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B. E. MEACHAM.
 THERMOSTATIC FUEL REGULATING DEVICE FOR GAS OVENS.
 APPLICATION FILED JUNE 4, 1918.

1,285,300.

Patented Nov. 19, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

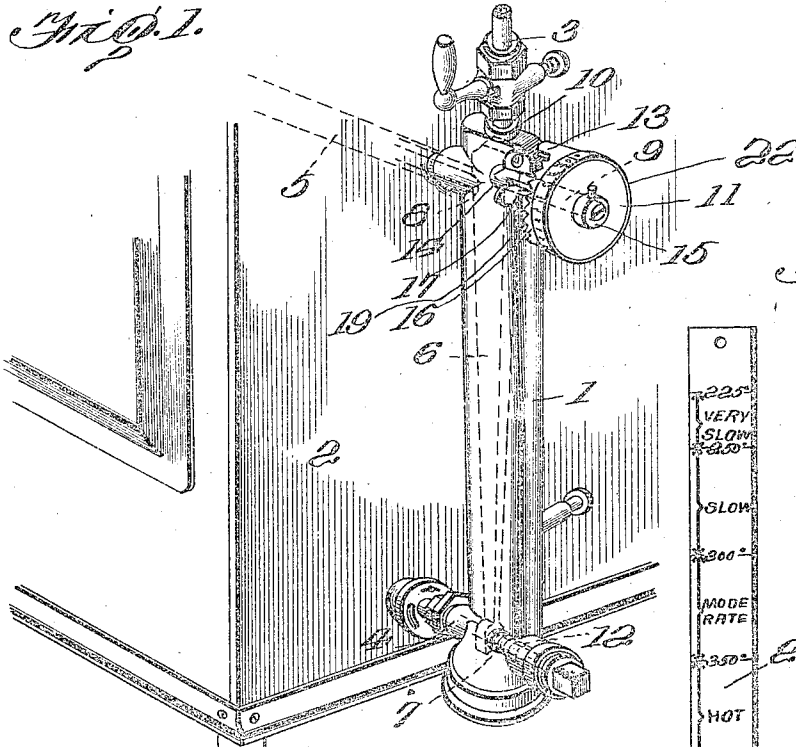


Fig. 4.

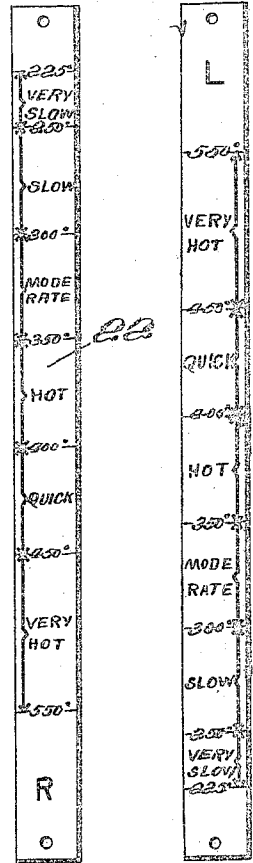


Fig. 2.

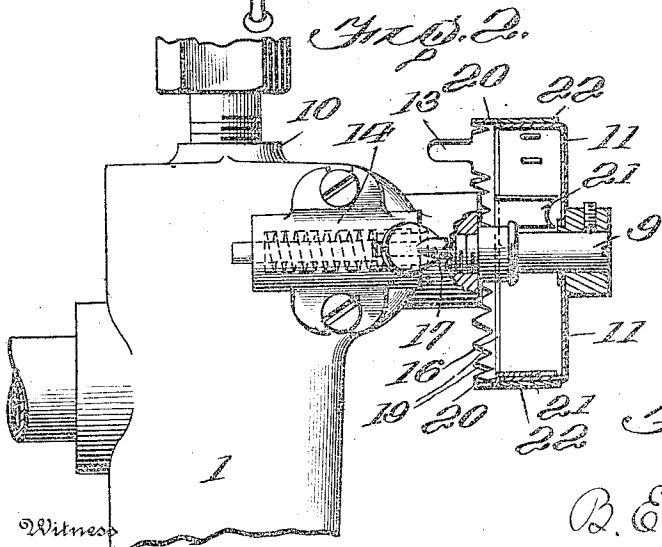


Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 5.

