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H. K. WILSON.
DEVICE FOR LIGHTING GAS LAMPS.
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Fig. 1.

Fig. 2.

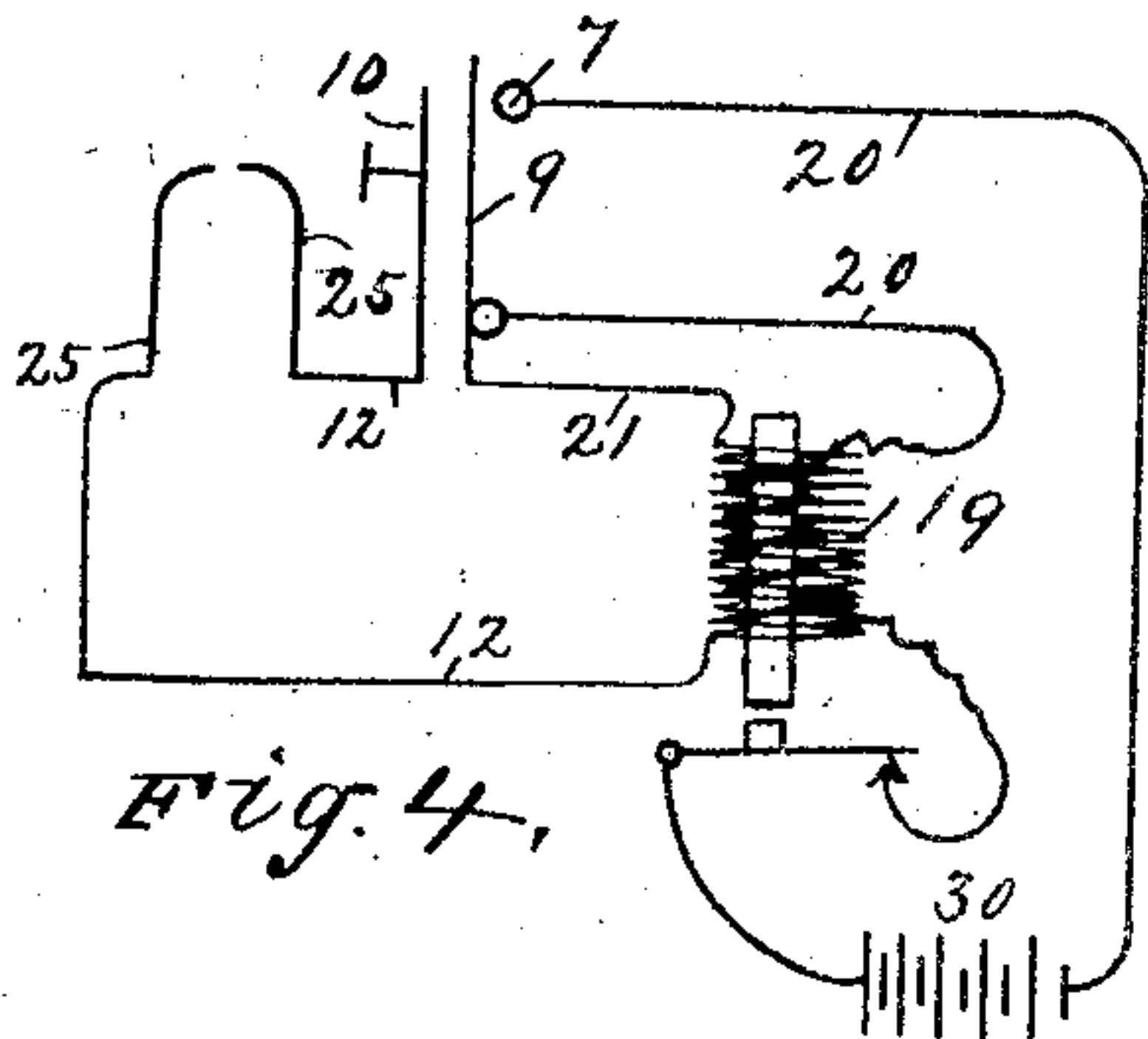
