March 1, 1932. H. NIELSEN 1,847,256

DISH DRIER AND HEATER

Filed Jan. 4, 1930 2 Sheets-Sheet 1

Fig. 1

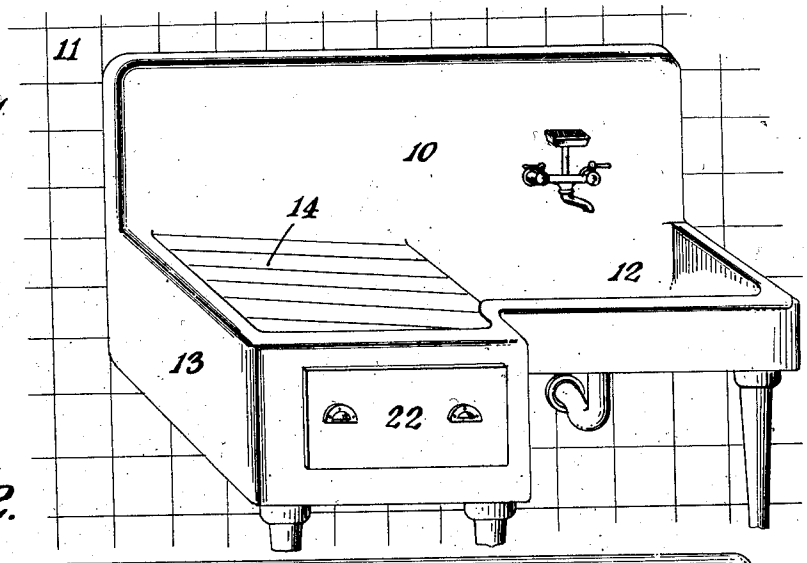
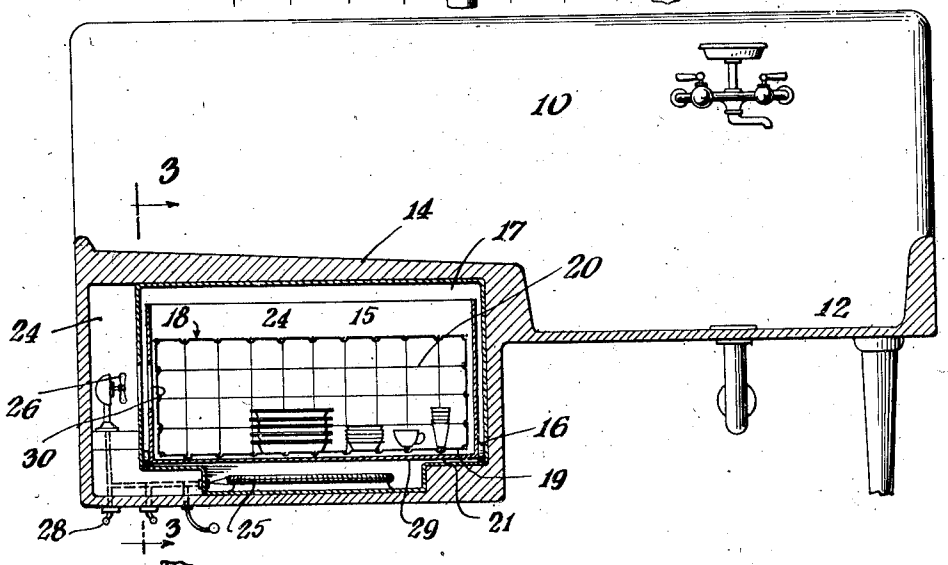


Fig. 2.



