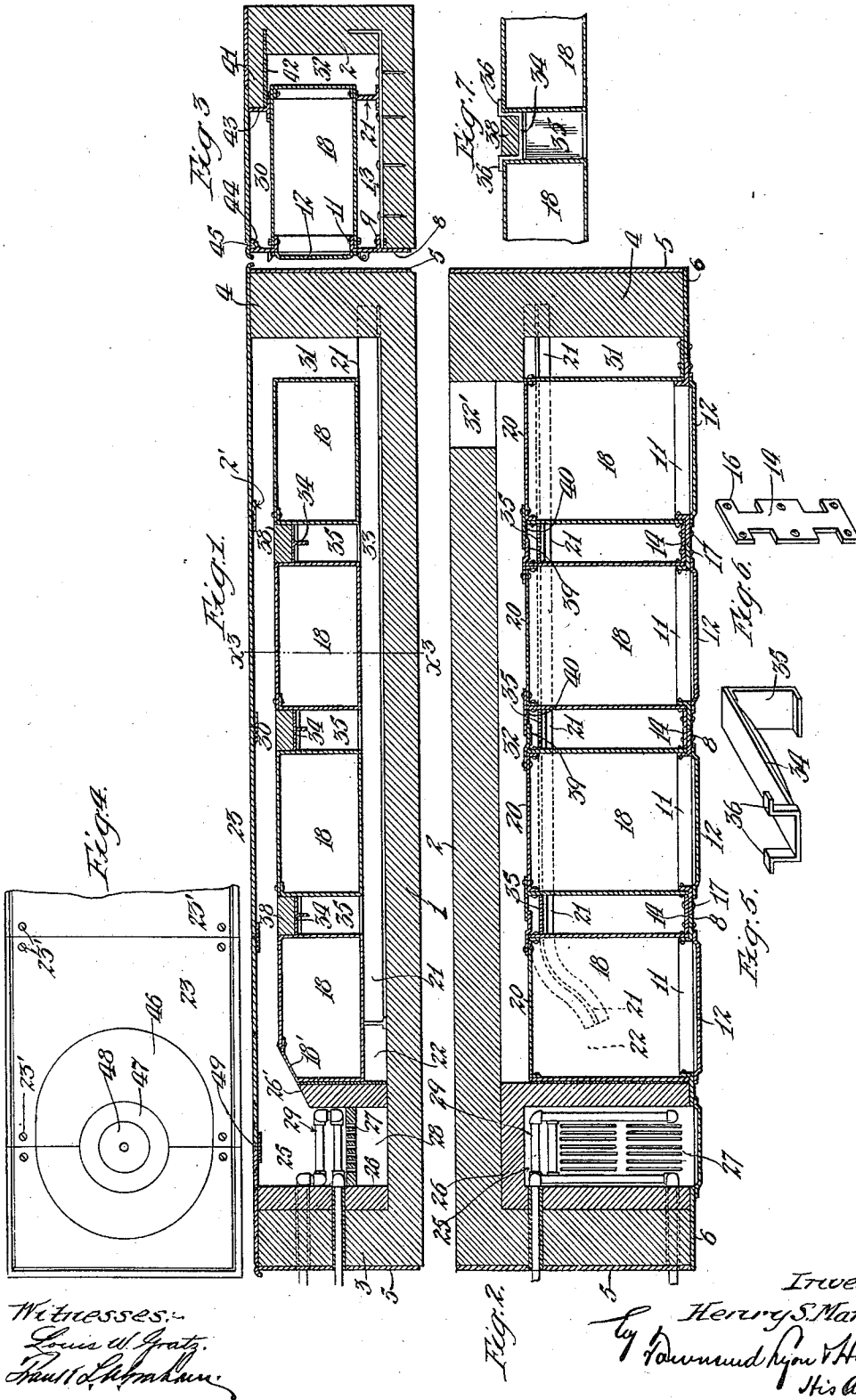


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 RANGE.
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948,943.

Patented Feb. 8, 1910.



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UNITED STATES PATENT OFFICE.

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RANGE.

948,943.

Specification of Letters Patent.

Patented Feb. 8, 1910.

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To all whom it may concern:

Be it known that I, HENRY S. MARVIN, a citizen of the United States, residing at San Diego, in the county of San Diego and State of California, have invented a new and useful Range, of which the following is a specification.

This invention relates to ranges of the form known as French ranges and particularly to those ranges wherein a series of ovens are heated from a single fire-box or fire-pot at the end of the series.

One object of the present invention is to provide means whereby the heat is more uniformly distributed from the fire-pot to a series of ovens and to the top plate of the range.

Another object of the invention is to provide means for maintaining the joint between the front wall of the range and the top plate.

The invention further comprises means for separating the ovens of the range.

Other objects of the invention will appear hereinafter.

The accompanying drawings illustrate the invention.

Figure 1 is a longitudinal vertical section of a range. Fig. 2 is a horizontal section thereof. Fig. 3 is a transverse section on the line x^2-x^3 in Fig. 1. Fig. 4 is a partial plan. Fig. 5 is perspective of a lintel plate serving as a spacer for the ovens. Fig. 6 is a perspective of a joint plate for the front of the range. Fig. 7 is a vertical section across the joint between the forward portions of the ovens.

