A. C. MOTT, JR.

COAL AND GAS RANGE CONSTRUCTION.

APPLICATION FILED OCT. 29, 1914.

1,167,203. Patented Jan. 4, 1916.

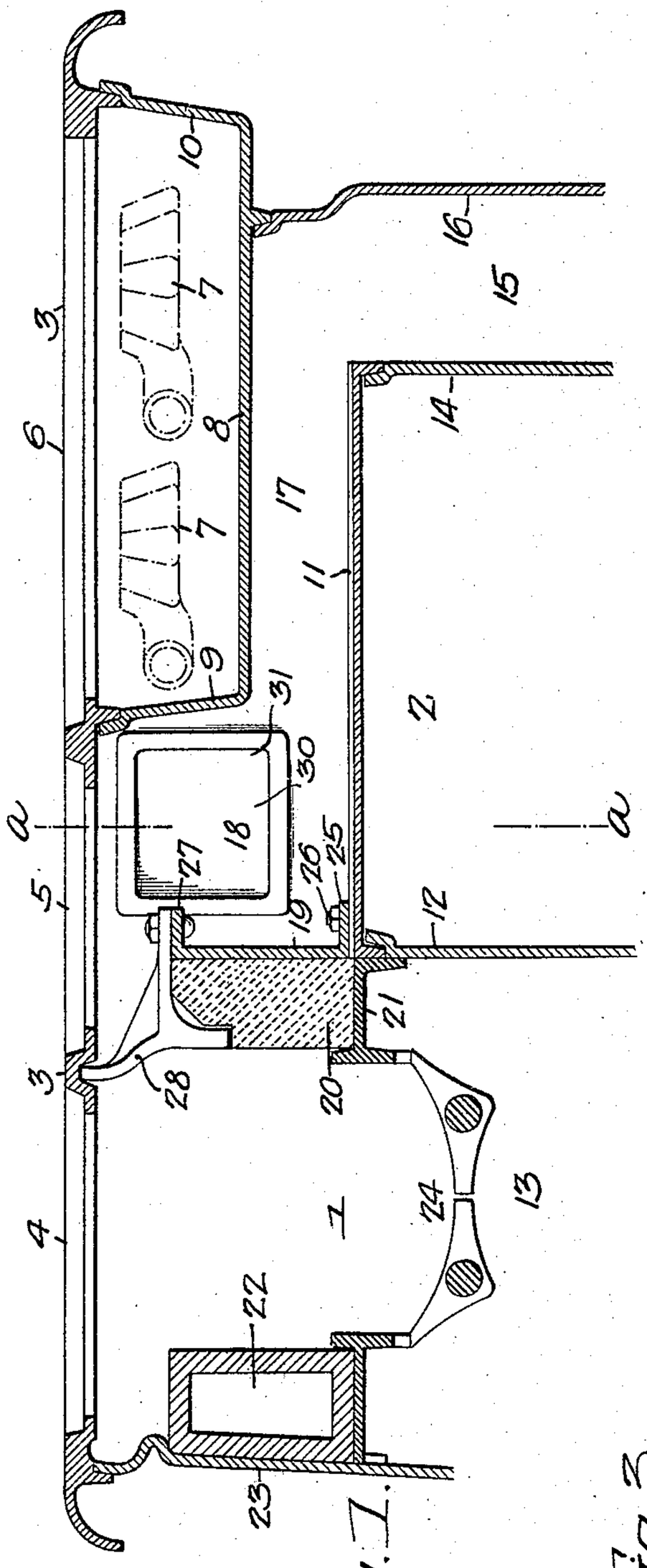

Fig. 1.

