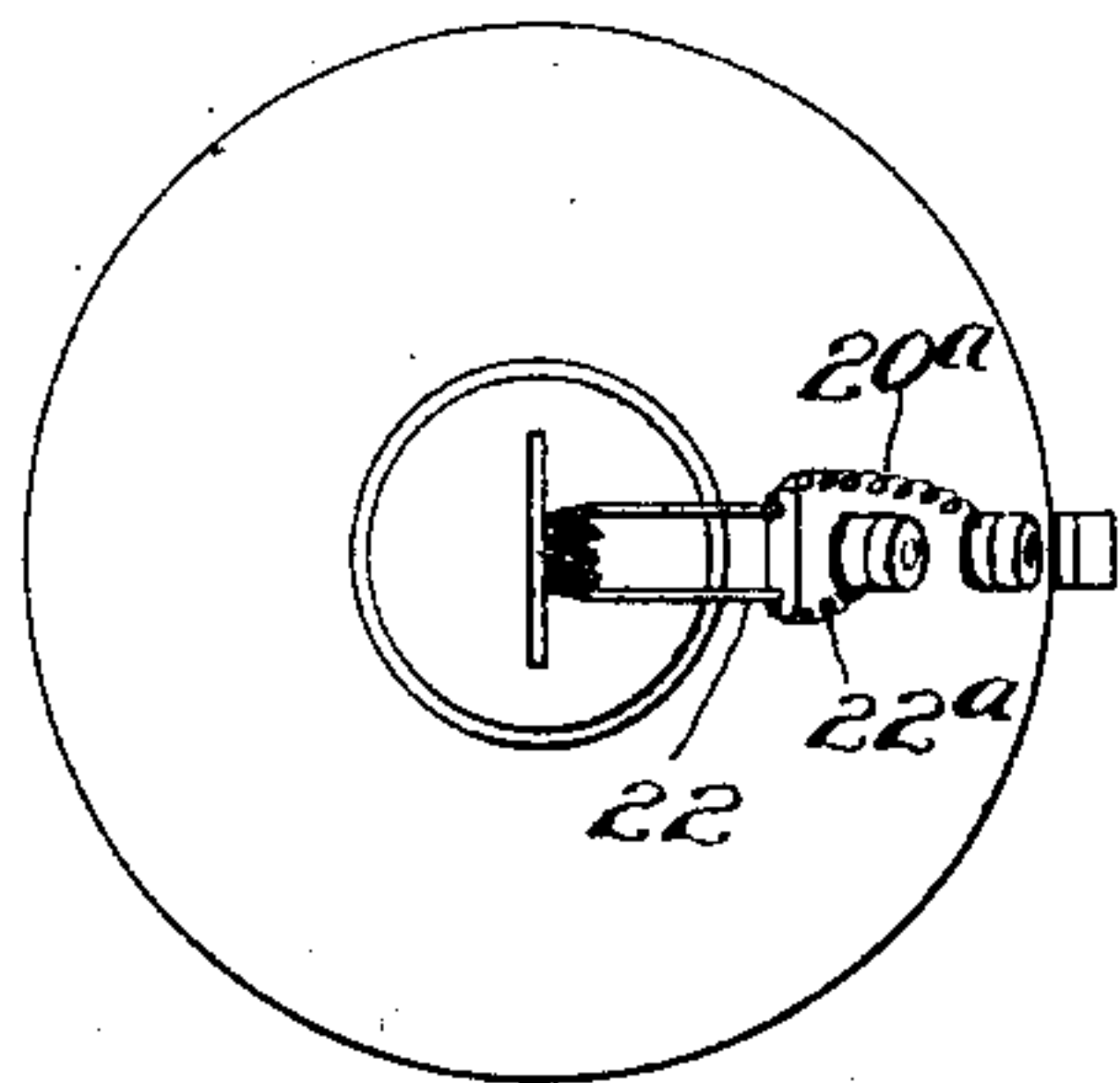


Fig. 3.

