

No. 726,010.

PATENTED APR. 21, 1903.

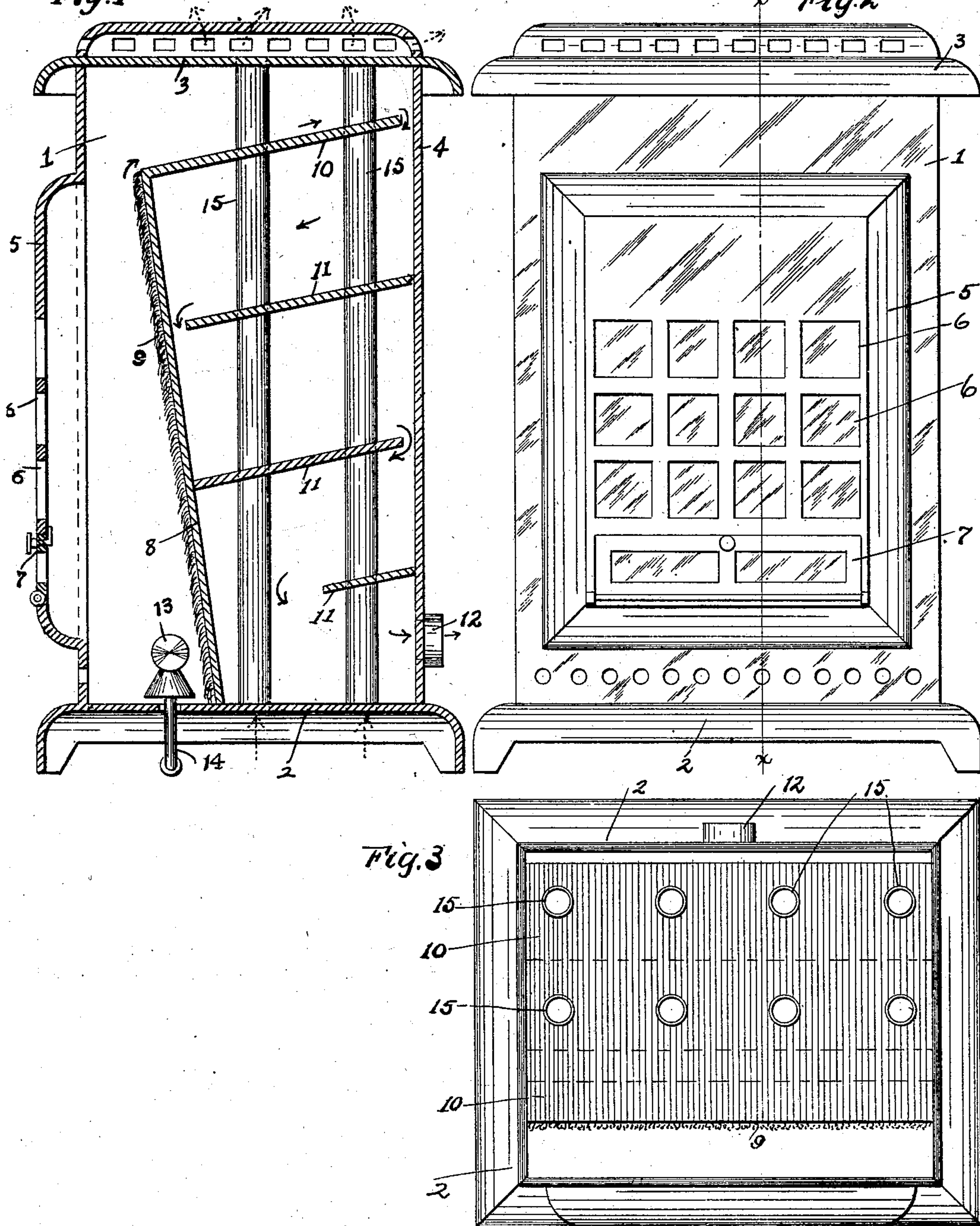
A. C. WITMAN.
GAS STOVE.

APPLICATION FILED SEPT. 3, 1901.

NO MODEL.

Fig.1

x Fig. 2



WITNESSES:

N. A. Wendick.
A. L. Phelps.

INVENTOR.

INVENTOR.
Arthur C. Witman

BY

O. Shepard

ATTORNEY.

UNITED STATES PATENT OFFICE.

ARTHUR C. WITMAN, OF COLUMBUS, OHIO, ASSIGNOR TO THE GEORGE B. DONAVIN & COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 726,010, dated April 21, 1903.

Application filed September 3, 1901. Serial No. 74,108. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR C. WITMAN, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Gas-Stoves, of which the following is a specification.

My invention relates to the improvement of gas-stoves of that class which are designed to employ either natural or artificial gas as fuel.