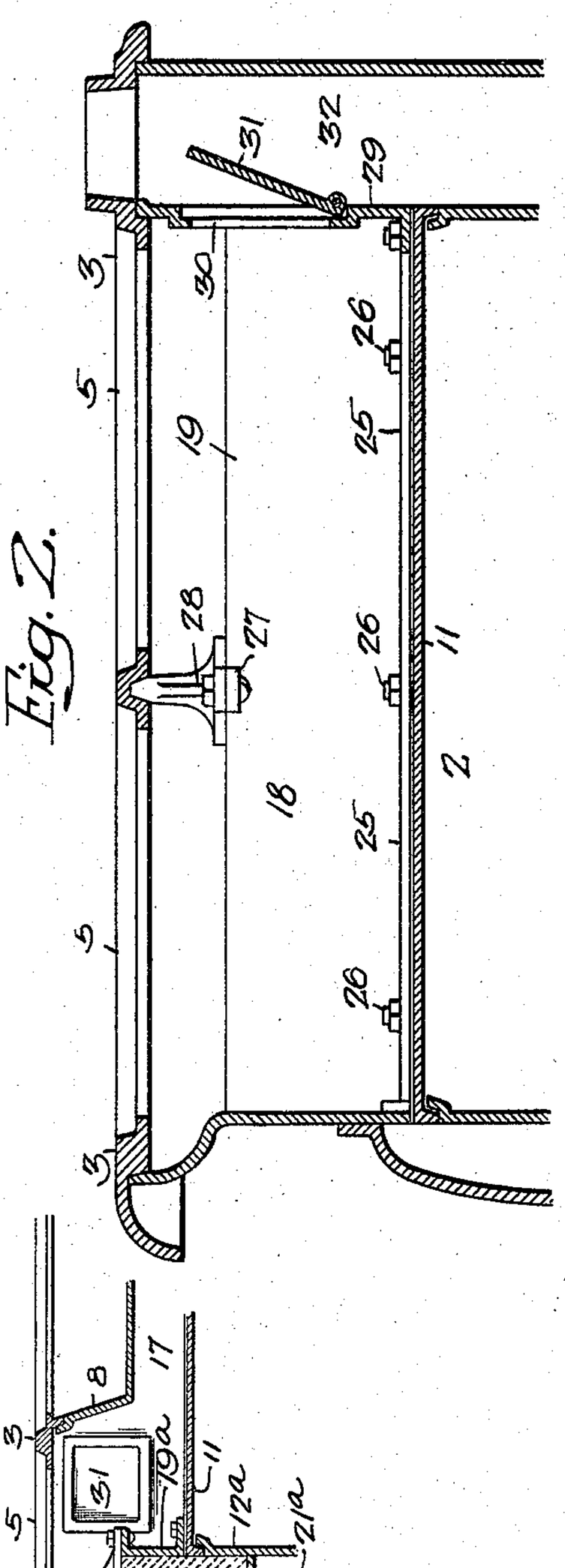

Fig. 2.

Fig. 3.

Witnesses.—
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COAL AND GAS RANGE CONSTRUCTION.

1,167,203. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed October 29, 1914. Serial No. 869,302.

To all whom it may concern:

Be it known that I, ABRAM C. MOTT, Jr., a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Coal and Gas Range Construction, of which the following is a specification.

This invention relates to certain improvements in the construction of a combined coal and gas range for which application for patent was filed by Abram C. Mott, Jr., and Jafew S. Van Buren, on the first day of May, 1913, under Serial No. 764,949.

The object of the invention is to construct the range of the type above described so that a greater portion of the fire pot will be above the top of the lower oven, forming a comparatively large combustion chamber at the rear of the fire pot.

The invention also relates to certain details of construction which will be fully described hereinafter.

In the accompanying drawings: Figure 1 is a longitudinal sectional view of sufficient of a combined coal and gas range to illustrate my invention; Fig. 2 is a transverse sectional view on the line *a*—*a*, Fig. 1; looking in the direction of the fire pot; and Fig. 3 is a longitudinal sectional view illustrating a modification of the invention.

