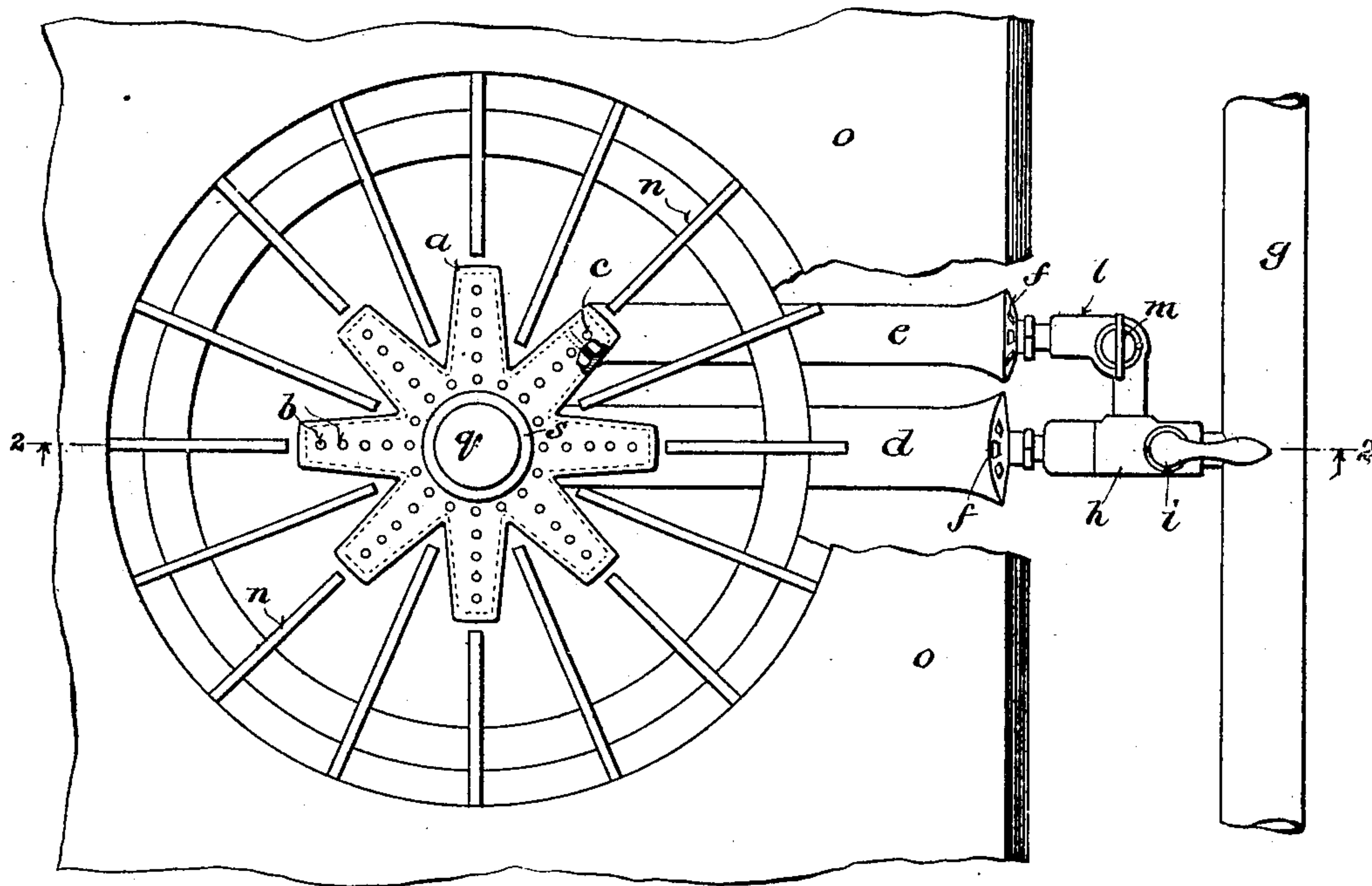


J. T. SCOLLARD.  
GAS STOVE BURNER.  
APPLICATION FILED JUNE 10, 1907.

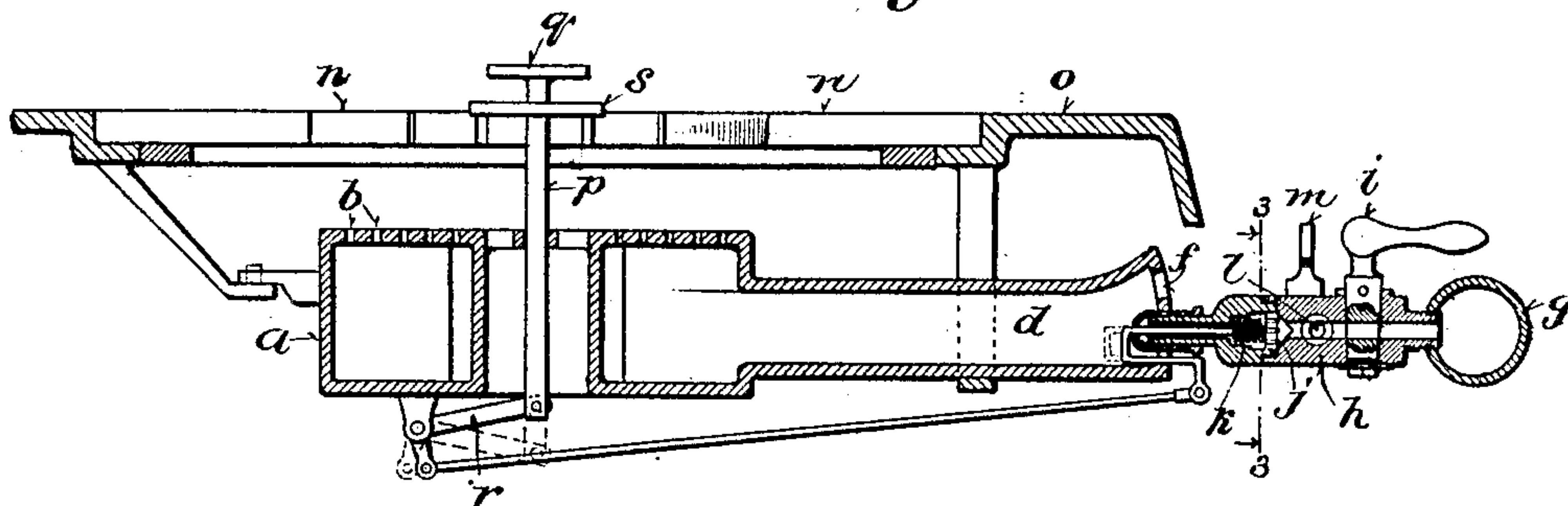
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Patented Nov. 24, 1908.

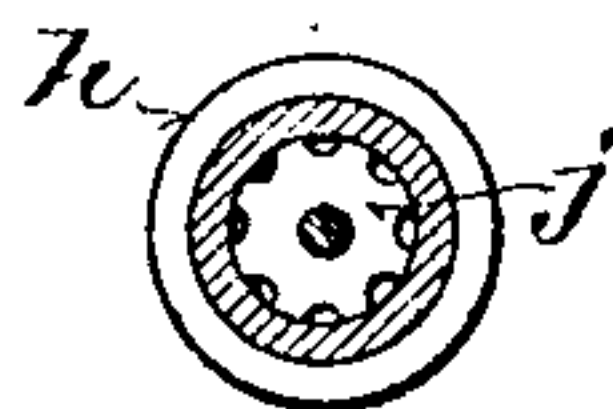
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

Wm. Palm

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# UNITED STATES PATENT OFFICE.

JOHN T. SCOLLARD, OF MILWAUKEE, WISCONSIN.

## GAS-STOVE BURNER.

No. 904,813.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed June 10, 1907. Serial No. 378,134.

*To all whom it may concern:*

Be it known, that I, JOHN T. SCOLLARD, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Gas-Stove Burners, of which the following is a specification, reference being had to the accompanying drawing forming a part thereof.

