

No. 845,332.

PATENTED FEB. 26, 1907.

H. S. BUSEY.
GAS BURNER.

APPLICATION FILED NOV. 20, 1905.

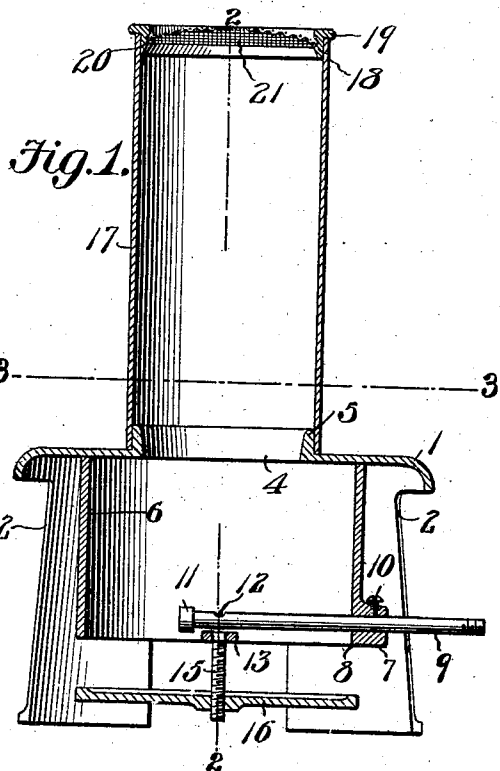


Fig. 1.

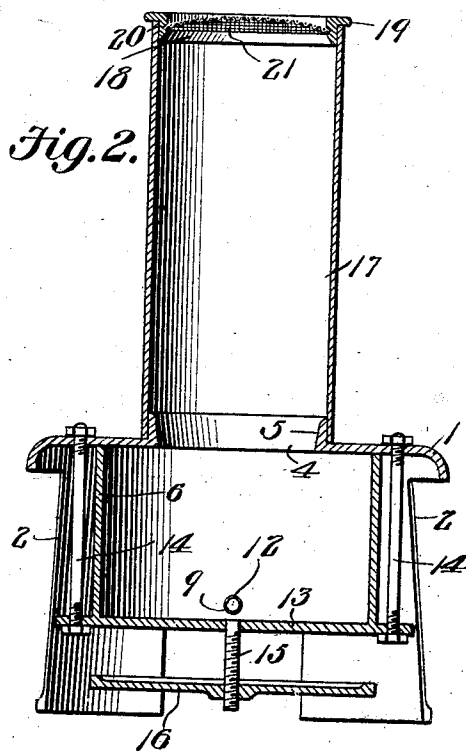


Fig. 2.

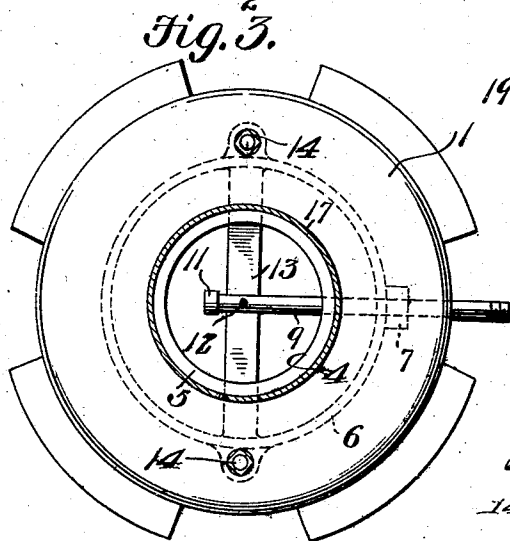


Fig. 3.

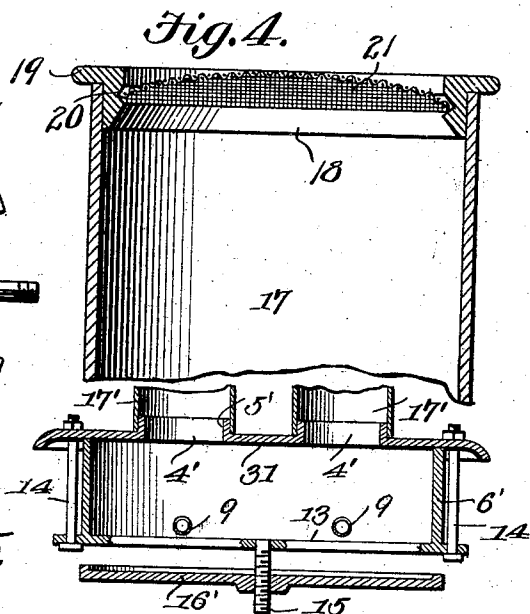


Fig. 4.

