United States Patent

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[54] **CLEANING UNIT FOR FRYING, BROILING OR DEFROSTING CHAMBER**
7 Claims, 1 Drawing Fig.

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[50] **Field of Search** ..... 134/96, 99, 103, 107, 167—169, 174—175, 177, 191, 193, 200, 115

[56] **References Cited**

UNITED STATES PATENTS

1,394,169	10/1921	Green	134/177
2,216,388	10/1940	Hampel	134/200 (UX)
2,532,299	12/1950	Greco	134/107 X
2,575,493	11/1951	Hilliker	134/96
2,641,270	6/1953	Allen	134/177 X
2,852,030	9/1958	Nord	134/200 X
3,329,529	7/1967	Lamar	134/115 X

FOREIGN PATENTS

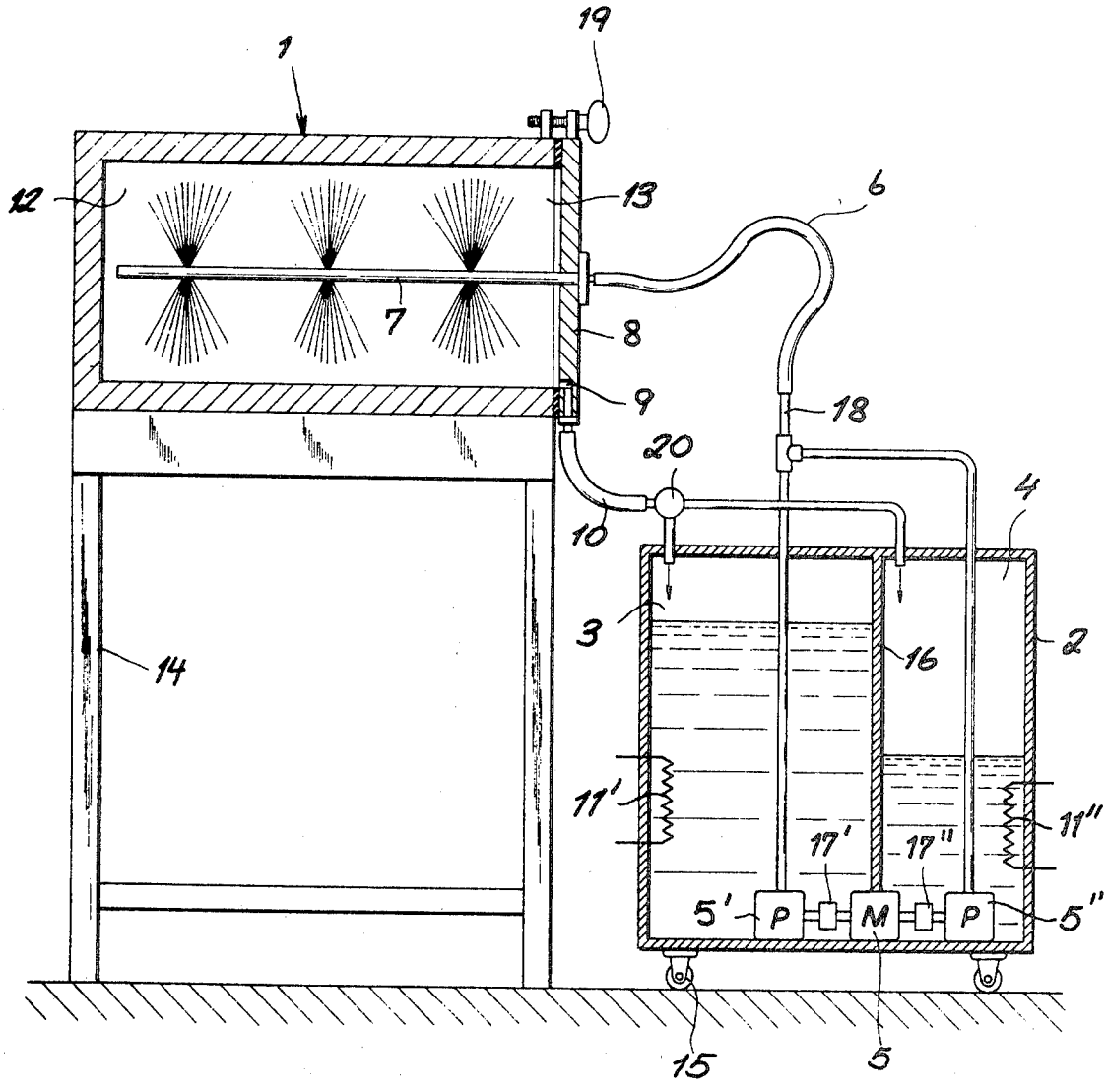
627,997	5/1963	France	134/167
752,410	7/1956	Great Britain	134/96

