No. 818,131. PATENTED APR. 17, 1906.

T. E. TAYLOR.

GAS OVEN.

APPLICATION FILED DEC. 26, 1903.

2 SHEETS—SHEET 1.

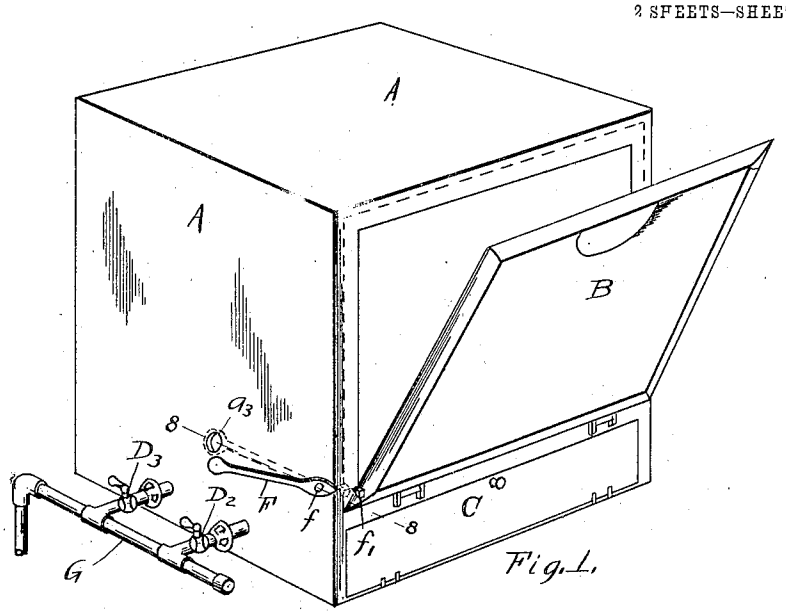


Fig. 1.

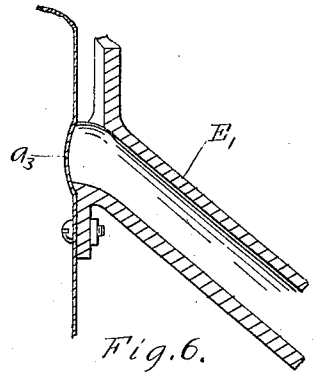


Fig. 6.

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2 SHEETS—SHEET 2.

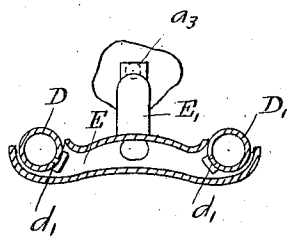


Fig. 3.

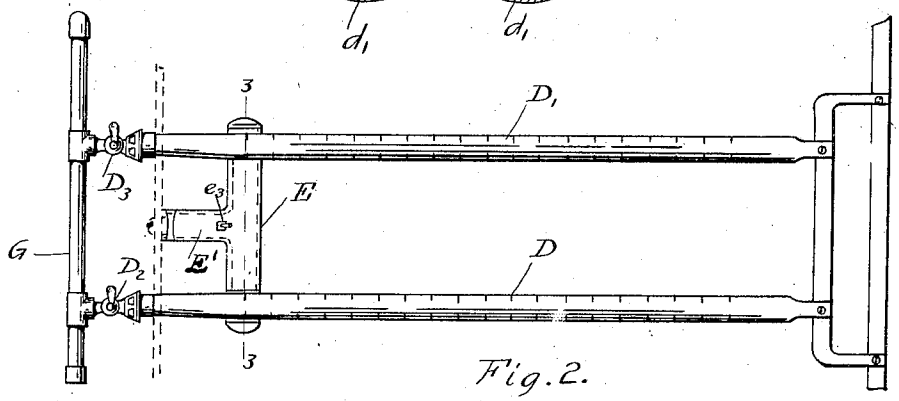


Fig. 2.

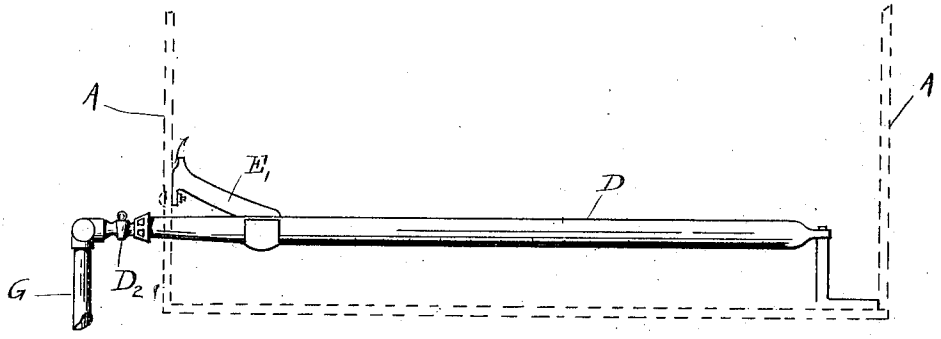


Fig. 4.

