

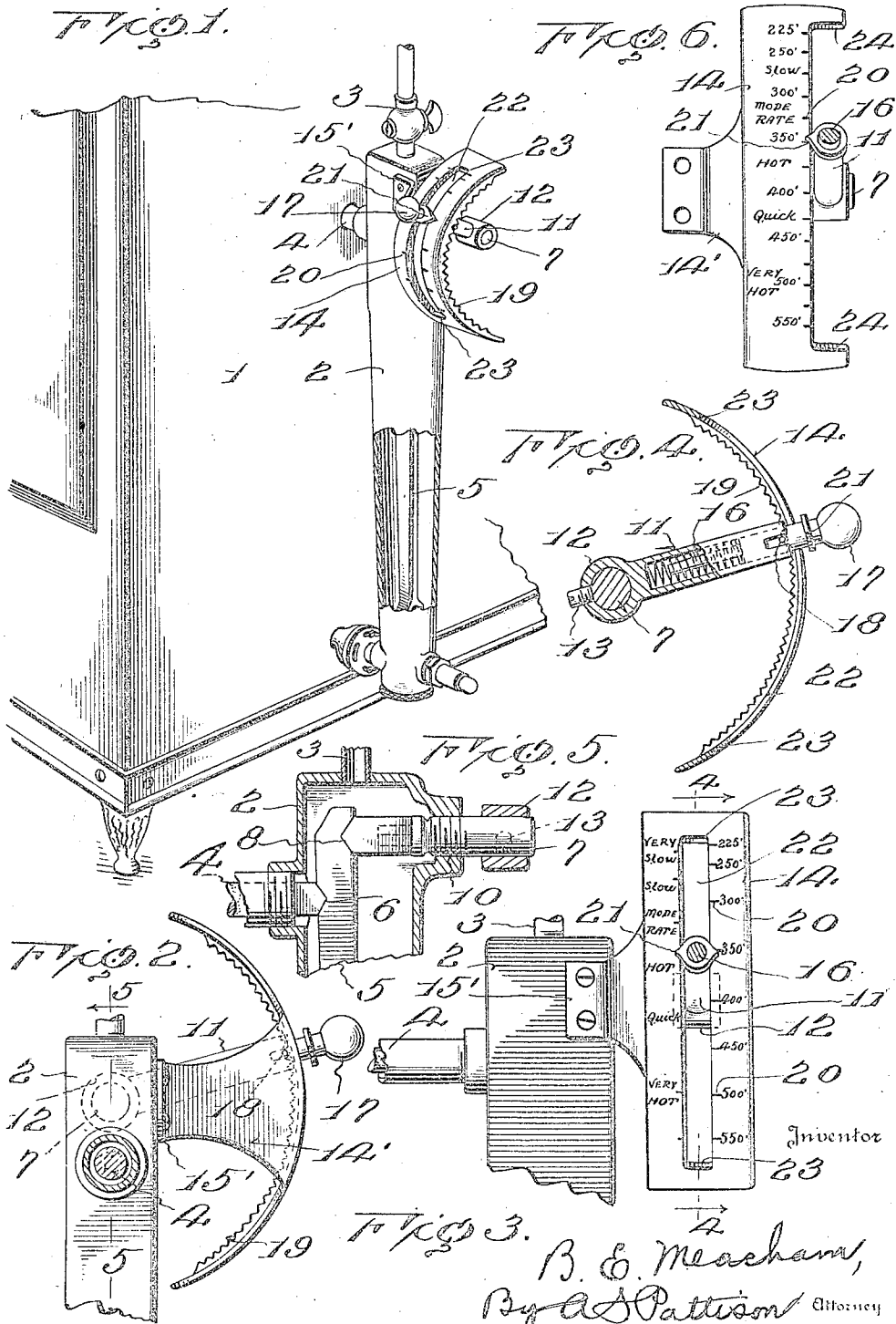
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B. E. MEACHAM

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THERMOSTATIC HEAT REGULATOR FOR OVENS

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UNITED STATES PATENT OFFICE.

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THERMOSTATIC HEAT REGULATOR FOR OVENS.

Application filed January 10, 1921. Serial No. 436,119.

To all whom it may concern:

Be it known that I, BENJAMIN E. MEACHAM, a citizen of the United States, residing at Lorain, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Thermostatic Heat Regulators for Ovens, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to improvements in thermostatic heat regulators for ovens, of the general type shown and described in my Patent Number 1,236,335, dated August 7th, 1917.

15 In this type of oven heat regulators there is an adjustable member for controlling the thermostatic element, and this adjustable element is regulated at the factory and a hand-operated member or handle attached thereto, which is adapted to be set at the degree of heat that is to be maintained in the oven. This hand-operated member is movable from minimum to a maximum degree. In the construction shown in my said patent, no means is provided for preventing the hand operated member from being rotated to such an extent that the original adjustment is lost and the operator has no means of determining the original position of the regulating wheel.

30 One object of my present invention is to provide a simple and cheap construction of regulating member or handle, which will prevent the operator from losing the original adjustment as set at the factory.

35 Another object of my invention is to arrange the indicating dial or member and the regulating handle so that they face the front of the stove or range, where they are convenient for observation and operation.

40 Other objects of my present invention will appear from the following description.

In the accompanying drawings:—

45 Figure 1 is a perspective view of a thermostatic oven heat regulator, showing my present improvement applied thereto.

Fig. 2 is an edge elevation of my present improvement.

50 Fig. 3 is an enlarged front elevation of my present improvement.

Fig. 4 is an enlarged edge elevation of my improvement.

