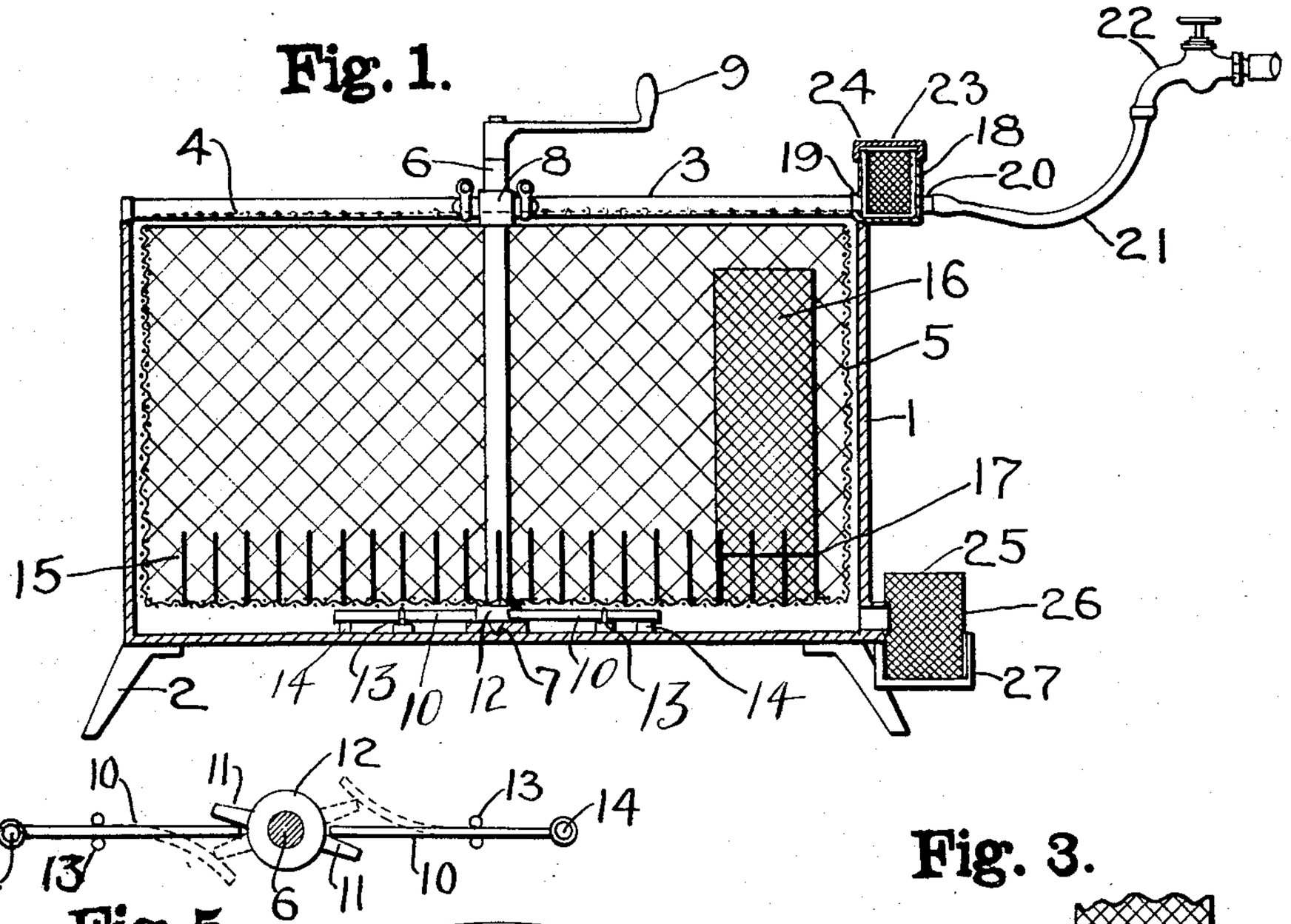
L. H. CAMPBELL.

DISH WASHING MACHINE.

APPLICATION FILED SEPT. 26, 1910.

999,956. Patented Aug. 8, 1911.

Fig. 1.