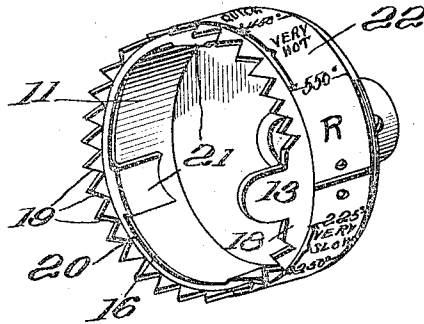
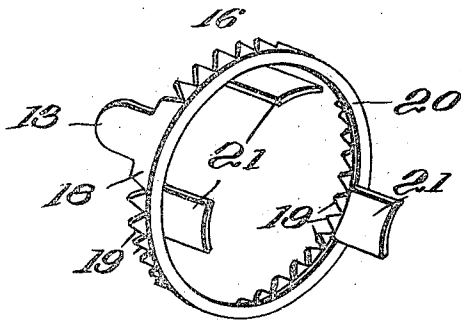


Fig. 6.



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UNITED STATES PATENT OFFICE.

BENJAMIN E. MEACHAM, OF LORAIN, OHIO, ASSIGNOR TO AMERICAN STOVE COMPANY,
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THERMOSTATIC FUEL-REGULATING DEVICE FOR GAS-OVENS.

1,285,300.

Specification of Letters Patent, Patented Nov. 19, 1918.

Application filed June 4, 1918. Serial No. 238,108.

To all whom it may concern:

scription thereof will be necessary to understand my present improvement.

Referring now to that part of the illustration which is shown in my prior patent, 1 indicates a housing placed outside of the oven 2. Communicating with the top of this housing is a gas conduit 3, and communicating with the lower end of the housing 1, is an outlet conduit 4, which in turn communicates with a burner (not shown) of suitable form, located within the oven. Extending from the top of the housing 1 is a suitable thermostatic tube 5, which passes into the oven and is affected by the heat therein. Extending vertically within the housing 1 is a lever 6, the lower end of which is operatively connected with a gas-valve stem 7, for controlling the flow of gas from the housing through the outlet conduit 4 to the burner.

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 Fuel-Regulating Devices for Gas-Ovens, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in thermostatic fuel regulating devices for gas ovens, and is an improvement upon the construction of an adjustable regulating wheel, shown in my Patent No. 1,236,335, dated August 7th, 1917.

One object of my invention is to provide an adjustable regulating wheel so constructed that the wheel cannot be revolved past a complete revolution, thereby preventing the regulation being thrown completely out of proper adjustment.

Another object of my invention is to provide an adjustable wheel with a detachable notched flange to cooperate with a spring catch.

Another object of my invention is to provide the adjustable wheel with an attachable indicator band.

Further objects of the invention will appear from the following description and illustration:

In the accompanying drawings,

Figure 1 is a perspective view showing a portion of an oven with my improved regulating device applied thereto.

Fig. 2 is an enlarged vertical sectional view taken through the center of the adjustable wheel.

Fig. 3 is a detached plan view of the indicator band to be used when the regulator is on the right-hand side of the oven.

Fig. 4 is a detached plan view of the indicator band when the regulator is used on the left-hand side of the oven.

Fig. 5 is an enlarged detached perspective view of the adjustable wheel looking at the inner side thereof.

Fig. 6 is an enlarged detached view of the detachable notched band for the wheel.

All of the mechanism here shown, with the exception of the specific construction of the adjustable wheel and its spring latch, are the same as shown in my patent hereinbefore mentioned, and only a very brief de-

The thermostatic tube 5 has its outer end pivotally engaging the inner side of the lever 6 near its upper end, as at 8. A screw-threaded shaft 9 has its inner end 10 pivotally engaging the outer edge of the lever 6, between the point 8 and the outer end of the lever.

Attached to the outer end of the screw-threaded shaft 9 is a regulating wheel 11.

When the oven is cold, the lower end of the lever 6 pushes the valve-stem 7 outward against a suitable spring 12, thereby opening the gas valve. As the oven is heated and the thermostat 5 expands, its fulcrum 8 moves to the left of Fig. 1, thereby causing the lower end of the lever 6 to move in the same direction and close the gas valve, as shown and described in my said patent. Also as described in my said patent the mechanism is set to close the gas valve at different predetermined heats by adjusting the screw-shaft 9 thus forcing inward or outward the fulcrum 10 of the said lever 6.

In my said patent, the regulating wheel is provided with degrees of heat and a spring latch which acts as a pointer, so that the wheel can be turned to the predetermined degree of heat desired in the said oven.

However, in my said patent, there was no way to prevent the regulating wheel from being turned more than a revolution thereby entirely misplacing the indications on the wheels in respect to the pointer, and the operator would then be unable to determine where to put the wheel. That is to say, if

the wheel is turned more than a revolution in either direction, then the operator working with the degrees would be entirely thrown out and might be confused and turn the wheel in the wrong direction.

