

M. W. LONGFELLOW.
GAS BURNER.
APPLICATION FILED DEC. 30, 1911.

1,064,505.

Patented June 10, 1913.

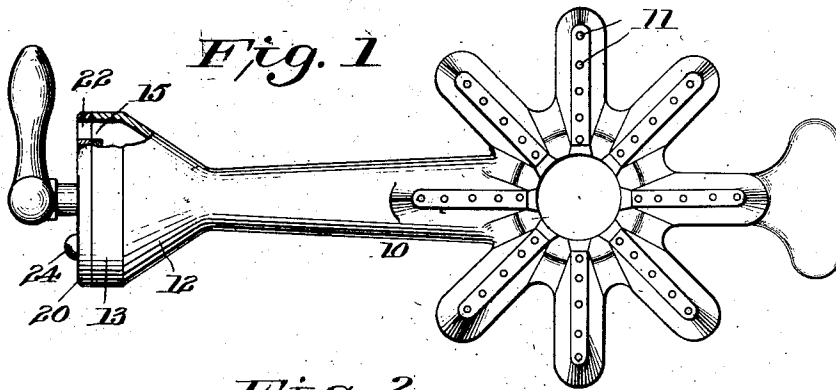


Fig. 2.

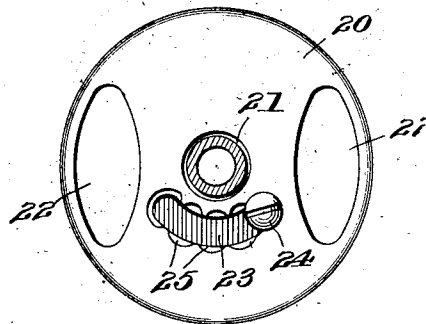
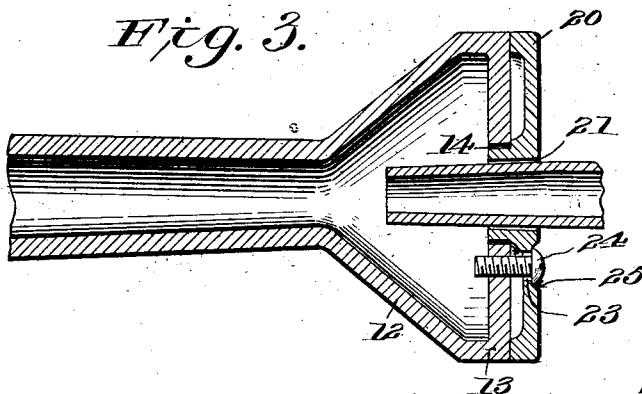


Fig. 3.



WITNESSES

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MARTIN W. LONGFELLOW, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE BALTIMORE GAS APPLIANCE AND MANUFACTURING COMPANY, OF BALTIMORE, MARYLAND.

GAS-BURNER.

1,064,505.

Specification of Letters Patent. Patented June 10, 1913.

Application filed December 30, 1911. Serial No. 668,726.

To all whom it may concern:

Be it known that I, MARTIN W. LONGFELLOW, a citizen of the United States, residing in the city of Baltimore and State of Maryland, have invented new and useful Improvements in Gas-Burners, of which the following is a specification.

This invention relates to certain new and useful improvements in gas burners, and has reference more particularly to that class of burners in which atmospheric air is mixed with the gas before the latter reaches the point of combustion. In burners of this character it has been customary to provide the burner with a mixer shield, so called, which comprises a plate having openings adapted to coincide with corresponding openings formed in the supply pipe of the burner, said plate being adjustable so that the size of the openings in the burner pipe may be made larger or smaller, as the quality of the gas may require. It is also customary to hold these mixer shields in any adjusted position by means of a set screw or other similar device. In practice, however, the set screw frequently works loose and as a result the shield will revolve on its supporting axis, and thereby disarrange the adjustment and interfere with the combustion of the gas.

The present invention has for its object the provision of simple and efficient means by which the mixer shield is securely held in adjusted position and accidental disarrangement thereof is prevented.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawing:—Figure 1 is a plan view of a burner embodying my invention. Fig. 2 is a front end view thereof, the gas supply pipe being shown in section. Fig. 3 is a transverse sectional view.

Referring to the drawing, 10 designates a burner of any suitable or preferred type, that shown being provided with a supply tube leading to an enlarged mixing chamber having the usual holes 11 for the escape of the mixed air and gas. The inlet end of the burner is enlarged as indicated at 12 and provided with a transverse plate or diaphragm 13 having a central opening 14 for the gas supply pipe and holes or open-

ings 15 for the admission of air to the burner.

Mounted to rotate about the gas supply pipe is a mixer shield 20 comprising a plate provided with a central opening 21 for the gas pipe, and openings 22 arranged to coincide with the openings 15 in the diaphragm 13. Said plate is also provided with an arcuate slot 23 to receive a locking screw 24 working in the diaphragm 13. The side walls of said slot are provided with notches 25 which extend partially through the slot, the head of screw 24 being of a size to engage said notches.

In operation the head of the screw 24 fits down into the recesses formed by the notches 25 and positively locks the shield 20 against rotative movement upon its axis. When it is desired to change the adjustment of the mixer shield, the screw 24 must be unscrewed to such an extent that the head thereof will move beyond the plane of the notches 25, whereupon the shield may be adjusted to any desired position. After adjustment the screw is turned up until the under face of the head abuts against the shoulder surrounding the slot 23, and the edge of the head engages the notches 25. From this it will be seen that a slight loosening of the screw will not permit movement of the mixer plate, but that the screw must be moved quite a distance before movement of the plate is permitted. Thus it will be observed that I provide a positive lock for preventing accidental movement of the mixer plate, and the adjustment of the latter cannot be deranged except by design, in which case the change is ordinarily made to suit different conditions of combustion.

It will be understood that the invention is not limited to the specific form of burner illustrated and described nor is it limited to the specific form of set screw, as these features may be widely varied without departing from the spirit of my invention.

Having thus explained the nature of my invention, and described an operative manner of constructing and using the same, although without attempting to set forth all of the forms in which it may be made, or all of the forms of its use, what I claim is:—

1. As an improvement in gas burners, an adjustable mixer shield provided with an

arcuate slot, the side walls of said slot being provided with notches, and a locking screw extended through said slot and engaging said notches.

- 5 2. As an improvement in gas burners, an adjustable mixer shield provided with an arcuate slot, the side walls of said slot being provided with notches extending partially through the slot, and a locking screw

extended through said slot and having a head of a size to engage said notches.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MARTIN W. LONGFELLOW.

Witnesses:

ROBERT RHODES,
FRANK MOELLER.