AMENDED CLAIMS ART 19 PCT

1. Catalytic combustion burner (10) made of porous material, comprising:

- an end piece (1) comprising:
  - a lower part (1a) of outside diameter ϕ_1 and delimiting a first cavity (2) of diameter ϕ_2, said first cavity (2) extending along a main axis (3) and being adapted to receive a wick that is capable of soaking the end piece (1) with a combustible composition, and
  - an upper part (1b) having a peripheral side wall (5) comprising an inner face (5a) of essentially frustoconical shape and delimiting a second cavity (6) of depth P, an outer face (5b), an upper face (5c) of circular shape and a base (5d), said inner face (5a) having a lower end (61) of diameter ϕ_3 greater than ϕ_2 and an upper end (62) of diameter ϕ_4 greater than ϕ_3, the upper end (62) of said side wall (5) communicating with the atmosphere and said lower end (61) of said base (5d) communicating with said first cavity (2),
  - at least a part of said outer face (5b) of said peripheral side wall (5) is doped with a catalyst,
- a sleeve (7) arranged in the extension of said lower part (1a) of the end piece (1) and delimiting a third cavity (2') extending said first cavity (2) of said lower part (1a), and
- an insert (8) arranged in said second cavity (2) of the end piece (1) and having a surface (8a) in contact with said base (5d) of the end piece,

said burner being characterized in that said porous material is obtained from a composition comprising, as a

percentage of the total weight of said composition, between 0 and 5% of at least one heat-conducting compound, with a thermal conductivity of greater than 60 watts per metre-kelvin, between 30% and 70% of at least one refractory compound, between 2% and 30% of at least one binder, and between 5% and 40% of at least one pore-forming agent, and in that all of said circular-shaped upper face (5c) is doped with said catalyst.

2. Burner (10) according to Claim 1, in which at least a part of said inner face (5a) of said peripheral side wall (5) is doped with said catalyst.

3. Burner (10) according to Claims 1 or 2, in which the lower end (61) of said inner face (5a) terminates with a counterbore (18) of diameter ϕ3, communicating with said cavity (2).

4. Burner (10) according to any one of the preceding claims, in which the depth P of said second cavity (6) is between 2 and 8 mm, preferably between 6 and 7.5 mm and better still about 7 mm.

5. Burner (10) according to any one of Claims 1 to 4, according to which said porous material is obtained from a composition comprising, as a percentage of the total weight of said composition, between 0.5% and 2% of said heat-conducting compound, between 40% and 70% of said refractory compound, between 5% and 25% of said binder, and between 8% and 35% of at least one pore-forming agent.

6. Burner (10) according to any one of Claims 1 to 5, in which the heat-conducting compound is silicon carbide,

preferably present in a proportion of 1% by weight relative to the total weight of said composition.

7. Burner (10) according to any one of Claims 1 to 6, in which each said refractory compound is chosen from the group constituted of alumina, silica, mullite, zirconia and cordierite, and mixtures thereof, and preferably mullite.

8. Burner (10) according to any one of Claims 1 to 7, in which said binder is a mineral compound which allows sintering at a temperature of less than or equal to 1100°C, preferably a glass, and better still a borosilicate glass.

9. Burner (10) according to any one of Claims 1 to 8, in which the pore-forming agent is polymethyl methacrylate (PMMA), which is preferably present in a proportion of from 18% to 30% by weight relative to the total weight of said composition.

10. Burner (10) according to any one of Claims 6 to 9, according to which said porous material is obtained from a composition comprising, as a percentage of the total weight of said composition, about 1% of silicon carbide, between 60% and 70% of mullite, between 5% and 15% of glass, and between 18% and 30% of PMMA.

11. Burner (10) according to Claim 10, in which said sleeve (7) has a length of between 10 and 20 mm, and preferably about 14 mm.

12. Catalytic combustion bottle (20), which is suitable for containing a combustible liquid (30) and for

receiving on its neck (50) a catalytic combustion burner (10) receiving a wick (40) which is soaking in said liquid (30), characterized in that said bottle (20) is equipped with a burner (10) as defined according to any one of Claims 1 to 11.