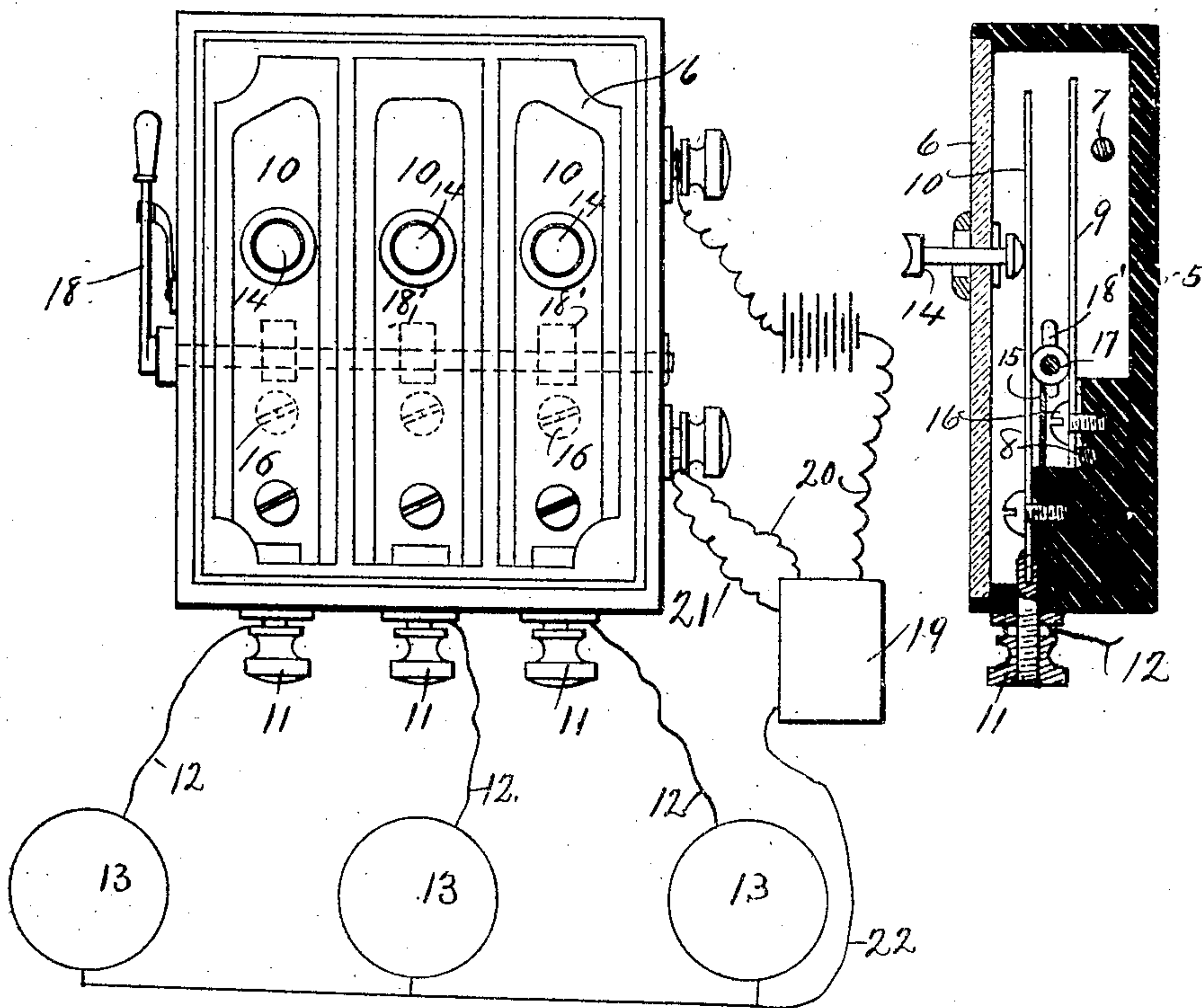
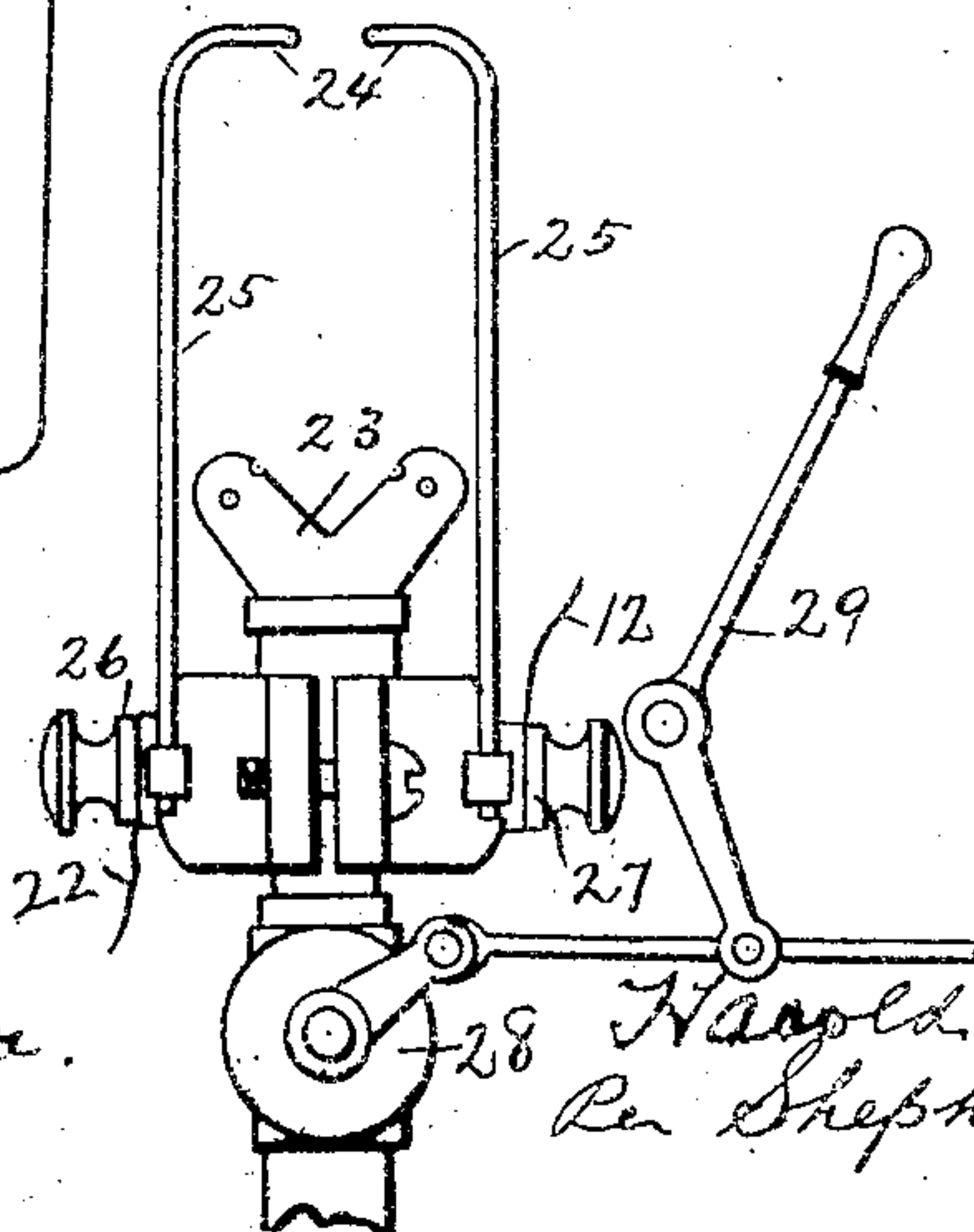