The objects of my invention are to provide a gas-stove of such improved construction and arrangement of parts as to insure the utilization of a comparatively large per cent. of the heat generated by the burner, to provide an improved flue construction therefor, and to produce other improvements the details of which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of my improved stove on line xx of Fig. 2. Fig. 2 is a front elevation, and Fig. 3 is a plan view with the top removed.

Similar numerals refer to similar parts throughout the several views.

1 represents the upright body or casing of my improved stove, of which 2 represents the base, 3 the top, and 4 the back. In constructing this stove-body I preferably provide the forward side thereof with an outwardly-projecting portion 5, the front of which is in the nature of a grating or open-work, the openings 6 of which are designed to be filled with isinglass or other suitable transparent material. In the lower portion of the projecting front 5 I hinge a transverse door 7.

8 represents the burner back or plate, which, rising from the base 2 and extending between the side walls of the stove-body, inclines forward and terminates in the upper portion of said body. This burner-back is designed to be coated or covered with mineral wool, such as is indicated at 9. As shown at 10, the upper end of the burner-back is provided with a rearwardly-projecting and upwardly-inclined top flue-plate, the rear termination of which is in close proximity to the inner surface of the back 4. At points below the flue-plate 10 and at suitable intervals I provide succes-

sively-arranged flue-plates 11, which are parallel with the plate 10, these plates 11 projecting alternately from the stove-back 4 and burner-back 8, those flue-plates which extend from the stove-body back having their forward terminations at points in rear of the burner-back 8 and those plate or plates which project from said burner-back having their terminations on the inner side and at a distance from the stove-back 4, thus providing a substantially sinuous flue which has its outlet in the lower portion of the back, as indicated at 12. In front of and near the base of the burner-back 8 I provide a suitable form of gas-burner 13, to which leads a gas-supply pipe 14. Extending vertically through the stove-body in rear of the burner-back and connecting oppositely-arranged openings in the top plate 3 and base-plate 2 are vertical flues or air-conductors 15, these flues or air-conductors passing through openings in the flue-plates 10 and 11, as shown.

It is obvious that in utilizing my invention as a gas heating-stove the products of combustion which rise along the front of the burner-back 8 will follow the direction of the full-line arrows in Fig. 1, passing through the upper converging flue formed between the top flue-plate 10 and the stove-top 3, thence about the rear portion of said plate 10, and between the flue-plates 11 and the burner-back 8 and body-back 4. In this operation it will be seen that by passing the heat about the flue-plates 10 and 11 not only will an increased heating-surface be provided, but the heat will be so distributed through the stove-body and its flues as to insure a uniform heating of said stove-body, and consequently a uniform radiation therefrom. It will also be understood that the heat in passing through the stove in the manner above described must impart a comparatively high temperature to the air conductors or tubes 15, with the result that the continuous currents of air which will thus be drawn through said tubes will be discharged into the room in a heated condition.

Owing to the fact that my improved stove is provided with a closed front, it is obvious that the products of combustion are prevented from escaping into the room and that they

are compelled to follow the direction of the arrows before escaping through the outlet 12. It will be observed that the construction of my improved stove is simple and that the same may be produced at a reasonable cost of manufacture.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

- 10 1. In a gas-stove, the combination with a casing, of a fireback rising from the base of the casing and terminated short of the top thereof, a gas-burner within the casing and in front of the fireback, a vertical series of
15 baffle-plates within the space between the fireback and the back of the casing, said plates being carried alternately by the fireback and the back of the casing from the top to the bottom of the series and alternately termi-
20 nated short of the back of the casing and the fireback from the top to the bottom of the series, vertical open-ended hot-air pipes piercing the top and the bottom of the casing and the series of baffle-plates, and a smoke-outlet
25 in the lower portion of one of the sides of the casing and in rear of the fireback.
2. In a gas-stove, the combination with a

casing having perforations in the lower portion of the front thereof and a hollow top provided with perforations in its external walls, 30 of a fireback rising from the bottom of the casing and terminated short of the top thereof, said fireback dividing the casing into a front combustion-chamber and a rear smoke-chamber, a gas-burner within the lower por- 35 tion of the combustion-chamber, a vertical series of baffle-plates located within the smoke-chamber, inclined upwardly and rearwardly and carried alternately by the fireback and the back of the casing from top to 40 bottom of the series, said plates also being terminated short of the back of the casing and the fireback alternately from the top to the bottom of the series, open-ended hot-air pipes piercing the bottom of the casing and 45 the series of baffle-plates and connecting with the hollow top of the casing, and a smoke-outlet piercing the back of the casing below the lowermost baffle-plate.

ARTHUR C. WITMAN.

In presence of—

C. C. SHEPHERD,
A. L. PHELPS.