OTHER REFERENCES

" Article Cleaning Apparatus" ; IBM TECHNICAL DISCLOSURE BULLETIN; C. G. Metreaud; Vol. 9, No. 12, 5/67 p. 1740 (copy in 132-200) 200)

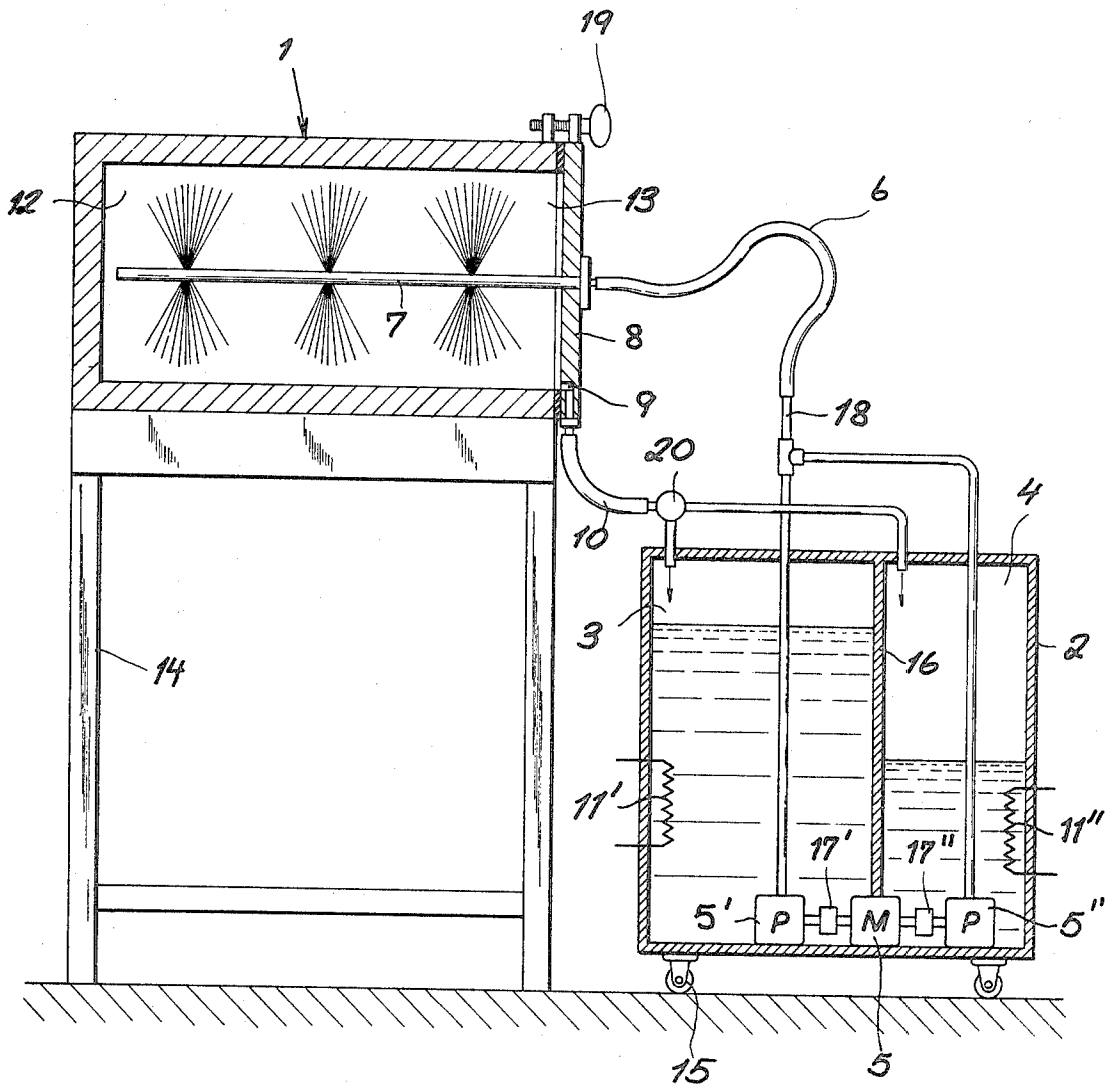
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ABSTRACT: A portable cleaning unit for a frying, broiling or defrosting chamber, open to one side, has a lid emplaceable across the open side to leave only a drain aperture at the bottom, the lid carrying an elongate spray nozzle with ports for the discharge of a high-pressure wash liquid onto the chamber walls. The wash liquid is fed to the nozzle from a wheeled tank to which the spent liquid is returned via the drain; a dual pump in the tank and a set of valves enable a switchover from the wash liquid to a rinse liquid.



