

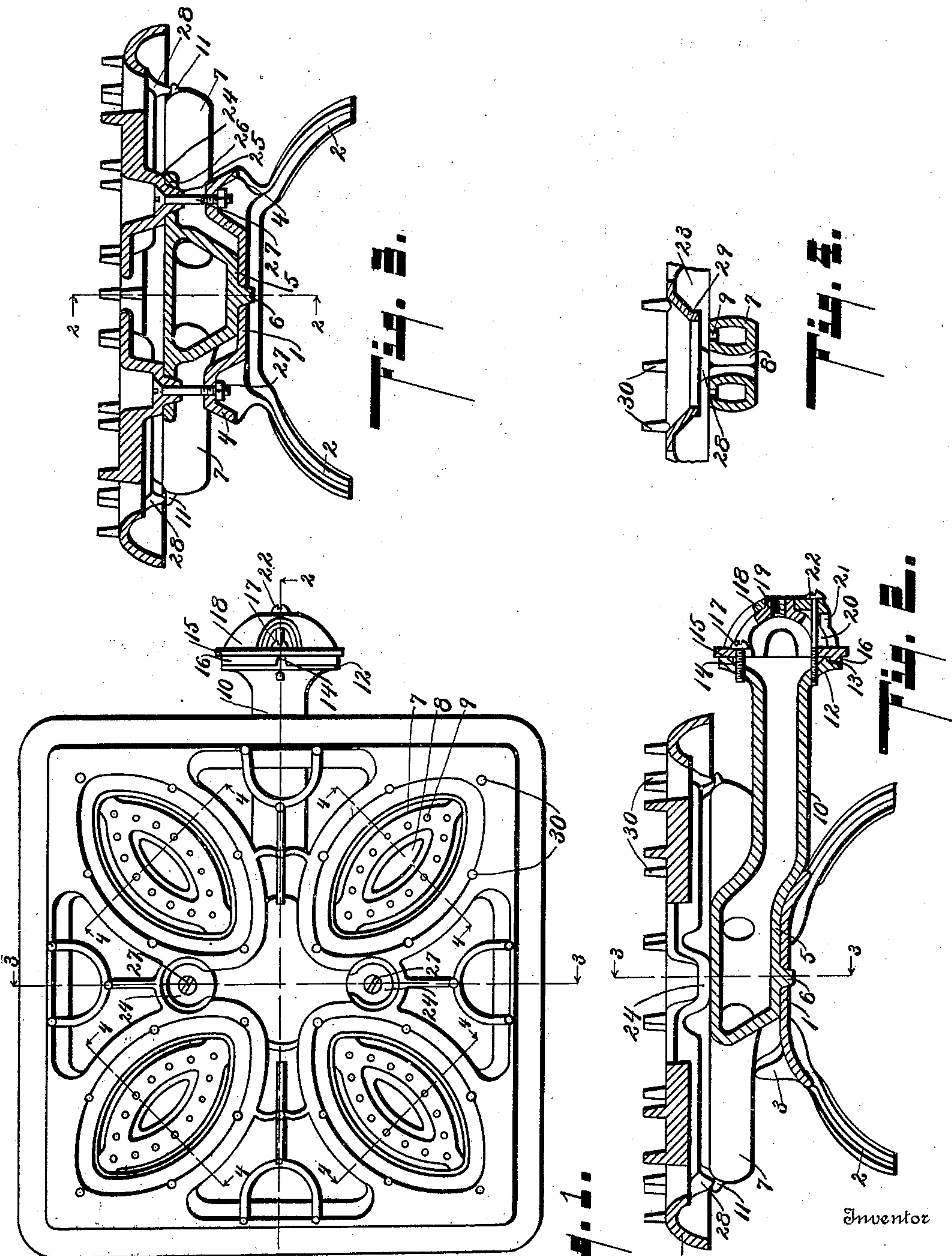
W. THOMPSON.

GAS STOVE.

APPLICATION FILED JAN. 30, 1908.

917,186.

Patented Apr. 6, 1909.



Witnesses  
Jesse M. Malone,  
Phineas Woodruff.

William Thompson  
Chapell & Carl  
Attorneys



# UNITED STATES PATENT OFFICE.

WILLIAM THOMPSON, OF KALAMAZOO, MICHIGAN.