The range is of elongated rectangular shape built up with a brick work floor 1, brick work back 2, brick work end walls 3, 4, and metal top and front plates. Metal plates 5 are provided at each end of the range outside of the end walls and the end plates 6 of the front of the range connect with said metallic end plates at the ends of the range.

The front of the oven is built of a plurality of sections each formed as a metal plate 8 provided with a flange 9 to rest on the base and with a central opening surrounded by an inturned flange 11, said opening being closed by a door 12. Flange 9 is fastened to base strips 13, anchored into back wall 2. Each section 8 is fastened to the adjoining section or to the end plate 6 as the case may

be, by the joint plate 14, see Fig. 6, which has laterally extending projections 16 perforated to receive fastening bolts or rivets 17. One of these joint plates is placed back of each joint between the adjacent sections of the oven front and is secured to said sections by the rivets 17 so as to bind the sections together in a continuous front. The ovens 18 are formed as sheet metal boxes fastened to and extending rearwardly from the flanges 11 around the oven doors, said ovens being closed at the rear by plates 20, and said ovens resting on a rail or longitudinal member 21 which may be formed as a metallic T-bar extending from the end wall of the range farthest from the fire-pot under the ovens, nearly to the fire-pot, but leaving a space or passage 22 adjacent to the fire-pot for the passage of the products of combustion from the front to the rear of said rail. The end of rail 21 nearest the fire-pot is bent forwardly to deflect the hot gases under the front part of the first oven.

The fire-pot 25 is located at one end of the series of ovens and has a lining or wall 26, grate 27, ash pit 28 below the grate, heating coil 29, if desired, above the grate. The combustion chamber of the fire-pot extends above the grate to the top plate 23 and rearwardly over the adjacent oven, and the wall of the fire-pot on the side toward the oven flares or is inclined upwardly and rearwardly as at 26' and the adjacent corner of the first oven is similarly formed, as at 18', forming a rearwardly converging space communicating with the combustion chamber of the fire-pot and with a flue 30 extending above the series of ovens, so that the flame and the products of combustion are drawn evenly and gradually into said flue from the combustion chamber, avoiding the concentration of the heat directly over the combustion chamber such as generally occurs with an abrupt transition from the combustion chamber to the flue.

At the far end of the flue the downtake 31 is provided in the end wall of the range, communicating at its upper end with the flue 30 and at its lower end with the return or bottom flue 33 which extends forwardly under the series of ovens and at its end communicates through the passage 22 aforesaid with a back flue 32 leading back of the series of ovens throughout the height thereof and communicating at its end into a stack

opening or flue 32'. The adjacent ovens are separated sufficiently to allow hot gases from the bottom flue to enter between them to heat the ovens, and this intervening space is closed at the top by a lintel plate 34 formed of flat metal (see Fig. 5) and having a leg 35 at one end and extending downwardly to rest on the longitudinal rail 21 aforesaid. Said lintel extends transversely between the adjacent oven walls to space the same, and close the opening therebetween. Said lintel has at each side at the front end thereof an upwardly extending arm 36 bent over to rest on the top of the ovens to support the lintel plate. Fire brick, indicated at 38, may be placed on top of the lintel plates to further close the space between the ovens 3. To insure closure at the back of this space, overlapping plates 39, 40 are provided, said plates being secured to adjacent ovens and making a slip joint with one another, so as to maintain closure between the return flue 33 and the back flue 32.

25 The top plate 23 is divided in sections and is secured by screws 23' to straps 2'. The back wall 2 has a forwardly extending flange 41 supported by a plate 42 anchored in the back wall and resting on a T-rail 43 which extends longitudinally above the ovens and rests thereon. The said top plate rests along its front on top of the front plate which has a longitudinal groove 44 to receive a body or strip 45 of packing material for closing the joint. Over the combustion chamber, the top plate is provided with removable nested lids 46, 47, 48, the outer lid 46 being split to correspond with the joint between two sections of the stove top and having a rabbeted joint 49 between its two parts.

What I claim is:—

1. In a range comprising a series of ovens, supporting means extending longitudinally beneath said series of ovens, and spacing

means for the ovens consisting of a plate having a leg to rest on said supporting means and having a portion extending from said leg between the ovens and provided at its other end with means to rest on top of said ovens.

2. In a range comprising a series of ovens spaced apart, means for supporting said ovens, wall means forming flues at the top, end, bottom, and back of said ovens, means for closing the space between the ovens to separate the bottom and top flues, and means closing the space between the ovens to separate the bottom and back flues, the latter means comprising plates secured to adjacent ovens and sliding on one another to form a slip joint.

3. A range comprising a series of ovens, said ovens being separated from one another forming intermediate spaces, back and end walls for the range, a top plate forming in conjunction with the back and end walls a flue extending longitudinally over the series of ovens, and the walls of the range forming flues extending downwardly at the rear of the series of ovens, then under the series of ovens and longitudinally back of the series of ovens, means for closing the spaces between the ovens at the top and back thereof, a front plate for the range comprising a plurality of sections, each section having an oven attached thereto, means for joining adjacent sections and closing the front of the spaces between the ovens consisting of a plate extending back of the two sections at their joint, and means fastening said plate to the edge portions of adjacent sections.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 12th day of December 1908.

HENRY S. MARVIN.

In presence of—

ARTHUR P. KNIGHT,
FRANK L. A. GRAHAM.