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3,593,728



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CLEANING UNIT FOR FRYING, BROILING OR DEFROSTING CHAMBER

My present invention relates to a cleaning unit for a device having a heatable food-treating chamber, i.e. a chamber for the frying, broiling, defrosting or similar processing of edibles.

A device of this type, hereinafter referred to for convenience as an oven, is frequently made with an open side to allow for the introduction and removal of the foodstuff to be treated. During the heating phase this side may be closed by a partially or completely removable (e.g. hinged) lid which in some cases may serve as a carrier for a rotatable spit to be used in the roasting of a piece of meat. In all these instances, drippings from the heated foodstuff accumulate on the bottom and on the walls of the oven chamber and may even cling to its roof, thus requiring a thorough cleaning between uses.

The general object of my invention is to provide a simple and efficient unit for rapidly cleaning such ovens.

A more specific object is to provide a portable unit which can be stored away from the oven when not needed and can also successively serve several ovens, e.g. in a commercial installation.

These objects are realized, pursuant to my present invention, by the provision of a demountable lid which can be emplaced upon the open side of an oven chamber and carries one or more nozzles extending into that chamber upon such emplacement, the nozzle or nozzles being connected to a supply of preferably heated wash liquid under high pressure which, upon its discharge into the chamber, is removed through a drain at the bottom of the same lid.

Advantageously, the supply of wash liquid comprises a wheeled tank provided with a pump for the circulation of the liquid, the spent fluid being returned to that tank through a reflux conduit connected to the drain. The tank may be divided into two compartments, one serving to store the wash liquid while the other contains a rinse liquid which can be pumped through the same surface after the washing step.

The invention will be described in greater detail with reference to the accompanying drawing the sole FIGURE of which diagrammatically illustrates a representative embodiment.

In the drawing I have shown an oven **1** with a cylindrical or prismatic chamber **12** having an open side **13**. The chamber housing is supported on a base **14** which may include conventional means for heating the chamber to a desired operative temperature.

A tank **2**, supported on wheels **14**, **15**, has a partition **16** subdividing its interior into a first compartment **3** for a wash liquid and a second compartment **4** for a rinse liquid. Two pumps **5'**, **5''** disposed on the bottom of compartments **3** and **4**, respectively, can be selectively operated by a common motor **5** via clutches **17'**, **17''** to deliver one or the other liquid to a port **18** connected via an inlet tube **6** with an elongated nozzle **7** extending axially inside chamber **12**. Nozzle **7** is supported in a demountable lid **8** which, with the aid of fasteners here represented by clamping bolts **19** (only one shown), can be fitted tightly onto the open side **13** of oven **1** to discharge the liquid of either compartment **3**, **4** into the chamber via a multiplicity of outlet apertures. Nozzle **7** may also be journaled in lid **8** for rotation about its axis. The spent liquid is removed via a drain **9** and a reflux conduit **10** to the compartment from which it was drawn, a valve **20** being selectively operable to direct it into the proper section of tank **2**. The compartments **3** and **4** are provided with respective heating coils **11'** and **11''** which may be alternately or jointly operated to bring the two liquids to the desired temperature level. These heating coils may be energized concurrently with motor **5** from any available outlet via a plug-in connection not shown.

I claim:

1. A cleaning unit for a heatable food-treating chamber open to one side, comprising a lid emplaceable vertically across the open side of said chamber, nozzle means on said lid extending into said chamber upon such emplacement, a supply of high-pressure wash liquid, inlet means leading from said supply to said nozzle means for discharging said wash liquid into said chamber, and drain means in the bottom of said lid for removing spent liquid from said chamber.

2. A cleaning unit as defined in claim **1** wherein said drain means comprises a reflux conduit for returning said spent liquid to said supply.

3. A cleaning unit as defined in claim **2** wherein said supply comprises a wheeled tank.

4. A cleaning unit as defined in claim **3** wherein said tank is provided with pump means for circulating said wash liquid via said inlet means, said nozzle means and said reflux conduit through said chamber.

5. A cleaning unit as defined in claim **4** wherein said tank comprises a first compartment for said wash liquid and a second compartment for a rinse liquid, said pump means being switchable for alternately circulating either liquid through said nozzle means.

6. A cleaning unit as defined in claim **5** wherein said reflux conduit is provided with valve means selectively operable for returning spent liquid to either of said compartments.

7. A cleaning unit as defined in claim **5** wherein said compartments are provided with heating means for their liquids.