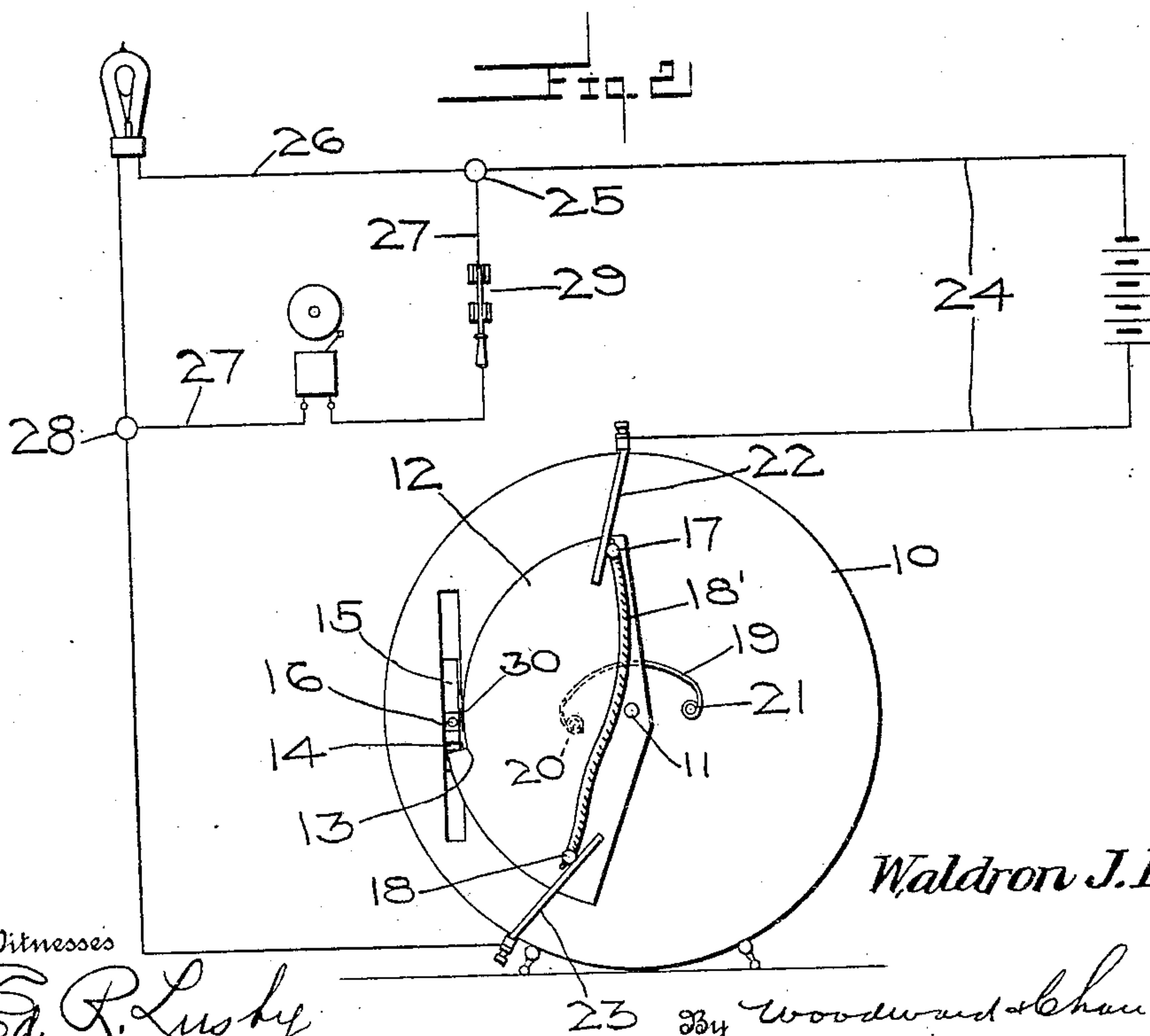
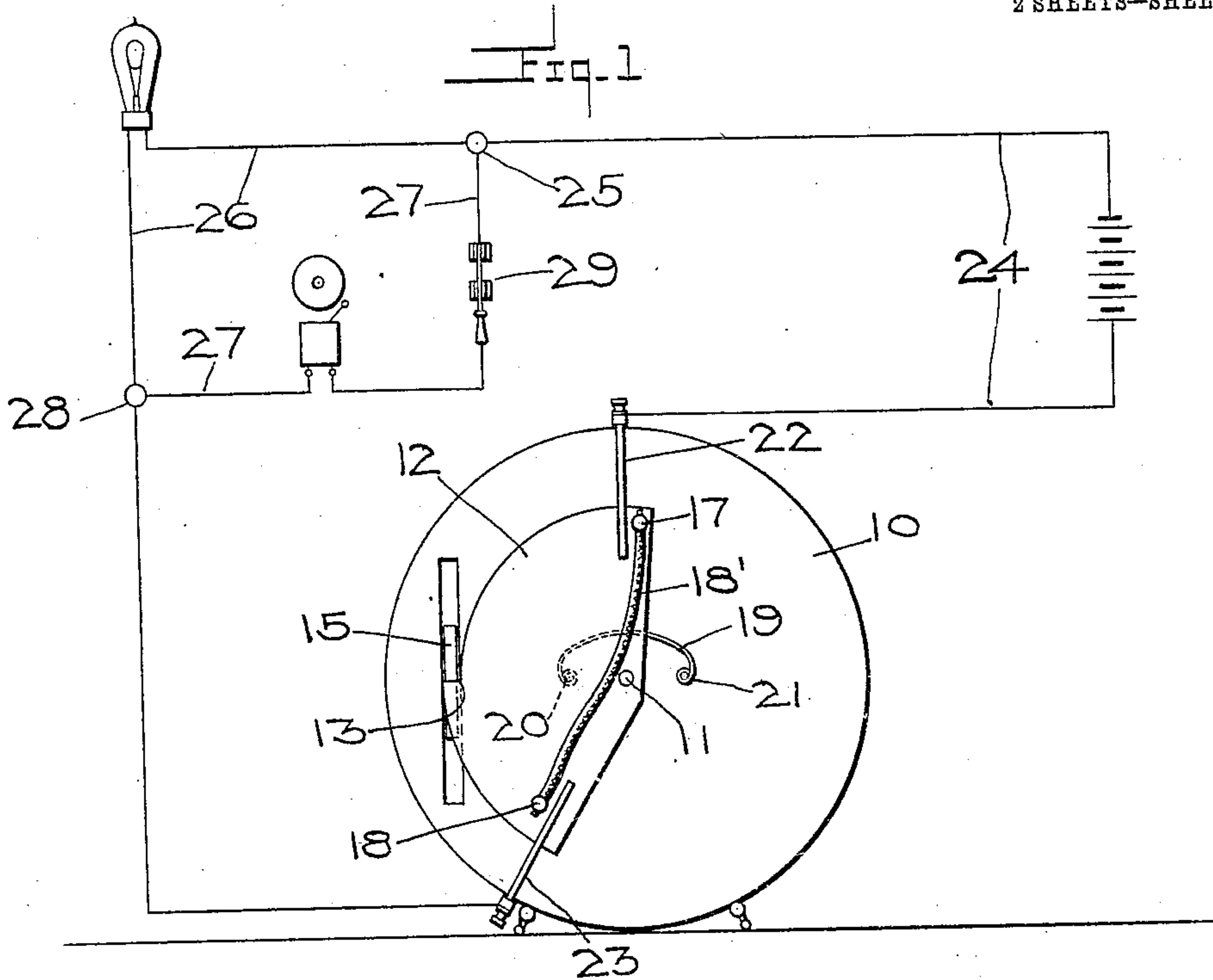


