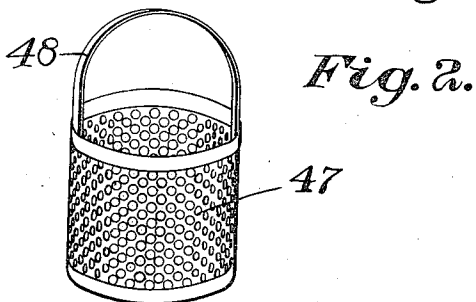
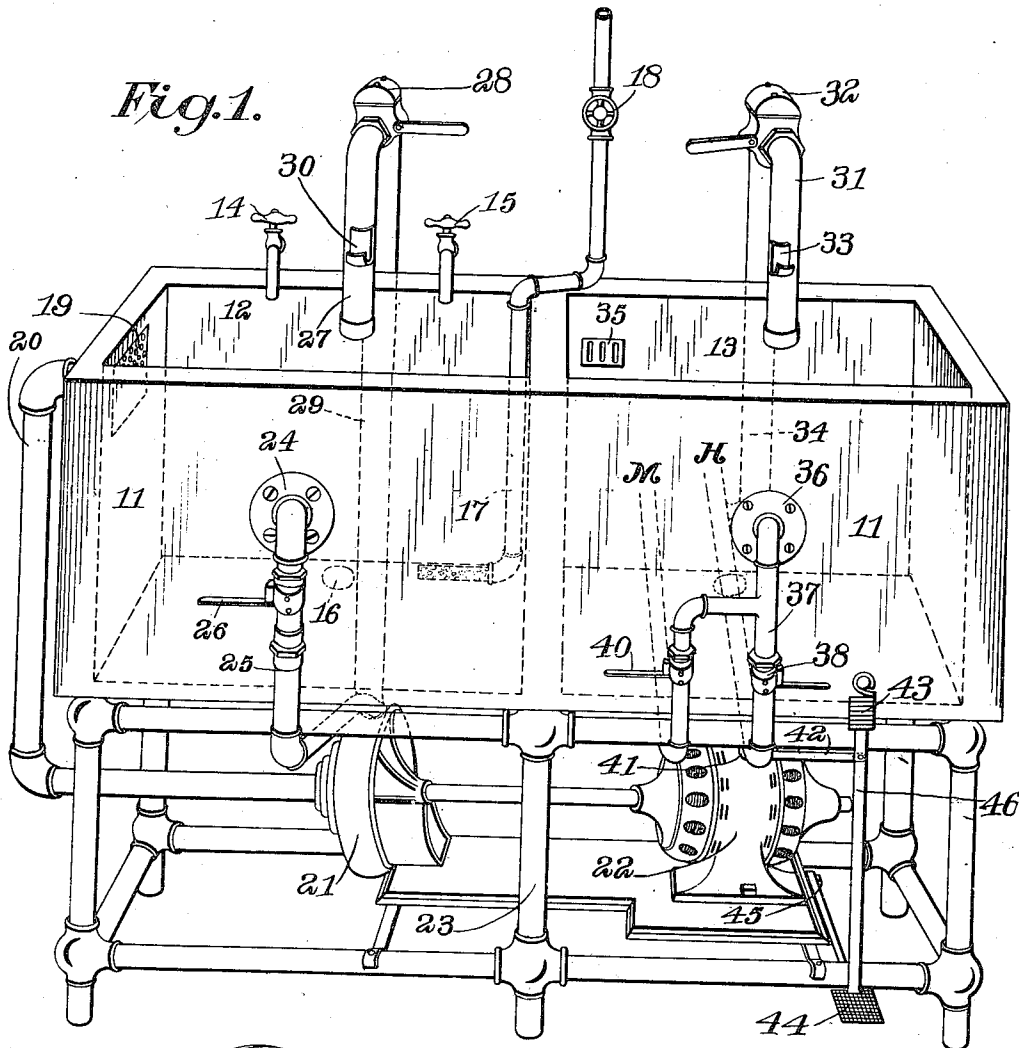


W. FITZGERALD.
DISH WASHER.
APPLICATION FILED JAN. 22, 1917.

1,299,698.

