June 14, 1949. J. F. DUNN 2,472,795

CONTROL FOR RANGES

Filed Dec. 22, 1945

FIG. 1

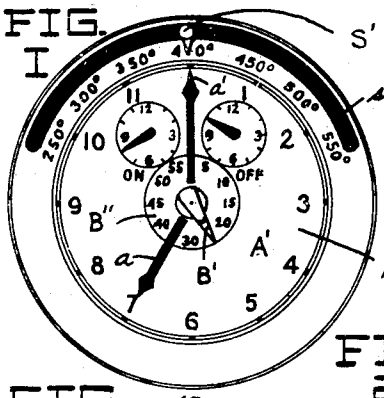


FIG. 2

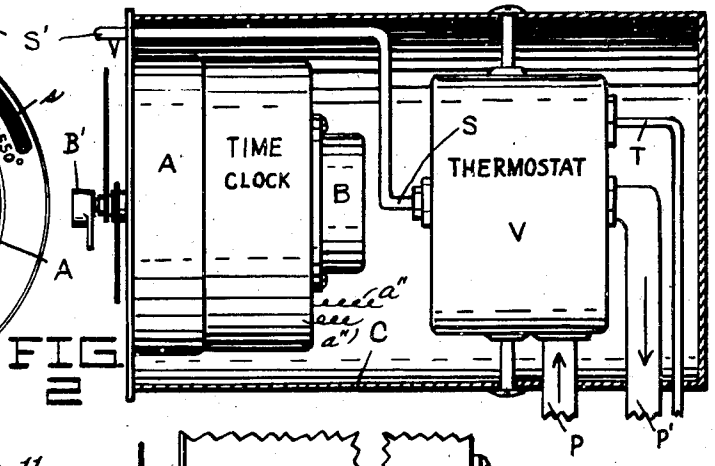
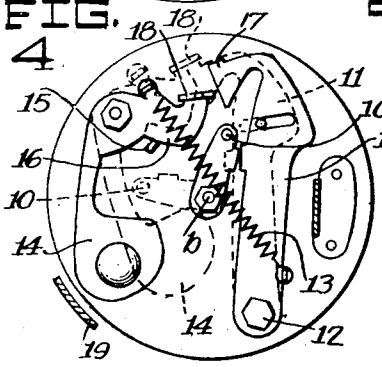


FIG. 4



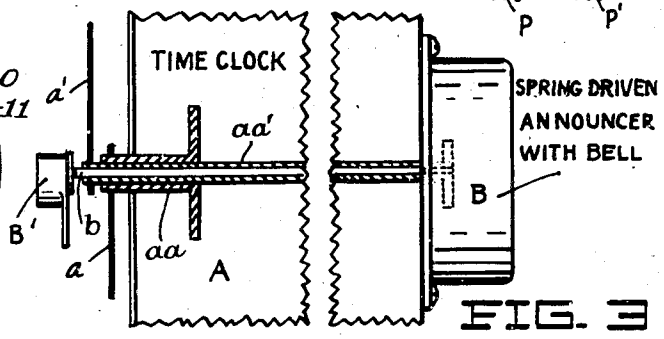


FIG. 3

FIG. 5

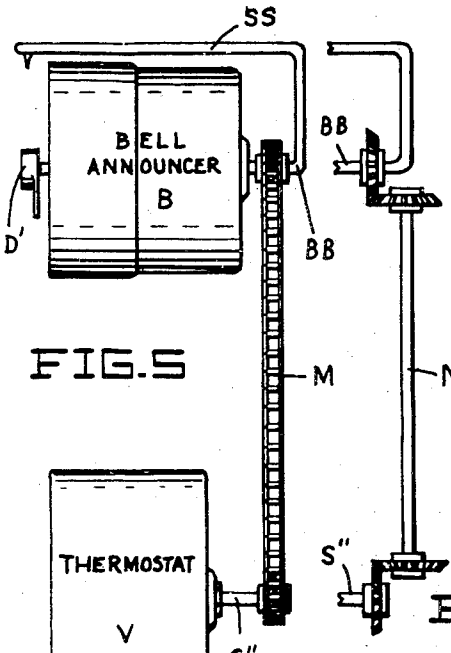


FIG. 6

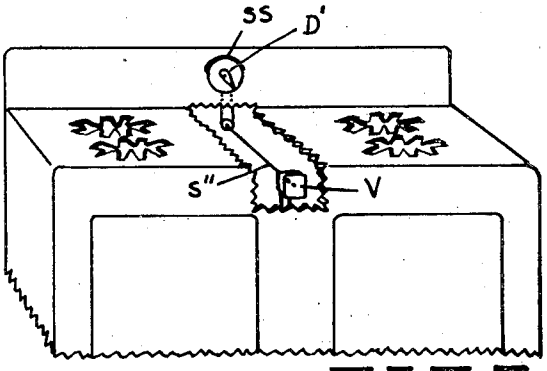


FIG. 7

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CONTROL FOR RANGES

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1 Claim. (Cl. 236—15)

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The present invention relates to controls for ranges and is more particularly directed toward improved arrangements of gas range controls according to which the spring-driven announcer used with such ranges and the adjustable means for the oven thermostat or control for the range, may be placed on the range for more convenient manipulation.

