(No Model.) 3 Sheets—Sheet 1.

W. R. KINNEAR.

GAS STOVE.

No. 346,554. Patented Aug. 3, 1886.

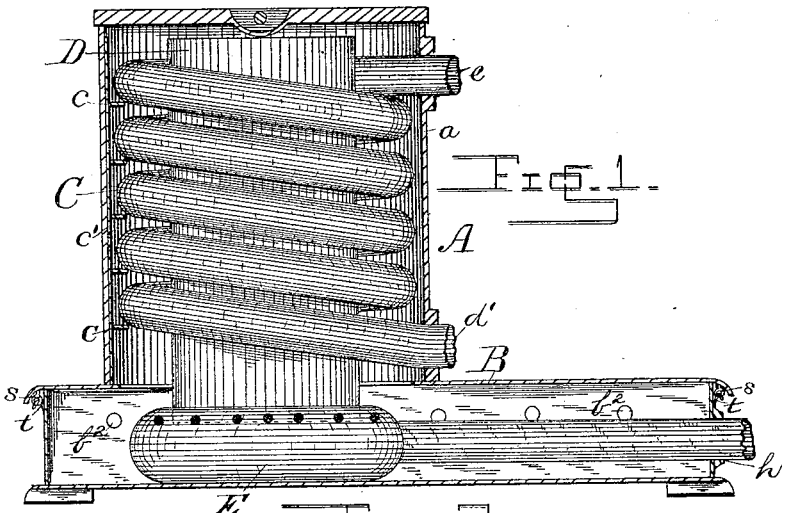


Fig. 1.

Fig. 2.

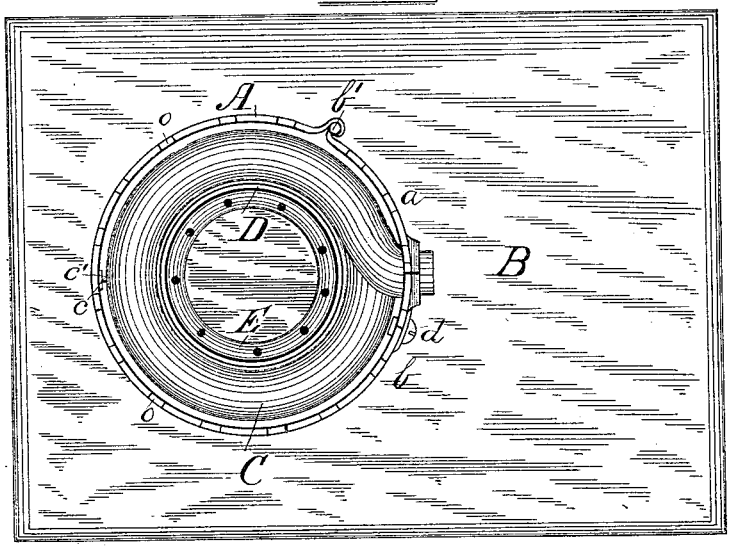
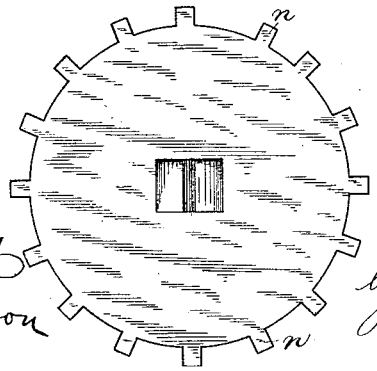


Fig. 3.



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(No Model.) 3 Sheets—Sheet 2.

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GAS STOVE.

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Fig. 4.