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

HERBERT STEVENSON BUSEY, OF CHAMBERSBURG, PENNSYLVANIA.

GAS-BURNER.

No. 845,332.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HERBERT STEVENSON BUSEY, a citizen of the United States, residing at Chambersburg, in the county of Franklin and State of Pennsylvania, have invented a new and useful Gas-Burner, of which the following is a specification.

This invention relates to gas-burners for heating and cooking purposes; and the object of the invention is to simplify and improve the construction and operation of this class of devices.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claim.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations, and modifications within the scope of the invention may be resorted to when desired.

In the drawings, Figure 1 is a vertical sectional view of a gas-burner constructed in accordance with the principles of the invention. Fig. 2 is a vertical sectional view taken on the plane indicated by the line 2 2 in Fig. 1. Fig. 3 is a horizontal sectional view taken on the plane indicated by the line 3 3 in Fig. 1. Fig. 4 is a sectional detail view, enlarged, of a portion of the device. Fig. 5 is a sectional detail view showing a modification.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

The base 1 of the improved burner is supported in a somewhat raised position by supports 2 2, which are spaced for the admission of air, and it is provided in its upper side with a central aperture 4, surrounded by an upstanding flange 5. The base-plate 1 has a downturned edge, and it is provided with a depending annular flange 6, which is of larger diameter than the aperture 4 and which is provided at one side with a boss 7, having a perforation 8 for the passage of a gas-pipe 9, which extends between the supports of the base and which is retained in position by a set-screw 10 in the boss 7. The inner end of the gas-pipe 9 has a cap or closure 11 and an

aperture 12, which latter faces in an upward direction and is disposed centrally beneath the aperture 4.

The flange 6 is provided at its lower edge with a diametrical cross-bar 13, in which is fitted a depending screw 15, supporting a disk 16, which may be rotated upon the screw to move it toward or from the lower edge of the flange 6 for the purpose of regulating the admission of air between said flange and the disk or closure. The latter may be readily manipulated by inserting the fingers between the supports 2 of the base.

Supported upon the base 1, in engagement with the flange 5, is a cylindrical stack 17 of suitable height, said stack being provided at its upper end with a ring or annulus 18, having a flange 19 engaging the upper edge of the member 17. The annulus 18 has an interior groove 20, into which is sprung a concavo-convex diaphragm 21, of foraminous material, such as wire-netting, said diaphragm being readily sprung into the groove and there retained by its inherent resiliency.

The operation of this improved burner will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. The gas-pipe 9 is connected in any suitable manner with a source of supply, and it is obviously to be provided with a regulating-valve, which latter, however, is not shown. When gas is permitted to flow through the aperture 12, it becomes mixed with the atmospheric air entering beneath the lower edge of the flange, and the mixture as it rises through the stack 17 and issues through the foraminous diaphragm 21 may be readily ignited. As the diaphragm, the annulus 18, and the upper end of the stack become heated an upward draft will be created, which is effective in causing the atmospheric air to rush in beneath the lower edge of the flange 6, the air and the gas becoming thoroughly intermixed within said flange and during the upward passage through the stack 17.

In the preferred embodiment of the invention the flange 6 is made separate from the base, but integral with the cross-bar 13, which latter extends at opposite sides of the flange for the passage of bolts 14, whereby the flange member 6, having the cross-bar 13, is secured upon the under side of the base. It is desired to be understood, however, that no limitation is made to this precise construction, as the flange 6 might be formed integrally

upon the base, if preferred, within the scope of the invention.

As shown in Fig. 5 of the drawings, an extended base (here designated 31) may be provided with a plurality of apertures, as 4', each surrounded by an upstanding flange 5' and each of the flanges 5' having a stack 17' connected therewith, the several apertures being disposed within the compass of a single depending flange 6', having an adjustable disk or closure 16' to regulate the admission of air within the flange 6'. Under this construction a battery of any desired number of burners arranged in any desired relation may be made.

The improved device, as will be seen, is extremely simple in construction, and it has proven to be practically efficient in every respect.

Having thus described the invention, what is claimed is—

A gas-burner comprising a base having spaced supporting-legs, a flange depending from said base and extending between the legs and spaced from the same, a pipe passing transversely through the flange and having an outlet located within the same, a stack located upon the base, a screw concentrically arranged and supported by said flange, a plate having a central screw-threaded perforation which receives said screw.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HERBERT STEVENSON BUSEY.

Witnesses:

S. H. STOLTZFUS,
C. P. GROVE.