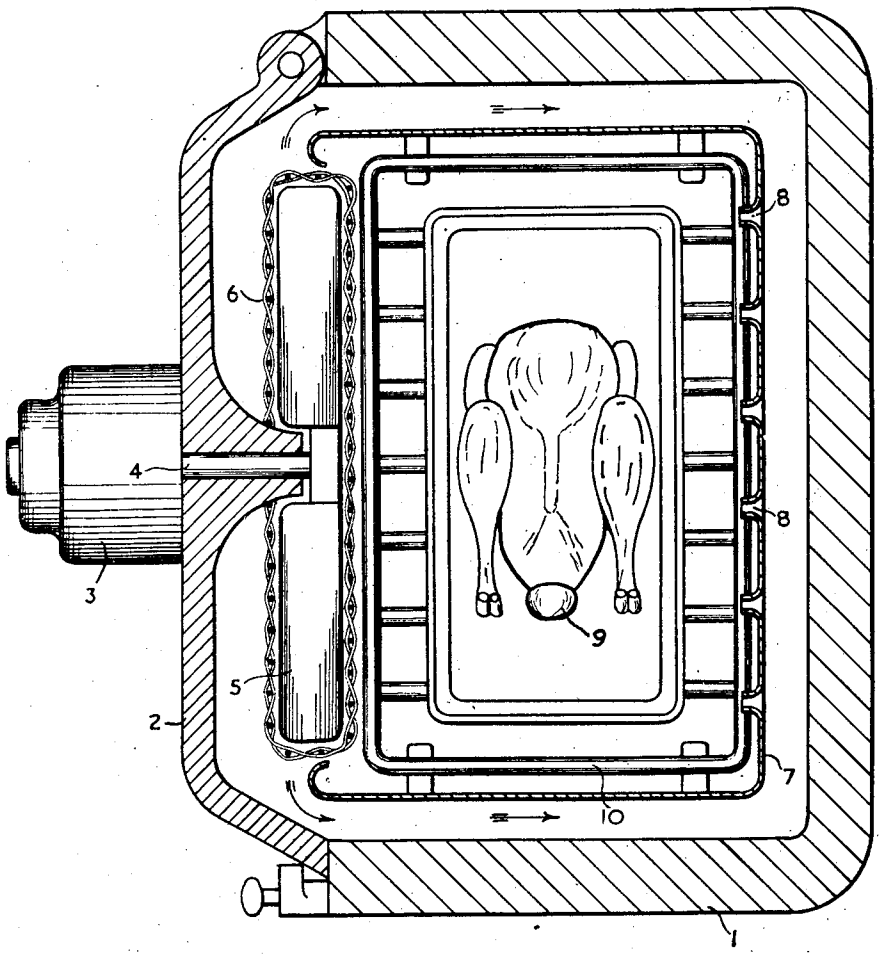
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AIR CIRCULATOR FOR OVENS

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AIR CIRCULATOR FOR OVENS

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1 Claim. (Cl. 126—273)

1

The present invention relates to improvements in cooking apparatus, more particularly of the type suitable as domestic ovens.

According to the present invention an air circulating fan is formed as a detachable unit to the door of an oven, that is to say that it may be mounted on the inside of an existing oven door, or alternatively the existing oven door may be removed and a substitute oven door applied to the oven, which has incorporated therein an air circulating fan.

The air circulating fan will normally be combined with its driving mechanism, which may be a hot air motor, but will more conveniently be an electric motor.

Means may be provided to control the flow of air to and from the said circulating fan by the provision of baffles or passages disposed within the oven or on the inside of the oven door, or both.

One convenient form of construction is shown diagrammatically in plan view in the accompanying drawing.

A cooking oven 1 has the usual door 2 hinged to it, on which an electric motor 3 is mounted, the driving spindle 4 of which extends inwardly into the oven and is provided with a fan 5 preferably mounted within a wire cage 6. The oven has a false wall 7 which is perforated at the back and may be provided with inwardly directed nozzles 8, so that streams of air are circulated around the walls of the oven to be taken up again by the fan and recirculated. The false wall 7 of the oven may, if desired, be detachable.

2

It will be seen that by this means heated air streams pass at high velocity across the goods such as 9 supported on the usual oven shelf 10.

Heat energy is taken up by the air either by applying a source of heat, such as electric resistance elements also built in to the substitute oven door, or heat may be applied to these air streams by the normal oven heating means, which may be either electric resistance elements or gas burners, or again solid fuel, which would normally be heating the walls of the oven.

The openings in the back baffle plate or false back wall of the oven may be simple perforations in the plate or may be formed as nozzles converting the pressure energy of the air stream supplied by the fan to velocity energy as the streams pass across the goods on the trays or shelves in the oven.

I declare that what I claim is:

A cooking apparatus including an oven, a detachable door for said oven, an air circulating fan mounted on said door, false walls to two sides of the oven spaced from its side walls with their front edges adjacent the periphery of the air circulating fan, and a perforated false wall spaced from the rear wall of the oven to form with the side false walls a space for air circulation from the fan, the air passing through the perforated false wall across the oven and back to the fan in closed circulation.

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