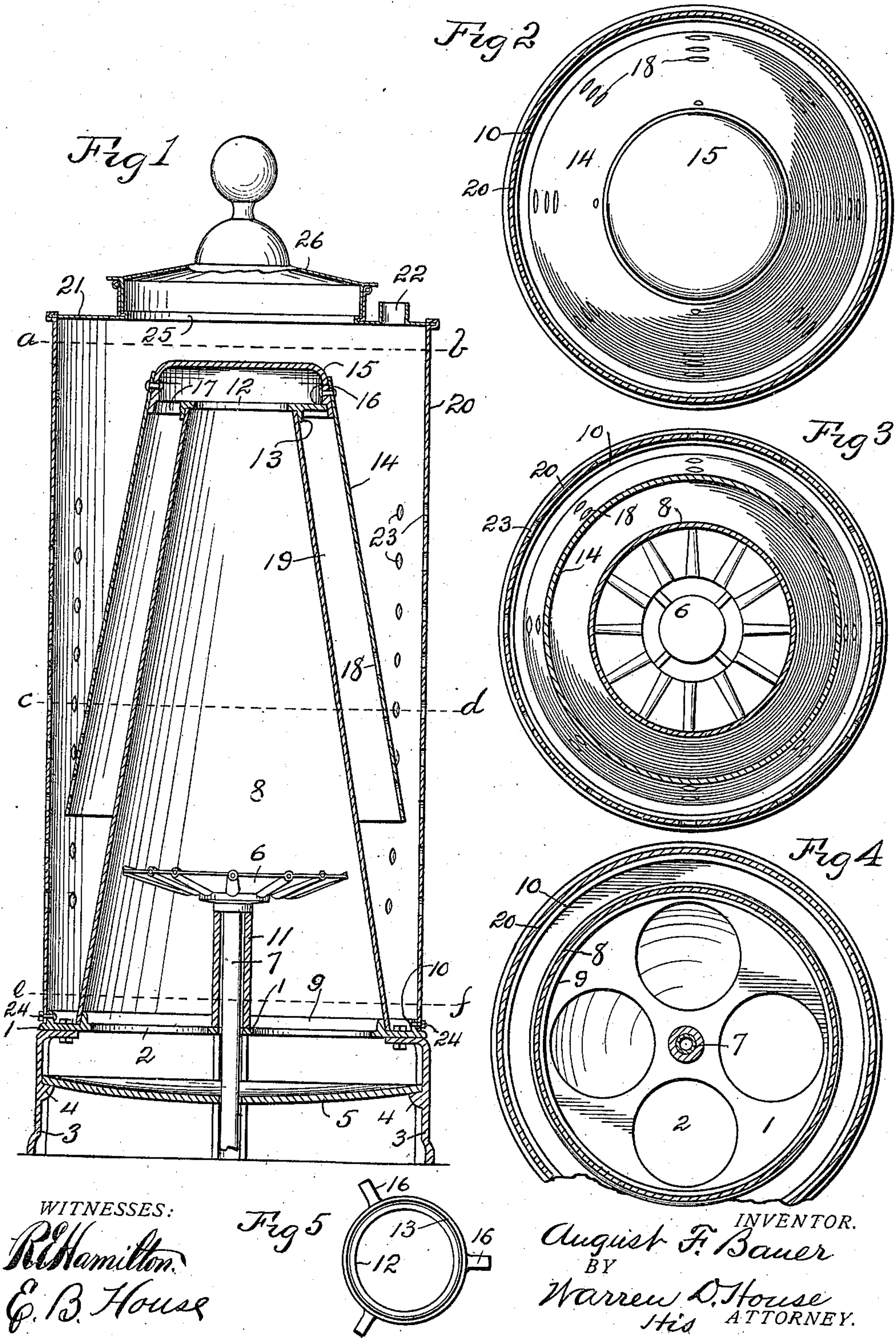


A. F. BAUER.  
GAS OR VAPOR STOVE.  
APPLICATION FILED JAN. 25, 1908.

963,266.

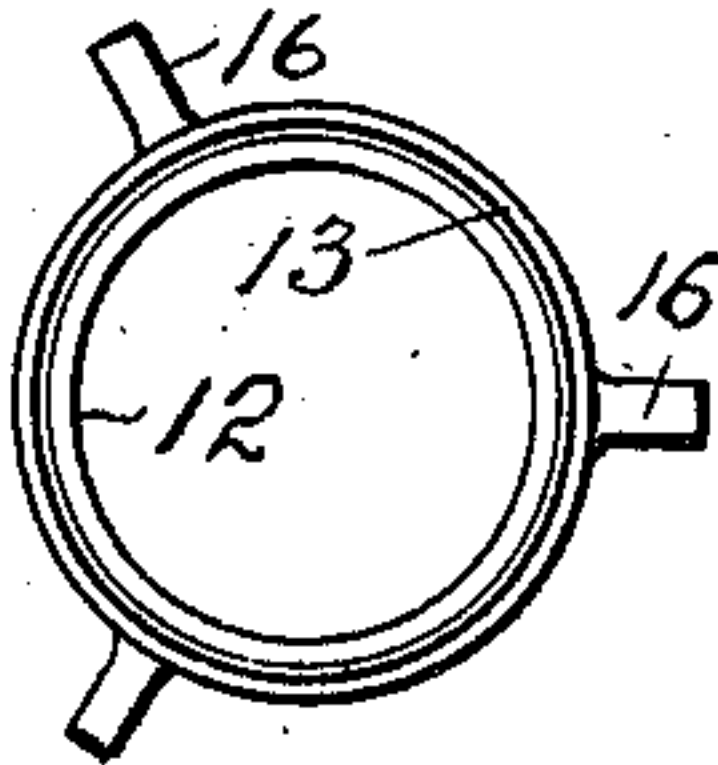
Patented July 5, 1910.