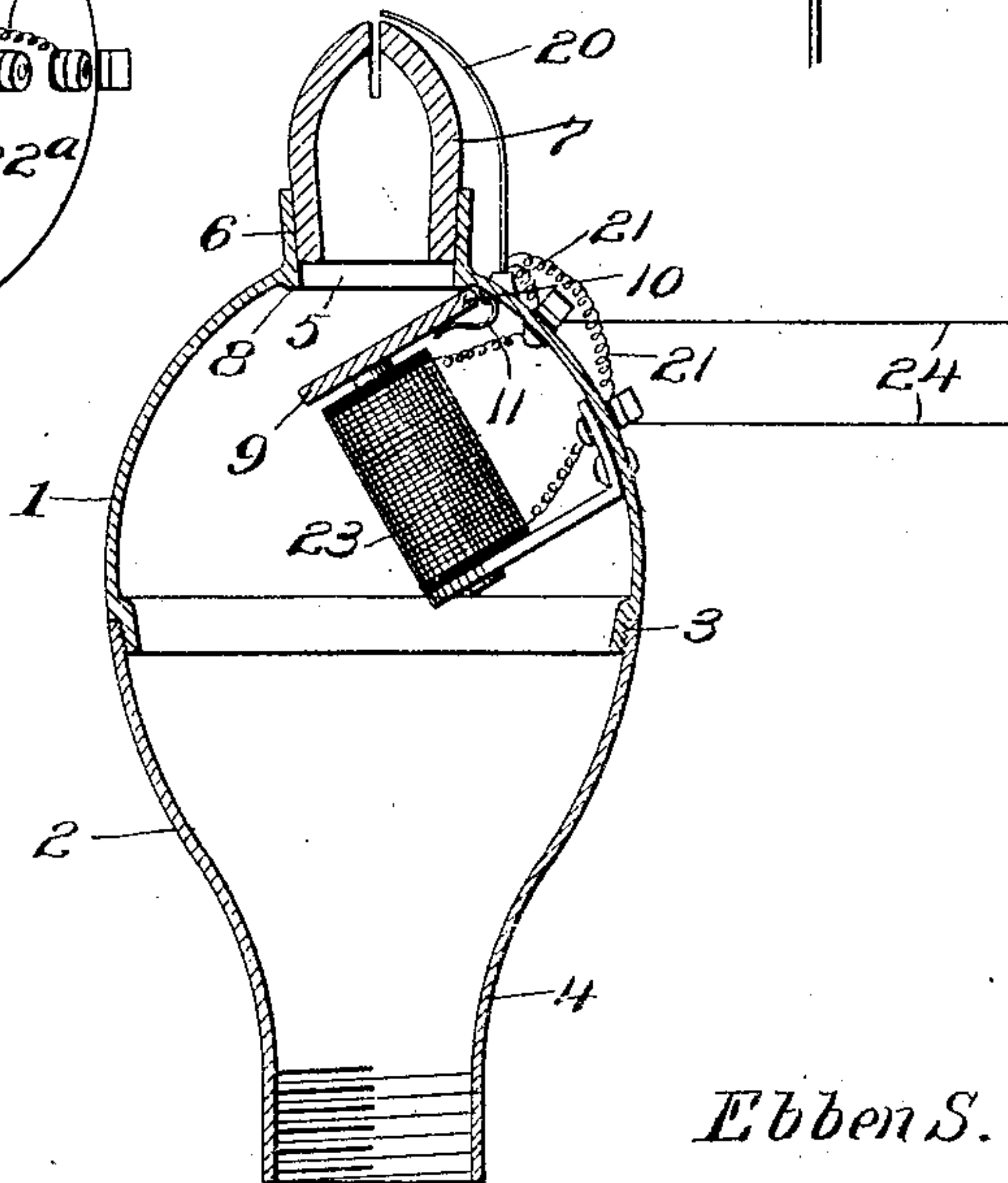
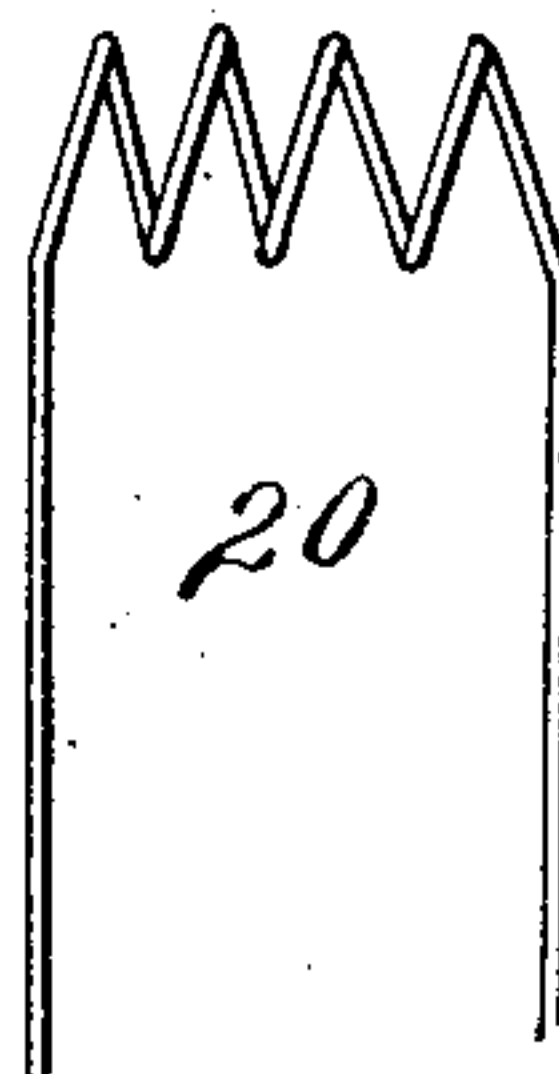


