239-552

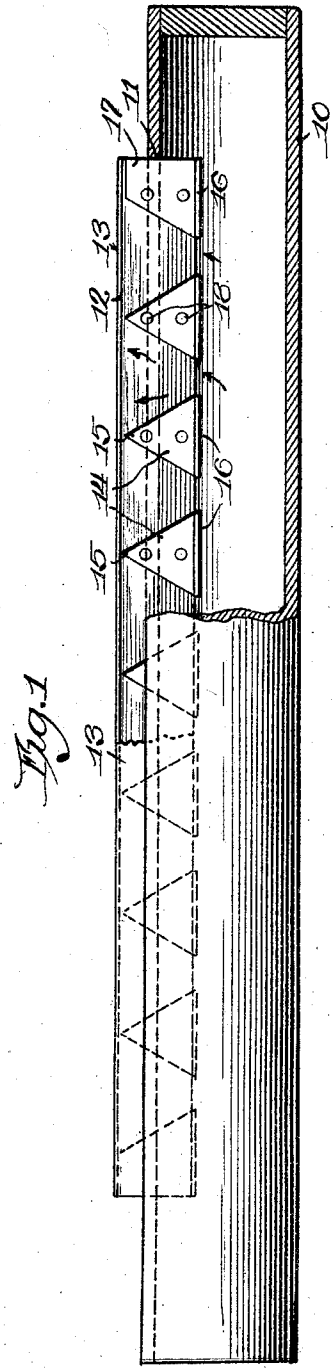
Draftsman

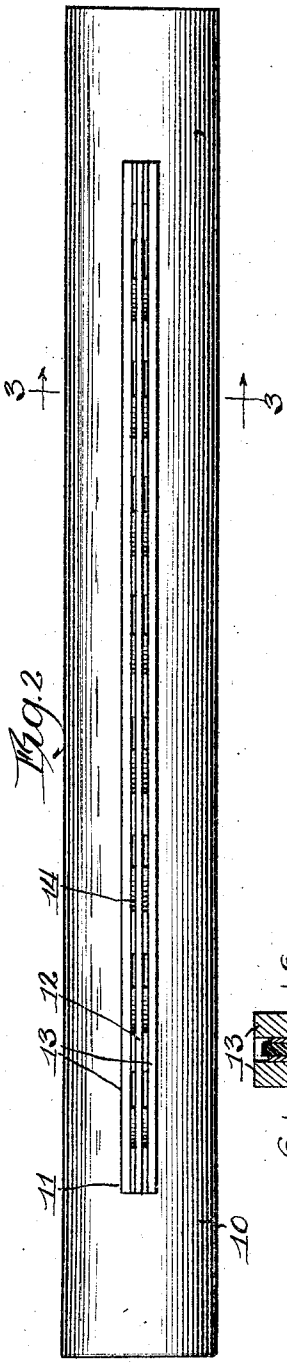
Aug. 25, 1925. 1,550,836

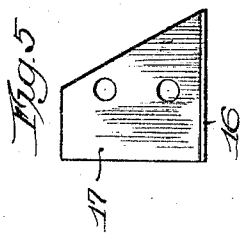
W. L. MUELLER

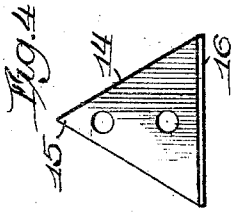
GAS BURNER FOR BAKERS' OVENS

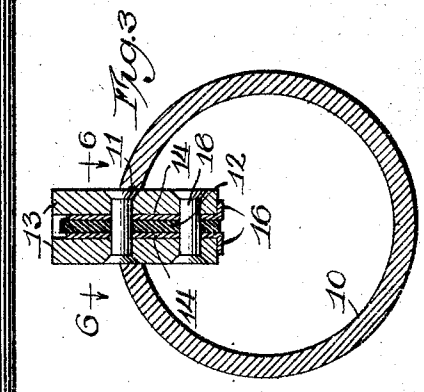
Filed July 17, 1924 2 Sheets-Sheet 1











Witness:
Chas. K. Kousal.

