

C. G. OVERMYER.

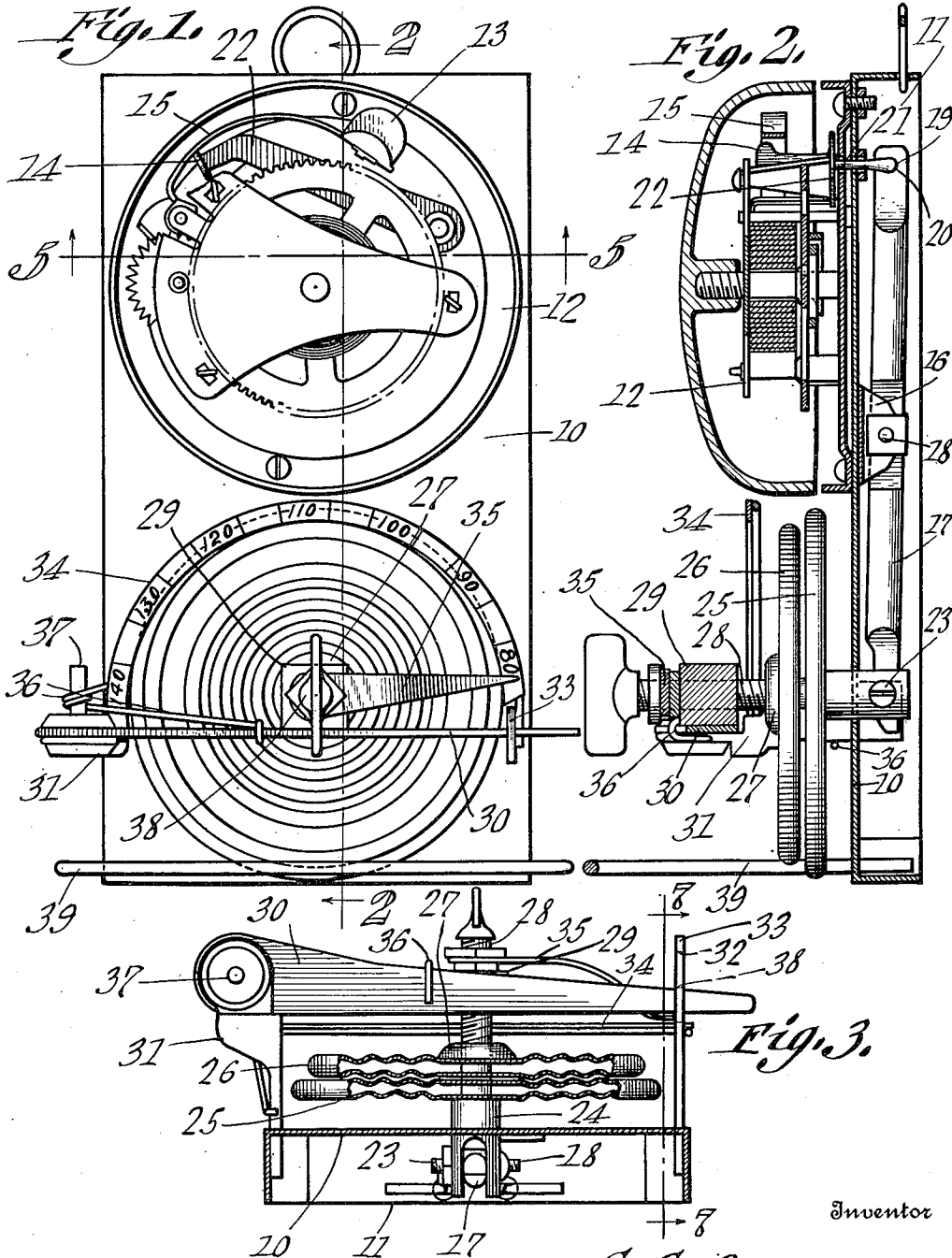
HEAT ALARM.

APPLICATION FILED MAY 29, 1920.

Patented May 31, 1921.

2 SHEETS—SHEET 1.

1,380,009.