Fig. 4.



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Witnesses

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# UNITED STATES PATENT OFFICE.

EBBEN S. ALLEN, OF NEW HAVEN, CONNECTICUT.

ELECTRICALLY-CONTROLLED GAS IGNITING AND EXTINGUISHING DEVICE.

958,574.

Specification of Letters Patent.

Patented May 17, 1910.

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*To all whom it may concern:*

Be it known that I, EBBEN S. ALLEN, a citizen of the United States of America, residing at New Haven, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Electrically - Controlled Gas Igniting and Extinguishing Devices, of which the following is a specification.

My invention relates to electrically controlled gas igniting and extinguishing devices.

One of its objects is to provide a device of this character by means of which one or more gas lamps or gas brackets can be ignited and extinguished from a central station.

A further object of my invention is to provide a combined burner and igniting and extinguishing device which can be applied to any gas lamp or bracket, one which is simple, durable and efficient, and one which may be manufactured and sold at a comparatively low cost.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts hereinafter fully described, claimed and illustrated in the accompanying drawing, wherein:

Figure 1 is a central vertical section through the combined burner and igniting and extinguishing device constructed in accordance with my invention. Fig. 2 is a top plan view thereof. Fig. 3 is a view similar to Fig. 1, illustrating a slightly modified form of the device. Fig. 4 is a detail view of the resistance member.

Referring to the drawing by reference numerals, 1 designates the relatively upper and 2 the relatively lower section of the burner body. The sections are substantially semicylindrical in form and are threadedly united at 3. The relatively lower section 2 is provided with a depending sleeve-like extension 4, the inner wall of which is threaded to adapt the burner to be applied to the usual construction of gas lamp or bracket. The relatively upper section 1 is provided at its highest point with an outlet opening 5, and is formed with a collar 6 which surrounds the outlet opening and which is adapted to receive the burner tip 7. The inner surface of the section 1 is provided with an annular flange 8, which surrounds the outlet opening 5 and provides a seat for a