Referring in the first instance to Figs. 1 and 2, 1 is the fire pot. 2 is the oven, which is heated by the products of combustion passing from the fire pot. In this type of range, there is either a separate gas burner for the oven or a gas oven is located above the top plate of the range. 3 is the top plate having the usual openings closed by lids. 4 is one of the openings directly above the fire pot. 5 is one of the openings directly above the combustion chamber, and 6, 6 are the openings above the gas burners 7, shown by dotted lines, Fig. 1. These gas burners are inclosed by a casing 8 located under the top plate 3 and provided with side walls 9 and 10. These walls preferably extend from the front to the rear of the range. 11 is the top plate of the oven. 12 is one of the side plates which separates the oven from the ash pit 13, and 14 is the side plate which separates the oven from the down flue 15 which is located between this plate and the outside plate 16 of the range. The casing 8, inclosing the gas burners, is located sufficiently above the top plate of the oven to form an uninterrupted top flue 17, which communicates with the combustion chamber 18. This combustion chamber extends from the front to the rear of the stove and on one side is the side plate 9 of the casing 8, and on the opposite side is the vertical plate 19, which is preferably on a line with the side plate 12 of the oven and which forms the rear support of the fire brick lining 20 of the fire pot. This fire brick rests on a flanged base 21, as shown. On the opposite side of the fire pot to the fire brick 20 is the usual water section 22, which rests against the side plate 23 of the range. A grate 24 of any type is employed. The plate 19 provides a substantial wall above the oven for the support of the fire brick, and this plate has a lower flange 25, which is secured to the top plate of the oven by bolts 26. On the upper end of the plate is a lug 27 to which is attached a bracket 28, which extends over the fire brick 20, as shown, and is preferably located in a recess in the fire brick. The upper arm of this bracket supports the central portion of the top plate 3. 29 is the rear plate of the combustion chamber and in this plate is an opening 30 inclosed by a damper 31. This opening communicates with the main flue 32 of the range leading from the bottom flue, which is located under the oven so that by opening the damper 31 the products of combustion can pass from the fire pot to the combustion chamber and from the combustion chamber directly into the main flue. When the damper is closed, then the products of combustion pass into the combustion chamber through the flues 17 and 15 and out through the main flue 32.

It will be seen, by the above construction, that I provide a range having a flat top for the reception of cooking utensils. One-half of the range can be used as a coal range and the other half can be used as a gas range. When it is used as a coal range, the plate 3 becomes sufficiently hot to form a heat radiating surface to keep warm any cooking vessels which are placed above the gas burners when the burners are not in use.

The products of combustion first strike the wall 9 of the plate 8 and are confined by the plate 19, after which they pass through the flue 17, consequently, a greater proportion of the gases is consumed than where the flue 17 connects directly with the fire pot and where the combustion chamber is ab-

sent. I find, in practice, that by extending the flue 17, as well as the combustion chamber 18, uninterruptedly from the front to the rear of the range that the oven 2 is evenly heated.

In Fig. 3, I have illustrated a modification of the invention, in which a deeper fire pot is used than that shown in Fig. 1. The supporting plate 21ª is below the top plate 11 of the oven and the fire brick 20ª rests directly against the wall 12ª of the oven and partly against the plate 19ª. This construction allows more space between the top of the fire brick and the top plate 3 of the range and is intended for ranges of a larger size than that illustrated in Fig. 1.

I claim:

1. The combination in a combined gas and coal range, of a top plate; a fire pot located on one side of the range under the top plate and spaced therefrom; a casing located under the top plate at the opposite side of the range; gas burners located in the chamber formed by the casing, said casing being spaced from the fire pot so as to form an intermediate combustion chamber; an oven having a top plate forming the bottom of the combustion chamber and extending under the casing and spaced therefrom to form a flue; a flanged plate secured to the top plate of the oven and forming the support for the fire brick at the inner side of the fire pot, the fire brick and said plate being spaced from the top plate so as to form a communicating passage between the fire pot and the combustion chamber.

2. The combination in a combined gas and coal range, of a top plate; a fire pot located on one side of the range under the top plate and spaced therefrom; a casing located under the top plate at the opposite side of the range; gas burners located in the chamber formed by the casing, said casing being spaced from the fire pot so as to form an intermediate combustion chamber; an oven having a top plate forming the bottom of the combustion chamber and extending under the casing and spaced therefrom to form a flue; a flanged plate secured to the top plate of the oven and forming the support for the fire brick at the inner side of the fire pot, the fire brick and said plate being spaced from the top plate so as to form a communicating passage between the fire pot and the combustion chamber; and a support, in the form of a bracket, secured to the flanged top plate, resting on the fire brick, and having a portion extending to and supporting the central portion of the top plate of the range.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ABRAM C. MOTT, Jr.

Witnesses:
Wm. A. Barr,
Jos. H. Klein.