

(No Model.)

G. W. COLEMAN.

GAS STOVE.

No. 349,209.

Patented Sept. 14, 1886.

Fig. 1.

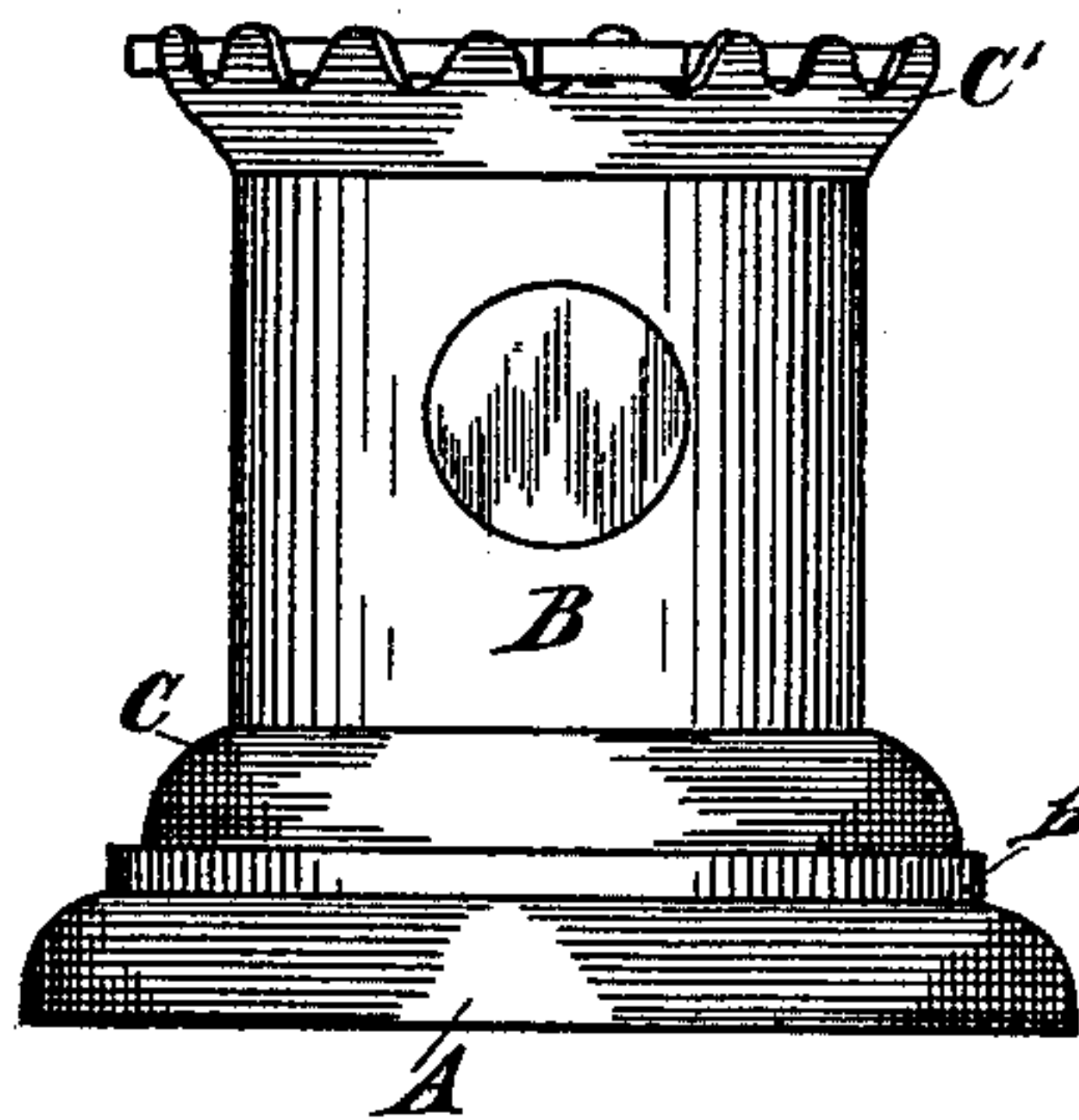


Fig. 2.