One object of my present improvement is to prevent such an occurrence by providing the regulating wheel 11 with a stop finger co-acting with a stationary part of the housing 1, which will prevent the wheel from being turned more than a revolution in either direction. This stop consists in providing the wheel with a stop finger 13, which will engage the spring latch housing 14, stationarily attached to the housing 1, and in placing the stop finger between the maximum and minimum heat indications on the regulating wheel 11. This location prevents the device from being regulated to too great a degree of heat and from being regulated beyond the minimum degree of heat, as well as preventing it being thrown out of adjustment, as previously explained.

The screw-shaft 9 is placed in the proper adjustment at the factory, and the wheel 11 is rigidly secured thereon in any suitable manner, as by a screw or pin 15. After being thus adjusted at the factory, it is impossible to disturb the adjustment without dissembling the regulating parts of the device, through the medium of the stop finger 13 and the fixed member or housing 14.

The inner edge of the wheel 11 is provided with an annular notched member 16, which coöperates with a spring latch 17, adapted to engage the notches of the wheel.

This notched member 16 is constructed separate from the wheel 11, and comprises an annular body portion 18 having the notches 19; an inwardly extending flange 20 resting on the outer edge of the wheel 11, as shown in Fig. 2, and inwardly extending lips 21, which tightly engage the inner side of the flange of the wheel, and is thus held in permanent position on the wheel.

Another improvement is the provision of an indicator band 22, surrounding the wheel 11, and having its inner edge abutting against a flange 20 of the notched member 16, as shown in Fig. 2. This indicator band is made from a strip of metal, as shown in Figs. 3 and 4, and carries the indications thereon.

Referring to the indicator band 22 of Fig. 3, which is the one shown in Figs. 1, 2 and 5, for the right-hand side of the oven, attention is directed to the novel arrangement of indications. It will be observed that between 225° and 250° are the words "Very slow"; between 250° and 300° is the word "Slow"; between 300° and 350° is the word "Moderate"; between 350° and 400° is the word "Hot"; between 400° and 450° is the word "Quick" and between 450° and 550° are the words "Very hot."

So far as I am aware, I am the first to combine degree indications and other indications independent of degrees, so that persons who are not familiar with degree cookery can use an older method indicated by the word describing what is desired in the way of cooking.

Fig. 4 shows the indicator band with the same arrangement, only from the reversed end of the stop when the regulator is used on the left-hand side of the oven. The strip to be used for the right hand side of the oven is marked with "R", and the strip to be used on the left hand side of the oven is marked with "L".

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

1. An indicator wheel for the purpose described, comprising a body portion, a notched member at its top made as a separate piece and attached thereto, and an indicator band around the periphery of the wheel between the notched member and its opposite face.

2. An improved indicator wheel for the purpose described, comprising a body-portion, a separate notched member attached at the inner edge of the periphery of the body portion, an indicator band around the periphery of the wheel between the notched member and the opposite face of the wheel, said band marked with indications from minimum to maximum, and the notched member provided with an inner extending stop finger arranged in a line between the maximum and minimum indicated degrees of the said band, for the purpose described.

3. An improved indicator wheel for the purpose described, comprising a body portion, having its periphery provided with indications from maximum to minimum, and also provided with an inwardly extending stop finger extending inward in a line between the minimum and maximum indications, in combination with an adjustable shaft to which the wheel is attached and a housing carrying a stop member in the path of travel of the stop finger.

4. An improved indicator wheel for the purpose described, comprising a body portion having its periphery provided with degree number indications from maximum to minimum and also descriptive degree indications beginning with the slowest cooking at the minimum degree number and ending with the hottest descriptive degree cooking at the maximum number degree cooking, said wheel having laterally projecting notches, whereby number degree cooking and descriptive degree cooking is provided on a single indicator wheel.

5. An improved indicator wheel for the purpose described, comprising a body portion having its periphery provided with de-

gree number indications from maximum to minimum and also descriptive degree indications beginning with the slowest cooking at the minimum degree number and ending with the hottest descriptive degree cooking at the maximum number degree cooking, said wheel having laterally projecting notches, and an arm projecting laterally in the same direction but beyond the said notches for the purpose described, whereby the single indicator wheel may be adjusted to number degree cookery or descriptive degree cookery.

6. An indicator wheel, comprising a body portion having a lateral peripheral flange, a notched member attached to the edge of the flange and extending in the plane of the flange, said notched member having arms

engaging the inner side of the said flange and serving to unite the notched member thereto. 20

7. An indicator wheel, comprising a body portion having a peripheral lateral flange, a notched member having an inwardly extending flange abutting the edge of the wheel flange, said notched member having inwardly extending arms engaging the inner side of the flange of the wheel and serving to unite the notched member thereto. 25

In testimony whereof I hereunto affix my signature in the presence of two witnesses. 30

BENJAMIN E. MEACHAM.

Witnesses:

C. E. VAN DEUSEN,
JAMES LANVER.