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- (71) Applicant (for all designated States except US): **MAKAS-AN MAKINA KALIP SANAYI VE TICARET ANON-İM ŞİRKETİ** [TR/TR]; Akcaburgaz Mah.26. SOK. NO: 10 Kirac, ESenyurt, Istanbul (TR).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **AKKOYUN, Saffet** [TR/TR]; Akcaburgaz Mah.26. SOK. NO: 10 Kirac, Esenyurt, Istanbul (TR).
- (74) Agent: **DESTEK PATENT, INC.**; Konak Mah . Lefkose Cad. NM Ofis Park B, Blok No: 36 / 5 BEŞEVLER NILÜFER, 16110 Bursa (TR).
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(54) Title: OVEN BURNER

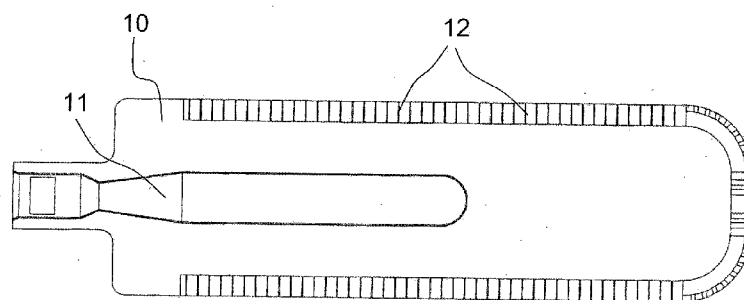


Figure 1

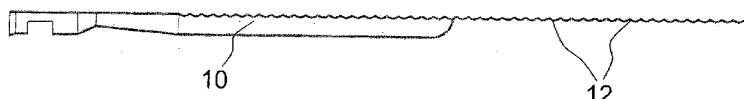


Figure 2

(57) Abstract: The invention relates to the burners (1) used in domestic type of ovens comprising bottom (10) and upper cover (20), characterized in comprising a separator (30) located between the said bottom (10) and upper covers (20) and preventing the gas from getting accumulated on the gas-inlet (1.1) part of the burner (1), to which the gas going into the burner (1) crashes, and at least one distribution hole (31) which is formed on the said separator (30), through which the gas goes before merging with air, and providing a proper distribution of gas-air mixture.



DESCRIPTION

OVEN BURNER

5 Technical Field

The invention relates to burners used in domestic type of ovens.

10 The invention especially relates to the burners used in domestic type of ovens comprising bottom and upper cover, characterized in comprising a separator located between the said bottom and upper covers and preventing the gas from getting accumulated on the gas-inlet part of the burner, to which the gas going into the burner crashes, and at least one distribution hole which is formed on the said separator, through which the gas goes before merging with air, and providing a proper
15 distribution of gas-air mixture.

State of the Art

20 Burner is the device which provides the fuel to be mixed with air in proper amounts and to be burned exactly. In the current applications used inside the ovens, the gas circulating inside the oven is not burned totally while the gas is being mixed with air.

25 As the gas cannot go continuously into the burner homogeneously in the current inside-oven applications, some gas-omissions have been experienced. Because of gas-omissions, the gas cannot be homogenously mixed in the burner. Therefore, in the part where the burner performs its burning process, the flame-propagation cannot be homogeneous.

30 Consequently, because of the above-mentioned shortcomings and the insufficiency of the current solutions for this problem, it has become necessary to make a development within the related technical field.

Object of the Invention

The invention developed with an inspiration from the current situations aims to eliminate the above-mentioned shortcomings.

5

The object of the invention is to provide the burning process performed by the oven burner, taking place following the mixture of fuel with air to be performed with a-100% ratio.

10 Another object of the invention is to slow down the passage of the gas into the part where the burning function of the burner takes place by means of the separator, and to provide that all of the gas be burnt.

In order to achieve the above-mentioned objects, the invention relates to the burners
15 used in domestic type of ovens comprising bottom and upper cover, characterized in comprising a separator located between the said bottom and upper covers and preventing the gas from getting accumulated on the gas-inlet part of the burner, to which the gas going into the burner crashes, and at least one distribution hole which is formed on the said separator, through which the gas goes before merging with air, and
20 providing a proper distribution of gas-air mixture.

In a preferred embodiment of the invention, the burner comprises a separator welded on the inner surface of the bottom cover.

25 In a preferred embodiment of the invention, the cross sectional view of the separator is in an "L" form.

All the structural and characteristic aspects, and all of the advantages of the invention will be understood more clearly by means of the following figures and the detailed
30 description written with certain references to the said figures, and therefore the evaluation should be made by taking these figures and the detailed description into consideration.