Inventor,
William L. Mueller,
By Thomason, Rochaus & Lundy attys

Draftsman

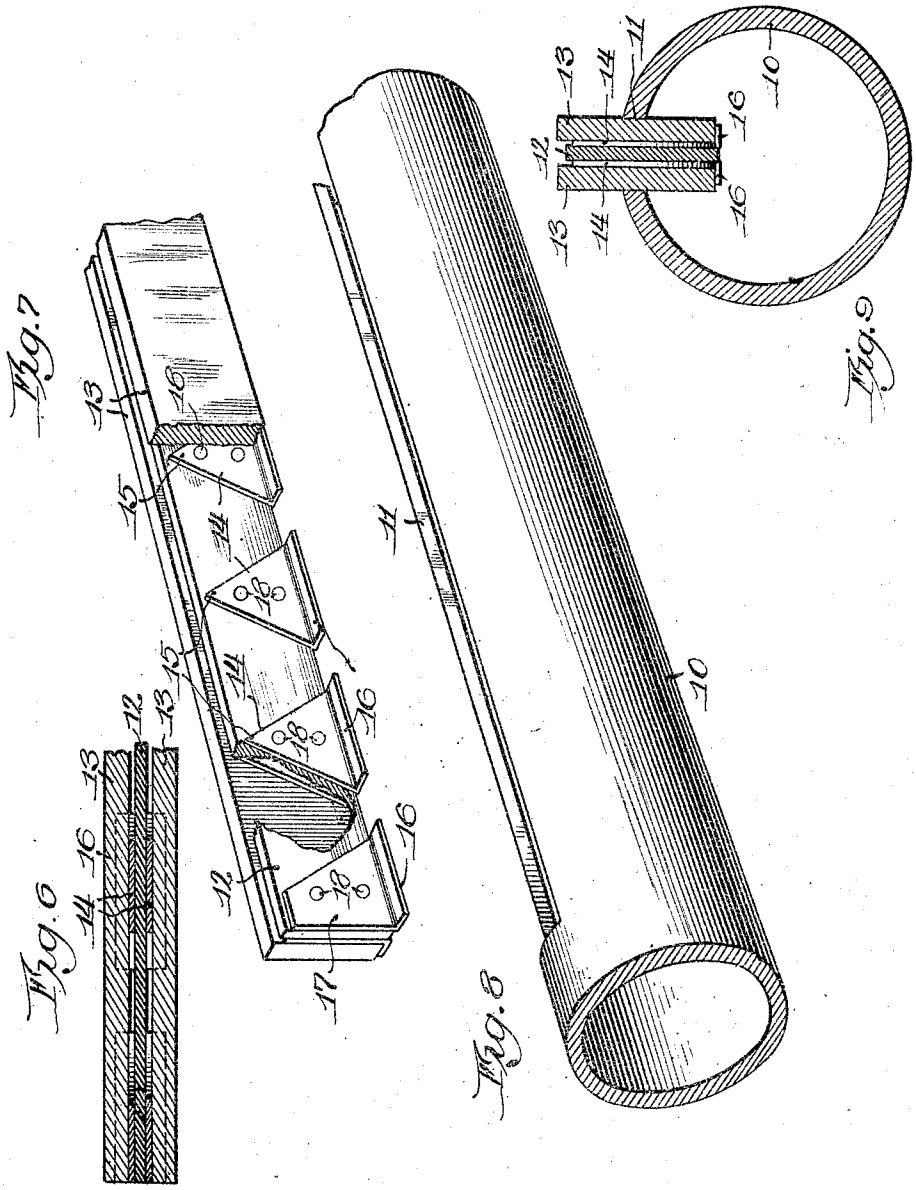
239-552

Aug. 25, 1925. 1,550,836

W. L. MUELLER

GAS BURNER FOR BAKERS' OVENS

Filed July 17, 1924 2 Sheets-Sheet 2



Witness:
Chas. K. Kousek.

Inventor,
William L. Mueller,
By Thomason, Rockhouse & Lindy attys

LIQUID & GAS FUEL BURNERS

Draftsman

239-552

Patented Aug. 25, 1925. 1,550,836

UNITED STATES PATENT OFFICE.

WILLIAM L. MUELLER, OF CHICAGO, ILLINOIS, ASSIGNOR TO WILLIAM F. PETERSEN, OF CHICAGO, ILLINOIS.

GAS BURNER FOR BAKERS' OVENS.

Application filed July 17, 1924. Serial No. 726,449.

To all whom it may concern:

Be it known that I, WILLIAM L. MUELLER, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gas Burners for Bakers' Ovens, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to make and use the same.

My invention relates to a gas-burner and particularly to gas-burners used in bakers' ovens.

The object of my invention is to provide a simple and economically constructed gas-burner that will produce a long flame extending across the heating chamber of a baker's oven and which will heat and expand the gas, so as to thoroughly burn and consume the same. This I accomplish by means hereinafter fully described and as particularly pointed out in the claims.

In the drawings:

Figure 1 is a longitudinal view of a gas-chamber showing one end in longitudinal section.

Figure 2 is a plan view of the same.

Figure 3 is a transverse section taken on dotted line 3—3, Figure 2.

Figures 4 and 5 are detail views illustrating the end and intermediate fillers.

Figure 6 is a longitudinal transverse section taken on dotted line 6—6, Figure 3.

Figure 7 is a perspective view of a section of one portion of the burner showing the nearest side-plate broken away.