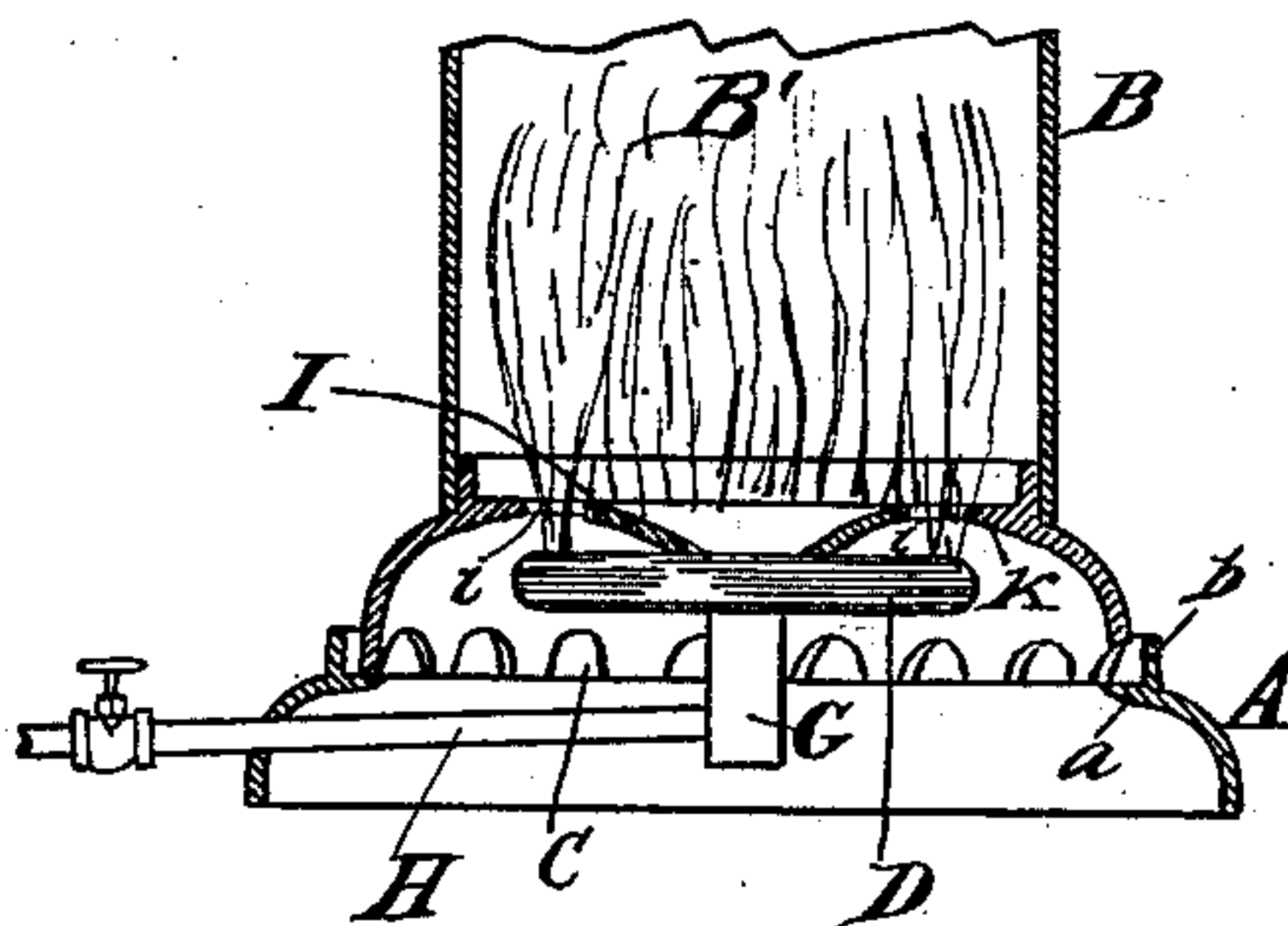


Fig. 3.