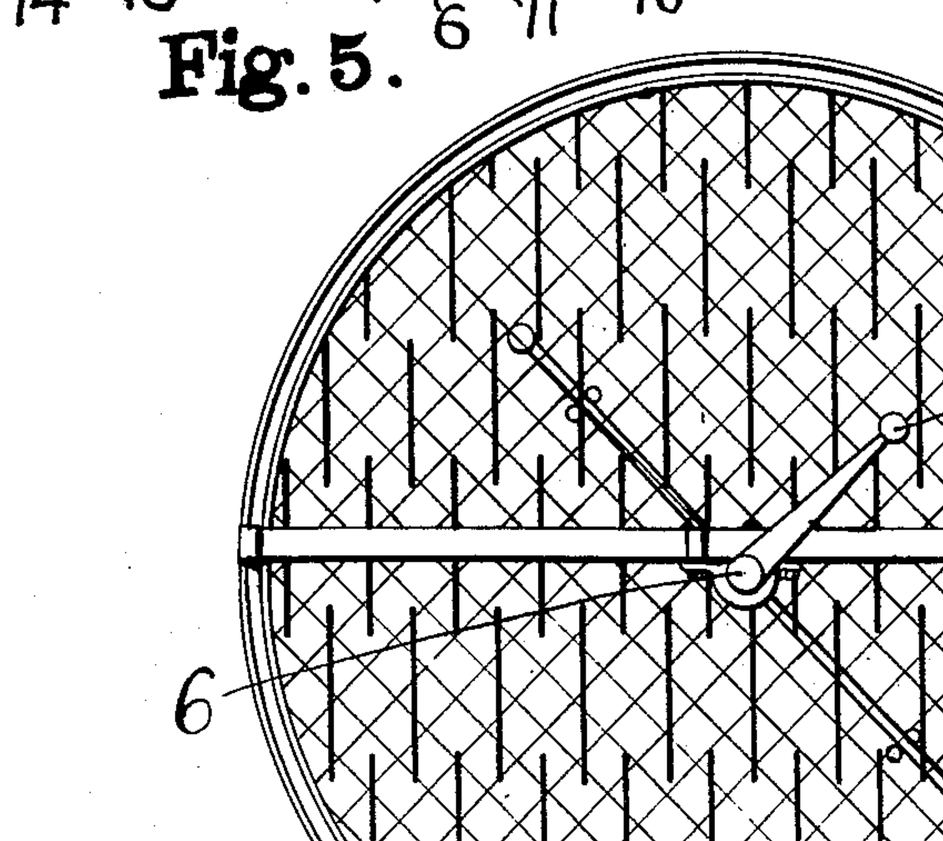


Fig. 5.

Fig. 3.

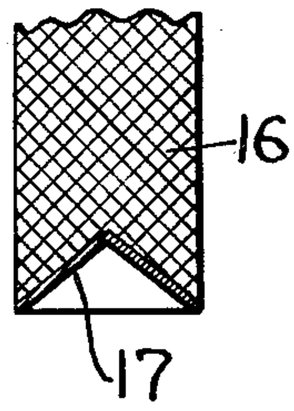


Fig. 4.

Fig. 2.

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LEONARD H. CAMPBELL, OF PROVIDENCE, RHODE ISLAND.

DISH-WASHING MACHINE.

999,956. Specification of Letters Patent. Patented Aug. 8, 1911.

Application filed September 26, 1910. Serial No. 583,951.

To all whom it may concern:

Be it known that I, LEONARD H. CAMPBELL, citizen of the United States, residing at 54 Locust street, Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Dish-Washing Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention has reference to dish washing machines its object being to provide a machine of this character that is simple and inexpensive in construction and practical in its operation, the same being adapted more particularly for family use but may be used as well in hotels, restaurants and other places of this class.

One of the principal objects of the invention is to provide a dish washing machine with a hose connection to a hot water supplying faucet and to provide a soap receptacle in the line of pipe through which the hot water is obliged to pass and be delivered in soapy condition onto the dishes, and an essential feature of this construction is to render the soap container removable so that the dishes may be subsequently rinsed through the same pipe.

A further object of this invention is to provide a separate container or compartment located in the main container, herein after called the basket, said separate container being provided with an inverted V shaped bottom for the purpose of forcing the water upward and around the silver as the basket is being rapidly rotated or oscillated.