Figure 8 is a perspective view of a portion of the gas-chamber with the burner removed.

Figure 9 is a transverse section similar to that shown in Figure 6 excepting that it is in a plane striking between the fillers.

Referring to the drawings 10 represents a tubular gas-chamber, of a length corresponding to about the width of the heating chamber of a baker's oven. This gas-chamber is closed at one end and has its other end exteriorly screw-threaded. Between its ends it is provided with a longitudinal slot 11, of a width sufficient to insert my improved gas-burner therein.

This burner consists of a strip of flat Monel metal 12, which is of the same thickness throughout its length, is of a height corresponding to the height of the burner and is of a length corresponding to the length of slot 11, within which it is placed edgewise. On either side the strip 12 is flanked by two plates 13—13, which are, preferably, thicker than the strip 12, from which they are separated by fillers 14—14. The fillers 14 are shown in the drawings as triangular in shape with their upper apices 15 a slight distance below the plane of the top edge of the central strip 12 and their bases are provided with lateral flanges 16, which extend outwards and lap against the lower edges of plates 13—13. These fillers are so placed that they are spaced apart and are equi-distant throughout the length of the burner.

The end fillers 17 are so shaped that the edges thereof come in the same transverse plane as the end edges of plates 13 and strip 12, and the upper edge thereof extends from their upper apices to the end of the burner, giving them sort of a truncated shape. These fillers are secured in place by transverse rivets 18—18, although they may be welded in place.

When the parts of my improved gas-burner are assembled, they constitute a compact body that is inserted in and fills slot 11, and the gas under pressure from the chamber 10 issues out from the spaces between the fillers and is ignited at the upper edge of the burner. This soon heats the Monel central strip of the fillers and the outside plates and expands the gas flowing out of the burner and makes a perfect combustion which when mixed with the oxygen of the outer atmosphere thoroughly consumes the same.

The fillers may be of the shape hereinbefore described, which is preferred, but any other shape which permit the gas to issue between them, and to burn at the top of the burner may be substituted therefor.

While I prefer to use my invention in bakers' ovens, as hereinbefore stated it is obvious it can be used in other heaters or furnaces, and I desire to be considered in claiming it in conjunction therewith.

It will also be understood that the burner may be of any depth desired and the deeper the same is formed the longer will be passages between the fillers so that liability of

back-fire is avoided. By my particular construction, this is possible because I have avoided the necessity of having to saw the slits for the egress of the gas from the tube.

What I claim as new is:—

1. A gas-burner comprising a gas-chamber having a longitudinal slot therein, two exterior plates placed therein, a central strip, and equi-distant separated fillers placed between and in contact with said plates and strip whereby gas-passages are provided between said fillers.

2. A gas-burner comprising a gas-chamber having a longitudinal slot therein, two exterior plates placed therein, a central strip of the same length, and equi-distant separated triangular shaped fillers placed between and in contact with said plates and strip whereby gas-passages are provided between said fillers.

3. A gas-burner comprising a gas-chamber having a longitudinal slot therein, two exterior plates placed therein, a central strip of the same length, and equi-distant separated triangular shaped fillers placed between and in contact with said plates and strip whereby gas-passages are provided between said fillers, and basal edges of which latter are provided with outwardly projecting flanges that lap against the lower edges of said plates.

4. A gas-burner comprising a gas-chamber having a longitudinal slot therein, two exterior plates placed therein and projecting therefrom, a central strip of the same length placed between the same, and equi-distant separated correspondingly shaped fillers placed between and sealed to said plates and strip whereby gas-passages are provided between said fillers.

5. A gas-burner comprising a gas-chamber having a longitudinal slot therein, two exterior plates placed therein, a central strip of the same length, and equi-distant separated tapered fillers placed between and in contact with said plates and strip, whereby gas-passages are provided between said fillers.

6. A gas burner comprising an elongated tube having a longitudinal slot therein, elongated members positioned in said slot and spaced from each other, and a plurality of fillers spaced longitudinally from each other and interspaced between said members whereby gas-passages are provided between said fillers.

7. A gas burner comprising an elongated tube having a longitudinal slot therein, elongated members positioned in said slot, and plurality of upwardly tapered fillers spaced apart and interposed between said members whereby upwardly flared gas-passages are provided between said fillers.

8. A gas-burner comprising an elongated tube having a longitudinal slot therein, a pair of elongated strips positioned edgewise in said slot, and suitably shaped fillers between said strips and spacing the latter, said fillers disposed in spaced relation with their narrow ends uppermost whereby gas-passages of upwardly diverging dimensions are provided between the fillers.

Signed at Chicago, county of Cook and State of Illinois, this fifth day of June, 1924.

WILLIAM L. MUELLER.