

1,435,894.

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Fig. 1.

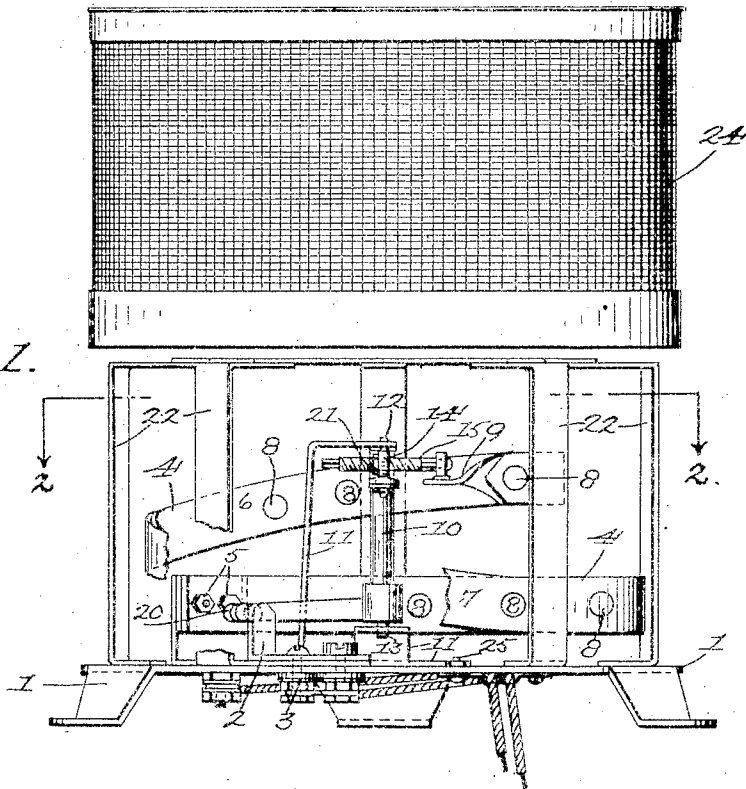
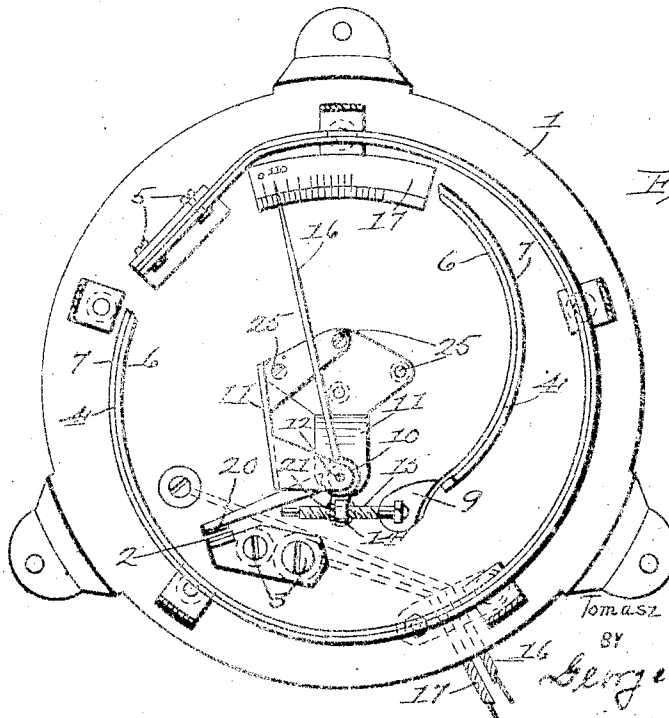


Fig. 2.



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FIRE ALARM.

Application filed May 5, 1920. Serial No. 379,095.

To all whom it may concern:

Be it known that I, TOMASZ HALAGARDA, a citizen of Poland, residing at Omaha, county of Douglas, and State of Nebraska, have invented certain new and useful Improvements in Fire Alarms, of which the following is a specification.

This invention relates to thermostats and particularly to those adapted to close an electrical circuit upon encountering a predetermined degree of temperature, sometimes called thermostatic alarms.

An object of this invention is to provide a thermostat of the above type and one which may be adjusted to close said circuit at any one of a number of predetermined degrees of temperature.

A further object is to provide means for indicating the extent of change, and the degree of temperature necessary to effect a closing of said circuit.

A further object is to provide a thermostat of the above type suitable for use as a fire alarm, and one which is inexpensive to manufacture and install, small and simple in construction, efficient in operation, and easily adjustable for particular temperatures.

Referring to the drawings, Fig. 1 represents a side view partly in section of the device with the cover shown removed.

Fig. 2 is a top plan view of the device on the line 2—2 of Figure 1.

Similar characters refer to similar parts throughout both views and in which—

1 represents a base carrying an electrical contact 2 fastened thereto as by means of screws 3, and a spirally curved expansion strip 4, mounted at one end to base 1 as by screws or bolts 5. Strip 4 comprises a strip of copper 6 and a strip of steel 7, securely riveted together as at 8, or two other metals having unequal co-efficients of expansion, so that when heat is applied, end 9 of the expansion strip will move in uncoiling direction, and when heat is removed end 9 will move in the reverse direction.

An electrical contact 20 movable against and away from contact 2 is mounted on vertical rod 10 pivoted to a support 11 as at 12 and 13, said support being attached to the base as at 25, and carries a threaded lug 14

adapted to receive a screw 15 in swiveled engagement with end 9 of the expansion member 4. Rod 10 also carries a dial finger 16 adapted to move over a dial 17 mounted on base 1, and suitably graduated so that the position of finger 16 in respect thereto will indicate the amount of movement and the degree of change in temperature which will effect a closing of electrical contacts 2 and 20.

It will be seen that upon the application of heat movement of end 9 of the expansive strip 4 will cause movable contact 20 to move toward contact 2, and will also cause dial finger 16 to move over dial 17.

By turning screw 15, contacts 2 and 20 may be set with a variable gap between them and the device set to cause said contacts to meet in response to any one of a number of predetermined changes of temperature, or upon encountering any one of a number of predetermined degrees of temperature. Contacts 2 and 20 should be insulated from each other and may be connected to a suitable electrical signal system in the usual manner.

A lock-nut 21 may be supplied to hold screw 15 in adjusted position.

A spider shaped frame 22 may be mounted upon base 1, adapted to receive and retain a cover 24, in protecting position over the parts of the device which cover is preferably constructed of wire gauze or other heat conducting material to transmit changes of temperature to the thermostatic element of the device.

Having thus described my invention, what I claim is new and desire to secure by Letters Patent of the United States is as follows—

1. In a fire alarm, a base, a curved expansion strip on said base comprising two strips of unequal co-efficients of expansion, a support, a vertical rod pivotally held by said support, a threaded lug on said rod, a screw in swivelled engagement with said expansion strip and said lug, a movable and a stationary contact, adapted to be engaged and disengaged by the movement of said expansion strip under changes in temperature.

2. In a fire alarm, a base, a spirally curved expansion strip on said base, comprising a

strip of copper and a strip of steel riveted together, a supporting bow, a vertical rod pivotally held between the rectangularly bent upper and lower ends of said bow, a stationary contact on said base, a movable contact on said rod, a threaded lug carried by said rod, a screw in swivelled engagement with the end of said expansion strip and said rod for closing and separating said contacts upon the movement of said expansion strip under changes in temperature.

In testimony whereof I have affixed my signature.

TOMASZ HALAGARDA.