The oven control for gas ranges generally employs a thermal element in the oven space and a gas valve in the gas line for the burners to the oven, which gas valve is controlled by the oven thermostat. These devices usually have an externally adjustable knob or similar device for presetting the control so that the oven temperature will correspond with a dial indication alongside the presetting device. It has been customary to place these control knobs on the front of the range, generally near the handles of the gas cocks. The time clock, with or without the announcer, or the spring-driven announcer alone, have heretofore been mounted on the back rail of the range or entirely separate from the range.

According to the present invention the control for the oven thermostatic gas valve, is carried adjacent the announcer and preferably coaxial with the control shaft of the announcer. In this way all the controls are close together for economical manufacture, and the cook can more conveniently operate them as well as more conveniently observe the settings and conditions. When the controls are separated, a cook sometimes will set one device and forget the other. Being adjacent, there is less possibility of forgetting to set both, when desired.

The accompanying drawings show, for purposes of illustrating the present invention, two embodiments in which the invention may take form, it being understood that the drawings are illustrative of the invention rather than limiting the same.

In these drawings:

Figure 1 is a front elevational view of a construction employing time clock, the bell announcer, and the oven control, all operating on coaxial shafts;

Figure 2 is a vertical sectional view through a control such as shown in Figure 1 wherein the thermostatic gas valve is arranged directly behind the time clock and announcer;

Figure 3 is an enlarged fragmentary sectional view of the time clock and showing the announcer shaft;

Figure 4 is a rear elevational view of a bell striking mechanism;

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Figure 5 is a side elevational view showing a form of construction in which the gas valve and thermostat are mounted remote from the announcer and operated through a chain drive;

Figure 6 is a fragmentary view similar to Figure 5 showing a modified form of construction; and

Figure 7 illustrates the application of the construction such as shown in Figure 5 to a gas range.

In the arrangement shown in Figures 1, 2 and 3, the time clock A has a dial A' with the usual hands *a*, *a'* driven by tubular shafts *aa* and *aa'*. It may, if desired, be of the type which controls a magnetic gas valve through wires indicated at *a''*. At the rear, as shown at B, is a spring-driven bell announcer. This announcer is preset by a control knob B' carried on a shaft *b* which extends through the tubular shaft *aa'* and moving over a dial B''. The clock and announcer operate in the usual well known manner.

The rear view of a common form of bell announcer is shown in Figure 4. Here the rear end of shaft *b* carries an arm 10 which may be moved back and forth manually or counter-clockwise by the announcer spring. In the position shown in full lines the arm 10 holds the latch 11 pivoted at 12 in the extreme right position and the spring 13 holds the clapper arm 14 against the stop 15. When manually driven in a counter-clockwise direction the arm 10 engages the cam 16 on the clapper arm and swings it counter-clockwise and releases pressure on the latch arm 11 so that its end 17 can engage under the flange 18 on the clapper arm and lock the clapper arm in position as shown in dotted lines. When the spring unwinds completely the latch arm 11 is actuated to the right and releases the clapper arm 14 so that the clapper hits the bell 19.

In the construction of Figures 1, 2 and 3, the clock and announcer are received at the front end of a casing C which carries at the rear the gas valve V. This valve is introduced in the pipes P, P' and is operated by the expansion of a fluid in a bulb not shown, this bulb being connected to the usual type of valve control through a small tube T. As the construction of such valves and thermal controls is well known, no details of the same are indicated in the drawings, it being sufficient to indicate that the device is provided with a control shaft S and is mounted so that this shaft is co-axial with the clock axis. The control shaft is connected through a crank-like member S' which extends alongside of the clock and just in front of the clock dial. It can be shifted

back and forth in the slot *s* alongside the dial markings as will be obvious and with this arrangement one can observe the time, make settings of the time announcer and of the oven thermostat in a very convenient manner.

In the arrangement shown in Figure 5 the bell announcer alone is again indicated at B, and the gas valve and thermostat at V. The shaft S'' of the thermostat V and the shaft BB of the bell announcer are interconnected by a sprocket drive indicated at M and the presetting device for the thermostat is in the form of a crank member SS.

In the arrangement shown in Figure 6, the shafts S'' and BB are connected by a bevel gear drive indicated generally at N.

Arrangements such as shown in Figures 5 and 6 are convenient for use in gas ranges where the depth of the space behind the back rail limits the amount of mechanism which can be mounted in it. Here the announcer and controls are mounted in the back rail and the gas valve V is mounted in about the same position that it would be in the usual range wherein the oven control knob was in the front of the range. The drive shaft S'' extends under the top of the range.

Since it is obvious that the invention may be embodied in other forms and constructions within the scope of the claim, I wish it to be understood that the particular forms shown are but a few of these forms, and various modifications and changes being possible, I do not otherwise limit myself in any way with respect thereto.

What is claimed is:

A range control comprising in combination, a time clock having hour and minute hands movable over the usual time dial having indicia, the time clock having tubular concentric shafts for driving the hour and minute hands, a spring driven announcer with a bell mounted to the rear of the time clock and having an operating shaft extending forwardly through the inner tubular shaft and a control knob mounted on the front of the operating shaft in front of the hour and minute hands, the knob serving, when manually rotated, to wind the announcer spring and determine the time to elapse before the bell is sounded, and an oven thermostat having a temperature presetting means including a shaft mounted directly to the rear of the announcer and coaxial with the control knob shaft and an L-shaped operator for the temperature presetting shaft, said L-shaped operator extending forwardly and having its terminus adjacent the periphery of the time dial, and a temperature dial past which the said terminus is movable to indicate the temperature setting.

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