My invention relates to ovens for gas ranges and the like.

One of the objects of the invention is to provide an oven door with spring tensioning means adapted to efficiently resist the opening of the door.

A further object is to provide an oven door and tensioning means therefor which can be easily assembled and disassembled and in which the tensioning spring is located outside the heat zone and shielded from the intense heat developed by gas fires.

Other objects and advantages of the invention will be understood as the specification is considered in connection with the accompanying drawing, in which:

Figure 1 is a fragmentary top sectional view of the oven portion of a table top type of gas range showing the positions assumed by the tension springs when the doors of the left and right oven compartments are open and closed respectively.

Figure 2 is a detail sectional view taken on the line 2—2 of Figure 1 showing a hinge connection between the left hand oven door and the spring tensioning means, the door being in open position; and

Figure 3 is a detail view of the hinge connection between the right hand door and the spring tensioning means, the door being in closed position.

Referring more particularly to the drawing 1 denotes a gas range comprising an oven compartment 2 and a utensil or other similar compartment 3, arranged in side by side relation. These compartments, in the embodiment illustrated herein, are identical in size and respectively provided with so called drop doors 4 and 5. The left hand compartment 3 is preferably used to house pots and pans but, like oven compartment 2, may also serve as a broiler or baking oven. Likewise, it is obvious that the relative position of the compartments could be reversed.

Oven compartment 2 is formed with a front frame 6, having the usual door opening, side walls 7 and rear wall 9, and compartment 3 has a similar frame member 8 and walls 10 and 11 respectively. Secured to the bottom edge of front frame 6 of compartment 2 are a pair of brackets 31 which are pivotally connected to pins 12 mounted in opposite corners of the lower edge of the door 2. Similar brackets 33 and pins 14 serve to hingeedly mount the door 5 on the front frame 8.

Spring tensioning means adapted to resist opening of the doors 4 and 5 comprise coil expansion springs 15 and 16 respectively substantially arranged within a pair of U-shaped housings 26 and 29 secured to the rear faces of the respective rear walls 8 and 11, of compartments 2 and 3 and extending substantially across said rear walls. These springs are connected to the respective doors so as to resist opening movement of the latter. Thus, chains 17 passing over pulleys 17' and fixed at one end to opposite ends of the spring 15 are adjustable hooked at their other ends to the rear end of connecting rods 18. The forward ends of these rods 19 are pivotally attached to the heads 20 of a pair of substantially T-shaped brackets or arms 21 in turn pivotally connected with the door 4 as at 22. Chains 23, passing over pulleys 23', connect the spring 18 to rods 24, the latter being pivotally connected at their forward ends to bracket arms 25, carried by the door 5 and similar in construction and mounting to the arms 21, previously described.

The springs 15 and 16 and their associated parts can be easily assembled or as easily removed for inspection or other purposes, and due to their location entirely outside the range, remote from the heat zones, danger of deterioration as the result of overheating is eliminated.

Furthermore it will be noted from an inspection of Figure 1 of the drawing that the springs 15 and 16 will be relaxed or released when their respective doors are closed and that they will be expanded or under tension when the latter are open. Consequently the springs are only under load at a time when the heat is escaping from the oven in a direction away from the springs and when the latter are subjected to a minimum amount of heat radiating from the back wall of the oven thus further adding to the life of the springs.

The hooked portions 26 and 27 formed on the rear ends of the connecting rods 19 and 24, cooperate with the links of the chains 17 and 23 to a very desirable range of adjustment to enable the manufacturer to compensate for doors of varying weights. This adjustability is, in fact, necessary so that the tension of the springs can be regulated to accommodate a heavier or lighter door, as the case may be. This also permits of necessary initial connection, subject to possible adjustment from time to time as the springs become old, so that the door will remain poised at a certain point in its pivotal movement and will drop and remain open when moved there-
below and when raised beyond that point in closing, permit of the spring naturally carrying the door to closed position. Obviously when the ends 26 and 27 of the connecting rods 19 and 24 are hooked to links closer to or further away from the ends of the springs 15 and 18 the tension of the latter will be increased or decreased according to the nature of the adjustment.

While I have shown my invention incorporated in a range having two doors it will be understood it is applicable to ranges having but one door.

Having thus described my invention, what I claim is:

1. An oven having side and rear walls and a front frame, a door pivoted to said front frame, a housing mounted on the rear wall of said oven, a coil spring mounted in said housing, and flexible means connecting the ends of said spring to said door for aiding the closing of said door.

2. An oven having a front door frame, a door swingably mounted on said frame, a coil spring mounted at the rear of and outside the oven, chains connected to opposite ends of the spring, and connecting rods adjustably connected at one end to a link of the respective chains and at their other end pivotally connected to said door for aiding the closing of the door.

3. An oven having side and rear walls and a front door frame with door opening therein, a door swingably mounted on said frame, a housing on the outer face of the rear wall of said oven, a coil spring in said housing, chains connected at their rear ends to opposite ends of said spring, anti-friction guide means for said chains, connecting rods having rear hooked ends for adjustable connection with the links of said chains and means for pivotally connecting the other ends of said rods to said door for aiding the closing of the door.

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