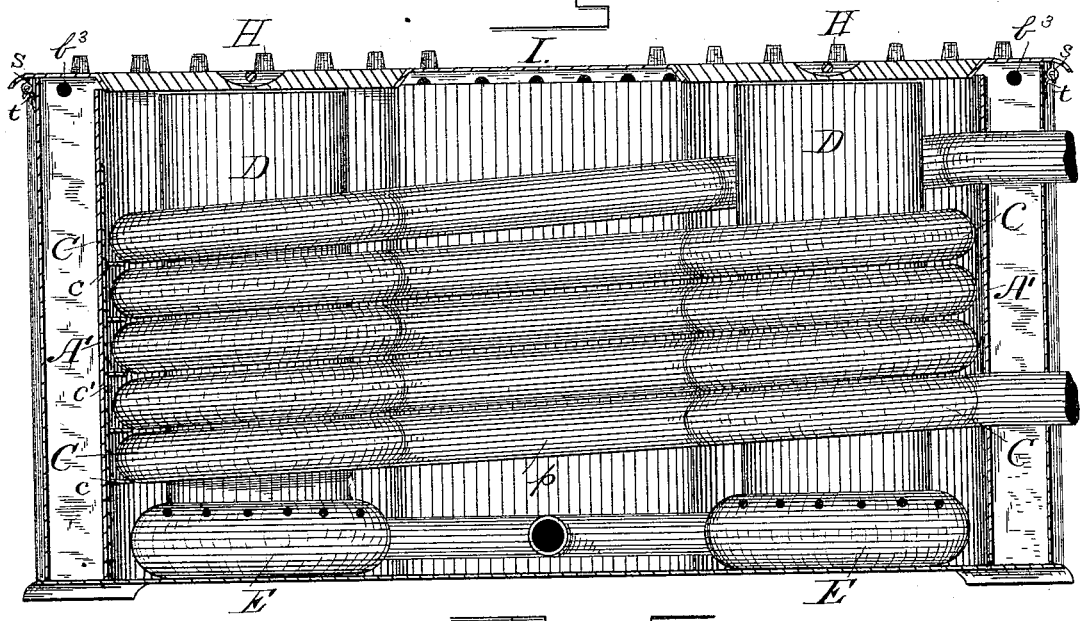
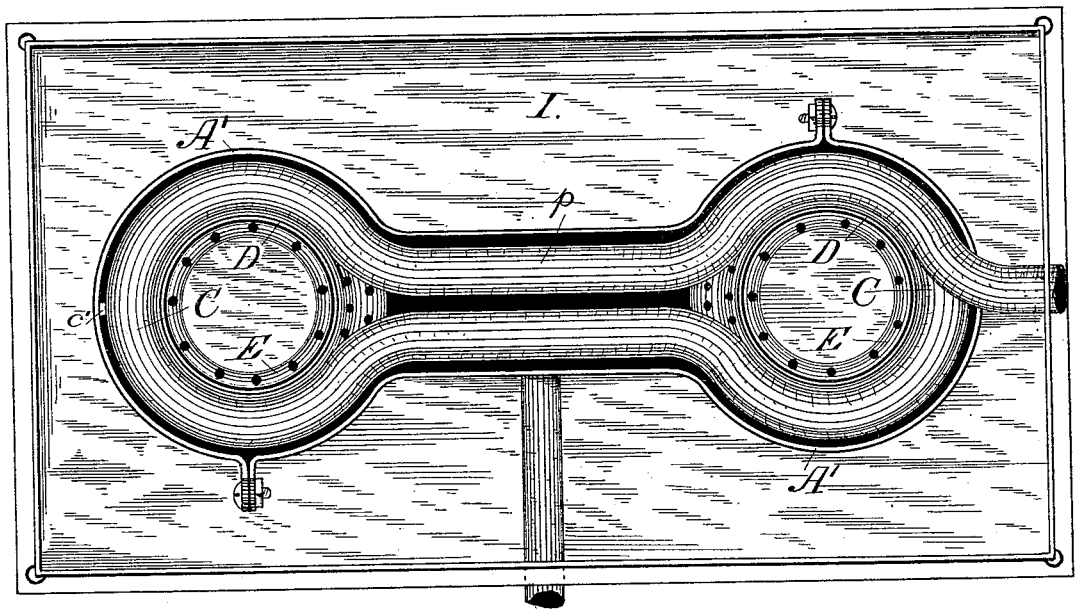


Fig. 5.



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3 Sheets—Sheet 3.

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GAS STOVE.

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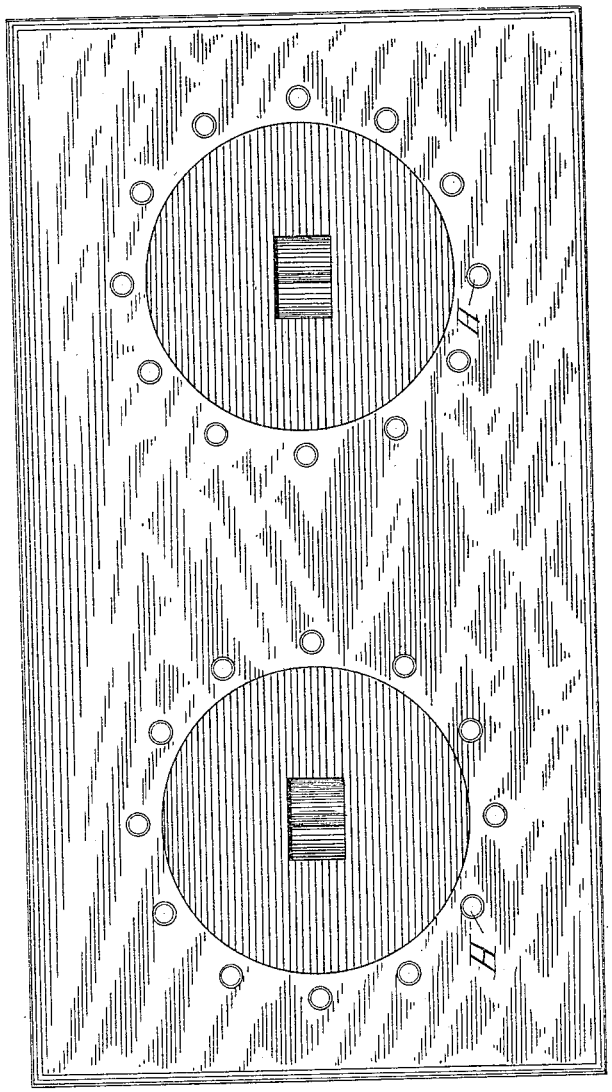
Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM R. KINNEAR, OF COLUMBUS, OHIO.

GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 346,554, dated August 3, 1886.

Application filed October 19, 1885. Serial No. 180,325. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. KINNEAR, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Gas-Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in gas and gasoline stoves designed for cooking; and the object of my improvement is to utilize the gas in heating the top of the stove on which the cooking is done, and at the same time heat water in a coil within the stove.

To this end my invention consists of certain features and combinations, as hereinafter described and claimed. It is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the heater, the stove being shown in section; Fig. 2, a plan view with the top removed; Fig. 3, a detail, and Figs. 4, 5, and 6 similar views when the invention is used as a double-heater.

In the drawings, A is the outer casing, which incloses the water-coil. It is made in two parts, *a* and *b*, and connected by a hinged joint, *b'*. The part *a* answers as a door, secured to the hinge *b'*, and to the outer part of the casing, *b*, by a screw-bolt, *d*.

B is the stove, on which the casing A rests, and it is provided with air-inlets b^2.

C is the coil of pipe, which extends up through the casing A to near the top thereof and close to its inner surface. It is held in place on one side by, and rests on, pins or lugs *c*, formed on the strip *c'*, secured to the inside of the casing A, and which extend in between the coils. It is held in place on the opposite side by its inlet and outlet ends, which extend through the casing. The lower end, *d'*, of the coil is the inlet for the cold water from any suitable reservoir, and the upper end, *e*, the outlet for the hot water. Both ends may be provided with suitable stop-cocks. One-half of the apertures through which the ends of the coil extend out of the casing is formed in the door part *a* of the casing, so that by unscrewing and opening the door the coil may be inserted or removed.

D is a removable cylinder, which rests on the heating apparatus and extends up through the coiled pipe from the center of the heater to the top of the coil, thus forming a flue or chimney, which tends to direct the heat to the center of the stove.

E is the heating apparatus, consisting of a perforated coil corresponding to the form of the water-coil, and which may be provided with any suitable attachment for the introduction of gas thereto through an aperture, *h*, in the stove.

In Fig. 3 I have shown one form of a lid or cover, which is provided with projections *n* on its edge, which fit into notches *o*, formed in the rim of the casing A. The object of such a construction is to bring the lid directly down upon the cylinder D, in order that it may receive against it the greatest amount of heat.

When used as a double-heater, the coil of pipe is formed, as shown in Fig. 5, with a straight portion, *p*, between the coils, by which they are connected, and A' is the double casing made to correspond in form to the double coil. The double coil and casing are placed in a suitable stove, I. The top of the double heater is provided with two lids, and also with projections H, formed around the outer edge of the holes in which the stove-lids are placed to receive a skillet or other object.

The tops of both forms of stove are removable, and are supplied with staples *s* to receive latches *t* on the bodies of the stoves, by which the tops may be secured to the body. The double heater is also provided with air-inlets b^3. In the operation of the device heat is not only directed up the center of the cylinder, but a large portion of it strikes at the bottom and on both sides of the coil, and ascends also between the coils. By this arrangement the same heat that is employed to do the cooking on the top of the stove is used to heat the water, and that, too, in an economical and efficient manner.

No separate independent arrangement of apparatus is necessary, as in many stoves of this character, for heating the water, as all the heat conducted directly to the top of the stove for cooking is also utilized to heat, on its way, the water, thus avoiding any additional expense for fuel for heating the water, and also,

by the arrangement described, effecting a great saving of time.

What I claim is—

1. In a gas-stove, the combination, with a suitable casing, of the coiled water-pipe within the casing, the independent removable cylinder within the water-coil, and the burner on which the said cylinder rests, substantially as described.

2. In combination with the stove-lid, the cylindrical casing extending directly from the burner to the stove-lid, the water-coils within the casing, extending up nearly to the stove-lid, and the burner located directly beneath the lower coil and provided with perforations that direct the heat within, against, and outside of said coil and directly to the under side of the stove-lid, substantially as described.

3. In combination with the removable top provided with staples, the body of the stove provided with latches for securing the top and body together, the casing provided with air-inlets, and the coils, the opposite ends of which pass through the casing for the ingress and egress of the water, substantially as described.

4. The combination of the body of the stove, the burner, the removable top, the jointed casing secured to said top and provided with a water inlet and outlet, the coil within said casing, the ends extending through the said inlet and outlet, and the supporting-lugs for the coil formed in the casing, substantially as and for the purpose described.

5. A gas-stove having air-inlets near its top, in combination with the casing, made in two parts and provided with the apertures divided at the line of junction of said parts for the admission of the inlet and outlet ends of the water-coil, the said coil, and the perforated burner placed beneath and against the coil, substantially as described.

6. In combination with the stove, the stove-lid, and the casing, the coil within the casing, the burner at the bottom of the casing and the independent removable cylinder D, resting upon the burner and surrounded by said coil, and which extends to the top of the casing, to conduct the heat to directly beneath the stove-lid, substantially as described.

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

WILLIAM R. KINNEAR.

Witnesses:

JNO. T. GALE,

E. B. GAGER.