Fig. 3.



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DEVICE FOR LIGHTING GAS-LAMPS.

No. 850,509.

Specification of Letters Patent.

Patented April 16, 1907.

Application filed March 13, 1906. Serial No. 305,896.

To all whom it may concern:

Be it known that I, HAROLD K. WILSON, a citizen of the United States, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in a Device for Lighting Gas-Lamps, of which the following is a specification.

My invention relates to a device for lighting gas-lamps, and has for its object the provision of a device of this character comprising an electric switch adapted to light any one of a number of lamps when desired or to light all of said lamps simultaneously, if desired.

A further object of the invention is the provision of an electric switch adapted to make or break the electric circuit in such manner as to produce a spark at contact-points located above the gas-burner in such manner that there will be less danger of a secondary spark at the switch than has heretofore been the case.

Further objects and advantages of the invention will be set forth in the detailed description which now follows.

In the accompanying drawings, Figure 1 is a front elevation of an electric switch constructed in accordance with the invention. Fig. 2 is a transverse vertical section through said switch with certain of the parts in elevation. Fig. 3 is a detail side elevation of a gas-burner which will be hereinafter described, and Fig. 4 is a diagrammatic view of a connection hereinafter described.

Like numerals designate corresponding parts in all of the figures of the drawings.

Referring to the drawings, the numeral 5 designates a casing formed of an insulating material and preferably having a glass front 6. Extending transversely of this case are bus-rods 7 and 8. Connected to the lower of these bus-rods are spring-plates 9, while located in front of the plates 9 and adapted to contact therewith are spring-plates 10. Binding-posts 11 are secured upon the lower ends of the spring-plates 10 and have connected thereto wires 12, which lead to the lamps 13 which are to be lighted. Push-buttons 14 are arranged in front of the casing in such manner that when pressed upon they will first press the free ends of the spring-plates 10 into contact with the spring-plates

9 and will then press the spring-plates 9 into contact with the bus-rod 7. An insulating-web 15 is located between the lower portion of the spring-plates 10 and the heads of screws 16, which hold the spring-plates 9 in position. Journaled in the casing 5 is an oscillatory rod 17, to which oscillatory movement may be imparted by the handle 18. Mounted upon this rod between the spring-plates 9 and 10 are contact members 18'. An induction-coil 19, which is preferably a Ruhmkorff coil, has the terminal of its primary coil connected to the bus-rods 7 and 8 by wires 20. A secondary coil or winding of the induction-coil is connected by the wires 21 with the bus-rod 8. The wires 12 connect the binding-posts 11 with one of the terminals of the lamps 13, the opposite terminals of said lamps being in circuit with the secondary winding of the induction-coil through the wire 22.

A lamp adapted to be lighted by the present invention is illustrated in Fig. 5 and comprises a gas-burner 23, over which are the sparking-points 24 of sparking members 25, to which current is applied through the binding-posts 26 and 27, to which the wires 12 and 22 are connected. A valve 28 controls the flow of gas to the burner and is in turn controlled by a handle 29, which may be located in any convenient position with relation to the lamp.

The operation of the device is as follows: When, for instance, it is desired to light the lamp shown at the extreme left of Fig. 1, the button 14 at the left of said figure is pressed to bring the spring 10 into contact with spring 9. This closes the secondary circuit of the induction-coil, with the exception of the gap formed between the sparking-points 24. This circuit is completed through the members 25, the wires 12, plates 9 and 10, and wire 21. A further pressure upon the button 14 brings the spring-plate 9 into contact with the bus-rod 7 and closes the circuit through the primary winding of the induction-coil, through plate 9, the wires 20, and bus-rod 8. One of the wires 20 is in circuit with a battery or other source of electrical energy, (indicated at 30 in Fig. 4.) This serves to produce a spark at the sparking-points 24 in the usual and well-known manner. If it is desired to light all of the lamps simultaneously,

the handle 18 is turned to bring the contact members 18' into contact with each of the plates 9 and 10. The initial movement of this handle completes the circuit between
 5 said plates, and continued movement of said handle forces the plates 9 into contact with the bus-rod 7. It will thus be seen that the secondary circuit is closed first and opened last, which does away with the excessive
 10 secondary sparking that might be formed if the reverse were the case.

