

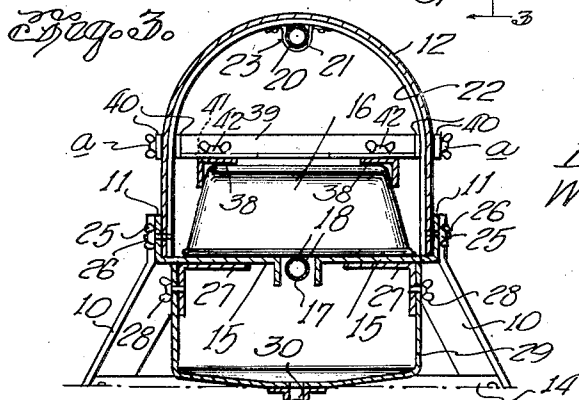
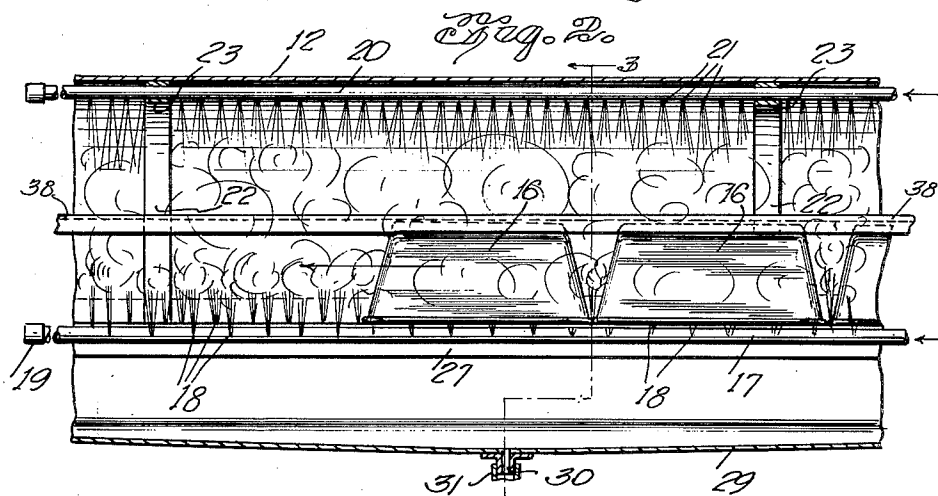
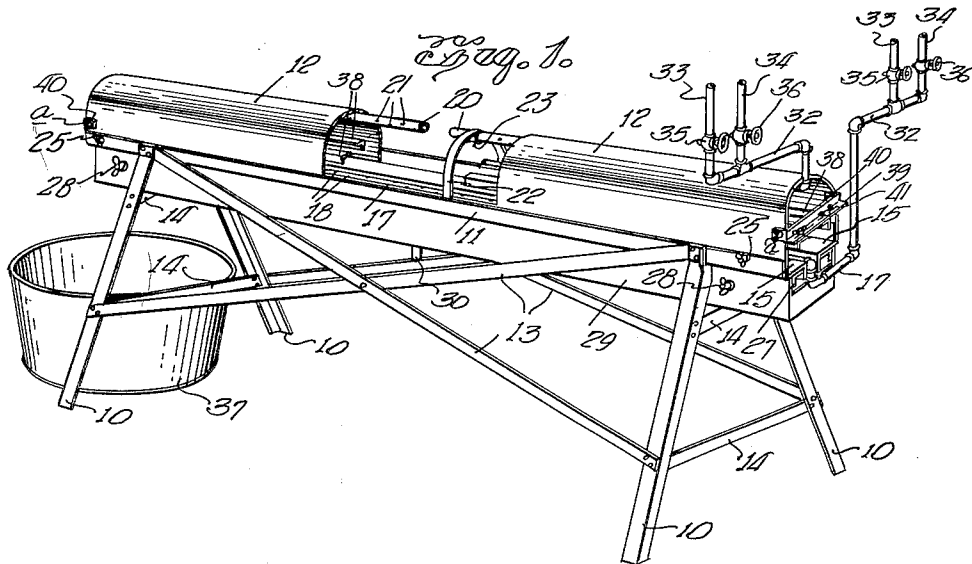
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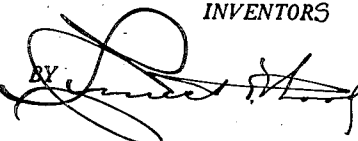
UTENSIL WASHING APPARATUS