WITNESSES:

R. Hamilton  
E. B. House

Fig 5



INVENTOR.  
August F. Bauer  
BY  
Warren D. House  
His ATTORNEY.



# UNITED STATES PATENT OFFICE.

AUGUST F. BAUER, OF KANSAS CITY, MISSOURI.

GAS OR VAPOR STOVE.

963,266.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed January 25, 1908. Serial No. 412,596.

*To all whom it may concern:*

Be it known that I, AUGUST F. BAUER, a citizen of the United States, and a resident of Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Gas or Vapor Stoves, of which the following is a specification.

My invention relates to improvements in stoves.

It is particularly adapted for use in connection with gas or vapor burners.

The object of my invention is to provide a stove in which gas or hydrocarbon fuel may be economically burned and with intense heating effect.

A further object of my invention is to provide a construction which is strong, durable and cheap to manufacture.

The novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawings illustrating my invention—Figure 1 is a central vertical sectional view of my improved stove. Fig. 2 is a cross section on the dotted line *a—b* of Fig. 1. Fig. 3 is a cross section on the dotted line *c—d* of Fig. 1. Fig. 4 is a cross section, partly broken away, taken on the dotted line *e—f* of Fig. 1. Fig. 5 is a bottom view of the ring which supports the outer shell.

Similar characters of reference denote similar parts.

1 denotes a horizontal base provided with one or more vertical holes 2 and having downwardly extending supporting legs 3, each provided on its inner side with a lug 4 for supporting a horizontal, circular guard 5, which is disposed below the openings 2. The guard 5 is preferably of a concavo-convex form, the upper side of which is the concave side. The guard 5 protects the floor from the heat emanating from a gas or vapor burner 6 mounted upon the upper end of a supply pipe 7, which extends vertically through holes provided therefor in the guard 5 and base 1. A vertical inner shell or tube 8, preferably having upwardly converging walls, encircles the burner 6 and openings 2 and has its lower end fitted to the inner of two annular, concentric flanges 9 and 10, with which the upper side of the base 1 is provided. A vertical tube 11 encircles the supply pipe 7 and has its lower end supported upon the upper side of the base 1, the upper end supporting the burner

6 and supply pipe 7. Mounted upon the upper end of the tube 8 is a horizontal ring 12 having on its under side an annular flange 13, in which is fitted the upper end of the tube 8. An inverted cup-shaped outer shell encircles the upper portion of the tube 8. This outer shell comprises preferably a vertical outer tube 14, which converges upwardly and is secured at its upper end to a cap 15, supported above the tube 8 by peripheral lugs 16, provided on the ring 12, which lugs are disposed in an annular groove 17, provided on the lower end and inner side of the cap 15. Transverse holes 18, are provided in the tube 14 adjacent the lower end thereof. An annular flue space 19, is provided intermediate the tubes 8 and 14.

The tubes 8 and 14 are inclosed by a casing comprising a vertical tube 20, having its upper end closed by a head 21, provided with a vertical tubular portion 22, with which, if desired, a pipe, not shown, may be connected for carrying off the products of combustion. The tube 20 is provided preferably with transverse holes or perforations 23. The lower end of the tube 20 encircles and is secured to the annular flange 10 by the bolts 24.

In the operation of my invention the heated products of combustion, mixed with air entering the tube 8, through the openings 2, pass through the ring 12, into the cap 15, and thence down the flue space 19 into the tube 20, and from thence into the smoke pipe, not shown, through the tubular portion 22, when a smoke pipe is employed. When a smoke pipe is not employed the products of combustion, mixed with heated air, will pass from the tube 20 through the openings 23 and 22.

With the inner and outer shell and the burner disposed as shown in the drawing, the greatest heat is centered in the cap 15 which quickly becomes red hot. By reason of the downwardly flaring form of the tube 14, the heated products of combustion passing from the upper end of the tube 8 and cap 15, freely expand, thereby effecting a strong downward current through the flue space 19. The momentum of this downwardly moving current of heated air and products of combustion, carries such heated air and products of combustion downward toward the base 1 and in contact with the lower end of the tube 20. These parts be-

coming highly heated heat the air adjacent the floor.

25 denotes a central vertical opening in the head 21, which is normally closed by a cover or closure 26. This closure may be removed when it is desired to have a pipe, not shown, connected with the outlet opening 25 for conveying heat to an upper room.

10 Various modifications of my invention may be made, within the scope of the appended claim, without departing from its spirit.

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

In a stove, the combination with a hori-

zontal base having one or more vertical openings, of a vertical, upwardly converging tube supported upon said base and encircling said openings in the base, a ring supported upon the upper end of said tube, and having peripheral lugs, a cap supported by said lugs above the upper end of said tube, and an upwardly converging outer tube encircling the first named tube and having its upper end secured to said cap. 20 25

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

AUGUST F. BAUER.

Witnesses:

E. B. HOUSE,

R. E. HAMILTON.