No. 837,471. PATENTED DEC. 4, 1906.

H. S. HUMPHREY.

GAS STOVE.

APPLICATION FILED MAR. 17, 1905.

2 SHEETS—SHEET 1.

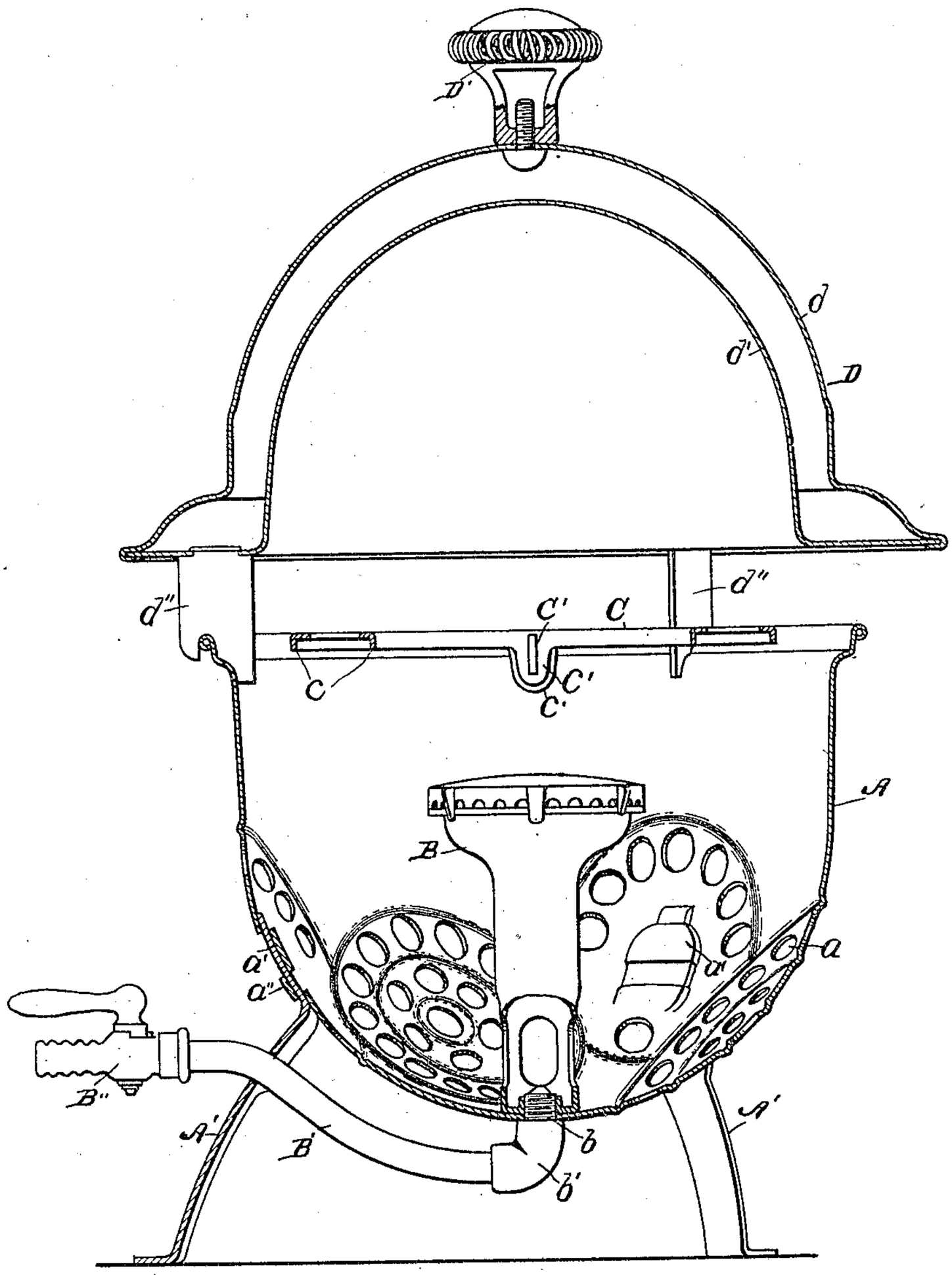

Fig. 1.

