

S. HOGE.
ALARM.

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1,037,767.

Patented Sept. 3, 1912.

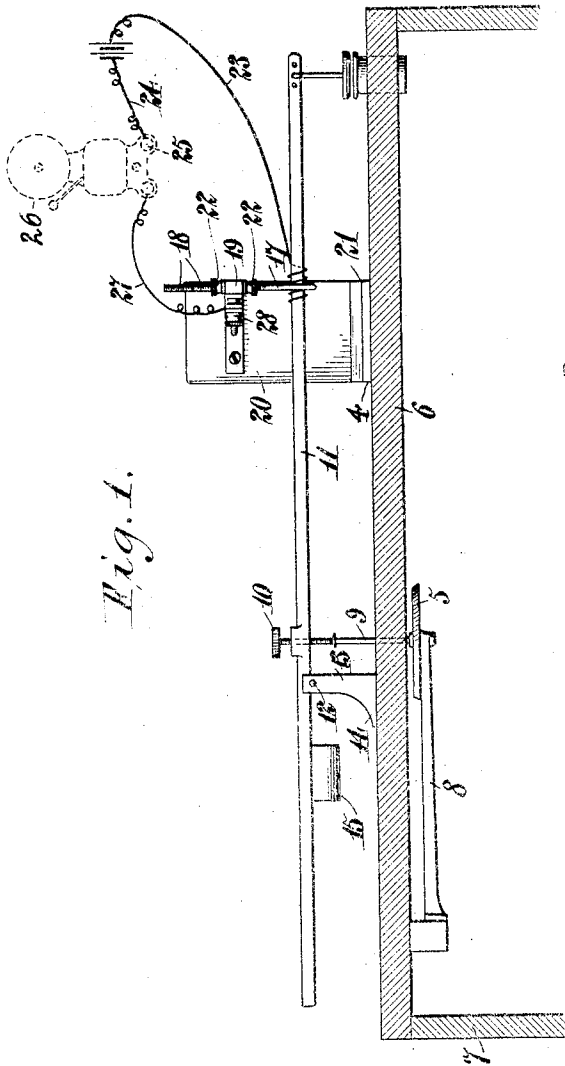


Fig. 1.

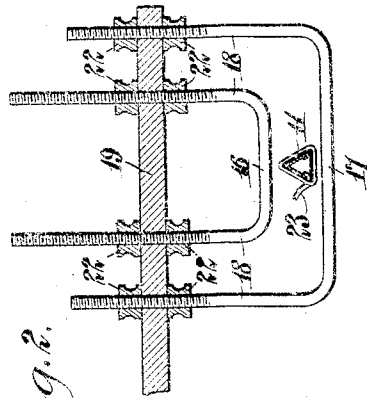


Fig. 2.

Witnesses: <

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UNITED STATES PATENT OFFICE.

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ALARM.

1,037,767.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SOLOMON HOGE, a citizen of the United States, residing at Waynesburg, in the county of Greene and State of Pennsylvania, have invented new and useful Improvements in Alarms, of which the following is a specification.

One object of the invention is to increase the efficiency of alarms for incubators, drip-pans, boilers and the like, by providing contact members adjustable with respect to each other and the circuit closer, whereby the alarm circuit may be regulated to close at various predetermined conditions of the operating agent in the incubator, drip-pan, boiler or the like.

Other objects will appear and be better understood from the following description taken in connection with the accompanying drawings, in which,

Figure 1 is a side elevation of the device as applied to the incubator. Fig. 2 is a detail front elevation of the contact members partly in section.

For purposes of illustration I have shown the device applied to a well-known form of incubator. It is to be understood however, that I am not to be limited to this specific application, since it will be understood from what will appear later how the device may be equally as well applied to other devices wherein an alarm is usually employed such as refrigerators, drip-pans, steam boilers and the like.

A thermostat 5 is arranged adjacent to the top 6 of the incubator casing 7 supporting means for the thermostat being herein shown to consist of a bracket arm 8. An operating rod 9 connects at one end with the thermostat 5 and its upper end underlies an adjusting screw 10 extending through a circuit closer 11 having a cross-piece or rock shaft 12 bearing in the upright sides 13 of a support 14. The rock shaft 12 is arranged to one side of the middle of the circuit closer so that the latter is normally over-balanced, but in order to compensate for the excess weight of the longer arm and whatever additional weight may be applied thereto as will be subsequently described, a sliding weight 15 is provided on the shorter arm of the circuit closer.

The longer arm of the circuit closer extends between the contact arms 16 and 17. Each of the contact arms is shown to consist of a U-shaped piece of metal the limbs

18 of which are exteriorly screw threaded and slide through vertical openings in an angular-shape bracket arm 19 carried by the upright portion 20 of a support 21 which is suitably secured to an insulating block 4, suitably secured to the top 6.

Referring to Fig. 2 it will be seen that the contact arms are of different widths and are arranged in vertical alinement and one within the other and in spaced relation. For adjusting the arms 16 and 17 with respect or relatively to each other I provide milled nuts 22 screwed onto the limbs 18 so as to bear on the upper and lower sides of the bracket arm 19.

It may here be stated that the upright portion of the support 21 is of wood or other nonconducting material.

The alarm circuit extends by a wire 23 from a suitable source of electric energy to the circuit closer 11, the said wire 23 being suitably secured to the end of the longer arm of the circuit closer. A conducting wire 24 connected to the other pole of the battery or other source of electric energy extends to one pole 25 of a suitable alarm herein shown to consist of an audible signal such as a bell 26, a conducting wire 27 connects at one end with the other binding post of the bell and at its opposite end connects with a binding post 28 carried by the bracket arm 19.

The circuit closer in its normal position is spaced from the horizontal portions of the contact arms 16 and 17 and is held against downward movement on the lower circuit closer by the operating rod 9 one end of which bears on the lower end of the adjusting screw 10. With this construction it will be seen that the rise of temperature in the incubator will cause the operating rod to move upwardly to said screw carrying with it the circuit closer until the latter contacts with the upper contact arm whereupon the circuit will be closed and the alarm sounded. The reverse of this of course will occur in the event of the temperature in the incubator falling below a certain point whereupon the thermostat will contract thus permitting the operating rod to move downwardly and also the circuit closer to contact with the lower contact arm. By adjusting the upper contact arm to a greater distance from the lower contact arm than shown it will be seen that a higher temperature will be required to operate the circuit

closer so as to contact with the upper contact arm.

It will of course be understood that I do not intend to limit myself to the specific use
5 of a thermostat for operating the circuit closer since it will be manifest that other devices such as the floats of drip-pans, boilers and the like may be connected in any preferred manner to the operating rod so as to
10 operate the same for the purpose previously described.

What I claim as new is:

In an alarm of the class described, the combination with an electric circuit and a
15 metallic bracket arm connected in said cir-

cuit, of vertically disposed spaced U-shaped contact arms bodily adjustable on said bracket arm, nuts screwed onto the arms so as to bind on opposite sides of the brackets, a pivoted circuit closer connected in said
20 circuit and extending through the space between said arms and a fluid actuated member connected to said circuit closer for the purpose described.

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

SOLOMON HOGE.

Witnesses:

WILLIAM B. STEWART,
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