Patented Apr. 8, 1919.
2 SHEETS—SHEET 1.

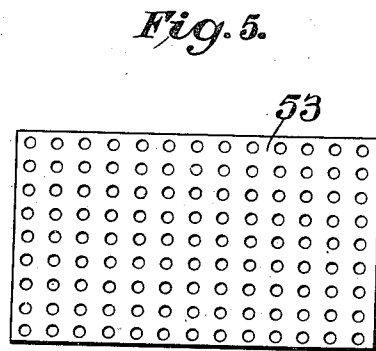
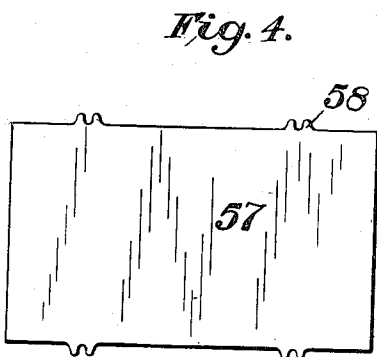
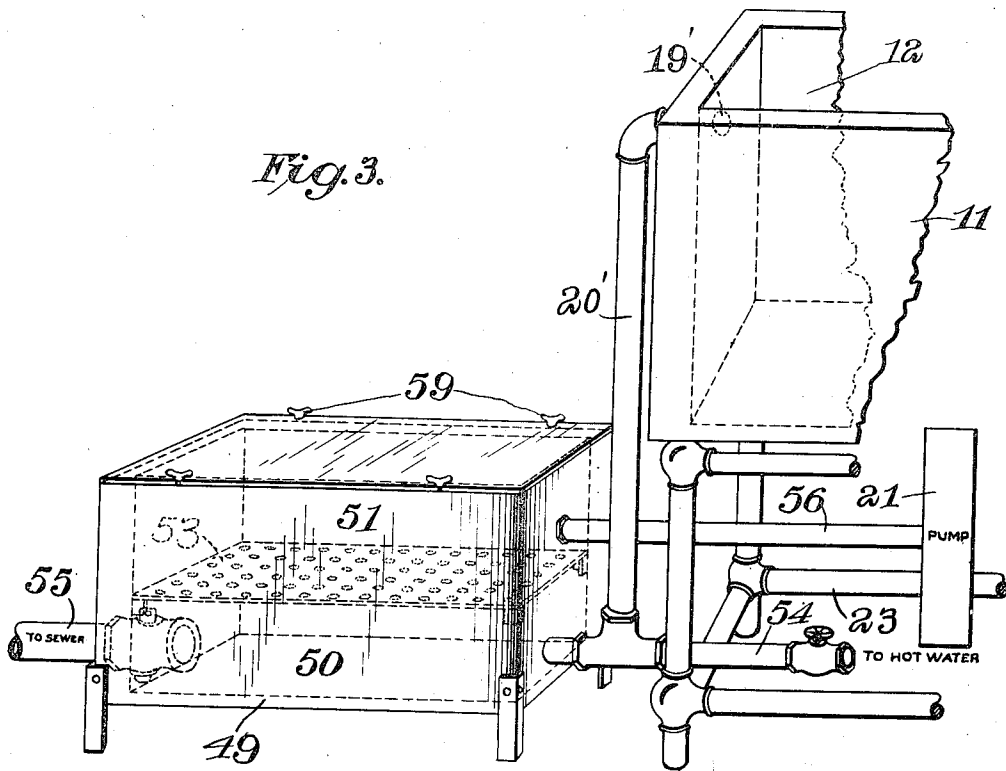


Inventor:
William Fitzgerald,
By Jethurstonhaugh & Catty's.

W. FITZGERALD.
DISH WASHER.
APPLICATION FILED JAN. 22, 1917.

1,299,698.

Patented Apr. 8, 1919.
2 SHEETS—SHEET 2.