Witnesses:

Adelaide L. Adams

Edith A. Keller

Inventor,

Herbert S. Humphrey

By Chappell & Earl

Att'y.s

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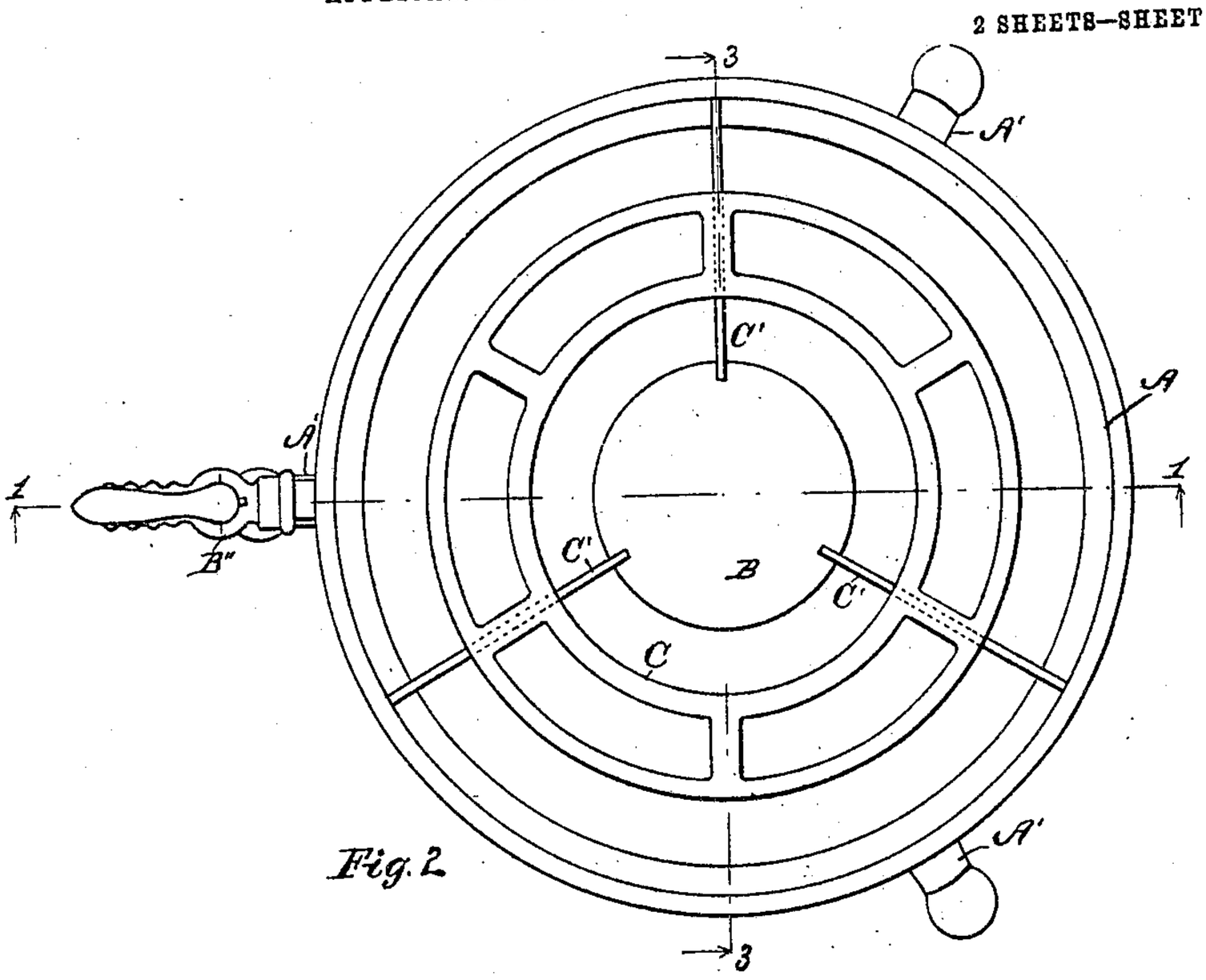

Fig. 2.