Figures for a Better Understanding of the Present Invention

Figure 1 is the two-dimensional view of the bottom cover from the top in a preferred embodiment of the oven burner according to the invention.

5 **Figure 2** is the two-dimensional view of the bottom cover from the side in a preferred embodiment of the oven burner according to the invention.

Figure 3 is the two-dimensional view of the upper cover from the top in a preferred embodiment of the oven burner according to the invention.

10 **Figure 4** is the two-dimensional view of the upper cover from the side in a preferred embodiment of the oven burner according to the invention.

Figure 5 is the two-dimensional view of the separator from the front in a preferred embodiment of the oven burner according to the invention.

Figure 6 is the two-dimensional view of the separator from the side in a preferred embodiment of the oven burner according to the invention.

15 **Figure 7** is the two-dimensional view of the preferred embodiment of the oven burner according to the invention from the side part.

Figure 8 is the two-dimensional view of the preferred embodiment of the oven burner according to the invention from the top part.

20 Description of the Part References

- 1. Burner
 - 1.1. Gas inlet
- 10. Bottom cover
 - 25 11. Inner surface
 - 12. Joint surface
- 20. Upper cover
 - 21. Inner surface
 - 22. Joint surface
- 30 30. Separator
 - 31. Distribution holes
 - 32. Bottom surface

The drawings do not necessarily need to be scaled, and the details which are not necessary for understanding the invention may have been ignored. Moreover, the parts which are identical to a great extent, or which, at least, have identical functions to a great extent are shown with the same number.

5

Detailed Description of the Present Invention

In this detailed description, the preferred embodiments of the burner (1) according to the invention are explained only for a better understanding of the subject of invention.

10

The invention relates to the burners (1) used in domestic type of ovens comprising bottom (10) and upper cover (20), characterized in comprising a separator (30) located between the said bottom (10) and upper covers (20) and preventing the gas from getting accumulated on the gas-inlet (1.1) part of the burner (1), to which the gas going into the burner (1) crashes, and at least one distribution hole (31) which is formed on the said separator (30), through which the gas goes before merging with air, and providing a proper distribution of gas-air mixture.

15

The burner (1) used in the domestic type of ovens with gas fuel is comprised of three parts: Bottom cover (10), upper cover (20), and separator (30).

20

Figure 1 shows the two-dimensional view of the bottom cover (10) from the top, while Figure 2 shows the same thing from the side part. On Figure 3 and 4, on the other hand, the two-dimensional top view and the two-dimensional side sectional view of the upper cover (20) are shown. The front and side views of the separator (30), on the other hand, are shown in Figure 5 and 6.

25

On the separator (30) with an "L"-form sectional view, the distribution holes (31) are located. The distribution holes (31), on the other hand, are preferably of the same size. The function of the distribution holes (31) is to provide the fuel-air mixture to be properly spread into the burner (30) as the gas going into the burner (1) crashes to the separator (30) and passes through the holes.

30

The separator (30) is fixed by means of a spot-weld onto the inner surface (11) of the bottom cover (10) on a point of the gas inlet (1.1) of the burner (1) at a certain distance from the bottom surface (31). The separator (30) is located at such a point that the gas going into from the burner inlet (1.1) can pass through only the distribution holes (31) not from the surrounding of the separator (30). After the separator (30) has been fixed onto the bottom cover (10) with a spot-weld, the upper cover (20) and bottom cover (10) are combined. The connection process is performed by combining the joint surface (12) of the bottom cover (10) and the joint surface (22) of the upper cover (20) by means of a spot-weld. Therefore the burner (1) has been made ready to use (Figure 7, Figure 8).

When the gas goes in through the gas-inlet (1.1) of the burner (1), the gas, first of all, collides onto the surface of the separator (30) where there is no distribution holes (31). The aim behind this collision is to provide that the gas can be accumulated at the gas-inlet (1.1) part of the separator (30) and that the gas can be homogeneously spread into the part where the burner (1) performs its burning process. The homogenous distribution of the gas is provided by means of the symmetrical distribution holes (31) located on the separator (30). Thanks to the distribution holes (31), the gas-omission is also prevented. And the gas is distributed homogeneously; the gas-air mixture can be properly spread into the burner (1). Therefore the flame propagation is provided homogeneously at each part of the burner (1). Moreover, thanks to the separator (30), the gas slowly passes to the part where the burning process of the burner (1) takes place. The gas crashes to the separator (30), and therefore its speed decreases. Therefore, not only the gas homogeneously proceeds, but also it moves slowly on the other part of the separator. Therefore, the gas inside the burner (1) is provided to be burnt totally.