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## UTENSIL WASHING APPARATUS

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2 Claims. (Cl. 134-152)

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This invention relates to washing and cleaning apparatus and more particularly to cleansing apparatus for cooking utensils.

The principal object of the invention is to provide a machine, especially adapted for commercial use in the cleaning of utensils in which substances such as chili and other preparations, difficult to remove have been prepared. The invention seeks to facilitate the washing of such utensils by continuously advancing them through an open ended tunnel having attendant means for introducing a mixture of steam and hot water, combined with means for draining off substances released from the utensils through the combined effects of water, steam and the pressure of these mediums.

Another object of the invention is to provide a utensil washing apparatus which simplifies and expedites the cleansing thereof and whose construction is such that certain parts can be quickly and easily removed to effect ready access to other parts for repair and cleaning.

With the foregoing objects as paramount, the invention has particular reference to certain features of accomplishment which will become apparent as the description proceeds, taken in connection with the accompanying drawings wherein:

Figure 1 is a perspective view of a utensil washing apparatus constructed according to the present invention.

Figure 2 is a portion of the machine in vertical section, showing the tunnel, pan supporting rail and drain, and

Figure 3 is a view in vertical section taken on line 3-3 on Figure 2.

Continuing with a more detailed description of the drawing, reference is primarily made to Figure 1, wherein numeral 10 denotes the legs of a supporting frame consisting of side members 11, extending from the upper end of one leg to the other, on each side of the machine, forming retaining means for a tunnel 12, of substantially inverted U-shape in transverse section. The legs 10 are braced by members 13, intercrossing each other on each side and transverse end members 14.

The parallel side members 11 are constructed of Z bars whose horizontal intermediate portions 15 are disposed in spaced apart relationship to support utensils 16 as the latter are slid from one end to the other in contiguous relationship through the tunnel 12, which latter encloses the utensils 16. The space between the members or rails 15 is occupied from end to end

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by a pipe 17, which is provided with closely spaced perforations 18 and is closed by means of a cap 19 at one end, as shown in Figure 2.

Within the dome of the tunnel 12 and extending from one end to the other thereof, is another and similar pipe 20, also perforated at 21. This pipe is supported by means of inverted and spaced U-shaped straps 22, rising from the rails 15 forming the track or rails on which the utensils 16 slide. Loops 23 are fastened underneath the straps at their midsections to embrace and support the pipe 20.

It is obvious that any means suitable for the purpose may be employed to secure the sides of the tunnel 12 removably to the side members 11, but for purposes of illustration, the sides of the tunnel are shown as being disposed on the inside of the members 15 to prevent leakage at the sides and are held against displacement by the U-shaped straps 22 or by means of wing nuts 25, threaded upon bolts 26 extending outwardly from said side members 11 (Fig. 3).

Extending longitudinally with the rails 15, therebelow are angle irons 27. To the depending flanges of these angle irons are secured, by means of bolts and wing nuts 28, the upper edges of a drain pan 29 and to facilitate drainage, the bottom thereof converges towards an opening 30, to which may be attached a pipe or hose 31 to carry off the waste material.

Communicating with an end of pipe 20 is a pipe 32 (Fig. 1). A steam pipe 33 enters this pipe as does likewise a water pipe 34. Valves 35 and 36 control the passage of steam and water through pipes 33 and 34 respectively, to control the mixture entering pipe 20 under pressure. A similar arrangement of pipes and valves, bearing the same characters of reference, is provided to supply a mixture of steam and water to pipe 17, below the rails 15.