Witness

*J. R. Doolittle*

Inventor

*C. G. Overmyer*

By

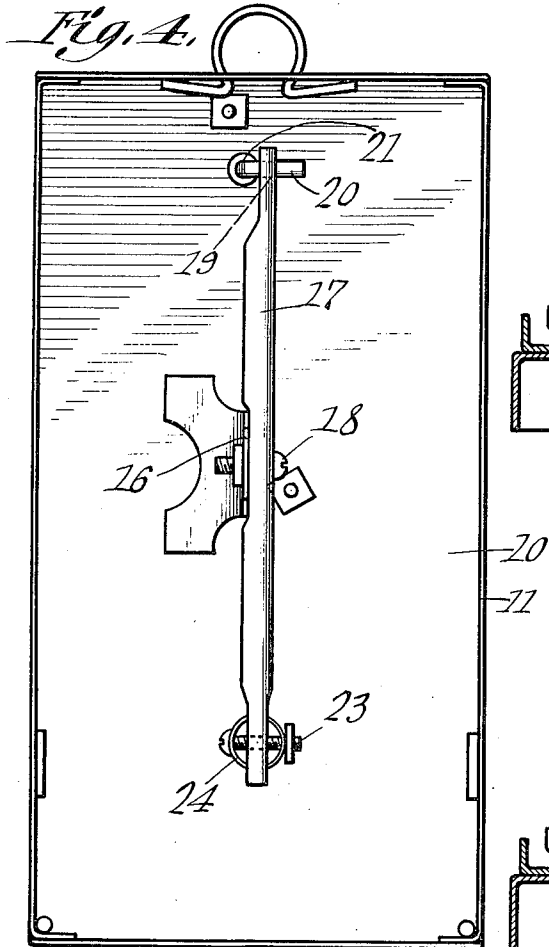
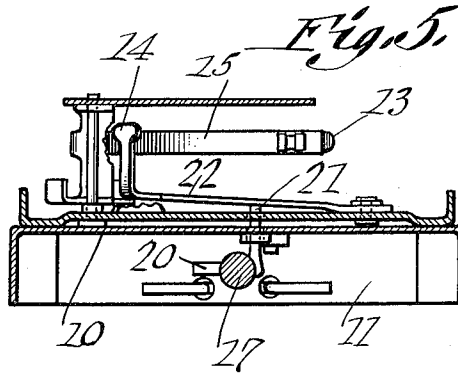
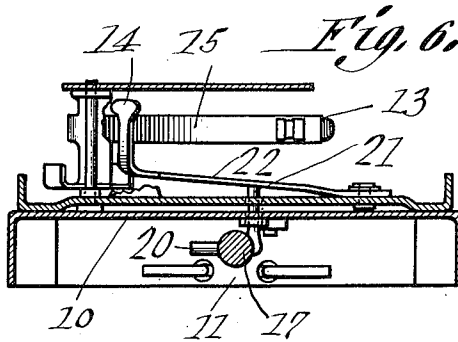
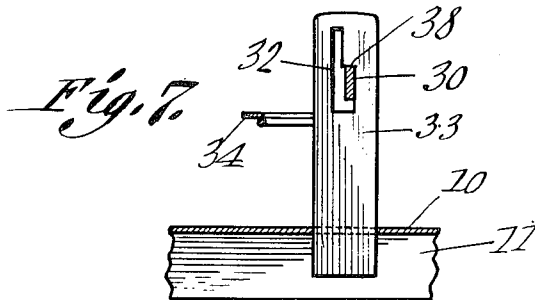
*C. A. Snow & Co.*

Attorneys

1,380,009.

Patented May 31, 1921.

2 SHEETS—SHEET 2.



Witness

*J. R. Ames*

Inventor

*C. G. Overmyer*

By

*C. A. Snow & Co.*

Attorneys

# UNITED STATES PATENT OFFICE.

CHARLES G. OVERMYER, OF HARTFORD CITY, INDIANA.

## HEAT-ALARM.

1,380,009.

Specification of Letters Patent.

Patented May 31, 1921.

Application filed May 29, 1920. Serial No. 385,288.

*To all whom it may concern:*

Be it known that I, CHARLES G. OVERMYER, a citizen of the United States, residing at Hartford City, in the county of Blackford and State of Indiana, have invented a new and useful Heat-Alarm, of which the following is a specification.

The present invention has reference to alarms, and more particularly to alarms known as heat alarms, to be employed in connection with stoves, furnaces, radiators or the like, to cause an audible signal to be given when the heat of the device associated with the alarm reaches a predetermined degree.

A further object of the invention is to provide a device of this character which will be purely mechanical in its operation, thus eliminating the use of electrical appliances for accomplishing the desired result.

A still further object of the invention is to provide a device of this character which may be adjusted to cause the same to operate under various degrees of temperature.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawings:—

Figure 1 illustrates a plan view of an alarm constructed in accordance with the present invention, the sounding portion of the bell being removed.

Fig. 2 illustrates a longitudinal sectional view through the signaling device, taken on line 2—2 of Fig. 1.

Fig. 3 illustrates a sectional view taken on line 3—3 of Fig. 1.

Fig. 4 illustrates a bottom plan view of the device.

Fig. 5 illustrates a sectional view taken on line 5—5 of Fig. 1.

Fig. 6 illustrates a sectional view showing the locking arm out of contact with the taper arm.

Fig. 7 illustrates a fragmental sectional view taken on line 7—7 of Fig. 3.

Referring to the drawings in detail, the

reference character 10 designates the body or base of the signal, which is formed preferably of sheet metal and provided with the downwardly extending flanges 11, providing supporting means for the base, to support the operating mechanism in spaced relation with the stove on which the same is positioned.

Secured to the upper surface of the base 10, is the spring actuated bell 12 of usual construction, the same having an oscillating taper 13 which is spring actuated, there being provided a stop indicated at 14 adapted to normally lie between the taper arm 15 and the frame supporting the operating mechanism of the signal to prevent the operation of the taper, under normal conditions.

