

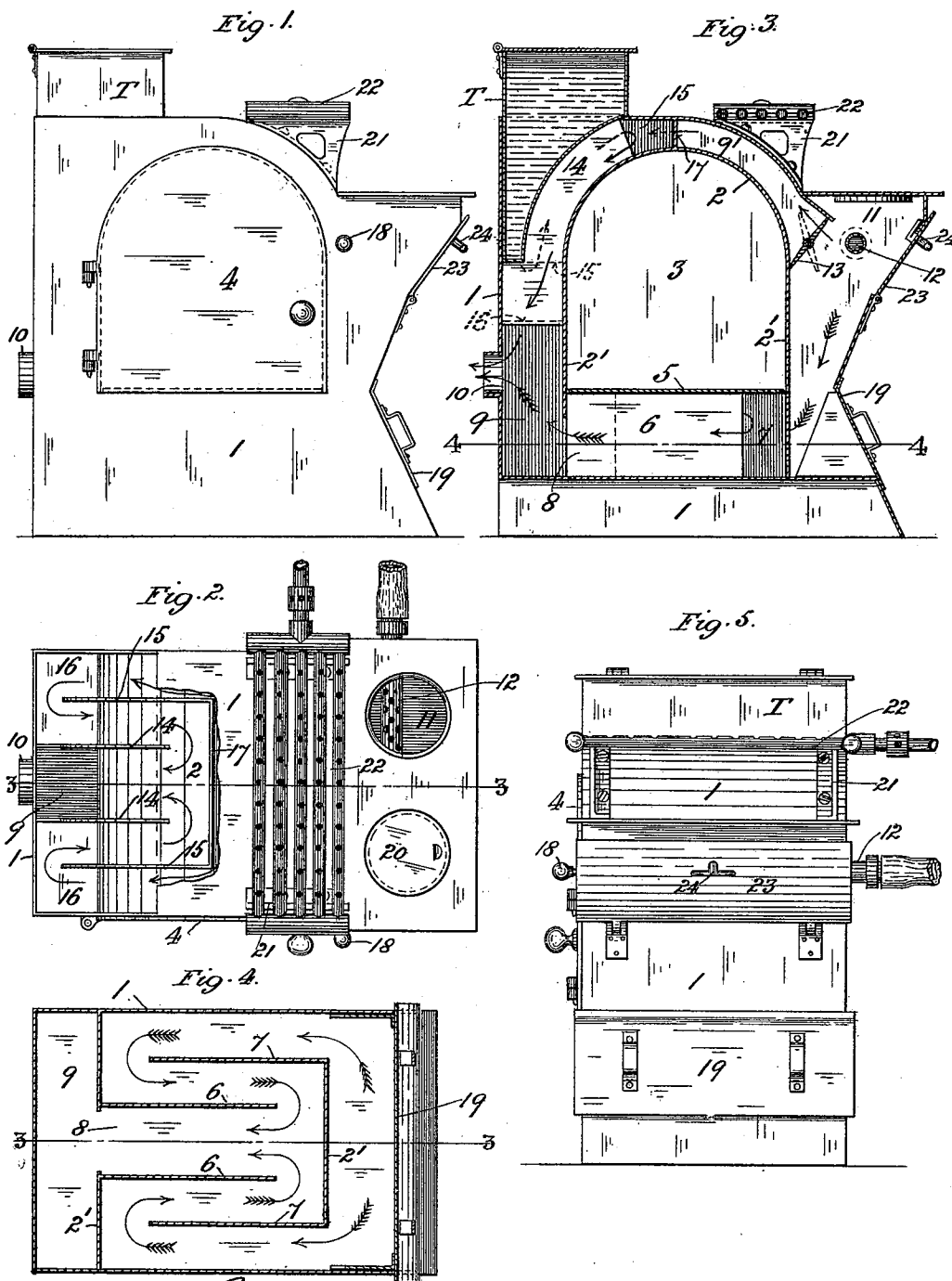
No. 667,010.

Patented Jan. 29, 1901.

J. GARY.
STOVE.

(Application filed Oct. 24, 1900.)

(No Model.)



WITNESSES
Edward W. Currell
G. L. Peck.

INVENTOR,
Jefferson Gary
by
Emil H. Hare, atty.

UNITED STATES PATENT OFFICE.

JEFFERSON GARY, OF ST. LOUIS, MISSOURI.

STOVE.

SPECIFICATION forming part of Letters Patent No. 667,010, dated January 29, 1901.

Application filed October 24, 1900. Serial No. 34,147. (No model.)

To all whom it may concern:

Be it known that I, JEFFERSON GARY, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in vapor-burning heating and cooking stoves; and it consists in the novel arrangement and combination of parts, more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of the stove. Fig. 2 is a top plan with a portion of the top broken away and water-tank removed. Fig. 3 is a middle vertical section on line 3 3 of Fig. 2. Fig. 4 is a horizontal section on line 4 4 of Fig. 3, taken through the flues below the oven; and Fig. 5 is a front elevation of the stove.

The object of my invention is to construct a vapor-burning heating and cooking stove, which can be brought to the desired temperature in a minimum amount of time, one which will develop a maximum degree of efficiency for the quantity of fuel consumed, one which shall be cheap in construction and durable, and one presenting further and other advantages better apparent from a detailed description thereof, which is as follows.

