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R. S. QUINN.
RANGE.

APPLICATION FILED FEB. 3, 1906.

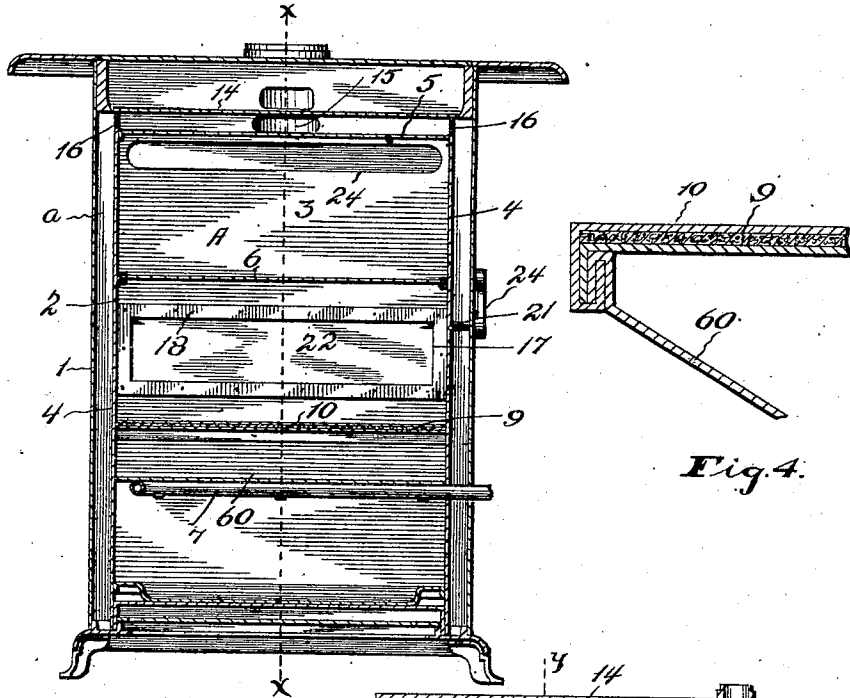


Fig. 1.

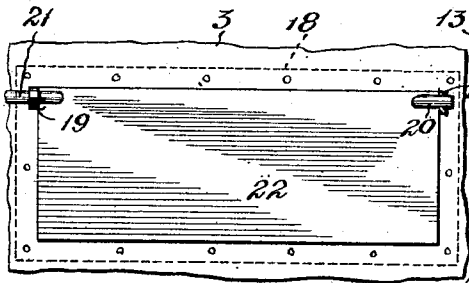


Fig. 3.

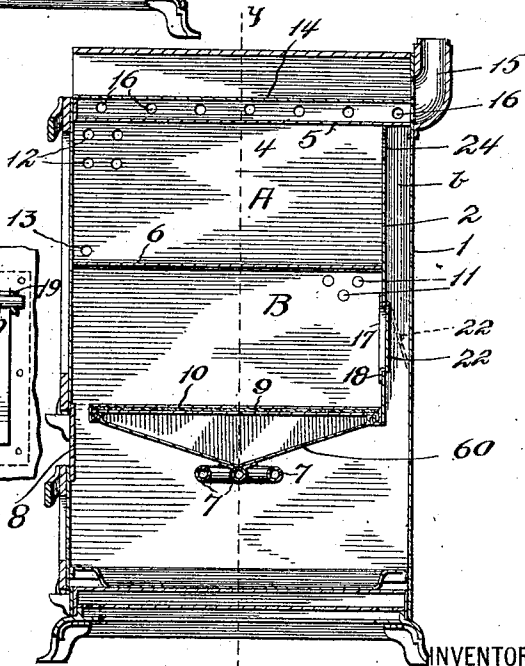


Fig. 2.

WITNESSES
Carl Stoughton
W. B. Kelly

INVENTOR
Richard S. Quinn
 BY
Shepherd & Paine
 ATTORNEYS

UNITED STATES PATENT OFFICE.

RICHARD S. QUINN, OF WASHINGTON COURT-HOUSE, OHIO, ASSIGNOR TO THE WONDER MANUFACTURING COMPANY, OF WASHINGTON COURT-HOUSE, OHIO, A CORPORATION OF OHIO.

RANGE.

No. 848,264.

Specification of Letters Patent.

Patented March 26, 1907.

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To all whom it may concern:

Be it known that I, RICHARD S. QUINN, a citizen of the United States, residing at Washington Court-House, in the county of Fayette and State of Ohio, have invented certain new and useful Improvements in Ranges, of which the following is a specification.

My invention relates to new and useful improvements in gas-ranges, and has particular relation to means for controlling the distribution of heat.

The object of the invention is to provide a suitably-arranged damper which may be manipulated to cause practically all the heat to pass to one compartment or to permit the heat to pass to both compartments of the stove.

Finally, the object of the invention is to provide a device of the character described that will be strong, durable and efficient, simple and comparatively inexpensive to make, and one in which the several parts will not be liable to get out of working order.