Having connection with the under surface of the base, is a bracket member indicated at 16, which supports the actuating rod 17, that is pivotally connected to the bracket member intermediate its ends, by means of the pivot pin 18, passing through registering openings in the bracket and actuating rod, and as shown, one end of the actuating rod is apertured as at 19 to receive the right angled end 20 of the operating pin 21, which in turn operates through a suitable opening provided in the base.

Disposed on the upper surface of the base, and forming a part of the stop 14 is the spring arm 22 which has its lower surface contacting with the operating pin 21, whereby movement of the operating pin causes a relative movement of the spring arm to move the stop out of contact with the taper arm 15 to permit the mechanism of the sounding bell to cause an audible signal to be produced.

The opposite end of the actuating rod is apertured to receive the pivot pin 23, which connects the actuating rod with the plunger 24 that has its upper end normally disposed in spaced relation with the upper surface of the base, and in contact with the lower disk 25 of the thermostat so that movement of the thermostat will cause a relative movement of the actuating rod 17 to the end that the signal is sounded.

This thermostat includes the lower disk 25 and the upper disk 26, which are of the usual constructions, the upper disk being provided with the washer 27 forming a seat

for the lower end of the adjusting screw 28 operating through a threaded opening formed in the lug 29 forming a part of the controlling arm 30, which controlling arm has one end thereof pivotally connected to the base through the bracket 31, the opposite or free end of said controlling arm operating in the slot 32 formed in the keeper 33, which is also secured to the base 10.

A semi-circular metallic member 34 has its ends connected to the bracket 31 and keeper 33 respectively, and this member 34 carries suitable graduations on the upper surface thereof, adapted to cooperate with the indicating hand 35, whereby the adjusting screw may be moved to a predetermined position, to cause the operation of the thermostat under various degrees of temperatures.

From the foregoing it is of course obvious that due to the construction of the thermostat, and relation of the adjusting screw therewith, movement of the adjusting screw causes a movement of the disks of the thermostat with relation to each other.

A spring member 36 has one of its ends positioned over the arm 29, the opposite end thereof being coiled around the pin 37 having connection with the bracket 31 so that the arm 30 is normally held behind the shoulder 38, formed in one of the walls of the slot 32 of the keeper 33. When it is desired to prevent ringing of the bell, the arm 30 is manually moved into the upper portion of the slot so that when the thermostat cools, the spring 36 will force the arm downwardly behind the shoulder to reset the device.

In order that the device may be applied to a stove in a vertical position, a supporting member 39 extends at right angles to the body 10, to provide a support.

In the operation of the device, the adjusting screw is positioned to bring the indicating hand 35 to register with a suitable mark on the plate 34, with the result that the disks of the thermostat are adjusted with relation to each other to cause an alarm to be sounded when the temperature of the stove or device on which the signal is positioned, attains a degree of temperature equal to that indicated by the hand 35.

Assuming that the disks of the thermostat are heated, it will be seen that the same move away from each other, at points adjacent the outer edges thereof, with the result that further expansion causes movement of the plunger 24 to cause the actuating rod 17 to move the pin 21 through the opening in which the same is supported, with the result that the stop 14 moves out of contact with the tapper arm 15. It follows that the tapper is now moved by the mechanism of the bell to cause the signal to be sounded.

Having thus described the invention, what I claim as new is:—

1. In a heat alarm, a base, a sounding device supported by the base, a thermostat supported on the base, a pivotal means supported under the base and having connection with the thermostat and sounding device, a controlling arm having pivotal connection with the base, a keeper carried by the base, said keeper having a slot to accommodate a portion of the controlling arm, a shoulder formed in one wall of the slot, and a coiled spring for normally forcing the arm under the shoulder.

2. In a heat alarm, a base, a pivotally supported actuating arm carried by the underside of the base, said base having a depending flange to support the base, a spring controlled sounding member carried by the base, a thermostat including a pair of expansible disks supported by the base, means having connection with the pivotally supported arm for contacting with one of the disks for moving the arm, means on the opposite end of the pivoted arm for operating the sounding member, a controlling arm operating over the thermostat, said controlling arm adapted to restrict movement of the thermostat, and means for resetting the controlling arm.

3. In a heat alarm, a base, an actuating rod pivotally supported under the base, a sounding device supported on the base, a stop having connection with the actuating rod and adapted to normally hold the sounding device out of operation, a thermostat supported by the base, means for connecting the thermostat and actuating rod, a controlling arm disposed over the thermostat means carried by the controlling arm and contacting with the thermostat for restricting movement of the thermostat, and means for normally restricting movement of the controlling arm.

4. In a heat alarm, a base, an actuating rod pivotally supported under the base, a sounding device, means operated by the actuating rod for controlling the sounding device, a thermostat adapted to move the actuating rod, a controlling arm pivotally supported over the thermostat, a keeper having a shoulder, said controlling arm adapted to normally engage under the shoulder, means carried by the controlling arm for restricting movement of the thermostat, and means for moving the controlling arm to a position behind the shoulder.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHARLES G. OVERMYER.

Witnesses:

NED HUFF,

D. W. LINIGER.