No. 696,815. Patented Apr. 1, 1902.

H. J. HENRY.

GAS BURNER FOR STOVES.

(Application filed Dec. 21, 1901.)

(No Model.)

Fig. 1.

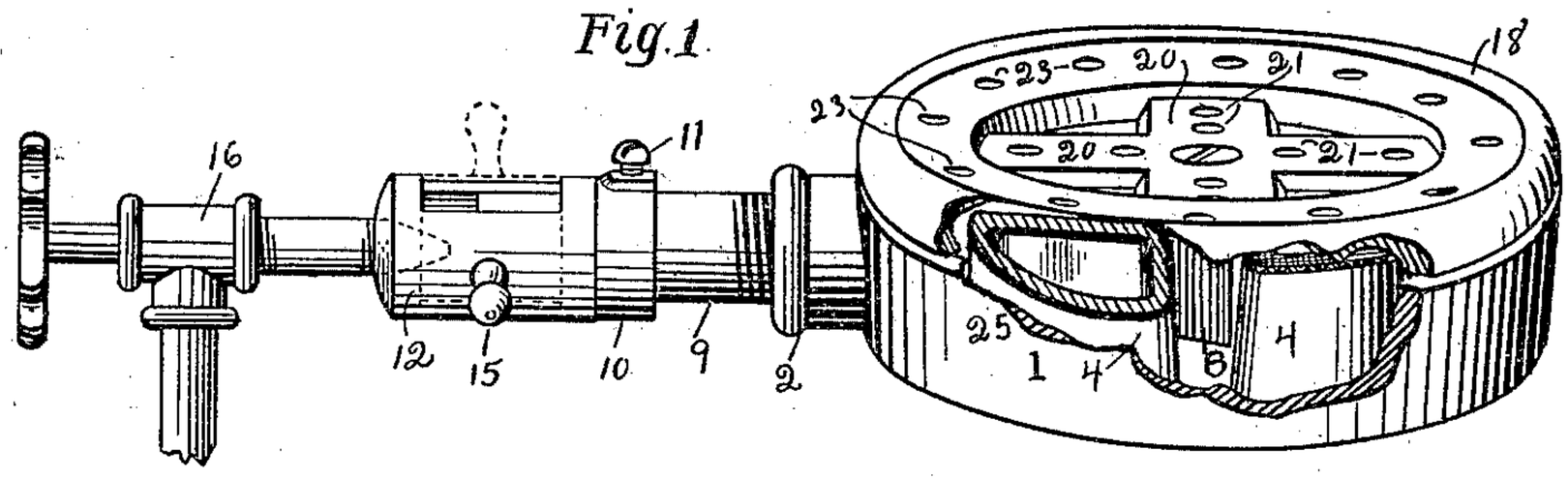


Fig. 2.