In operation, pans or other utensils 16 are placed end to end or side to side on the rails 15, preferably in inverted position, as shown, for adequate drainage and to insure thorough cleaning of their interiors. A suitable mixture of steam and hot water is permitted to enter pipes 17 and 20 through proper manipulation of valves 35 and 36, which mixture emerges from the pipes through their apertures 18 and 21, to impinge all surfaces of the utensils 16 under pressure.

It is clearly apparent that the combined effects of the steam and water, as well as the scrubbing or scouring action of these mediums under pressure will be such that the most obstinate of substances will be readily dislodged from the

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utensils in their passage through the tunnel and will find release through the drainage opening 30. As the pans 16 continue through the tunnel, they emerge successively from the opposite end, thoroughly cleansed and sterilized and will be deposited into a receptacle 37, or they may be otherwise received and transported to a place for refilling or storage, as by a common conveyor.

In order to hold the pans in centered relationship with the tunnel as they are caused to move therethrough, a pair of parallel angle members 38 is disposed longitudinally in the tunnel, with their vertical flanges in confronting relationship to embrace the line of pans. Any tendency of the pans to shift from side to side is defeated by these members as well as preventing upward displacement of the pans should the steam and water pressure below be sufficient to overcome counterpressure of these mediums above.

The members 38 are supported only at their ends by means of cross members 39, also of angle iron. These members are provided at each end with clamps 40, which are secured for vertical adjustment to the ends of the tunnel 12 by bolts *a*. The horizontal flanges of these cross members 39 are provided with longitudinally aligned slots 41 and the ends of guide members 38 are secured by bolts 42, entering these slots. It is apparent therefore that both vertical and horizontal adjustment of these guide members is possible by virtue of the described arrangement to accommodate pans of different heights and widths.

Manifestly, the construction as shown and described is capable of some modification and such modification as may be construed to fall within the scope and meaning of the appended claims is also considered to be within the spirit and intent of the invention.

What is claimed is:

1. A utensil cleansing and sterilizing machine including parallel transporting rails for utensils, a perforated pipe closed at one end and extending adjacent the rails along the full length of said rails, an open ended tunnel removably disposed on said rails, a second perforated pipe suspended in the top of said tunnel throughout the length thereof, valve controlled means for

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introducing fluid into said pipes for discharge onto said utensils, parallel members above said rails extending through said tunnel for guiding utensils therethrough, cross-members vertically adjustable on each end of said tunnel having slots receiving bolts securing said parallel members for relative horizontal adjustment toward and away from each other and means for receiving and disposing of waste materials dis-  
lodged from said utensils.

2. A pan washing machine including parallel transporting rails along which pans are moved in contiguous relationship, a removable, open ended tunnel arranged longitudinally on said rails, perforated pipes, each having a closed end, disposed above and below said rails and extending the full length thereof, means for introducing a fluid cleaning medium under pressure into said pipes to effect discharge thereof through the perforations of said pipes onto the exposed surfaces of said utensils, a pair of parallel guide rails extending through said tunnel intermediate the top and bottom thereof, a cross-member mounted on each end of said tunnel for vertical displacement and to which the ends of said guide rails are connected for adjustment horizontally toward and away from each other to guide pans through said tunnel.

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#### REFERENCES CITED

The following references are of record in the file of this patent:

#### UNITED STATES PATENTS

| Number    | Name          | Date          |
|-----------|---------------|---------------|
| 601,658   | Kaestner      | Apr. 5, 1898  |
| 657,354   | Muller        | Sept. 4, 1900 |
| 784,504   | Rubin         | Mar. 7, 1905  |
| 829,547   | Schwarzenbach | Aug. 28, 1906 |
| 1,055,843 | Warren        | Mar. 11, 1913 |
| 1,206,120 | McCue et al.  | Nov. 28, 1916 |
| 1,406,465 | Lynch         | Feb. 14, 1922 |
| 1,454,124 | McEwan        | May 8, 1923   |
| 1,666,671 | Speer         | Apr. 17, 1928 |
| 2,038,471 | Benatar       | Apr. 21, 1936 |
| 2,223,578 | Rude et al.   | Dec. 3, 1940  |