W. J. LUNGER.
TIME CONTROLLED ELECTRIC DEVICE.
APPLICATION FILED JULY 24, 1908.

930,871.

Patented Aug. 10, 1909.

2 SHEETS—SHEET 1.



Inventor

Waldron J. Lurger

Witnesses

Ed. R. Lusk
C. L. Chandler

By Woodward & Chandler

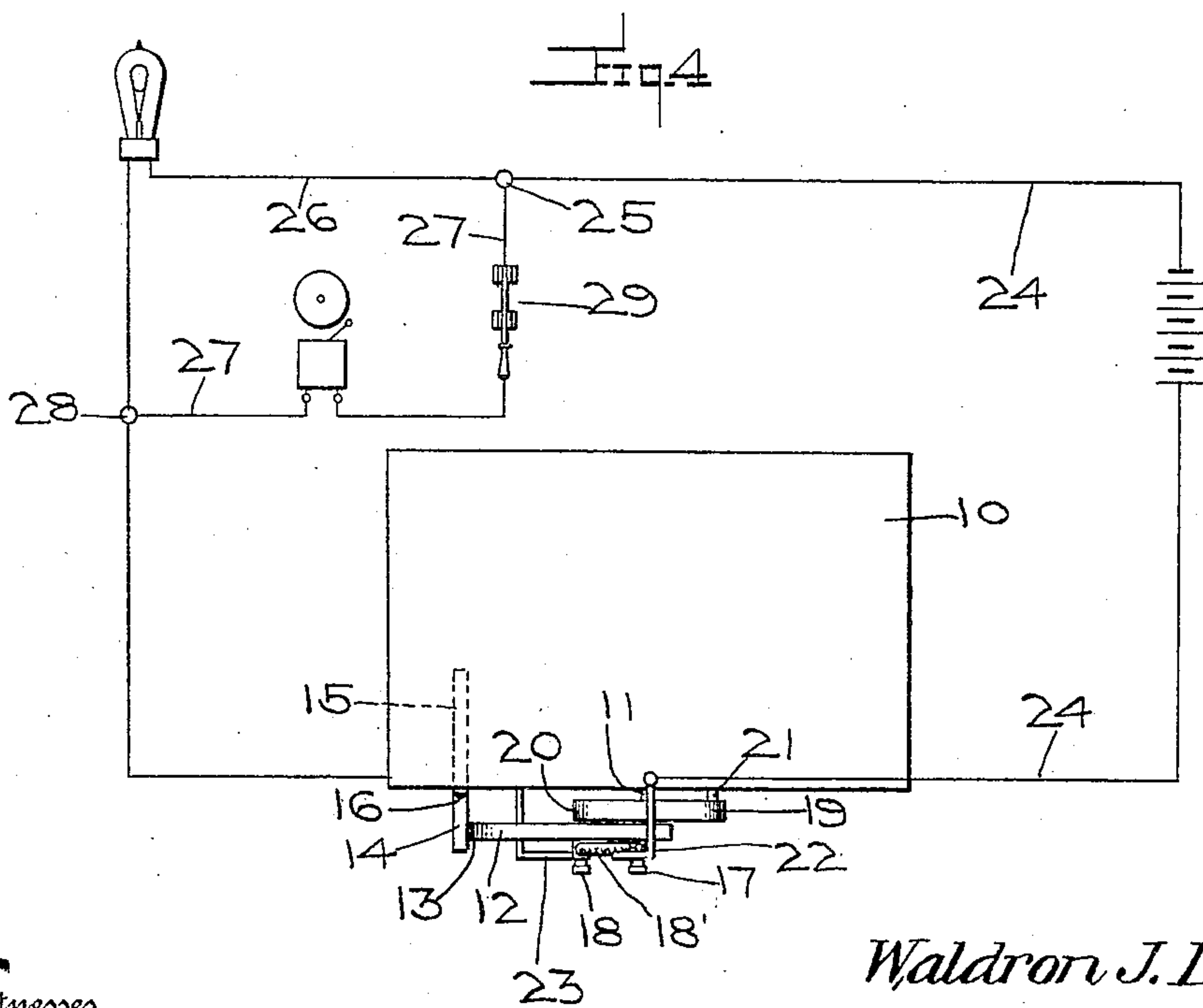
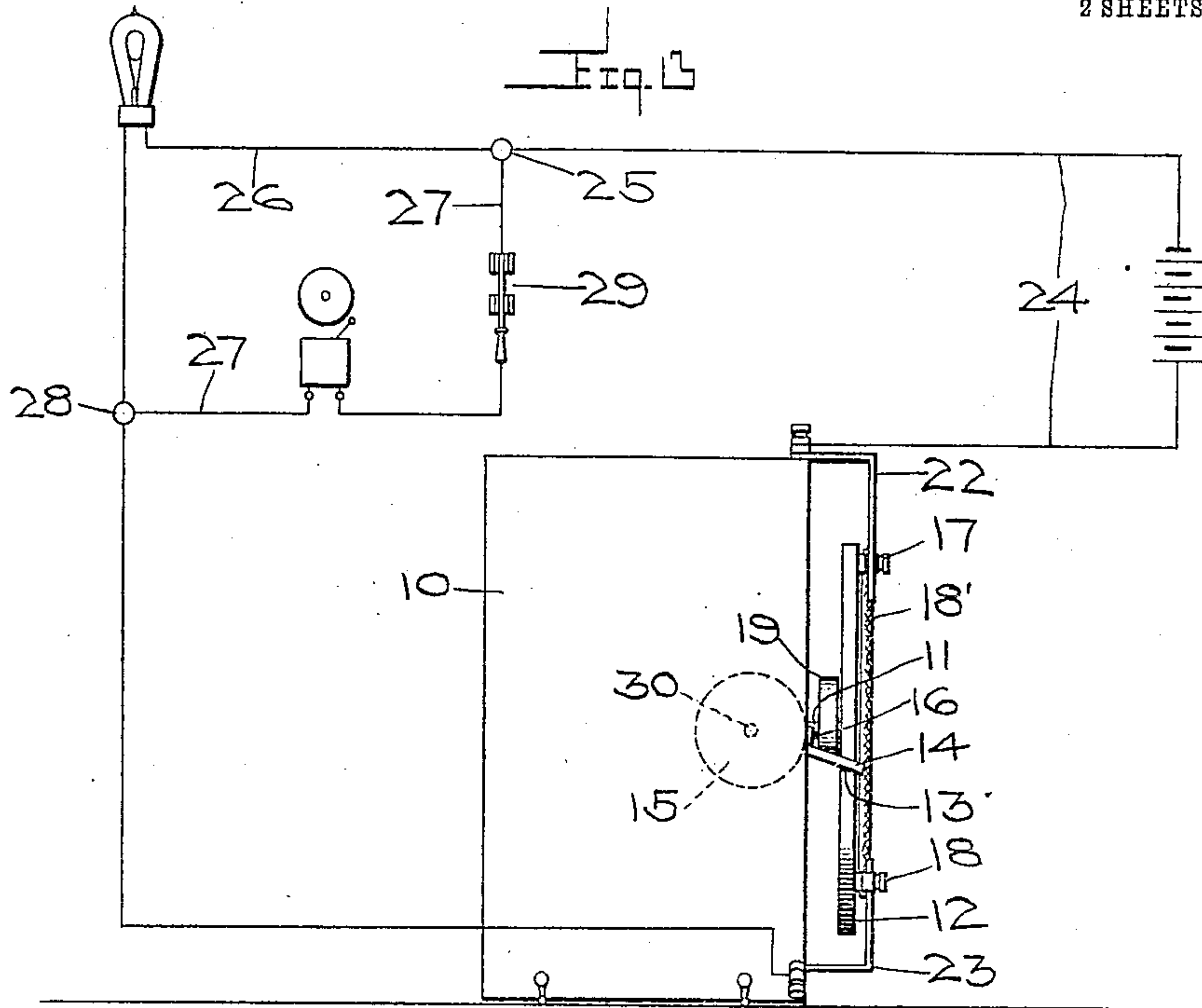
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Witnesses