## GAS-STOVE.

No. 917,186.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed January 30, 1908. Serial No. 413,457.

*To all whom it may concern:*

Be it known that I, WILLIAM THOMPSON, a citizen of the United States, residing at Kalamazoo, Michigan, have invented certain new and useful Improvements in Gas-Stoves, of which the following is a specification.

This invention relates to improvements in gas stoves.

My invention relates particularly to improvements in gas stoves or gas burners, which are generally designated as gas plates.

The main objects of this invention are: First, to provide an improved gas stove by the aid of which the maximum amount of heat units of gas consumed may be utilized. Second, to provide an improved gas stove of the gas-plate type, which is very simple and economical in structure, and at the same time very durable in use. Third, to provide an improved gas stove which is particularly adapted for use in heating sad-irons.

Further objects, and objects relating to details of construction, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which,

Figure 1 is a plan view of my improved gas stove. Fig. 2 is a vertical section thereof taken on a line corresponding to line 2—2 of Fig. 1. Fig. 3 is a vertical section therethrough taken on a line corresponding to line 3—3 of Fig. 1. Fig. 4 is a detail vertical section taken on a line corresponding to lines 4—4 of Fig. 1.

In the drawing, the sectional views are taken looking in the direction of the little arrows at the ends of the section lines, and similar numerals of reference refer to similar parts throughout the several views.

Referring to the drawing, the base 1 is provided with suitable legs as 2 and with upwardly-projecting rests 3 for the burner. The burner, which is the structure shown in my co-pending application, Serial No. 383,865, filed July 15, 1907 of which this is a divisional application, consists of a central chamber adapted to rest on the top of the base, it being preferably provided with a central downwardly-projecting lug 6 arranged through a

suitable hole provided therefor in the base; see Figs. 2 and 3.

A plurality of burner members or arms, 7, are connected to the central chamber and extend radially therefrom, the structure illustrated having four of the burner members. These burner members are oblong in form, having a central opening 8 therethrough, each member being provided with a plurality of jet orifices 9. These burner members are so arranged as to rest upon the supports 3 on the base, as clearly appears from the drawing.

The burner is provided with a mixing tube 10, which delivers to and is preferably formed integral with the central chamber or body of the burner. The outer end of the mixing tube 10 is provided with a flange-like enlargement 12 having an outwardly-projecting flange 13 thereon, adapted to receive the flange 16 on the fixed valve member 15. This valve member is secured to the mixing tube by means of the screw 17. A lug 14, adapted to engage the flange 16 on the valve member, is provided; see Figs. 1 and 2. The valve member 18 is rotatably mounted upon the outwardly-projecting nipple 19 of the fixed valve member 15, the nipple being threaded to receive the nozzle of the gas delivery pipe. (Not here illustrated.)

The adjustable valve member is provided with ports 21, adapted to be brought into registry with ports 20 of the inner valve member. The valve member 18 is adjustably secured by means of the screw 22, which is arranged in a suitable slot provided therefor. This forms a simple and effective valve, and at the same time one which is economical to produce, as it may be formed of castings.

The grid 23 is of skeleton form and is adapted to rest upon the burner, it being provided with downwardly-projecting portions 24 having lugs 25 thereon, adapted to be arranged through the perforated arms 26 on the burner, the grid being secured thereto by bolts 27 arranged therethrough and through the ears 4 provided therefor on the base. The grid is also provided with downwardly-projecting rests 28 adapted to engage the supports 11 provided therefor on the outer ends of the burner members or arms, the parts being thus effectively and rigidly secured together by the use of two bolts only. The grid is also provided with openings for each of the burner arms, the open-



ings being of the same shape and somewhat larger than the burner arms. These burner openings are surrounded by downwardly and inwardly-projecting flanges 29, which effectively direct the heat from each burner arm or member upwardly through the openings of the grid to the article to be heated. The grid is provided with a plurality of stud-like rests 30, on which the article to be heated is placed.

By thus arranging the parts, the heat is effectively distributed to the article to be heated, if it is of sufficient size to cover all of the burner members; or, where the stove is used for heating sad-irons, for which purpose it is particularly well adapted, the heat is delivered to each sad-iron, the structure illustrated being adapted for the heating of four sad-irons at a time.