This device is designed for use in the lighting of gas-lamps on automobiles, motor-boats, or yachts. When used on automobiles, it
 15 provides means whereby the operator may light the acetylene-gas lamps without leaving his seat. It does not require that the lamps be opened for the purpose of lighting them, which is a decided advantage in windy
 20 weather. When used on boats where the search-lights are well forward or on the pilot-house roof, it provides means whereby the pilot may light the lamps from the interior of the pilot-house.

From the foregoing description it will be seen that simple and efficient means are herein provided for accomplishing the objects of the invention; but while the elements shown and described are well adapted to serve the
 30 purpose for which they are intended it is to be understood that my invention is not limited to the precise construction set forth, but includes within its purview such changes as may be made within the scope of the appended claims.

Having thus described my invention, what I claim is—

1. In a device of the character described, the combination with an induction-coil, comprising a primary and a secondary circuit, of
 40 a plurality of sparking mechanisms located in the secondary circuit, a source of electrical energy located in the primary circuit, a switch comprising a plurality of pairs of spring contact members, one member of each of said pairs of springs being connected to the sparking mechanism and the other member of each of said pairs of springs being connected to the secondary winding of the induction-coil, and a bus-rod and means for forcing said
 50 springs into contact with each other and for then bringing said springs into electrical connection with the bus-rod.

2. In a device of the character described, a switch comprising a casing, a plurality of pairs of contacting members located in said casing, a bus-rod with which one of the springs of each pair is in contact at all times, a second bus-rod and means for forcing the
 60 other spring of each pair into contact with the adjacent spring and for then forcing both of said springs into electrical connection with the second bus-rod.

3. In a device of the character described the combination with an induction-coil comprising a primary and a secondary circuit, of
 65 a plurality of sparking mechanisms located in the secondary circuit, a source of electrical energy located in the primary circuit, a switch comprising a plurality of pairs of spaced movable contacts, one member of each of said pairs of contacts being connected to the sparking mechanism and the other member of each of said pairs of contacts being connected to the secondary winding of
 75 the induction-coil, a stationary contact electrically connected with the primary circuit of said coil and means for electrically and initially engaging said springs with one another and for then engaging them in electrical connection with said stationary contact.

4. In a device of the character described, a switch comprising a pair of spaced spring contact members, a stationary contact member, and a rotatable key between said spring
 85 members for establishing initial electrical connection therebetween and for moving one of the members of said pair to engage said stationary contact.

5. In a device of the character described, a switch comprising a plurality of pairs of spaced spring contact members, a stationary contact member, simultaneously-rotatable keys between each respective pair of said spring members adapted in one position to
 95 initially engage the respective members of each pair in electrical connection, in a second position to force one member of each of said pairs into engagement with said stationary contact and in another position to disengage
 100 said members, and sliding pins disposed severally adjacent the respective pairs and designed upon disengagement of said keys upon individual actuation to force one of the members of a selected pair into contact with the
 105 other member of said pair, and by further movement to force both of said spring members while still in contact with one another into engagement with said stationary contact.

6. In a device of the character described a switch comprising a plurality of pairs of spaced contact members, means for initially and simultaneously engaging the respective
 115 members of all of said pairs in electrical connection and means designed in the inoperative relation of said first-named means to engage the members of a selected individual pair in electrical connection with one another.

7. In a device of the character described, a switch comprising a plurality of pairs of spaced movable contact members, a common stationary contact member, means for initially and simultaneously engaging the
 125 respective members of all of said pairs in elec-

5 trical connection with one another and then
for finally engaging said members while still
electrically connected with one another, with
said stationary contact and means designed
in the inoperative relation of said first-named
means to initially electrically engage the
members of a selected individual pair with
one another and for finally electrically en-

gaging said members while still engaged with
one another with said stationary contact. 10

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

HAROLD K. WILSON.

Witnesses:

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ISABEL F. MURPHY.