Ed. R. Luby
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UNITED STATES PATENT OFFICE.

WALDRON J. LUNGER, OF ELM CREEK, NEBRASKA.

TIME-CONTROLLED ELECTRIC DEVICE.

No. 930,871.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed July 24, 1908. Serial No. 445,177.

To all whom it may concern:

Be it known that I, WALDRON J. LUNGER, a citizen of the United States, residing at Elm Creek, in the county of Buffalo and State of Nebraska, have invented certain new and useful Improvements in Time-Controlled Electric Devices, of which the following is a specification.

This invention relates to time controlled mechanisms and refers especially to an electric light and a gong circuit which is completed at predetermined times.

An object of this invention is to construct a device which is applicable to a clock of common structure and which will close a circuit to light an electric bulb or a gong at a distance from the clock automatically.

A further object of the invention is to devise a mechanism of this character which is of simple structure and comprises but few parts which are strong and durable so that a mechanism which is practical is obtained.

Other objects and advantages will be apparent from the following description and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a rear elevation of a clock having the apparatus applied thereto, Fig. 2 is a view of the same showing the mechanism as being operated to close the circuit, Fig. 3 is a side elevation of the same showing the trip mechanism, Fig. 4 is a top plan view of the complete device, showing a diagrammatic view of the wiring.

Referring now to the drawings, 10 designates a clock casing which is provided with a centrally and rearwardly extending shaft 11, the rear extremity of which supports a segmental disk 12 which is shouldered upon its outer edge as at 13 for the abutment of an arm 14 which is carried upon a wheel 15 actuated by the clock 10. The arm 14 is adjustably secured upon the wheel 15 by means of a set screw 16 for the purpose of regulating the time at which the circuit is adapted to be closed. The disk 12 is provided with two contact pins 17 and 18 at the opposite extremities thereof and upon the outer face which are connected by a copper wire 18' for the purpose of forming a current conductor between the two pins 17 and 18. The disk 12