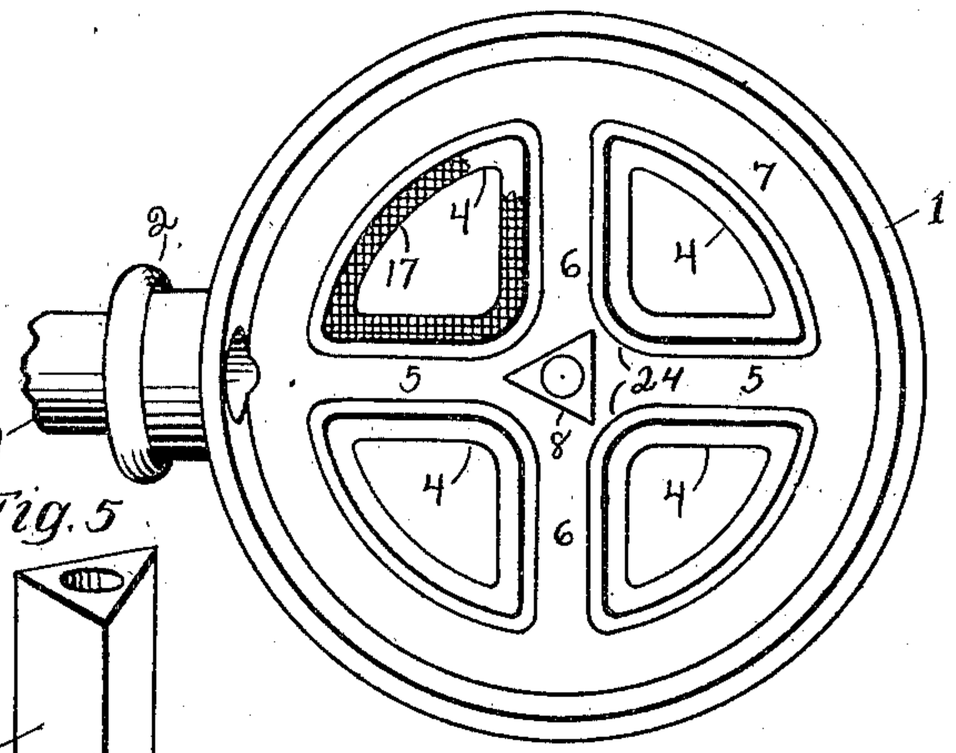


Fig. 3

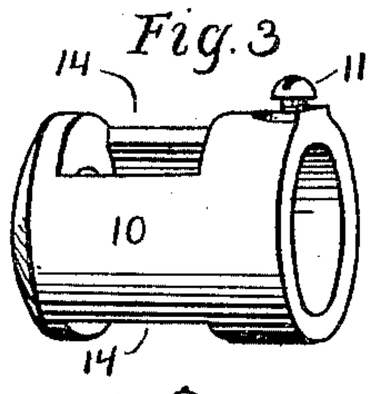


Fig. 4

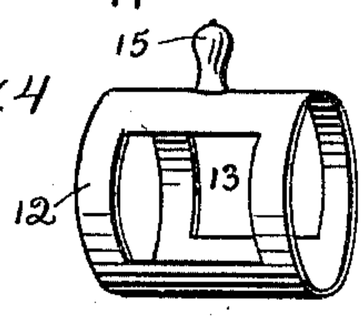


Fig. 5

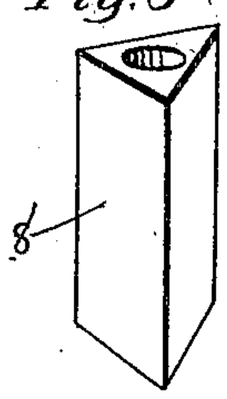


Fig. 6

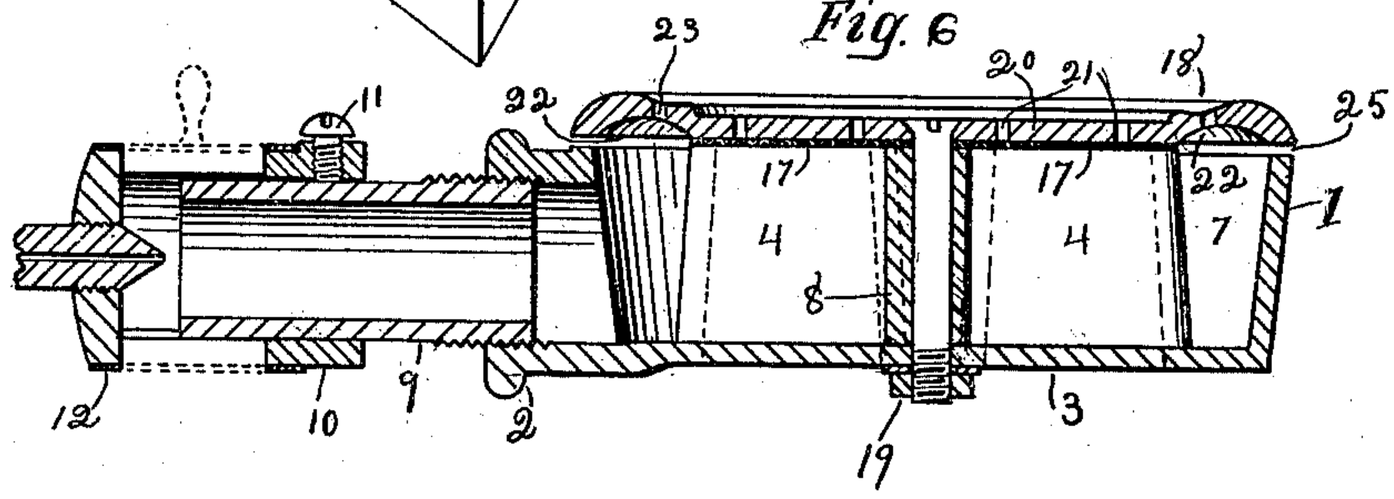
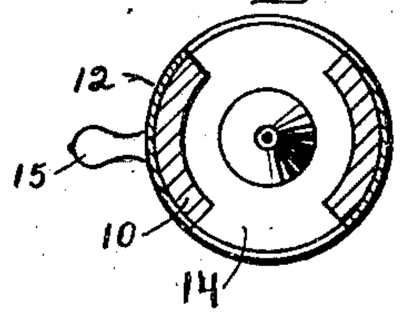


Fig. 7.



Witnesses
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UNITED STATES PATENT OFFICE.

HARVEY J. HENRY, OF MASSILLON, OHIO.

GAS-BURNER FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 696,815, dated April 1, 1902.

Application filed December 21, 1901. Serial No. 86,744. (No model.)