By arranging the burners in the form described, the same are effectively supplied with air and the heat is delivered so that a maximum thereof is utilized. The parts of the structure are economical to produce, and are readily assembled; and, when assembled, the structure is very strong and rigid.

I have illustrated and described my improved gas stove or burner in detail in the form preferred by me on account of its structural simplicity and economy. I am, however, aware that it is capable of considerable variation in structural details without departing from my invention, and I desire to be understood as claiming the same specifically, as illustrated, as well as broadly.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a structure of the class described, the combination with the burner comprising a central chamber, and a plurality of burner members radiating from said chamber, each of said burner members having a central air opening therethrough and having a plurality of jet orifices grouped about said opening; and a grid having a plurality of openings therethrough arranged with an opening above each of said burner members, said grid openings being provided with downwardly and inwardly projecting flanges adapted to surround the jet orifices of said burner members, the lower edges of said flanges being in a plane slightly above the plane of the burner orifices to direct the air thereto, passing to the grid openings from the outside of the burner members.

2. In a structure of the class described, the combination with the burner having a central air opening therethrough provided with a plurality of jet orifices grouped about said openings; a grid having an opening therethrough arranged above said burner, said grid opening being provided with a

downwardly and inwardly projecting flange, the lower edge of said flange being in a plane slightly above the plane of the jet orifices to direct the air thereto from the outside of the burners; and upwardly projecting stud-like rests arranged about the said grid opening.

3. In a structure of the class described, the combination with the base, having upwardly-projecting burner rests thereon, of a burner comprising a central chamber and a plurality of burner members or arms radiating from said chamber arranged on said burner rests; a downwardly-projecting central lug on said burner chamber arranged through said base; a pair of grid supports on said burner chamber; grid supports on the outer ends of said burner arms; downwardly-projecting rests on said grid arranged to engage said grid supports on said burner arms; downwardly-projecting grid rests having lugs thereon arranged through said perforated grid supports on said burner chamber; perforated ears on said base; and bolts arranged through said rests on said grid and said ears on the said base, whereby the parts are secured together.

4. In a structure of the class described, the combination with the base, having upwardly-projecting burner rests thereon, of a burner, comprising a central chamber and a plurality of burner members or arms radiating from said chamber, arranged on said burner rests; a downwardly-projecting central lug on said burner chamber arranged through said base; a pair of grid supports on said burner chamber; downwardly-projecting grid rests having lugs thereon arranged through said perforated grid supports on said burner chamber; perforated ears on said base; and bolts arranged through said rests on said grid and said ears on the said base, whereby the parts are secured together.

5. In a structure of the class described, the combination with the base, having upwardly-projecting burner rests thereon, of a burner, comprising a central chamber and a plurality of burner members or arms radiating from said chamber arranged on said burner rests; a pair of grid supports on said burner chamber; downwardly-projecting grid rests having lugs thereon arranged through said perforated grid supports on said burner chamber; perforated ears on said base; and bolts arranged through said rests on said grid and said ears on the said base, whereby the parts are secured together.

6. In a structure of the class described, the combination with the base, having upwardly-projecting burner rests thereon, of a burner comprising a central chamber and a plurality of burner members or arms radiating from said burner chamber; a downwardly-projecting central lug on said burner chamber arranged through said base; a pair of grid supports on said burner chamber;



downwardly-projecting grid rests having  
lugs thereon arranged through said per-  
forated grid supports on said burner cham-  
ber; perforated ears on said base; and bolts  
5 arranged through said rests on said grid and  
said ears on the said base, whereby the parts  
are secured together.

7. In a structure of the class described,  
the combination with the base, of a burner  
10 comprising a central chamber and a plurality  
of burner members or arms radiating from  
said chamber, arranged on said burner rests;  
a pair of grid supports on said burner cham-  
ber; downwardly-projecting grid rests having

lugs thereon arranged through said perfo- 15  
rated grid supports on said burner chamber;  
perforated ears on said base; and bolts ar-  
ranged through said rests on said grid and  
said ears on the said base, whereby the parts  
are secured together. 20

In witness whereof, I have hereunto set  
my hand and seal in the presence of two  
witnesses.

WILLIAM THOMPSON. [L. s.]

Witnesses:

J. C. GOODALE, Jr.,  
W. E. DERWENT.