WHAT IS CLAIMED IS:

1. A burner of a gas stove, comprising:

a burner body including an inlet portion and a base, wherein the inlet portion has two inlet passages for injecting gas and air; the base has two mixture passages for mixing the gas and the air; the two mixture passages are annular; an end of each of the two mixture passages communicates with one of the two inlet passages, and another end of each of the two mixture passages is a closed end;

a partition member mounted on the base and covering the two mixture passages; wherein the partition member has a plurality of through holes communicating with the two mixture passages, and the plurality of through holes arranged along a circumferential direction of one of the two mixture passages; and

two flame covers covering the partition member, wherein a chamber is formed between each of the two flame covers and the partition member; each of the two flame covers has a plurality of flame holes arranged in a ring shape and communicating with one of the chambers; the chambers communicate with the two mixture passages through the plurality of through holes of the partition member; wherein the inlet portion is disposed at a side surface of the base and does not protrude out of a bottom of the base, so that the gas and air flow into the base through the side surface of the base; a bottom of each of the two mixture passages is inclined upward, so that a cross-sectional area of each of the two mixture passages is gradually decreased from the end communicating to one of the two inlet passages all the way to the closed end;

wherein the base has two opposite ends, and the inlet portion has two opposite ends, wherein an end of the inlet portion is connected to one of the ends of the base; a length of the burner body from the other end of the inlet portion to the other corresponding end of the base is a first length; the base has a maximum outer peripheral surface, and a diameter of

the maximum outer peripheral surface is a second length; the first length is equal to or smaller than 1.5 times the second length.

2. The burner of the gas stove of claim 1, wherein the two mixture passages include an outer annular mixture passage and an inner annular mixture passage; the two inlet passages include a first inlet passage and a second inlet passage; an end of the outer annular mixture passage communicates with the first inlet passage, and another end of the outer annular mixture passage is a first closed end; an end of the inner annular mixture passage communicates with the second inlet passage, and another end of the inner annular mixture is a second closed end; the outer annular mixture passage surrounds the inner annular mixture passage.

3. The burner of the gas stove of claim 2, wherein the partition member has an outer ring section and an inner ring section; the plurality of through holes includes a plurality of first through holes and a plurality of second through holes; the outer ring section and the inner ring section respectively cover the outer annular mixture passage and the inner annular mixture passage; the plurality of first through holes are arranged along a circumferential direction of the outer annular mixture passage, and the plurality of second through holes are arranged along a circumferential direction of the inner annular mixture passage.

4. The burner of the gas stove of claim 3, wherein the two flame covers include an inner annular flame cover and an outer annular flame cover, the two chambers include a first chamber and a second chamber; the outer annular flame cover covers the outer ring section of the partition member, and the first chamber is formed between the outer annular flame cover and the outer ring section; the inner annular flame cover covers the inner ring section of the partition member, and the second chamber is formed between the inner annular flame cover and the inner ring section; the outer annular flame cover includes a plurality of first flame holes arranged in a ring shape, the plurality of first holes communicate with the first chamber, and the first chamber communicates with the outer annular mixture passage

through the plurality of first through holes of the partition member; the inner annular flame cover includes a plurality of second flame holes arranged in a ring shape; the plurality of second holes communicate with the second chamber, and the second chamber communicates with the inner annular mixture passage through the plurality of second through holes of the partition member.

5. The burner of the gas stove of claim 4, wherein the outer ring section has a first annular groove extending along the circumferential direction of the outer annular mixture passage, and the plurality of first through holes are located at an outer side of the first annular groove and communicate with the outer annular mixture passage through the first annular groove.

6. The burner of the gas stove of claim 5, wherein a top of the partition member has a ring rim surrounding the first annular groove, and the plurality of first through holes are formed between the ring rim and the first annular groove.

7. The burner of the gas stove of claim 4, wherein the inner ring section has a second annular groove extending along the circumferential direction of the inner annular mixture passage, and the plurality of second through holes are located at an outer side of the second annular groove and communicate with the inner annular mixture passage through the second annular groove.

8. The burner of the gas stove of claim 4, wherein a top of the base has an engaging recess recessed thereinto; a top of the outer annular mixture passage and a top of the inner annular mixture passage respectively communicate with the engaging recess, and the partition member is engaged with the engaging recess.

9. The burner of the gas stove of claim 8, wherein a bottom surface of the engaging recess is recessed and forms two fitting grooves respectively surrounding the top of the outer annular mixture passage and the top of the inner annular mixture passage, and a bottom of the partition member protrudes and forms two fitting rims respectively protruding into the

two fitting grooves.

10. The burner of the gas stove of claim 4, wherein the outer annular flame cover has an outer ring side and an inner ring side; the plurality of first flame holes are located at the outer ring side; the inner ring side has at least one flame guide hole communicating with the first chamber; the inner annular flame cover has an outer ring side corresponding to the inner ring side of the outer annular flame cover, and the plurality of second flame holes are located at the outer ring side of the inner annular flame cover.

11. The burner of the gas stove of claim 10, wherein the outer annular flame cover has a flame guide groove communicating with the first chamber; an end of the flame guide groove is located beside the at least one flame guide hole, and the flame guide groove extends in a direction from the inner ring side of the outer annular flame cover to the outer ring side of the outer annular flame cover.

12. The burner of the gas stove of claim 10, further comprising a cover ring disposed at the inner annular flame cover and located above the plurality of second flame holes.

13. The burner of the gas stove of claim 4, further comprising a ring partition disposed between the outer annular flame cover and the partition member and located in the first chamber, wherein the ring partition has a plurality of penetrating holes arranged in a ring shape.