

J. GESUALDO & F. BALDASSARRE.

SAFETY ALARM.

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1,041,456.

Patented Oct. 15, 1912.

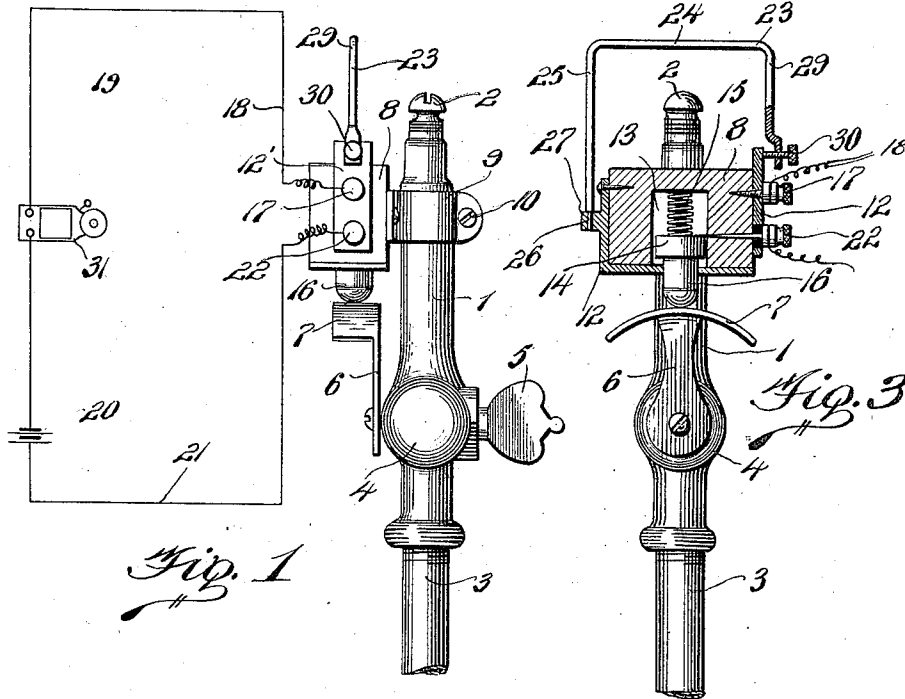


Fig. 1

Fig. 3

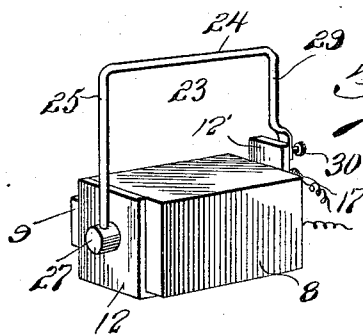


Fig. 4

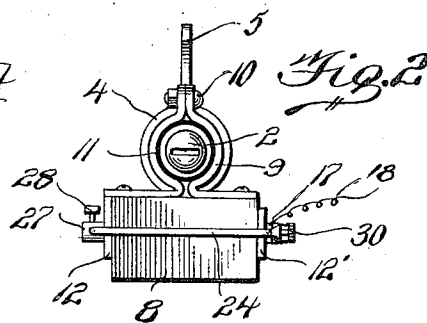


Fig. 2

Witnesses

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SAFETY-ALARM.

1,041,456.

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To all whom it may concern:

Be it known that we, JOSEPH GESUALDO and FEDERICO BALDASSARRE, subjects of the King of Italy, residing at Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Safety-Alarms, of which the following is a specification.

This invention relates to an automatic safety alarm for gas fixtures, the object of the invention being to provide simple and effective thermo-electrically controlled means for automatically sounding an alarm when the gas light is blown out or accidentally extinguished.

A further object of the invention is to provide a simple, cheap, durable and reliable device of this character which may be applied to any ordinary gas fixture in place of the ordinary burner tube.

The invention consists of the features of construction, combination and arrangement of parts, hereinafter fully described and claimed, reference being had to the accompanying drawing, in which,

Figure 1 is a side elevation of a burner equipped with our safety alarm device, showing the alarm circuit in diagram. Fig. 2 is a top plan view of the same. Fig. 3 is an irregular vertical section of the device as set for use. Fig. 4 is a view of the device detached.