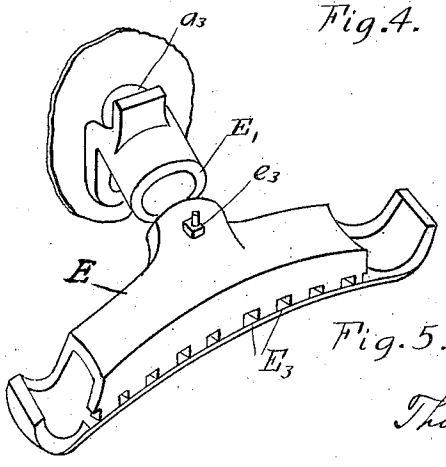


Fig. 5.

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UNITED STATES PATENT OFFICE.

THOMAS E. TAYLOR, OF DETROIT, MICHIGAN.

GAS-OVEN.

No. 818,131 Specification of Letters Patent. Patented April 17, 1906.

Application filed December 26, 1903. Serial No. 186,634.

To all whom it may concern:

Be it known that I, THOMAS E. TAYLOR, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Gas-Ovens; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to igniting devices for gas-ovens. In this kind of oven the gas-flame is inclosed within the oven itself; and the object of my invention is to provide an improved device whereby the gas may be ignited from the outside of the oven and at the side thereof and in which danger from explosion of a gas and air mixture within the oven is avoided.

I am aware that patents, numbered 698,009 and 698,010, were granted to G. W. Graves and to this inventor and J. F. Mills, Jr., April 22, 1902. In these patents devices are shown in which it is necessary to put the igniting-flame within the oven from a position in front of the open door. There is danger in such devices of causing an explosion which may injure the person igniting the gas.

My invention consists in the improvements hereinafter described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a perspective view of an oven of the type to which the device of this invention is applicable. Fig. 2 is a plan view showing the foraminous tubes or manifolds which convey gas to be burned as it issues in jets through the holes in said tubes together with the device for igniting the jets from the outside of the tube. Fig. 3 is a detail section on the line 3 3 of Fig. 2. Fig. 4 is an elevation of the parts shown in plan in Fig. 2. Fig. 5 is a perspective view of the apparatus for igniting the jets from the outside of the oven. Fig. 6 is a sectional perspective view of the part of the apparatus of Fig. 5 contiguous to a wall of the oven and a portion of the walls adjacent thereto.

A A are walls of the oven.

B is the door of the oven proper, which door in this case is shown as of the "drop" kind.

C is a door leading to a chamber below the oven proper, at the upper part of which chamber are the tubes or manifolds D D′.

D^2 is a cock controlling the admission of gas to the tube or manifold D, and D^3 is a cock controlling the admission of gas to the tube or manifold D′.

E is the device for igniting the jets from the outside of the oven. This consists of two castings united together by a bolt e^3 to form a T-shaped conduit or trunk, two ends of which partially surround the tubes or manifolds D D′. The portion between the tubes D D′ is arched upward to a point intermediate between said tubes, and from the middle portion extending upward and outward there is a part E′, forming a tube leading to an aperture a^3 through the walls of the oven. The upper casting of the device shown in Fig. 5 has formed in it the notches E^3 at the edge which comes against the lower casting at the inner side thereof, or holes may be drilled in other parts of the trunk, so that said notches form openings leading into the channel or chamber in said device which extends between the tubes D D′. Holes through the walls of the tubes D D′ (shown most distinctly in Fig. 3 and marked d') open into the chamber of the device E, which extends between the tubes D D′, so that a gas-jet is projected into said chamber toward the tube E′ from said holes. Since the hole a^3 at the outer end of the tube E′ is in a side wall of the oven, it is generally desirable to have some such covering member as the lever F, which is pivoted at f to the side of the oven and may be used as a closure over the hole a^3 when the oven is not in use to render impossible ignition from the flame of a match unintentionally and carelessly held near the opening.

The operation of the above-described device is as follows: The cock D^2 or D^3, or both of said cocks, are opened, admitting a jet of gas from the pipes G into the pipes or manifolds D D′. These jets carry with them a small portion of air, but not sufficient to make a combustible mixture. The gas forced into the manifolds D D′ flows out of the holes d' into the chamber between said manifolds in the device E, and the gas rises up in the conduit E′ to the aperture a^3 in the oven-wall and may be lighted by a match at said aperture from the outside of the oven. Air flows in through the notches E^3 to mingle with the gas, making a combustible mixture. The flame is carried down the tube E′ through the

channel or chamber between the manifolds D D′, and the jets of said manifolds are ignited by said flame. It will be observed that the tube E′ has its upper end contiguous to the inner walls of the oven, its channel communicating with the oven through an aperture. Thus the hot air passing through the tube E′ is carried into the oven and not to the outside of the oven. If one burner is lighted, it will ignite the gas flowing into the trunk E, and the flame will be carried from the lighted burner to ignite the opposite burner.

What I claim is—

1. The combination of two burners, a lighter adjacent to said burners and adapted to catch escaping gas from each of said burners, said lighter being provided with a trunk extending between the burners, said trunk being provided with a series of perforations extending through its walls throughout its length to admit air to every part of the length of the gas-column in said trunk.

2. The combination of a burner having an aperture therein to permit the escape of a jet of gas therefrom, a trunk open at each end and having its open end located adjacent to said burner and in front of the aperture therein, said trunk being provided with a series of perforations extending through its walls throughout its length adapted to admit air to every part of the length of the gas-column in said trunk to form a combustible mixture therewith.

In testimony whereof I sign this specification in the presence of two witnesses.

THOMAS E. TAYLOR.

Witnesses:

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ELLIOTT J. STODDARD.