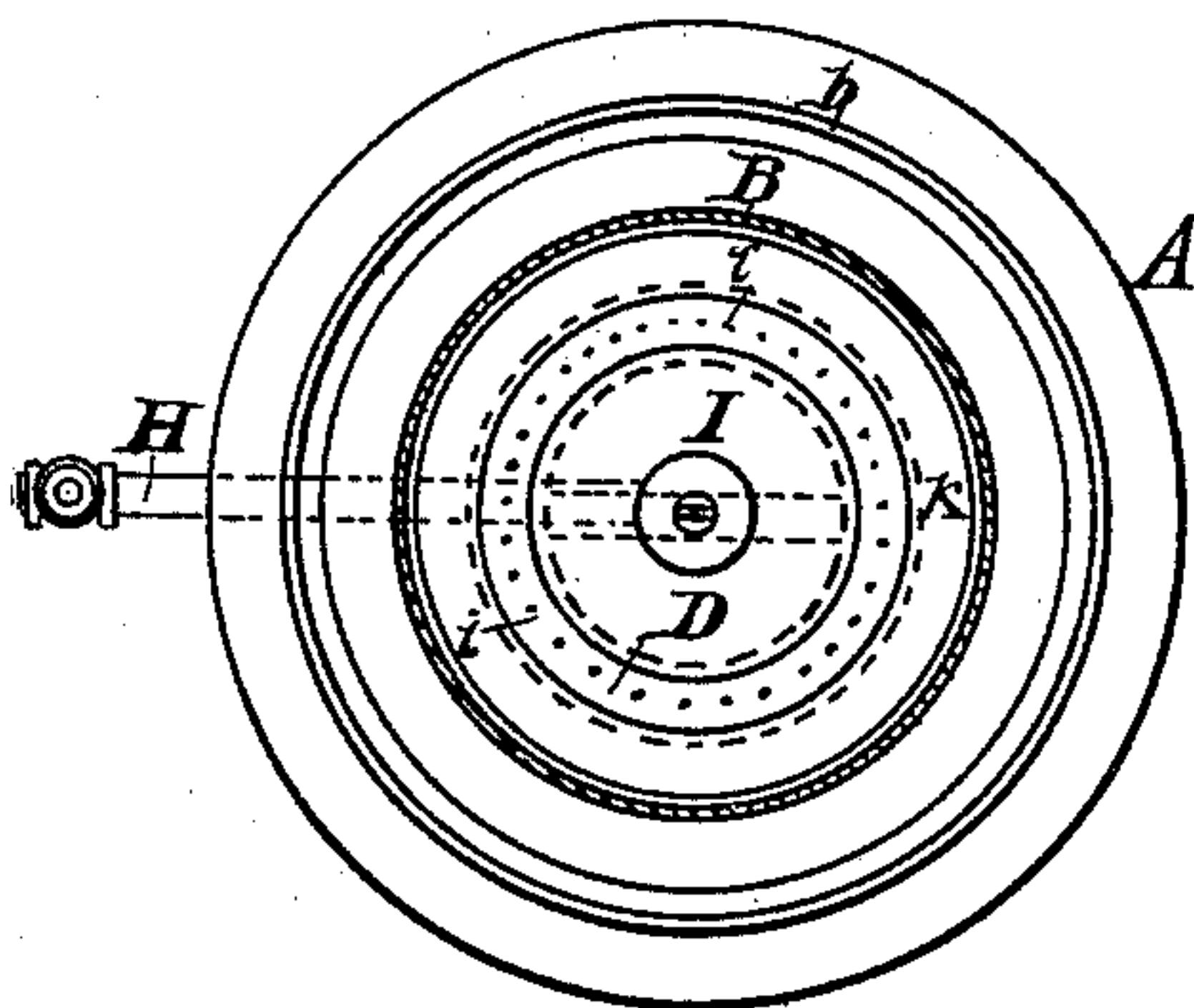