The device comprises a burner tube 1, which is provided with the usual tip 2, and may be mounted upon the bracket or supply pipe 3 in place of the burner tube commonly employed. The tube 1 is provided with a controlling and cut-off valve 4 having at one end a manipulating key or handle 5, and at its opposite end an arm 6 carrying a segmental curved head or cam 7. Arranged upon the burner tube above the level of the valve is a support 8, consisting of a block of wood or other suitable material, secured to the tube by a collar or sleeve 9 provided with a set screw 10, said block being electrically insulated from the tube by a layer of insulating material 11. The block carries separated metallic conducting plates or surfaces 12 12' and is formed with a cavity or chamber 13 in which operates a vertically movable switch block 14 normally held depressed by a spring 15 and provided with a projection 16 adapted to be engaged by the head 7 of the valve when the latter is adjusted to an open position. Secured by a

binding screw 17 to the plate 12' is a conductor 18 forming one of the sides of an electric alarm circuit 19 supplied by a battery or other suitable source of energy 20, the other side of which circuit is formed by a conductor 21 connected with a contact screw 22 carried by the block 8, and suitably insulated from the metallic sheathing. The inner end of this screw 22 projects into the cavity or chamber 13, and its flexible end is adapted to be engaged by the switch block 14 to connect the conductor 21 and screw 22 with the plates of the metallic sheathing and thus set the electric circuit in condition for operation. The block supports a yoke shaped thermostat 23, the main or cross portion 24 of which is suitably arranged in the heating zone of the flame when the gas issuing from the tip 2 is ignited, which portion 24 is adapted to expand when heated and to contract when cooled, as will be readily understood.

One of the depending arms 25 of the thermostat has a reduced lower end 26 which fits within an apertured lug 27 connected with the conducting sheathing or surface of the block and is secured thereto by a set screw 28. The other arm 29 of the thermostat carries an adjustable contact piece or screw 30 adapted to engage the metallic conducting plate 12' of the block to close the electric circuit. In one side of the electric circuit is a bell or other suitable alarm device 31. Normally the contact 30 is held in engagement with the plate 12', but the circuit is maintained in opened position by the disengagement of the switch 14 from the contact 22. By adjusting the contact 30 its period of engagement with the plate 12' in the expansion of the thermostat may be regulated, to vary the time period of operation of the alarm in sounding the signal, as hereinafter set forth.

When the valve 4 is closed the supply of gas to the burner tip is cut off. Upon the opening of the valve, the head 7 comes into engagement with the projection 16 of the button 14 and raises said button into engagement with the contact 22 against the resistance of the spring 15, thus simultaneously permitting the gas to pass to the tip 2 for consumption and setting the alarm circuit for operation, whereupon the gas may be ignited. The circuit will thus be closed and the alarm bell will sound until the thermostat is expanded sufficiently to

throw the contact 30 out of engagement with the metallic sheathing when the circuit will be broken and the burner will remain in operation without sounding the alarm. If, however, the gas should be blown out or accidentally extinguished the cooling and contraction of the thermostat will cause the contact 30 to be again brought into engagement with the conducting sheathing, thus closing the circuit and sounding the alarm, to indicate that the flame has been extinguished and danger exists. The person heeding the warning upon closing the valve 4 will throw the cam 7 out of engagement with the button or switch block 14, allowing the latter to be retracted by the spring 15, whereupon the circuit will be broken and rendered inoperative, thus cutting out the alarm.

From the foregoing description, taken in connection with the drawing, the construction and mode of use of our safety alarm apparatus will be readily understood, and it will be seen that a simple and efficient type of apparatus of this character is provided which is durable and reliable in use and inexpensive of construction so that it may be applied for operation at a comparatively low cost.

Having thus fully described the invention what is claimed as new is:

An automatic safety alarm attachment for gas burners comprising a block of electric

insulating material provided with a cavity and with means of attachment to a burner, spaced conducting plates carried by said block, one of said plates having a base portion provided with an opening communicating with the cavity, a bail-shaped thermostat having one of its arms connected with said conducting plate, and its other arm provided with an adjustable contact screw to engage the other conducting plate, binding posts carried by the latter-named conducting plate for the attachment of wires forming part of an alarm circuit, one of said binding posts being insulated from said last-named plate, a flexible contact piece projecting from one of said binding posts through the block into the cavity, a switch block movable in said cavity toward and from said contact piece and through the opening in the conducting plate, a spring for normally holding said switch block depressed and out of engagement with said contact piece, and a switch block elevating member adapted for connection with the valve plug of the burner to elevate said switch block when said valve plug is opened.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSEPH GESUALDO.

FEDERICO BALDASSARRE.

Witnesses:

GENNERO SOLERE,

RAFFAELE REMONDELLI.