valve 9. The valve is hingedly connected to the section 1 by means of a pintle 10, and is adapted to be normally held in closed position by means of a spring 11. Independent electromagnets 12 and 12<sup>a</sup> are secured within the burner body to the section 1 by means of bracket arms 13, and are respectively included in independent open circuits 14 and 14<sup>a</sup>. The wires of the respective circuits are secured to binding posts 15 and 15<sup>a</sup>, which are carried by and insulated from the section 1, said binding posts carrying the bracket arms 13. The magnets 12 and 12<sup>a</sup> are connected to the binding posts by means of wires 16 and 16<sup>a</sup>, respectively. When the circuit 14 is closed, the magnet 12 is energized and attracts the valve 9, thus uncovering the opening 5 and allowing the gas to pass to the burner tip 7. The valve 9, when attracted by the magnet 12, is adapted to be engaged by a latch 17, which is adapted to retain the valve in open position. The latch is secured to one of the arms 13, and is normally held in active position by means of a spring 18. The relatively lower end of the latch 17 is curved and provided with an armature 19, which is adapted to be attracted by the magnet 12<sup>a</sup> when the circuit 14<sup>a</sup> is closed. The attraction of the armature 19 by the magnet 12<sup>a</sup> moves the latch 17 into inactive position and releases the valve 9, which upon being released, is moved into closed position by means of the spring 11. It should thus be apparent that I provide an electrically controlled device by means of which the flow of gas to the burner tip can be cut off or established. A resistance member 20 is included in the circuit 14 by means of wires 21, so that when said circuit is closed the valve 9 is opened to allow the passage of gas to the burner tip 7, and the resistance member 20 is heated to ignite the gas issuing from the burner tip. Instead of using the resistance member 20 a jump spark 22 may be used, which is included in the circuit 14 by means of wires 22<sup>a</sup>, see Fig. 2 of the drawing.

In Fig. 3 of the drawing, I have illustrated a slightly modified form of my invention. I only use one magnet and one circuit, the magnet being designated by the reference numeral 23 and the circuit by the numeral 24. In using the modified form of the device, the circuit 24 is closed, whereupon the magnet 23 energizes and attracts the valve 9, thus allowing the gas to flow to the



burner tip 7, and the resistance member 20 is heated to ignite the gas issuing from the burner. In this form of the device the circuit is normally closed, whereby the magnet is adapted to retain the valve normally opened, and the resistance member 20 is normally heated. When it is desired to extinguish the gas, the circuit is broken, the magnet being deenergized releases the valve 9, which is returned to its closed position by the spring 11. As the magnet and resistance member are included in a normally closed circuit, the resistance member is always heated, while the valve is open, thus rendering it impossible for gas to escape from the burner.

From the foregoing description taken in connection with the accompanying drawing, the construction and mode of operation of the invention should be understood without a further extended description.

Changes in the form, proportions and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages of the invention.

Having fully described and illustrated my invention, what I claim is:

1. A device of the character set forth including a burner body consisting of upper and lower separable sections, the lower section being provided with an inlet opening and the upper section with an outlet opening, a valve hingedly secured to the upper section, a spring secured to the upper section and adapted to normally retain the valve in position to close the outlet opening, a bracket arm secured to the upper section, and an electro-magnet carried by the bracket arm, said magnet being adapted when energized to move the valve in position to clear the outlet opening.

2. A device of the character set forth including a burner body consisting of upper and lower sections, the upper section being detachably secured to the lower section and provided with an outlet opening, a valve hingedly secured to the upper section, a spring secured to the upper section and adapted to normally retain the valve in position to close the outlet opening, and an electro-magnet carried by the upper section, said magnet being adapted when energized to

move the valve in position to clear the outlet opening, said valve and magnet being removable with the upper section.

3. A device of the character set forth including a burner body consisting of upper and lower separable sections, the lower section being provided with an inlet opening and the upper section with an outlet opening, a support, a valve hingedly secured to the upper section, a spring adapted to normally retain the valve in position to close the outlet opening, a bracket arm secured to the upper section, a circuit, an electro-magnet carried by the bracket and included in said circuit, and an igniting means carried by the upper section and included in the circuit.

4. A device of the character set forth including a burner body consisting of upper and lower separable sections, the lower section being provided with an inlet opening and the upper section with an outlet opening, a valve hingedly mounted within the burner body, a spring adapted to normally retain the valve in position to close the outlet opening, and an electro-magnet mounted within the burner body, said magnet being adapted when energized to move the valve in position to clear the outlet opening.

5. A device of the character set forth including a burner body consisting of upper and lower separable sections, the lower section being provided with an inlet opening and the upper section with an outlet opening, a valve mounted within the burner body, a spring adapted to normally retain the valve in position to close the outlet opening, an electro-magnet mounted within the burner body, said magnet being adapted when energized to move the valve in position to clear the outlet opening, a latch mounted within the burner body and adapted to engage and hold the valve in a position to clear the outlet opening, and means by which the latch may be withdrawn to release the valve.

In testimony whereof I affix my signature in presence of two witnesses.

EBBEN S. ALLEN.

Witnesses:

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WILLIAM C. ALLEN.