Referring to the drawings, 1 represents the body portion or outer casing, the latter being surmounted by a partially-plane and partially-rounded top, beneath which, at a suitable distance therefrom, is disposed the crown 2 of the oven 3, the latter having a door 4, hinged to the side wall of the casing. Disposed beneath the removable floor 5 of the oven are a series of deflecting-plates 6 6 7 7 so disposed as to form passages or flues for the escape of the products of combustion, the said flues terminating at what constitute the front and rear walls or vertical continuations 2' of the crown of the oven, the central passage leading to the rear opening 8, which in turn opens into the chamber 9 between the rear wall of the casing and adjacent wall of the oven, the products eventually escaping from the chamber 9 through the escape-flue 10. The combustion-chamber 11 forms the

forward extension of the chamber 9', included between the crown 2 and top of the casing, said combustion-chamber being provided with a gas burner on pipe 12 of any approved form. Disposed to the rear of the pipe 12 is a rotatable damper-plate 13, operated by an outer terminal knob 18 at one end of the pivotal axis of the damper. When the damper is turned so as to intercept the natural upward travel of the products of combustion, the latter are forced to pass downward from the pipe 12 along the front wall of the oven and through the series of flues or passages below the oven in the manner indicated and fully shown by the feathered arrows in Figs. 3 and 4, thereby thoroughly heating the oven. When the damper-plate is turned on, so as to allow for the free upward travel of the products of combustion, the latter pass upward over the crown and down through the chamber 9 into the escape-flue 10, being caused in this case to take a circuitous path by the deflecting-plates 14 14 15 15, partition-walls 16 16, and intercepting-plate 17. The plates 14 14 are disposed in vertical planes about the crown and rear wall of the oven, beginning at a point adjacent to the arch of the said crown and extending downward to the partition plates or walls 16 16. The plates 15 15 begin slightly in advance of the plates 14 14, their forward ends being connected by the intercepting-plate 17 and their opposite or lower ends terminating a suitable distance above the partition-walls 16 16. The flues thus formed are completed by the adjacent curved wall of the removable water-tank T, said curved wall resting directly against the curved edges of the plates 14 14 15 15, so that when the damper 13 is open the majority of the products of combustion take the course indicated by the plain arrows in Figs. 2 and 3—that is to say, along the crown down to the partition-walls 16 16 and up along the crown to the intercepting-wall 17 and thence down again between the plates 14 14 to the chamber 9 and out through the flue 10.

The front of the casing is provided with a removable plate or cover 19 in front of the passages formed below the oven-floor, which should the oven become too hot may be removed to allow fresh air to mix with the products and cool off the oven. The flat top

of the forward extension of the stove is provided with the usual lids 20, and immediately to the rear of these are mounted brackets 21 for the support of a broiler 22, supplied with gas from any suitable hose or pipe. (Not shown.) As shown in the drawings, the bottom of the water-tank extends only to the lower edges of the plates 15 15, the flue-passages being completed by said tank when once inserted in place.

It is to be understood that I do not limit myself to the precise details here shown, as these may be departed from in a measure without departing from the spirit of my invention. Where the products are allowed to circulate over the oven-crown, the stove acts more as a heater than a cooker, and where it is intended to heat the oven for baking purposes the products are deflected under the oven in the manner indicated. Access is had to the pipe in the combustion-chamber and the gas therefrom is lighted through a door 23, hinged along the front of the casing, the said door being provided with a locking-latch 24 of any approved construction.

Having thus described my invention, what I claim is—

1. A stove comprising an outer casing, an oven having a crown, bottom, and vertical front and rear walls separated by a space or chamber from the walls of the casing, a forward extension forming a combustion-chamber, a damper-plate located in the latter, a series of deflecting plates or walls forming flues below the oven, a series of deflecting plates or walls interposed between the oven crown and walls and the casing, and forming flues over the oven, a rear chamber into which the several flues lead, and an exit-flue in the rear of the casing, the products of combustion being adapted to pass along the front wall of the oven to the bottom thereof when the damper is closed, substantially as set forth.

2. A stove comprising an outer casing, an oven having a crown, bottom, and vertical front and rear walls separated by a space or

chamber from the walls of the casing, a forward extension forming a combustion-chamber, a rotatable damper-plate located in the latter, a series of deflecting plates or walls forming flues below the oven, a series of deflecting plates or walls interposed between the oven crown and walls and the casing, and forming flues over the oven, a rear chamber into which the several flues lead, and an exit-flue in the rear of the casing, the products of combustion being adapted to pass along the front wall of the oven to the bottom thereof when the damper is closed, substantially as set forth.

3. A stove comprising an outer casing, an oven having a crown, bottom, and front and rear walls separated by a space from the corresponding walls of the casing, a forward extension forming a combustion-chamber, a rotatable damper-plate located in the latter, a series of deflecting plates or walls forming flues below the oven, suitable partition-walls interposed between the rear wall of the oven and rear wall of the casing, a series of deflecting-plates disposed in parallel vertical planes about the crown and rear wall of the oven and terminating at said partition-walls, a second series of deflecting-plates also disposed about the crown and rear wall of the oven exterior to the first-mentioned plates and extending a suitable distance above the partition-walls, an intercepting plate or wall connecting the upper ends of the second series of deflecting-plates, a water-heater adapted to rest on the edges of the last-named series of plates and thus complete the flues formed between the oven and casing, a common chamber into which the several flues communicate, and an exit-flue in the rear wall of the casing, substantially as set forth.

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

JEFFERSON GARY.

Witnesses:

EMIL STAREK,
G. L. BELFRY.