The main objects of this invention are to prevent needless consumption and waste of gas by automatically shutting off the main supply to the burner when a cooking utensil is removed from its position over the burner, the supply being automatically turned on by the weight of the utensil when it is placed over the burner; to produce simple, effective and durable mechanism which can be easily adapted and applied to burners of different forms and sizes for this purpose; to provide such a burner with an easy working valve which requires no packing, which will be effective and reliable in operation and which can be readily removed and replaced; to provide a pilot or auxiliary jet or burner whose flame will be of the same kind and quality as that of the main burner and will form a part thereof and cooperate therewith when the main burner is in use, and which will serve not only as a lighter for the main burner, but also as a warmer or as an independent burner for cooking or heating when the full capacity of the main or entire burner is not required; and generally to improve the construction and operation of burners of this class.

The invention consists in certain novel features of construction and in the peculiar arrangement and combinations of parts as hereinafter particularly described and pointed out in the claims.

In the accompanying drawing like characters designate the same parts in the several figures.

Figure 1 is a plan view of a burner embodying the invention, in connection with associated parts of a gas range or stove; Fig. 2 is a vertical section of the same on the line 2 2, Fig. 1; and Fig. 3 is an enlarged section on the line 3 3, Fig. 2, showing the automatic cut-off valve.

Although the present invention is applicable with little or no modification in construction and arrangement of parts, to burners of various shapes and sizes, for the pur-

pose of illustration it is shown and will be described in connection with a burner of the common and well known star form.

*a* designates the body of the burner formed in its upper face with openings or jets *b* constituting the main burner, and one or more isolated or separate jets *c* constituting an auxiliary burner and lighter or pilot burner, the auxiliary burner chamber being separated from the main burner chamber by a partition, as shown in Fig. 1.

The burner is formed or provided with separate air supply and mixing tubes *d* and *e*, each having at its outer end an opening or openings *f* for the admission of air. These openings may be provided in the usual or any suitable manner with valves (not shown) for adjusting and regulating the air supply to the main and auxiliary parts of the burner.

The tube *d* communicates at its inner end with the main burner chamber and the openings or jets *b*, and the tube *e* communicates at its inner end with the other chamber and the opening or openings *c* constituting the lighter and auxiliary burner.

*g* is the main gas supply pipe of the stove or range, and *h* is a branch supply connection between the main and the mixer tube *d*. It is provided with a stop cock *i* for shutting off and turning on the gas supply to the entire burner, and is made in two separable parts connected by screwthreads or otherwise, as shown in Fig. 2, and forming a valve case. One of these parts terminates in a nipple which normally projects into the mixer tube *d*.

*j* is a conical cut-off valve fitted in the chamber of the valve case and normally held by a spring *k* against its seat. It is formed as shown in Fig. 3, with peripheral guiding projections to keep it centered in the valve chamber. The stem of this valve extends inwardly therefrom through the gas passage in the nipple and is then bent downwardly and outwardly, passing through the end of the tube *d* in which it is guided. Packing is thus avoided and any gas which may leak by the valve and its stem will pass directly into the burner and not into the room.

A branch connection *l* provided with a regulating cock *m*, leads laterally from the connection *h* between the cock *i* and valve *j* into the outer end of the mixer tube *e*.

*n* designates a grate such as is usually re-



movably fitted in an opening in the stove or range top *o* for supporting a cooking vessel or utensil.

*p* is a vertically movable stem preferably formed or provided at its upper end which projects normally above the grate *n*, with a disk or head *q*. At its lower end it is pivoted to one arm of an angular lever *r* fulcrumed to an ear on the under side of the burner. The other arm of this lever is connected by a rod with the stem of the valve *j*. The stem *p* is preferably provided below the disk or head *q* at its upper end with a deflector *s* for spreading the flame of the burner.