Inventor:
William Fitzgerald,
By Johnston, Haugh & Co.
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM FITZGERALD, OF MEMPHIS, TENNESSEE.

DISH-WASHER.

1,299,698.

Specification of Letters Patent.

Patented Apr. 8, 1919.

Application filed January 22, 1917. Serial No. 143,751.

To all whom it may concern:

Be it known that I, WILLIAM FITZGERALD, a citizen of the United States, residing at Memphis, State of Tennessee, have invented a new and useful Improvement in Dish-washers, of which the following is a specification.

My invention comprises an open top tank having a free interior space for the introduction of the articles to be cleaned, by hand, and means for producing a submerged surging current in the bath, said means consisting of a supply pipe, or like means, having its outlet submerged so that the articles placed opposite this submerged outlet and consequently in a submerged position will be subjected both to the incoming surging current and also to the water of the bath, which is set in motion by the submerged current so that the article will be cleaned both inside and out in the case of a tumbler, pitcher, or other open mouthed receptacle, or in the case of a collection of silver articles, such as knives, forks and spoons, the cleansing will be done by the surging current and also by the water of the bath which is set in motion by the submerged surging current.

The invention is illustrated in the accompanying drawings in which—

Figure 1 shows a perspective front view of my washer. Fig. 2 shows a perspective view of a basket that may be used in connection with it. Fig. 3 shows a washer having a more elaborate form of strainer in the overflow. Fig. 4 is a plan view of the removable top of the sediment collector and Fig. 5 is a plan view of the screen within the collector.

In the drawings, the numeral 11 illustrates a tub having two compartments 12 and 13 therein, compartment 12 being adapted for washing the utensils and the compartment 13 for rinsing them after they have been washed. Hot and cold water faucets, 14 and 15 are provided for the compartment 12. 16 indicates an ordinary drain opening, and 17 illustrates a steam pipe for heating the water in the compartment 12, which heat may be regulated by the valve 18. A screened overflow 19 is provided in the compartment 12, and a pipe 20 is connected thereto to carry water therefrom to the intake side of a pump 21, driven by a motor 22, which pump and motor are supported on a support 23, provided for the tub 11. This support is preferably made from tub-

ing, as illustrated. 24 indicates an inlet in the side of the compartment 12 so arranged that water passing into the tub from it will take the form of fine streams, which may either converge or diverge for the purpose of efficiently cleansing glass utensils of any shape. This inlet 24 is connected by a pipe 25, having a valve 26 in it, with the out go end of the pump 21. Preferably on the opposite side of the compartment 12, I provide an elongated downwardly directed nozzle 27, controlled by a valve 28, and connected by a pipe 29, to the out going part of the pump 21. A hook 30 is provided on the nozzle as shown.

The compartment 13 has a nozzle 31, a valve 32, and a hook 33, in all respects similar to the nozzle and its parts of the compartment 12 but is fed from a pipe 34, which is connected to any source of hot water H. This compartment is equipped with an overflow 35. The front face of this compartment is provided with a nozzle 36, in all respects similar to the inlet 24 of the compartment 12. It is connected by a pipe 37, controlled by a valve 38, connected to a hot water supply H. The pipe 37 has communicating with it, a pipe, controlled by a valve 40, which is connected to the water mains or other source of supply. The pipe 37 may or may not be equipped with a further valve 41, having an operating handle 42, held normally closed by a spring 43 and operable to open it by a treadle, pivoted at 45 to the tub support 23, and a link 46 connecting the treadle to the handle 42.

It is to be understood that the handle for the various valves shown, may be extended in which ever direction is found to be the most efficient. 47 indicates a basket or perforated bucket for holding utensils to be washed and is equipped with a handle 48.