55 Fig. 5 is a sectional view through the upper end of the housing, which contains part of the thermostatic mechanism.

Fig. 6 is an enlarged front elevation, showing a modification of my present improvement.

Referring now to the drawings, 1 is the oven of a gas stove, and 2 is a housing which carries the lever arrangement of the thermostatic mechanism of the type shown in my above-mentioned patent, to which reference is made for a specific description of the operation of the thermostatic mechanism for controlling the fuel which is fed to the oven burners. It is sufficient for an understanding of my present improvement to state that in the illustrative form of thermostatic member here shown, there is a housing 2, into which gas passes from a suitable feed pipe 3. A thermo member 4 extends into the oven in the manner shown in my aforesaid patent, and a lever 5 is located in this housing. An adjustable member 7 passes through the upper end of the housing 2 and has its inner end engage the upper extremity of a lever 5 as at 8. The form of adjusting member 7, here shown, consists of a shaft which is screw-threaded at 10, into the housing 2, so that this member 7 may be moved in and out in respect to the lever 5, for the purpose of adjusting it and the gas flow heretofore referred to. This member 7 projects through the housing 2 and carries a hand-operated lever or member 11, which has at its inner end a socket 12, which receives the outer end of the shaft or member 7.

90 The member 7 is adjusted at the factory and the socket 12 of the hand-operated member 11 is properly positioned on the shaft or member 7, and secured thereto in any suitable manner. For illustrative purposes, I have shown a set screw 13 for fastening the socket 12 to the projecting end of the adjustable member 7.

100 A combined dial and stop member 14 is secured to the housing 2 and is of a curved form, as clearly shown. The member 11 is hollow and is provided with an expanding spring 15 therein. A plunger 16 passes into the hollow member 11 and this plunger projects therefrom forming a handle 17. The plunger 16 carries a lateral pin or projection 18, which is adapted to engage the inner side of the dial 14. In the construction here shown, the outer edge of the dial 14 is provided with a toothed portion 19, with which the pin or projection 18 engages. By 110

pushing in on the handle 17, the pin or projection 18 is disengaged from the dial, so that the handle 17 may be swung back and forth. The dial 14 is provided with a plurality of marks or notches 20, and the handle 17 is provided with a suitable pointer 21, which co-operates with the notches. These notches are to indicate the desired degree of heat to be maintained in the oven and they are marked with figure notations and descriptive notations from minimum to maximum heat. That is to say, they are marked from 225 degrees to 550 degrees and "very slow moderate, hot, quick, very hot." By these markings the operator will set the pointer opposite the mark of the dial which indicates the degree of heat it is desired to maintain in the oven.

The regulating member 7 having been properly adjusted, and the operating member or handle 11 having been properly positioned on the member 7, it is essential to the proper operation of the regulator in the hands of the user, that this adjustment be not disturbed. For the purpose of preventing the user from disturbing this adjustment, in the construction here shown, the movement of the hand regulating member is limited, so that the adjustment cannot be lost.

In the form shown in Figs. 1 and 3, the dial 14 is shown with a slot 22, which has closed ends 23. These closed ends prevent the hand-operated member from being moved out of its adjusted position. That is to say, if there was no means to limit the movement of the handle 17, it could be moved a complete circle in either direction, and in that event the operator would lose the adjustment.

In Fig. 6 the dial is provided with projections 24, which are located in the path of travel of the handle, so that they prevent the handle from being moved so far that the operator would lose the adjustment. If the adjustment in a device of this character were lost, its utility is gone and it would be necessary to call upon a skilled person to reset it.

The foregoing construction is very simple, cheap and at the same time effective for the purpose, and prevents the operator from losing the adjustment of the device as set at the factory, and at the same time the dial and the operating handle face the front of the oven, so that the operator can set the device from the front of the oven.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. The combination with an oven of a thermo-actuated member extending into the oven, an adjustable member operatively con-

nected with its outer end, a hand operated oscillating member connected with the adjustable member, and a dial supported independently of the adjustable member, said dial having at each end laterally projecting members forming stops for the hand operated member, for the purpose described.

2. The combination with an oven having a thermo member extending into the oven, an adjustable member located outside of the oven, a hand operated oscillating member connected with the adjustable member, a curved shaped dial supported independently of the adjustable member, the curve of said dial extending at right angles to the movement of the adjustable member, the curved member having a cut out portion through which the hand operated member passes, and the dial having a laterally extending stop for the said hand operated member, whereby the hand operated member being set at the factory, its position can not be afterward disturbed.

3. The combination with an oven having a thermo member extending thereinto, an adjustable member located outside of the oven carrying an oscillating hand operated member, a crescent shaped member supported independently of the adjustable member, said crescent extending in a direction transverse the axis of the adjustable member, said crescent shaped member having a longitudinal slot through which the hand operated member passes, thereby preventing the hand operated member from being oscillated to disturb its factory adjustment, for the purpose described.

4. The combination with an oven of a thermo member extending thereinto, a rotatable adjustable member located outside of the oven and carrying a hand operated lever, a crescent shaped dial supported independently of the hand operated lever, said dial cut away longitudinally through which the said operated lever passes, the ends of the cut away portion forming stops for the lever to prevent the lever being moved in a complete circle thereby destroying its factory adjustment.

5. The combination with an oven of a thermo member extending into the oven, an adjustable member located outside of the oven and connected with the thermo member, a hand operated member connected with the adjustable member for moving it, and a dial supported independent of the adjustable member and having means for preventing the hand operated member from making a complete revolution thereby destroying its factory adjustment.

In testimony whereof I hereunto affix my signature.

BENJAMIN EDWIN MEACHAM.