In the operation of the burner the cocks *i* and *m* are opened, thus admitting gas from the main supply pipe *g* through the branches *h* and *l* into the mixer tube *e* of the lighter and auxiliary burner. The jet or jets *c* of this burner are lighted and burn continuously as long as needed. When a cooking vessel or other utensil is placed in position on the grate *n* over the burner, it is brought in contact with the disk or head at the upper end of the stem *p* and depressing the same to the level of the grate, operates through the connections above described to open the valve *j* against the tension of the spring *k*. Gas is thus admitted to the tube *d*, where it is mixed with the proper proportion of air entering through the openings *f* and the mixture is supplied to the openings or jets *b* of the main burner, and upon issuing from said openings or jets is ignited by the flame of the constantly burning jet or jets *c* of the lighter or pilot burner. When the vessel or other utensil is removed from the grate *n*, the valve *j* is instantly closed and the disk or head *q* is lifted to its initial position above the grate by the spring *k*. The supply of gas is thus automatically cut off from the main burner openings or jets *b* and unnecessary consumption of fuel is avoided, without care or attention.

The gas supplied to the tube *e* through the connection *l* is mixed with air entering through the openings *f* in said tube, the same as the supply of gas to the main burner jets, and the mixture thus formed produces a flame at the opening or jet *c*, of the same kind and quality as those of the main burner jets *b*, with which it coöperates.

The lighter or auxiliary burner may be used whenever desired, for warming purposes or for light work, independently of the main burner, the flame being adjusted and regulated by means of the cock *m*.

Whenever the burner is no longer needed for any purpose, the gas supply is shut off from both parts of it by closing the cock *i*, the same as with an ordinary burner of this class.

The automatic cut-off valve *j* constructed, arranged and connected as herein shown and

described, requires no packing, works with freedom and certainty, and may be easily removed and replaced by unscrewing or disconnecting the nipple member of the valve case or connection *h* from the member which is attached to the main gas supply pipe *g*.

I claim:

1. A gas stove burner comprising a body having main and auxiliary chambers and jets, separate gas and air supply connections leading into said chambers, a stop cock in the main gas supply connection, a self-closing cut-off valve in the main gas supply connection between said cock and the burner, and a vertically movable part projecting above the burner and adapted when subjected to the weight of a utensil placed thereon, to open said valve, substantially as described.

2. A gas stove burner comprising a body having main and auxiliary chambers and jets, separate air and gas supply connections leading into said chambers, a stop cock in the main gas supply connection, a self-closing valve in the main gas supply connection between said cock and the burner, a regulating cock in the auxiliary gas supply connection, and a vertically movable part connected with and adapted to open said valve when a utensil is placed in position over the burner, substantially as described.

3. A gas stove burner comprising main and auxiliary burners having separate gas supply connections and the main burner having an air supply and mixer, a valve case forming a part of the main gas supply connection and composed of separable parts one of which terminates in a nipple projecting normally into said air mixer, a spring seated valve which is inclosed and guided in said case and the stem of which extends loosely through the gas passage in said nipple and thence outwardly through the air mixer, an angular lever below the burner, a rod connecting one arm of said lever with said valve stem, and a vertically movable part projecting normally above the burner and connected with the other arm of said lever, substantially as described.

4. A gas stove burner comprising a body having separate chambers provided with main and auxiliary jets and having separate air supply and mixer tubes leading into said chambers, a gas supply connection leading into the main mixer tube and provided with a self-closing valve, a vertically movable part projecting normally above the burner and connected with said valve, and a gas supply connection leading into the auxiliary air mixer tube and provided with a regulating cock, substantially as described.

5. A gas stove burner comprising a body having chambers separated from each other by a partition and provided with main chambers, a gas supply connection leading

into the main mixer tube and provided with a cut-off cock and with a self-closing valve between said cock and the burner, a vertically movable part projecting normally above the burner and connected with said valve, and a branch gas connection leading out from the main connection between the cock and valve therein into the auxiliary air

mixer tube and provided with a regulating cock, substantially as described.

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

JOHN T. SCOLLARD.

Witnesses:

CHAS. L. GOSS,  
J. E. GOSS.