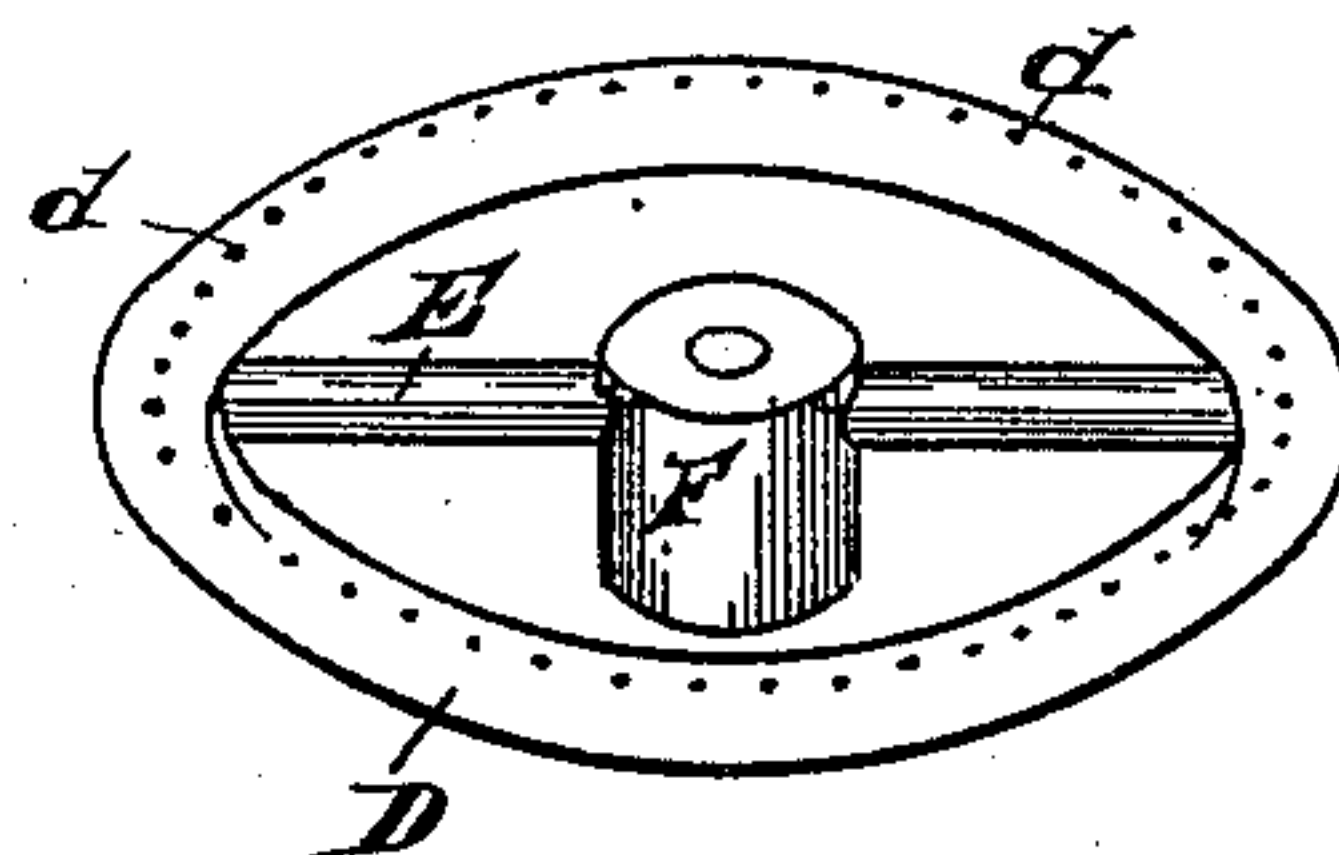