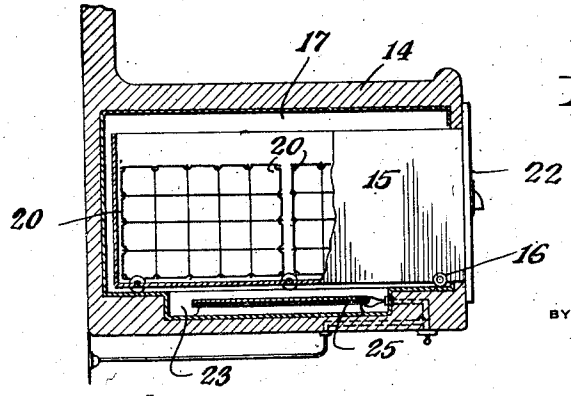


Fig. 3

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Fig. 4

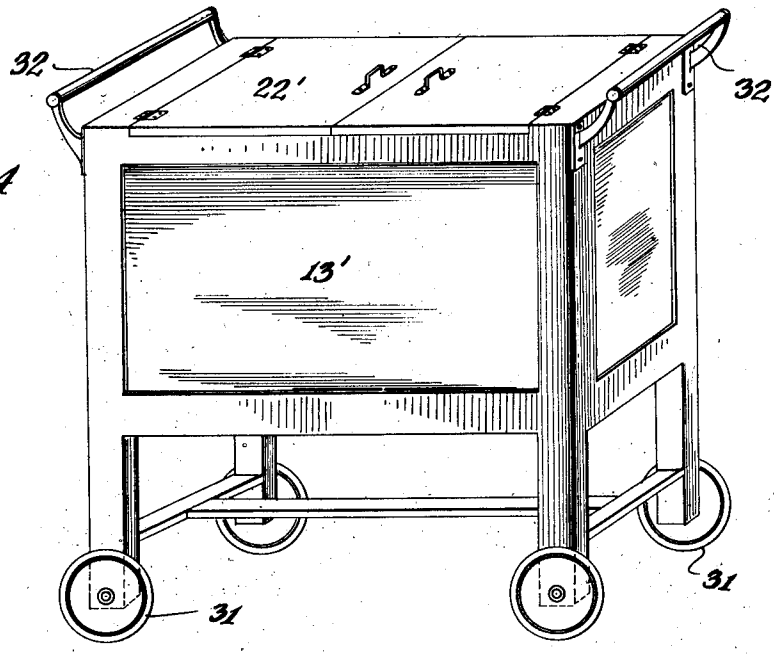


Fig. 5

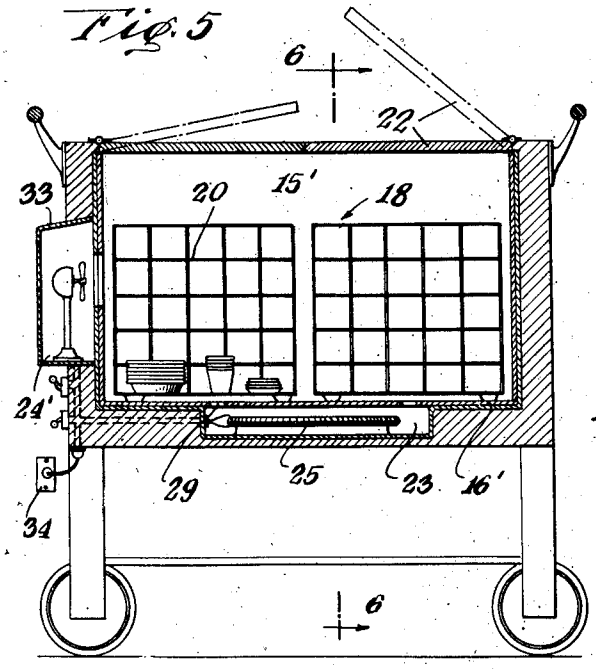
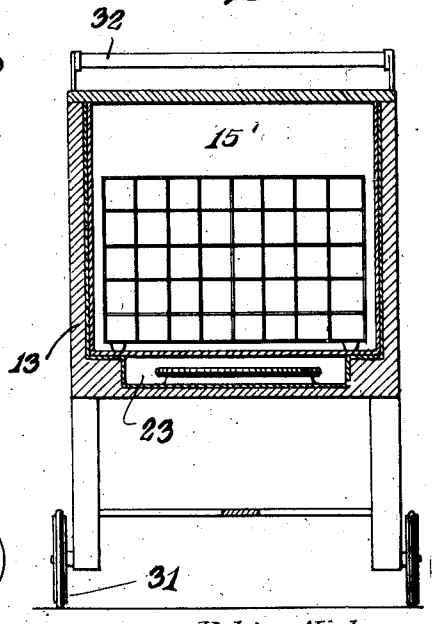


Fig. 6



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UNITED STATES PATENT OFFICE

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DISH DRIER AND HEATER

Application filed January 4, 1930. Serial No. 418,617.

This invention relates to dish driers in which the articles to be dried are heated during the drying operation.

An important object of the invention is the provision of a mechanical organization in which utensil washing and drying means are conveniently positioned in adjoining relation for completing the cleaning process in a shorter space of time and with less manual effort than has heretofore been possible.

Another object of the invention is the provision of an apparatus of the kind described, in which a container, utilized to accommodate articles during the drying process and having associated therewith a heat generating unit, is also effective to control the generated heat, so as to utilize the latter economic lly.

A further object of the invention is to provide, with a view to further controlling the drying and heating operation, an air circulating device for uniformly distributing throughout the container the heat generated by the said unit.

In order to meet the demand for articles, such as plates or dishes, which are occasionally required a number of times in succession during a short interval, the articles may be immediately removed from the container, when dry, while on other occasions, as when the articles are not required immediately after having been cleaned and dried, the said articles may be retained for any length of time in a sanitary condition in the container, there being a manipulable cover for the latter, to satisfy a still further object of the invention.