The operation of the device is as follows: The compartment 12 is filled to overflowing with hot water from the spigots 14 and 15 attached to the mains. Soap or soap powder is then put into the water to increase its cleansing qualities. Then the motor 22 is started which rotates the pump 21 and creates pressure upon the inlets 24 and 27. Assuming that the glassware or cups are to be washed first, the operator will open the valve 26 to permit the pump 21 to force water from the overflow 19 back into the compartment through the inlet 24, in the forms of a submerged or surging current so

that the utensil is thoroughly washed. After the glasses and cups are washed, the silverware may be placed upon the support 30 on the nozzle 27 and its valve 28 opened. This nozzle produces a submerged surging current in the same way as the inlet 24, and the pump forces the water from the overflow, through the pipes under pressure, whereby the silverware is completely cleansed. Then the china ware can be treated either in the same way in the bucket, or else piece by piece, the principal feature being that the soapy water is used over and over again. If it begins to cool off, it may be heated by the steam pipe 17. After the utensils have been washed they are then put into the compartment 13, where they are rinsed. To rinse the glasses or cups, they are placed over the inlet 36 and the valve 38, opened, to permit hot water from the pipe 37 to surge on to the glasses to rinse them. If it is important to conserve the water hot, the valve 38 can be left permanently opened and when the glasses are to be rinsed, the treadle 44 may be operated to open the valve 41. As soon as the glasses have been rinsed and the operator's foot removed from the treadle, the spring 43 will immediately close the valve 41. The silver ware and chinaware are rinsed by placing them under the nozzle 31 and opening the valve 32 to permit the hot water from the pipe 34 to surge thereon to rinse them. If the water in the inlet 36 becomes too hot, it can be cooled by opening the valve 40 in the cold water pipe 39.

If desirable I may interpose means for ridding the water passing to the pump of any refuse by interposing a tank 49 divided into two compartments 50 and 51 by a removable perforated partition 53. In this event the screen 19 of Fig. 1 is displaced by opening 19' in Fig. 3 and the pipe 20 leading to the pump 21 by a pipe 20' leading to the lower compartment 50 of the sediment tank 49. A valved connection 54 may be made with this pipe to a source of hot water. The lower compartment 50 is also provided with a valve connection 55 to a sewer. A pipe 56 connects the upper compartment 51 with the pump 21. The tank 49 has a removable lid 57 provided with pairs of lugs 58 adapted to be engaged by wing nuts 59 on the top of the tank.

When this modification is used, water from the compartment 12 of the tub 11 flows down the overflow pipe 20' into the lower

compartment 50 of the tank 49. It then rises through the perforated partition 53 that serves as a screen to clean the water of sediment, which sediment is trapped in the compartment 50. The cleaned water from the compartment 51 then passes to the pump from whence it is forced back into the tub compartment as previously described. When the sediment compartment 50 has become filled, the pump and its circulating water may be stopped, the valve sewer connection 55 opened, and the hot water connection 54 opened whereby the sediment is flushed out of the tank into the sewer. The partition 53 and lid 57 are removable so at periodic intervals, the tank may be thoroughly cleansed.

It will be understood that the washing effect is not done by spraying the water upon the articles but by creating a surging current through the water of the bath and below the level of the bath a sufficient distance to insure the complete submergence of the articles when placed opposite the incoming current or stream.

The glasses are placed with their open mouths opposite the incoming surging currents, and in this position they are completely submerged. The surging currents create eddy currents in the bath not only by their direct flow, but by striking the opposite side of the compartment and producing a disturbance here, and because of this disturbance of the water and the consequent eddy currents a glass when submerged will be washed inside and out by the water of the bath surging or flowing thereagainst, and the flow of water out from the glass will also produce eddy currents along its sides, which will accentuate the washing effect.

What I claim is:

A washing apparatus comprising a receptacle having an overflow to determine the height of water therein and means to direct a stream of water under pressure horizontally into the bath at such a distance below the overflow thereof as to enable the articles readily to be placed in front of said stream while maintained in the hand of the operator, but at sufficient depth to be wholly submerged and subjected to the horizontally surging water, due to the inflowing submerged stream, said apparatus being open at the top to enable the articles, one after the other, to be quickly submerged and removed by hand.

WM. FITZGERALD.