CLAIMS

1. The invention relates to the burners (1) used in domestic type of ovens comprising bottom (10) and upper cover (20); characterized in comprising;
- 5
- a separator (30) located between the said bottom cover (10) and upper covers (20) and preventing the gas from getting accumulated on the gas-inlet (1.1) part of the burner (1), to which the gas going into the burner (1) crashes,
 - 10 - at least one distribution hole (31) which is formed on the said separator (30), through which the gas goes before merging with air, and providing a proper distribution of gas-air mixture.
2. A burner (1) according to Claim 1, characterized in comprising a separator (30) welded on the inner surface (11) of the bottom cover (10).
- 15
3. A burner (1) according to Claims 1 and 2, characterized in that the sectional view of the separator (30) is in an "L"-shape.

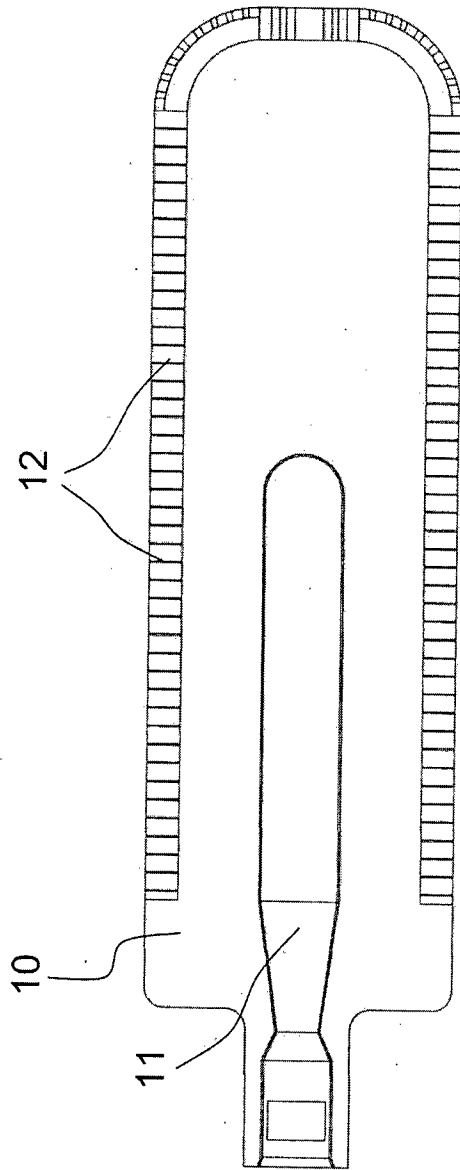


Figure 1

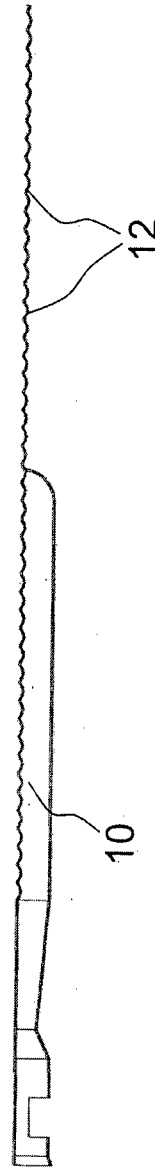


Figure 2

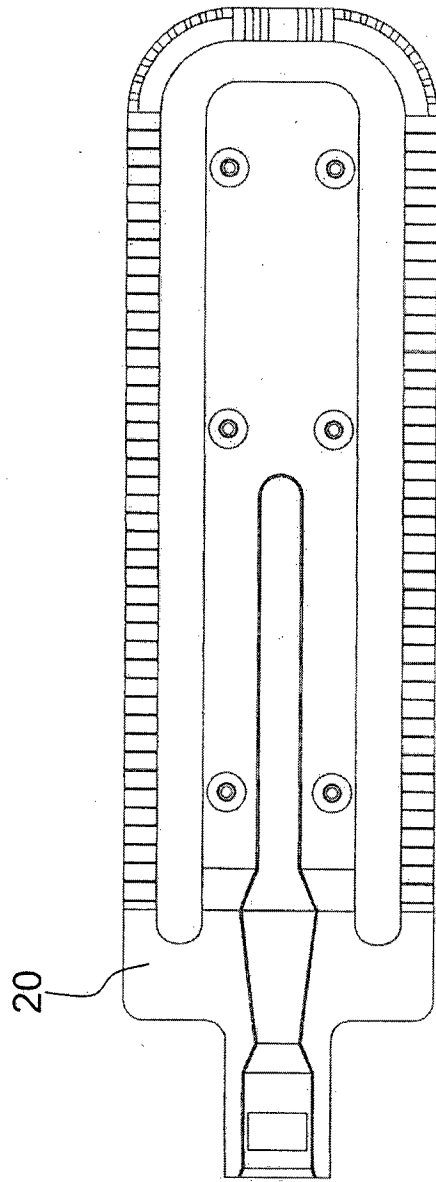


Figure 3

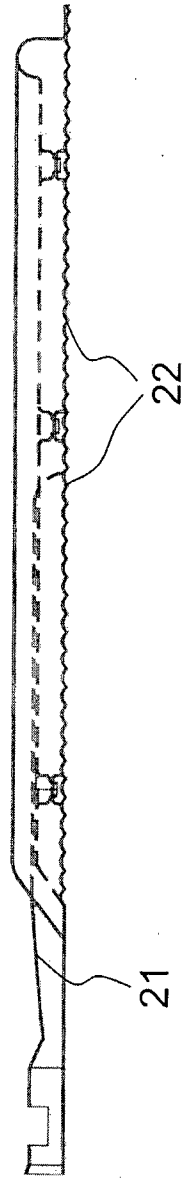


Figure 4

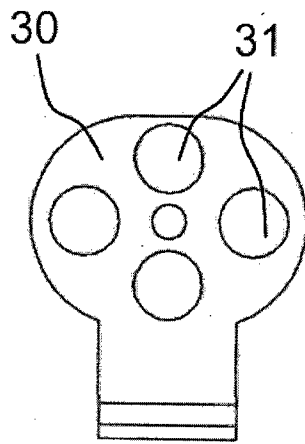


Figure 5

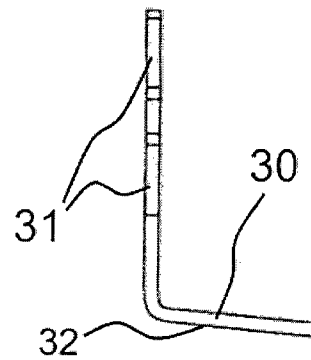


Figure 6

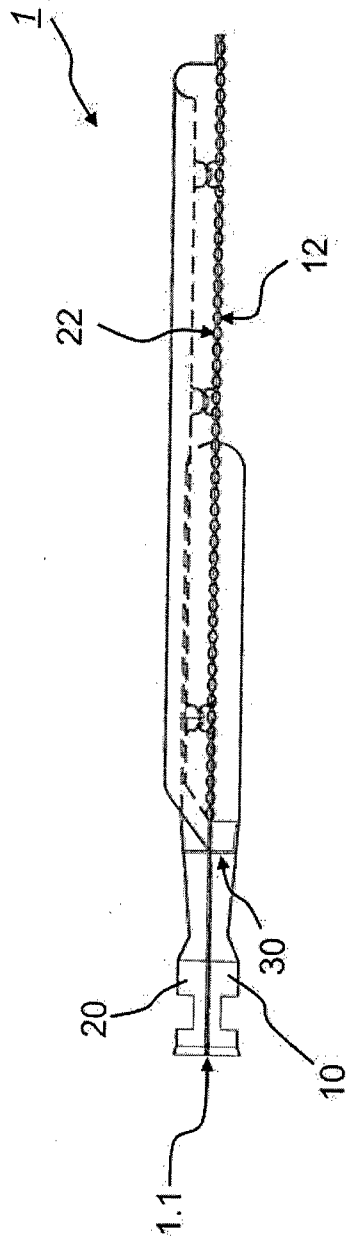


Figure 7

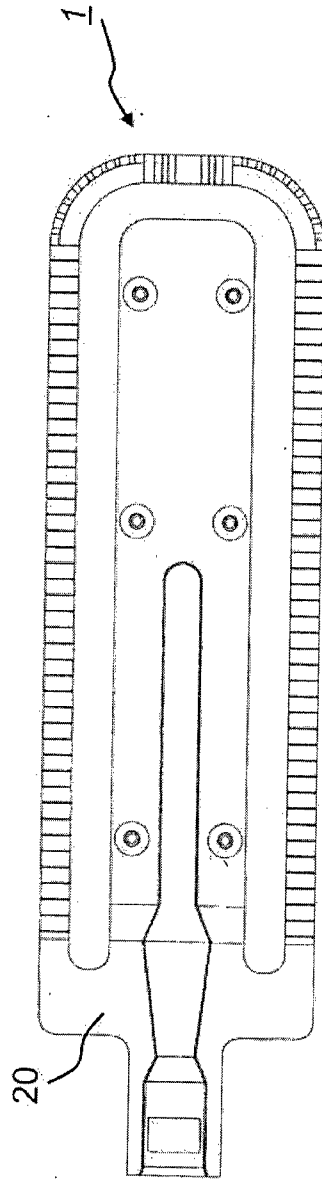


Figure 8