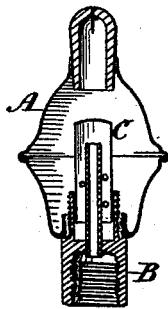


H. A. JERAULD.  
Gas-Burner.

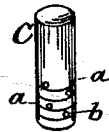
No. 203,159.

Patented April 30, 1878.

*Fig. 1.*



*Fig. 2.*



*Witnesses:*  
*Philip F. Larner*  
*W. B. Pauldwell*

*Inventor:*  
*Herbert A. Jerauld.*  
*By [Signature] Attorney*

# UNITED STATES PATENT OFFICE.

HERBERT A. JERAULD, OF WATSEKA, ILLINOIS.

## IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. **203,159**, dated April 30, 1878; application filed January 25, 1878.

*To all whom it may concern:*

Be it known that I, HERBERT A. JERAULD, of Watseka, in the county of Iroquois and State of Illinois, have invented certain new and useful Improvements in Gas-Burners; and I do hereby declare that the following specification, taken in connection with the drawings furnished, and forming a part of the same, is a clear, true, and complete description of my invention.

The object of my invention is to provide a simple and comparatively inexpensive gas-burner, in which the elements of which the gas is composed shall be thoroughly commingled in passing through the burner to its tip, and which is capable of ready adjustability after the separation of the main parts of which the burner is composed; and my invention consists in the combination, with a gas-burner having a detachable base, of a central vertical tube and a graduated sliding check or cap, which is perforated to afford radial gas-passages at different longitudinal and peripheral points, and is fitted to slide within or over a portion of the base and surround the inner tube. This sliding check is graduated by being provided with a series of annular scores or "check-marks," and at each score there is one or more perforations, forming passages for the gas into the body of the burner; and these passages are not only located at different points with reference to the length or height of the sliding check, but also at different points with reference to its periphery.

By reason of these last-specified peculiarities, when the check is raised, not only a larger quantity of gas is permitted to flow into the body of the burner, but it is delivered in numerous small jets in various radial directions, which secures a desirable intermingling of the gaseous elements, and the number of the annular scores exposed indicates the number of jets thus opened.

In practice each burner will have its check adjusted to perform the particular service required; but as the check slides and is graduated, it is an easy matter to readjust from time to time; or a set of burners can be adjusted by the retailer in filling an order for burners of varied "foot" capacity.

To more particularly describe my invention,

I will refer to the accompanying drawings, in which—

Figure 1 represents, in central vertical section, one form of burner embodying my invention. Fig. 2 represents, in perspective, the sliding check detached.

A denotes the body of the burner, which, in this case, is of a well-known form; but it is to be understood that my invention is equally applicable to other forms of burner. B denotes a detachable base, substantially as heretofore, and provided with a central vertical tube, also as heretofore in certain classes of burners. C denotes the sliding check, preferably drawn in sheet metal, with a closed top or dome. It is provided with the annular scores or check-marks *a*, and at each of these scores there are one or more perforations or radial gas-passages, *b*.

For the purposes of ready adjustment, the scores will each represent or indicate a certain number of perforations, so that when, for instance, two scores are visible it will follow that two gas-passages are exposed, or if there be more than one passage to each score, then they will indicate that twice as many passages are opened as each score represents. It is preferable that these passages be so small as to deliver the gas into the body of the burner in fine or attenuated jets, as thereby the gaseous elements will be thoroughly intermingled.

It is not, of course, essential that the check should slide within the base, as it may as well be fitted to slide on a neck or upward projection of the base, in which case the neck would be properly scored for indicating the number of passages opened.

It will be seen that the gas, in passing through the central pipe, will, by contact with the interior of the dome of the check, be deflected, and that this action, in connection with the effect of the numerous jets from the check, will cause the gas to be thoroughly worked into a favorable condition for burning, as heretofore in some classes of burners, and that whether the check be fully elevated or partially, the gaseous elements will be similarly commingled.

I am aware that gas-burners have heretofore been provided with checks of various kinds, including a sliding cap on a vertically-slotted

tube. I am also aware that a perforated sliding check or cap has heretofore been employed in gas-burners without any central tube, said cap having its perforations one above the other, in the same line, instead of being located at different points around the check, as in my burner; but I know of none which involve the novel features of construction specified or the combination of parts herein shown and described.

I claim as new and desire to secure by Letters Patent—

The combination, with a gas-burner having a detachable base, of a central vertical tube within the base, a graduated sliding check provided with radial gas-passages, which are located at different longitudinal and peripheral points, substantially as described.

HERBERT A. JERAULD.

Witnesses:

L. F. WATSON,  
E. R. RATHBUN.