

E. MAHON.
ELECTRIC FIRE ALARM.
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979,977.

Patented Dec. 27, 1910.

Fig. 1.

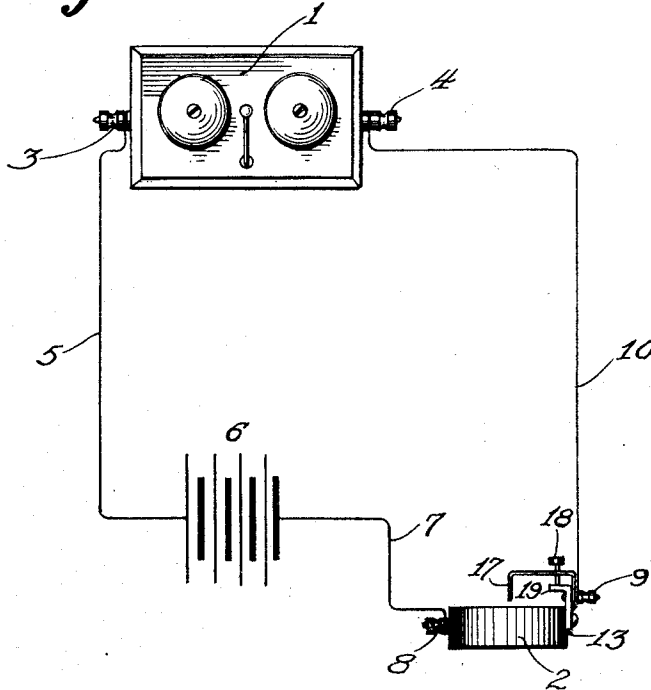


Fig. 2.

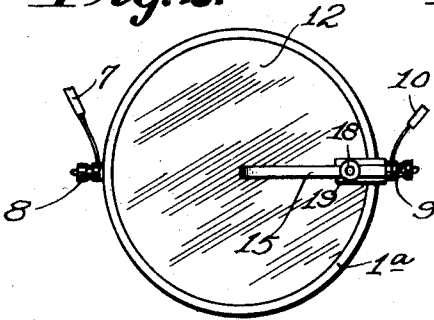
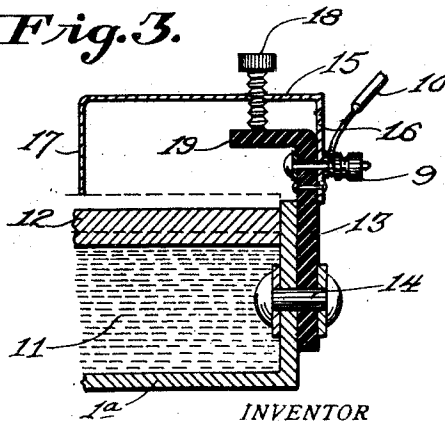


Fig. 3.



WITNESSES

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ELECTRIC FIRE-ALARM.

979,977.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EMMETT MAHON, a citizen of the United States, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented certain new and useful Improvements in Electric Fire-Alarms, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to electric fire alarms, and has for its object the production of an alarm, which is simple in construction, efficient in operation and consists of a comparatively small number of parts.

15 Another object of this invention is the production of novel contact means, which will readily form a contact, when the temperature of a room or the surrounding atmosphere reaches a certain height.

20 With these and other objects in view this invention consists of certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

25 In the drawings: Figure 1 is a diagrammatic view of the signal; Fig. 2 is a top plan view of the contact device; Fig. 3 is a fragmentary sectional view of a portion of the contact device.

30 Referring to the drawings by numerals, 1 designates the bell box, which is electrically connected to the contact device 2 hereinafter described. The bell box 1 is provided with binding posts 3 and 4. The binding post 3 is connected by means of a conductor or rod 5 to the positive side of the battery or series of batteries 6. Connected to the negative side of the battery by means of a conductor 7 is the binding post 8 of the circuit-closing device of contact device 2. The contact device is also provided with a terminal or binding post 9 to which terminal is connected a conductor 10, which conductor is also connected to the opposite binding post 4 thereby making a complete circuit when the circuit is closed through the medium of the circuit closer 2, and causing the bells to actuate and an alarm to be sounded.

50 The circuit closer device comprises a tank portion or receptacle 1, to which, as stated above, is secured a binding post 8 for electrically connecting the same to the audible alarm. Within the receptacle 1 is adapted to be carried expansible liquid 11, preferably mercury, upon which is adapted to be supported a float disk 12. An insulating

member 13 is fixedly secured to the tank or receptacle 1 by means of a binding rivet or member 14. The insulating member is substantially an inverted L-shaped member having its vertical portion engaging the receptacle 1. 60

A contact member 15 which is substantially U-shaped in cross section is fixedly secured, at one end 16, to the insulating member 13 by means of a binding post 9, previously alluded to. The substantially U-shaped member 15 is, preferably, inverted, thereby having its outer depending end 17 supported, preferably, above the center of the contact disk or float 12. The substantially U-shaped member 15 is provided with an adjusting screw 18, which works therein and engages the outer horizontally-extending portion 19 of the insulating member 13. 70 The adjusting screw 18 is adapted to be threaded through the contact member 15 for adjusting the same and withdrawing or bringing the outer end 17 into closer relation with respect to the float 12. 80

As the heat of the room in which the alarm is situated rises to such a height as to cause the liquid 11 to expand, the float 12 will be raised to the position shown in dotted lines in Fig. 3 thereby forming a contact with the depending end 17 and completing an electrical circuit through the contact member 15. The current will then flow through from the positive side of the batteries through the conductor 5, through the bells, actuating the same, out through the conductor 10, through the contact member 15, then through the float member 12 and the receptacle 1 and back to the other side of the batteries by means of the conductor 7 thereby causing a complete circuit and causing the bells or other audible alarm to be actuated. Of course, it should be understood that the bell or alarm can be placed at any desired or convenient place with respect to the circuit closer or contact device 2. 85 90 95 100

What I claim is:—

1. In an electric alarm, a normally open circuit, an annunciator in the path thereof, a circuit closer in the path thereof, said closer comprising a receptacle containing expansible liquid, a float supported by said liquid, a substantially inverted L-shaped insulating member fixedly secured to said casing and extending above the same, a substantially inverted U-shaped contact mem- 105 110

ber supported upon said insulating member, and having one of its depending ends adapted to engage said float for closing an electrical circuit and actuating the annunciator, 5 and an adjusting screw passing through said U-shaped member and engaging said insulating member for adjusting the U-shaped member with respect to the float.

2. A circuit closer of the class described 10 comprising a receptacle adapted to contain expansible liquid, a float carried within said receptacle, an insulating member fixedly secured to one side of said receptacle, said insulating member provided with a portion 15 overhanging said receptacle, a substantially U-shaped contact member carried by said insulating member and overhanging the

same, one end of said U-shaped contact member adapted to form a contact with said float, a terminal carried by said receptacle, 20 a second terminal connected to said U-shaped contact member, and means passing through said U-shaped contact member and engaging the overhanging portion of said insulating member for adjusting the U- 25 shaped contact member with relation to said insulating member.

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

EMMETT MAHON.

Witnesses:

A. D. LONG,
CHAS. S. CRAIL.