To all whom it may concern:

Be it known that I, HARVEY J. HENRY, a citizen of the United States, residing at Massillon, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Gas-Burners for Stoves; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures of reference marked thereon, in which—

Figure 1 is a perspective view of the burner, showing parts broken away. Fig. 2 is a top view of the burner, showing the cover removed. Fig. 3 is a detached view of the inlet thimble or section. Fig. 4 is a detached view of the shutter. Fig. 5 is a detached view of the gas-spreader. Fig. 6 is a vertical section. Fig. 7 is a transverse section of the inlet-cylinder and its shutter.

The present invention has relation to gas-burners for stoves; and it consists in the novel construction hereinafter described, and particularly pointed out in the claim.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the shell or body of the burner, which is substantially of the form shown and is provided with the connecting-flange 2. The shell 1 is provided with the integral bottom 3, to which integral bottom is attached or cast therewith the segmental partitions 4, which segmental partitions are spaced from each other, so as to produce the passages 5 and 6, which passages are located at right angles to each other. The partitions are spaced from the inner periphery of the shell and are so spaced for the purpose of forming the annular passage 7.

At the intersection of the passages 5 and 6 is located the post 8, which post is preferably formed triangular in cross-section and is formed of a size to provide suitable passages between the angles of the post. To the flange 2 is connected the supply-pipe 9, which supply-pipe is provided with the air-inlet section 10, said air-inlet section being securely held in proper position by means of the set-screw 11 or its equivalent. Upon the periphery of the air-inlet section 10 is located the shutter 12, which shutter is provided with the openings 13, said openings being so located and arranged that they will register with the openings 14, formed in the air-inlet section 10, and when it is desired to place the shutter in the position to allow the openings 14 to be fully opened the shutter 12 is so turned that the openings 13 will come directly over or opposite the openings 14; but when it is desired to cut off a part of the atmospheric air the shutter 12 is turned so as to partially close the openings 14, and thereby regulate the supply of air, and when it is desired to cut off all of the air the openings 14 may be fully closed.

For the purpose of providing a means for adjusting the shutter 12 the handle or knob 15 is provided. To the inlet-section 10 is connected the valve 16, which valve is of any construction and is of course for the purpose of regulating the supply of gas to the burner. This construction being common needs no description here.

Upon the tops of the partitions 4 are located suitable asbestos gaskets 17, which asbestos gaskets are for the purpose of properly cutting off the gas between the different passages and between the different partitions 4.

Upon the tops of the partitions 4 is located the cover 18, which cover is securely held in proper position by means of the clamping-bolt 19, which clamping-bolt is passed through the cover 18, the triangular post 8, and the bottom 3 of the shell 1.

For the purpose of providing a space between the bottom or under edge of the cover and the top or upper edge of the shell 1 said cover is set a distance above the top or upper edge of the shell 1, thereby allowing gas to escape and be consumed in a continuous flame entirely around the burner or shell and cover.

The cover 18 is provided with the arms or bars 20, which arms or bars are located directly over the passages 5 and 6. Said arms or bars are provided with the apertures 21, which apertures are for the purpose of allowing the gas to be consumed and a flame produced.

Directly over the annular passage 7 is located the convexo-concave flange 22, formed integral with the cover 18, and the convexo-

concave flange 22 is provided with a series of apertures 23, which are also for the purpose of allowing gas to pass and be consumed.

It will be understood that as gas enters the burner proper a portion of it will pass around the annular flange 7 and a portion will pass to the passage 6, the flow of gas being divided by means of the triangular post 8, and for the purpose of allowing a free flow of gas the inner portions of the partitions 4 are rounded, as shown at 24, by which arrangement an equal distribution of gas is brought about as between the various partitions 4.

In the drawings I have illustrated the partitions 4 formed hollow; but this is simply a question of judgment, as the same object can be accomplished by the employment of solid partitions; but in order to produce better distribution of the gas the outer portions of the partitions 4 are convexed, as illustrated in Fig. 2.

By providing the flange 22 and curving its bottom or under side a portion of the gas will be shunted downward and through the slot 25, thereby insuring a sufficient amount of gas to pass through the slot 25 to produce a continuous and solid flame.

The portion of gas passed through the apertures 23 will of course be burned adjacent to the flame emanating from the slot 25.

By providing the shutter 12 and locating it so that it can be turned to adjust the size of the air-inlet passages 14 I am enabled to regulate the quantity of air to be supplied or commingled with the gas. This feature is an important one, owing to the fact that the burner is designed to be used in various places, and of course more or less air may be desired, owing to the location of the burner proper.

It will be understood that the supply-pipe 9 may be differently located without departing from the nature of my invention.

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

In a gas-burner for stoves, the combination of a shell, a supply-pipe connected thereto, partitions located in the shell and spaced from each other, gas-passages located between the partitions and the shell, a cover spaced from the shell and said cover provided with an annular flange having a concaved bottom or under side and a series of apertures located through the flange having the concaved bottom, a plate located over the passages between the partitions in the shell and the plates provided with apertures, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HARVEY J. HENRY.

Witnesses:
J. A. JEFFERS,
F. W. BOND.