With the above and other objects in view the invention consists of the novel details of construction and operation, a preferable embodiment of which is described in the specification and illustrated in the accompanying drawings, wherein—

Figure 1 is a longitudinal vertical sectional view of the range, taken on the line *y y* of Fig. 2. Fig. 2 is a transverse vertical sectional view taken on the line *x x* of Fig. 1. Fig. 3 is a rear elevation of the damper and a portion of the back wall of the oven, and Fig. 4 is a detail partial transverse sectional view of the spreader and the oven bottom plate.

In the drawings the numeral 1 designates the range, which is suitably constructed and provided inside with an oven 2, the latter comprising a back wall 3, side walls 4, and a top plate 5, said walls 3 and 4 being separated from the walls or sides and back of the range, so as to provide side flues *a* and a vertical back flue *b*. The oven is divided centrally by a transverse partition 6, so as to have an upper compartment A and a lower compartment B, separated from each other and without communication. At the bottom of the oven a deflecting or spreader drum 60 is arranged, said drum being triangular in cross-section with its apex directly downward.

Running longitudinally of the drum and adjacent the apex are suitable gas-burners 7. The drum terminates at its forward end a short distance from the front wall 8 of the range, so as to permit the heat from the burners to pass up into the lower compartment B. On the top of this spreader-drum a sheet of asbestos 9 is arranged, and upon this sheet of asbestos the bottom plate 10 of the oven is disposed. In this manner the said bottom plate is protected and prevented from burning out.

Each of the side walls 4 are provided with openings for the escape of the heat products after the same have passed through the compartments A and B. Three or more of these openings are disposed near the upper rear corner of the compartment B just below the shelf 6, as indicated at 11, while four or more of said openings are disposed at the upper forward end of the compartment A just below the top plate 5, as indicated at 12. Below the openings 12 and at the forward lower end of the compartment A an aperture 13 is provided. These openings are provided in each of the side walls 4 and establish communication between the compartments A and B and the vertical side flues *a*. Over the top plate a second plate 14 is arranged, so as to form a flue or chamber leading to the escape-pipe 15. Apertures 16 in the side walls 4, which extend up to the plate 14, establish communication between the side flues *a* and the said chamber. The waste products which pass through the openings 11, 12, and 13 to the vertical flues *a* pass through the openings 16 into the chamber between the plates 5 and 14 and out by way of the pipe 15.

In the rear wall 3 of the oven and substantially midway between the partition 6 and the bottom plate 10 I provide a rectangular opening 17, in which is arranged a frame 18, extending entirely between the walls 4. This frame projects through the opening and on the rear side of the wall, as best shown in Fig. 2. On each side of the rearwardly-projecting portion of the frame ears 19 are provided and receive a trunnion 20 and a damper-rod 21, which project from a damper 22, the latter depending and adapted to engage with the frame to entirely close the opening. The damper-rod 21 is extended through the side wall 4 and the side

of the range, projecting far enough there-
beyond to receive a lever 23. By means of
this lever the damper may be manipulated
so as to be closed or opened. When the
5 damper is opened, it is swung rearwardly and
upwardly, so that its lower edge comes in
contact with the back of the range. The
upper end of the lever 23 is weighted, so that
the damper will be held either in its opened
10 or closed position.

When the damper is closed, as shown in
full lines in Fig. 2, the heat products being
spread and deflected by the drum 60 will
pass around and up each side thereof, those
15 coming up the forward side passing into the
compartment B and those coming around
the rear side passing up the rear flue *b* and
into the upper compartment A through an
elongated opening 24, provided in the rear
20 wall 3 just below the top plate 5. In this
manner an equal distribution of heat to the
compartments is had. However, should it
be desired to direct substantially all the heat
into the lower compartment the lever 23 is
25 swung forward, so as to swing the damper 22
rearwardly, thus uncovering the opening 17
and standing across the flue *b*. With the
damper so positioned the heat passing rear-

wardly is prevented from continuing up the
flue *b* and is directed through the opening 17 30
into the lower compartment, so that the said
compartment receives the heat from both
sides of the spreader-drum. This is espe-
cially desirable where quick baking is neces-
sary, and it is obvious that the course of the 35
rearwardly-flowing heat may be readily con-
trolled for the purpose desired.

What I claim is—

In a range, the combination with an oven
forming with the range a vertical flue, a par- 40
tition in the oven dividing the same into
separate compartments each having com-
munication with the flue, and a burner ar-
ranged beneath the oven supplying heat to
the oven and the flue, of a damper arranged 45
to cause the heat passing up the flue to enter
the upper compartment and adapted to be
moved into the flue to obstruct the passage
of the heat to the upper compartment and
deflect the same into the lower compartment. 50

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

RICHARD S. QUINN.

Witnesses:

JAMES L. ZIMMERMAN,
J. O. FLAX.