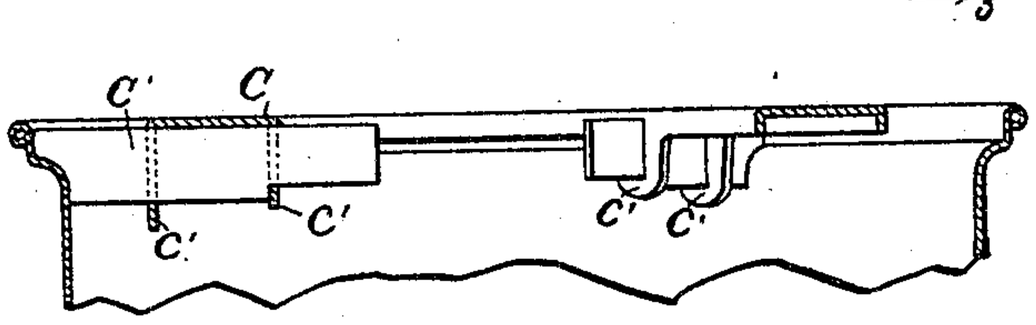

Fig. 3.

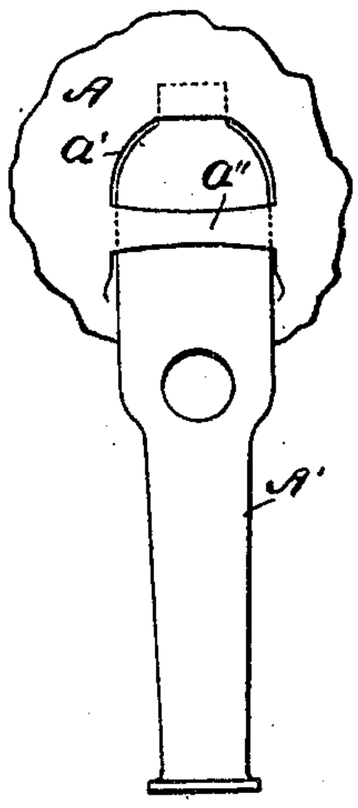

Fig. 4.

Witnesses:

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UNITED STATES PATENT OFFICE.

HERBERT S. HUMPHREY, OF KALAMAZOO, MICHIGAN.

GAS-STOVE.

No. 837,471. Specification of Letters Patent. Patented Dec. 4, 1906.

Application filed March 17, 1905. Serial No. 250,628.

To all whom it may concern:

Be it known that I, HERBERT S. HUMPHREY, a citizen of the United States, residing in the city and county of Kalamazoo, State of 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.

The objects of this invention are, first, to provide an improved portable gas-stove which may be used both as a heating and as a cooking stove and is very light in weight and attractive in appearance; second, to provide an improved portable gas-stove which may be readily and easily assembled or knocked down and one which when in the knockdown condition may be arranged into a very compact package; third, to provide an improved portable gas-stove which is made mainly of sheet metal; fourth, to provide an improved portable gas-stove which is very simple and economical in structure and at the same time strong and durable.

Further objects and objects relating to structural details 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 drawings, forming a part of this specification, in which—

Figure 1 is a vertical sectional view of my improved gas-stove, taken on a line corresponding to line 1 1 of Fig. 2. Fig. 2 is a plan view of the base portion of my improved gas-stove, the top portion being removed. Fig. 3 is a detail cross-sectional view taken on a line corresponding to line 3 3 of Fig. 2, showing structural details. Fig. 4 is a detail view showing one of the legs A′ and the means of securing it in position.

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

Referring to the drawings, the base portion A is struck up from a sheet of metal and is shaped somewhat like an inverted dome. The upper edge of the base portion is preferably flared outwardly and terminated in a head. The lower portion of the base is provided with suitable perforations *a*. The legs A′ are also formed of sheet metal. These legs are secured by inserting into suitable pockets *a′*, which are struck up from the base. These pockets *a′* are formed by slitting the metal and punching in a portion to form the pockets. A strap portion *a″* extends across the pocket for retaining the leg therein. The legs are preferably made to fit the pockets sufficiently tight so that they are held therein by the spring tension thereof.

One of the legs A′ is perforated to receive the gas-delivery pipe B′, which is provided with a threaded gas-nozzle *b* at its inner end. This nozzle is connected to the pipe B by a suitable elbow, as *b′*, so that it may be inserted up through a suitable perforation in the bottom of the base A. The burner B is threaded upon the nozzle *b* and holds the same, and thereby the delivery-pipe, in place.