Fig. 4.



Attest

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UNITED STATES PATENT OFFICE.

GEORGE W. COLEMAN, OF CINCINNATI, OHIO.

GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 349,209, dated September 14, 1886.

Application filed May 27, 1885. Serial No. 166,850. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. COLEMAN, a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Gas-Stoves, of which the following is a specification.

My invention relates to an improved gas-burner for stoves.

Great difficulty has been experienced hitherto in obtaining suitable results in the consumption of gasoline, gas, or carbureted air in heating and cooking stoves, because of the difficulty of properly supplying air to the burner-orifices; hence a smoky flame is the result. By my invention these objections are obviated, as a thorough mingling of the air and gas is effected as they enter the combustion-chamber.

The invention consists in the novel construction and combinations of parts hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of my improved chimney; Fig. 2, a central cross-section, partly in elevation; Fig. 3, a top plan view of the burner, with the chimney removed; Fig. 4, a detail view of the burner-coil.

A represents the base of the chimney or flue, which is made of metal, of any desired form.

a represents an annular flange formed upon the inside and at the top of the base.

b represents a vertical outside flange or rim, which is simply used as a guard to prevent the top part of the chimney from being jostled off when it is made of two parts.

B represents the chimney or combustion-chamber, preferably made of metal. This chimney is provided with scalloped points in the bottom rim, between which are air-spaces C, for supplying air to the burner. The top section, C', is a duplicate of the bottom section, so that the chimney may be used either side up, as desired. The barrel portion is preferably made of sheet metal and the rims C C' of cast metal, so as to have sufficient weight to hold the chimney in position on the base.

D represents the jet-burner, which is preferably in the form of a coil or annular tube. It is pierced with a series of small holes, *d*, upon the upper surface of the tube.

E represents a bridge-pipe connecting the annular tube D with the hollow hub F.

G represents a pipe tapping into the hub F, and H a branch pipe tapping into the pipe G, for supplying gas to the annular tube D. The pipe H is connected to the gas source of supply. The tube or burner D occupies a position within the base of the chimney, and is so located that the air has free access all around the jet-pipe.

I represents a plate supported on the center of the hub F. It is arched and extends backward and outward, so as to leave a free space above the barrel D, terminating on a plane abutting an outside plate, K, preferably formed on the base of the chimney, leaving an air-space, *i i*, over the ring D of sufficient area to properly throttle the air and create a draft, the jets *d* being near the center of this air-space *i*.

The plates I K form a contracted entrance at the base of the chimney into the combustion-chamber B', and direct and compel the air to mingle and mix with the gases escaping through the jets *d* as they enter the chamber B', and by reason of the heat induce a strong draft and an adequate supply of oxygen, and furnish a complete combustion of all the gases without causing smoke.

I have found by experiment that not only carbureted air but fixed gas will burn in this device without smoke, and without causing an odor or unpleasant smell in the room, and in this respect it is an improvement over other burners in use in gas-stoves.

These stoves and chimneys can be employed in the ordinary manner common to kerosene and gas stoves, and may be combined with ovens or heating-surfaces, as desired.

The drawings illustrate only the annular form of my burner with the jets escaping into a contracted air-space, which freely admits air upon both sides of the jets and leads into a large heating and combustion chamber formed in the upper part of the chimney.

I do not wish to limit my claims herein to the annular form of burner, as I propose to use any form of burner which will successfully cooperate with a stove having a base with an annular opening in its top.

I claim—

1. The combination, in a gas-stove, of a base having an annular opening in its top, a chimney forming a combustion-chamber above and

supported upon said base, and a tubular jet-burner located beneath the annular opening and admitting air upon both sides of each jet, whereby a thorough mingling of the air and gas is effected as they enter the combustion-chamber, substantially as described.

2. The combination, in a gas-stove, of a base having an annular contracted opening in its top, a chimney or flue supported upon said base and constituting a combustion-chamber, and a jet-burner located within the base beneath the opening, and having air-passages between the walls of the base and the burner and between the jets, whereby a thorough mingling of the air and gas is effected substantially at the ini-

tial point of combustion, substantially as described.

3. A gas-stove composed of the base A, having the annular plates I and K, separated at their adjacent edges to form a contracted opening, the chimney B, and the tubular gas-burner having jets *d* arranged beneath and in line with the opening between the plates, substantially as described.

In testimony whereof I have hereunto set my hand.

GEORGE W. COLEMAN.

Witnesses:

ROBERT ZAHNER,

M. E. MILLIKAN.