Other objects and advantages of the invention will be hereinafter specifically pointed out, or will become apparent, as the specification proceeds.

With the above indicated objects in view, the invention resides in certain novel constructions and combinations and arrangement of parts, clearly described in the following specification and fully illustrated in the accompanying drawings, which latter show embodiments of the invention as at present preferred.

In said drawings:

Figure 1 is a perspective of one part of the interior structure of a building wherein an embodiment of the invention is housed.

Figure 2 is a transverse vertical section taken centrally of Figure 1.

Figure 3 is a vertical sectional view on the line 3—3 of Figure 2.

Figure 4 shows a modified form of the invention, in which the outer housing is represented as a service wagon.

Figure 5 is a central longitudinal vertical section of Figure 4.

Figure 6 is a transverse vertical section taken on the line 6—6 of Figure 5.

Referring particularly to the drawings by reference characters, the numeral 10 designates on a wall 11 a fixture of earthenware or the like, preferably enameled, and provided with a receptacle 12, wherein articles may be washed, while the said fixture includes also a housing 13, the top working surface 14 of which is inclined, to facilitate removal therefrom of water, as the latter descends from articles washed in the receptacle and placed on said working surface.

Provided in the interior compartment of the housing, below the surface 14, is a removable container 15, preferably of aluminum, and having thereon rollers 16, which ride on the inner surface of the housing, the latter being provided with an asbestos lining 17, while removably positioned in the container 15 is basket 18 the respective base wall 19 and vertical walls 20 of which, herein shown as being of suitable wiring of large mesh to facilitate manipulation of the same, particularly when dishes 21 or the like are carried therein, may be provided with removable shelves, like the bottom 19, but of less area.

The front wall 22 of the container, when placed in the housing, closes an opening in the latter. Said housing has also therein base and lateral recesses 23 and 24, the former accommodating a heating coil 25 of electric wiring, and the latter an electric motor and fan 26, suitable control switches being installed in the circuit wiring of these devices as indicated at 28. Ventilating or air communication openings 29 are provided in the base of the container 15; and in the vertical

wall of the latter, in register with an opening in the asbestos 17, is an opening 30.

On operation of the fan or blower 26, an air stream is driven about centrally through the container, and as movement of air to the fan is from the back of the latter, return of the air stream is also backwardly outside of the forwardly moving stream, to circulate the air in all parts of the container, the air therefore carrying heat from the coil 25 past the articles 21 to said parts. While two openings 29 are shown in the bottom of the container, any other number of openings may be therein provided, and the covers 22 or 22', the latter being hereinafter referred to, may be open or partly open on certain occasions. The working surface 14 is unobstructed so that the entire construction affords a handy and convenient combination unit of kitchen equipment.

In Figures 4, 5 and 6 I have shown a modified form of the invention in which, however, several of the parts are identical with those already described. In these latter figures the structure is movable, for conveying articles from place to place, and includes a housing 13' or service wagon, which is provided with base wheels 31 and handles 32, while the wall 22', hereinbefore referred to, consists of a pair of swingably openable sections, the carriers 18 being removable, and having on the base thereof spacing members 16'. In this structure the container 15' is close to the asbestos 17, and the recess 24' extends beyond the housing, there being a guard 33 for the fan 26. The electric cable of the wagon 13' may be removably inserted in any convenient socket 34.

The hereinbefore described construction admits of considerable modification without departing from the invention; therefore, it is desired not to be limited to the precise arrangements shown and described, which are as aforesaid, by way of illustration merely. In other words, the scope of protection contemplated is to be taken solely from the appended claims, interpreted as broadly as is consistent with the prior art.

What is claimed as new, is:

1. A drying device comprising in combination with a housing having an upper working surface and a pair of recesses in the wall thereof, one of said recesses being at the lower part of the housing and the other at one side of the latter, said recesses communicating with the interior of the housing, a container slidably mounted in said housing, a removable openwork article holder in said container, a heating coil in said lower recess for heating articles positioned in said container to dry said articles, and an air circulating device in said side recess for moving heated air across said articles, said container including ventilating apertures at the base thereof.

2. A utensil drying device comprising in combination with a housing having an upper working inclined surface and an opening in the front wall of the housing, said housing having also a base recess and a lateral recess therein, said recesses communicating with the interior of the housing, a container slidably mounted in said housing, one part of the wall of said container closing said opening, said latter wall having an opening therein in communication with said lateral recess, a removable openwork article holder in said container, a heating coil in said base recess for heating utensils in one part of said article holder to dry said utensils, and an air circulating device in said lateral recess for moving air in said container to carry heat to said utensils in said article holder for drying said latter utensils.

In testimony whereof I hereby affix my signature.

HELGA NIELSEN.