A removable grid is provided for the base. The grid is made of a sheet-metal ring-like portion C, having downturned flanges *c* thereon. These flanges are provided with ears or extensions *c′* at intervals, which are slotted to receive the radially-arranged arms C′. These arms are arranged in the slots from the outside and project within the ring C and are shouldered to rest against the inner extensions *c′*. The outer ends of the arms are conformed to rest within the flaring portions of the base. By thus conforming the grid it may be made of comparatively light material and at the same time possess sufficient strength to properly support any cooking utensil which may be placed thereon and is practically non-breakable.

The top D, which is preferably dome-like in shape, is made up of an outer shell *d* and an inner shell *d′* of sheet metal. The outer shell *d* is provided with an outwardly-projecting flange at its base, and its edge is rolled over the outwardly-projecting flange of the inner shell *d′*. This forms an air-chamber in the top, the object of which will appear later.

The top D is provided with downwardly-projecting supports or rests *d″*, which are notched to engage the upper edge of the base portion A. The inner sides of the notches of the rests *d″* are inclined and conformed to the rim of the base portion A, so that the top readily centers itself upon the base. The rests *d″* are secured to the top by inserting in suitable perforations in the flange of the inner

shell *d'* and riveting therein, as clearly appears in Fig. 1.

By constructing the top D with an outer and inner shell an air-chamber is formed which protects the outer shell from excessive heat, so that it may be suitably ornamented or finished without such ornamentation or finish being destroyed.

The flange of the top projects outwardly beyond the base portion, so that the heated air and gases are deflected outwardly.

The shells *d* and *d'* of the top are punched up from sheet metal. The main portions of my improved gas-stove are, as stated, made from sheet metal, so that the structure is comparatively light and at the same time very durable.

When it is desired to disassemble the structure, the grid is removed, and by removing the burner the top can be inserted in an inverted position into the base. The legs B' may be quickly removed and placed within the base or top. The supporting-arms of the grid may be removed, so that the same may be inserted within the top or the base portion, as desired. It is evident that the structure in the knockdown condition can be arranged into a very compact package and also be quickly set up without the use of tools. When it is desired to use the stove as a cooking-stove, the top portion is removed.

I have illustrated and described my improved gas-stove in detail in the form preferred by me on account of its structural simplicity and convenience in assembling and disassembling the parts. I am, however, aware that it is capable of considerable variation in structural details without departing from my invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a gas-stove, the combination of a base portion stamped up from sheet metal, shaped like an inverted dome, having perforations in the lower portion thereof, and having an outwardly-flaring rim; legs therefor formed of sheet metal; leg-pockets having a retaining-strap across the same, formed in said base, adapted to retain said legs under spring tension; a gas-delivery pipe inserted through a suitable perforation in one of said legs; a threaded nozzle thereon inserted through the bottom of said base; a burner threaded onto said nozzle; and a suitable top, for the purpose specified.

2. In a gas-stove, the combination of a base portion stamped up from sheet metal, shaped like an inverted dome, having perforations in the lower portion thereof, and having an outwardly-flaring rim; a gas-delivery pipe; a threaded nozzle thereon inserted through the bottom of said base; a burner threaded onto said nozzle; a grid, consisting of a ring-like body portion of sheet metal, having downturned flanges; slotted projections or lugs on said flanges; radially-arranged supporting-arms adapted to engage the rim of said base, inserted through said slots and projecting within said rim; a dome-shaped top consisting of outer and inner shells of sheet metal, having outturned flanges at their bases secured together to form an air-chamber, the said flange portion of said top projecting beyond the rim of said base; downwardly-projecting supports for said top, having notches in their lower ends adapted to engage the rim of said base, said notches being shaped to assist in centering the said top portion of said base, for the purpose specified.

3. In a gas-stove, the combination of a base portion stamped up from sheet metal, shaped like an inverted dome, having perforations in the lower portion thereof, and having an outwardly-flaring rim; a gas-delivery pipe; a threaded nozzle thereon inserted through the bottom of said base; a burner threaded onto said nozzle; a dome-shaped top consisting of outer and inner shells of sheet metal, having outturned flanges at their bases, secured together to form an air-chamber, the said flange portion of said top projecting beyond the rim of said base; downwardly-projecting supports for said top, having notches in their lower ends adapted to engage the rim of said base, said notches being shaped to assist in centering the said top portion of said base, for the purpose specified.