is provided with a spring 19 upon its outer face which is secured thereto by a pin 20, which spring is secured to the rear face of the clock 10 by a pin 21 which holds the spring 19 under compression and causes the disk 12 to assume an upward position. The clock 10 carries two angular contact members 22 and 23 which extend rearwardly and inwardly over the edges of the disk 12 where they are positioned in the path of the contact pins 17 and 18 during the rotation of the disk 12 for the purpose of engaging the same at times to complete a circuit. The contact pin 22 is connected to one pole of a main circuit 24 which is connected at its other pole to a rosette 25 where it is divided into a lamp circuit 26 and a bell circuit 27. The contact member 23 leads to a rosette 28 which is divided into two circuits 26 and 27 to complete the circuit passing through the rosette 25. The bell circuit 27 is provided with a switch 29 by which it may be broken so as to cause only the closing of the lamp circuit 26 upon the actuation of the mechanism. The wheel 15 is mounted upon a stub shaft 30 in the frame of the clock 10 which is connected to the clock mechanism and actuated thereby.

The operation of the device is as follows: When the clock is set in motion the wheel 15 is rotated and the arm 14 is carried thereby. When the arm 14 protrudes from the rear face of the casing it engages the shoulder 13 and carries the disk 12 downwardly against the tension of the spring 19. This action causes the contact pins 17 and 18 to travel about the shaft 11 and to be brought into contact with the members 22 and 23. The abutting of these contacts causes the circuits from the main circuit 24 to be formed through the member 22, contact pin 17, copper wire 18', contact pin 18 out of the member 23 to the rosette 28, thence through the two circuits 26 and 27 to the rosette 25 thence back to the main circuit 24. The circuit is closed until the arm 14 has traveled downwardly to a sufficient extent to disengage from the shoulder 13 and to allow the spring 19 to return the disk 12 to its normal position. If it is desired the bell circuit 27 may be broken by opening the switch 29 and the bell will not be affected by the operations of the disk 12. Any number of circuits may be formed between the rosettes 25 and 28 as is desired as this device could be practically applied in hotels and the like where a bell or the like will be desired in each room. The mem-

bers 22 and 23 must necessarily be of yieldable material and of sufficient length to allow for the movement of the disk 12 during the entire swinging of the arm 14 so as to prevent the breaking of the circuits.

This alarm device may be applied and operated by any alarm mechanism which is already mounted in clocks or mechanisms of a like nature. The disk 12 may be actuated by the stationary key of the alarm mechanism instead of the arm 15. This device could be especially applied to the alarm clock of common structure which is provided with a stationary key with which to wind the alarm mechanism. This circuit closer may be made to light a plurality of miniature electric bulbs which may be disposed about a clock face of any design adaptable.

What is claimed is:—

1. A device of the class described comprising a clock, a disk disposed upon the extension of a shaft of a clock, contact members disposed on said disk, contact members carried by the clock, a shoulder on said disk, an arm carried by said clock for engagement at times against said shoulder for rotating said disk and bringing said contacts together and circuits connected with said contacts.
2. A device of the class described comprising a clock, a shaft rearwardly extended from said clock, a disk mounted on said shaft, a spring interposed between said disk and said clock for normally holding said disk in an upward position, a shoulder on said disk, an adjustable arm disposed on said clock for engagement with said shoulder, contact pins carried at the opposite ends of said disk, a wire disposed on said disk for connecting said pins, contact members disposed on said clock for yieldable engagement with said pins at times and wires of electric circuits connected to said pins and contact members.
3. A device of the class described comprising

ing a clock, a shaft rearwardly extended from said clock, a disk loosely disposed on said shaft a spring carried between said disk and said clock for holding said disk in its normal position, two contact pins disposed at the opposite end of said disk, a wire disposed on said disk between said pins, a wheel carried by said clock and actuated thereby, an adjustable arm disposed on said wheel, a shoulder on said disk, said arm adapted to engage at times against said shoulder to operate said disk and contact members disposed on said clock for yieldable engagement against said pins when said disk is rotated.

4. A device of the class described comprising a clock mechanism, a plate pivotally mounted upon the clock mechanism, said plate having a shoulder, an arm carried by the clock mechanism for engagement of the shoulder to move said plate, contacts carried by the plate and contacts located in position for engagement by the contacts of the plate when the said plate is in a predetermined position.

5. A device of the class described comprising a clock, a plate pivotally mounted upon said clock, said plate having a shoulder, contact members carried by the plate, contact members carried by the clock, means for holding the plate with its contact members in a predetermined position with respect to the contact members of the clock, and means carried by the clock and arranged for engagement of the shoulder of the plate to move the plate against the action of the holding means.

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

WALDRON J. LUNGER.

Witnesses:

J. B. ELLIOTT,
F. M. BARNEY.