4. In a gas-stove, the combination of a base portion stamped up from sheet metal, shaped like an inverted dome, having perforations in the lower portion thereof, and having an outwardly-flaring rim; a gas-delivery pipe; a threaded nozzle thereon inserted through the bottom of said base; a burner threaded onto said nozzle; a grid, consisting of a ring-like body portion of sheet metal, having downturned flanges; slotted projections or lugs on said flanges; radially-arranged supporting-arms adapted to engage the rim of said base, inserted through said slots and projecting within said rim; and a suitable top, for the purpose specified.

5. In a gas-stove, the combination of a base portion stamped up from sheet metal, having perforations in the lower portion thereof; legs therefor formed of sheet metal; leg-pockets formed in said base; a burner; a grid, consisting of a ring-like body portion of sheet metal, having downturned slotted flanges; radially-arranged supporting-arms adapted to engage the rim of said base, inserted through said slots; a top consisting of outer and inner shells of sheet metal, having outturned flanges at their bases, secured together to form an air-chamber, the said flange portion of said top projecting over said base; downwardly-projecting supports

for said top adapted to rest upon said base, for the purpose specified.

6. In a gas-stove, the combination of a base portion stamped up from sheet metal, having perforations in the lower portion thereof; a burner; a grid consisting of a ring-like body portion of sheet metal, having downturned slotted flanges; radially-arranged supporting-arms adapted to engage the rim of said base, inserted through said slots; a top consisting of outer and inner shells of sheet metal, having outturned flanges at their bases, secured together to form an air-chamber, the said flange portion of said top projecting over said base; downwardly-projecting supports for said top, adapted to rest on said base, for the purpose specified.

7. In a gas-stove, the combination of a base portion stamped up from sheet metal, having perforations in the lower portion thereof; legs therefor formed of sheet metal; leg-pockets formed in said base; a gas-delivery pipe inserted through a suitable perforation in one of said legs; a threaded nozzle thereon inserted through the bottom of said base; a burner threaded onto said nozzle; a top consisting of outer and inner shells of sheet metal, having outturned flanges at their bases, secured together to form an air-chamber, the said flange portion of said top projecting over said base; downwardly-projecting supports for said top adapted to rest upon said base, for the purpose specified.

8. In a gas-stove, the combination of a base portion stamped up from sheet metal, having perforations in the lower portion thereof; a gas-delivery pipe; a threaded nozzle thereon inserted through the bottom of said base; a burner threaded onto said nozzle; a grid, consisting of a ring-like body portion of sheet metal; having downturned slotted flanges; radially-arranged supporting-arms adapted to engage the rim of said base, inserted through said slots; and a top consisting of outer and inner shells of sheet metal, arranged to form a sealed chamber, for the purpose specified.

9. In a gas-stove, the combination of a base portion stamped up from sheet metal, having perforations in the lower portion thereof; suitable legs therefor; leg-pockets formed in said base, adapted to retain said legs under spring tension; a burner; a grid, consisting of a ring-like body portion of sheet metal, having downturned slotted flanges; radially-arranged supporting-arms adapted to engage the rim of said base, inserted through said slots; and a top consisting of outer and inner shells of sheet metal, arranged to form a sealed chamber, for the purpose specified.

10. In a gas-stove, the combination of a base portion stamped up from sheet metal, having perforations in the lower portion thereof; a burner; a grid, consisting of a ring-like body portion of sheet metal, having downturned slotted flanges; radially-arranged supporting-arms adapted to engage the rim of said base, inserted through said slots; and a top consisting of outer and inner shells of sheet metal, arranged to form a sealed chamber, for the purpose specified.

11. In a gas-stove, the combination of a base; a burner; a grid consisting of a ring-like body portion of sheet metal having downturned slotted flanges at its inner and outer edges; and radially-arranged supporting-arms inserted through said slots, for the purpose specified.

12. In a gas-stove the combination of a base portion stamped up from sheet metal, having air-openings in the lower portion thereof; suitable legs for said base; a top consisting of an inner and outer shell of sheet metal, having a projecting flange at its lower end; and supports *d''* for said top adapted to engage the upper edge of said base, whereby said top is supported above said base to form an air-opening between the same, for the purpose specified.

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

H. S. HUMPHREY. [L. S.]

Witnesses:

EVA E. HOUSE,

CHARLES A. MERRELL.