Still another object of the invention is to provide spring means to act upon the basket whereby the same is stopped gradually and caused to reverse its direction of rotation at each half revolution.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1—is a sectional side elevation of my improved apparatus. Fig. 2—is a plan view of the same. Fig. 3—is a detail illustrating the inverted V shaped bottom in the silverware receptacle. Fig. 4—is an enlarged detail of the soap receptacle. Fig. 5—is a detail showing the application and one form or arrangement of spring which may be used to assist in reversing the direction of rotation of the dish receiving basket.

Referring to the drawings, I designates a water tight drum supported on suitable legs 2. This drum may be made of metal or other suitable material and is preferably open at its upper end across which extends a water supply pipe 3 provided with suitable holes or perforations on its lower side. In this casing is rotatably mounted a wire mesh basket 5, the same being mounted on and fixed to the upright central shaft 6. The lower end of this shaft is stepped at 7 and its upper portion is rotatably supported in bearing 8, the latter being shown as connected to the sprinkler pipe 3. A handle 9 is connected to the upper end of this by which the basket and its contents are oscillated or rotated a one-half revolution in one direction and then reversed. In order to assist in this oscillating movement, I have provided a pair of long flat springs 10—10 firmly held by pins 13—14, see Fig. 5, the free ends of which springs are arranged to engage lug 11—11 on the hub 12 at the lower end of shaft 6 whereby the basket, when heavily loaded with dishes, upon approaching the end of each half revolution may be gradually brought to a stop and caused to easily reverse its direction of rotation, but any arrangement of springs may be employed for this purpose. Wire fingers or rests 15 are arranged at close intervals about the bottom of this basket to receive the edges of the dishes and hold them in an up-right position to facilitate being operated upon and cleaned by the swirling water, but any desired means may be employed for supporting the dishes in this position.

Near the outer edge of the wire basket is located a separate container 16 constructed preferably of wire for receiving the silverware to be washed. A feature of this container is that the bottom portion is constructed of plates set up on an angle forming an inverted V shape bottom 17, see Fig. 3, whereby as the main basket is rotated rapidly through the water this shape of bottom causes the water to force its way upward between the separate articles of silverware to more effectually clean the same.

An essential feature of my invention is the provision of a soap receptacle 18 comprising a box secured on one side 19 to the

spray pipe 3 and on the opposite side 20 to the flexible tube 21 that leads to the hot water supplying faucet 22. This box or receptacle is provided at its upper end with a screw cap 23 making the same water tight when the pressure is applied. A separate wire mesh soap containing basket 24 is adapted to be dropped into and be readily removed from the receptacle 18.

The particles of food removed from the dishes while being washed are conveyed by the water through the outlet opening 25 into a garbage receiving wire basket 26. This basket is loosely supported in the frame 27 of any desired construction whereby it may be readily removed to deposit the waste collected therein.

In operating my improved dish washing apparatus, the plate and dishes are first deposited in the bottom of the main rotatable basket 5 where they are held apart by the up-right supports 15. The table silver is deposited in a separate container 16. The basket 24 containing the soap is inclosed in its receptacle 18 and the faucet 22 is opened permitting the hot water to pass through the tube 21, soap chamber 18, and be forced from the spray pipe in a soapy condition onto the dishes. It is now only necessary to rapidly oscillate the main dish carrying basket, first in one direction and then in the other, which motion is greatly assisted by the springs 10—10. The movement of the dishes first in one direction then in the other produces a scouring effect of the water upon them which is much more effective than a continuous rotating motion could possibly be. After the dishes are thoroughly washed it is only necessary to unscrew the cap 23 of the receptacle 18 and remove soap containing basket, after which the water is again turned on and the dishes rinsed with the clean water from the faucet.

I do not wish to restrict myself to the means shown for manually operating the device, as the dish containing basket may be oscillated by mechanical means not shown if desired.

The water from the machine after passing through the garbage receptacle may be deposited in the sink or connected directly to the waste pipe.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A dish washer comprising a drum, a basket mounted to oscillate in said drum, and means for arresting the movement of said basket and assisting to reverse the direction of travel thereof.

2. A dish washer comprising a drum, a basket mounted in said drum, an oscillatory shaft supporting said basket, and means engaging said shaft for absorbing the momentum and assisting to reverse the direction of travel of said shaft.

3. A dish washer comprising a drum, a basket mounted in said drum, an oscillatory shaft supporting said basket, and provided with radial lugs, and springs engaging said lugs to absorb the momentum and assist in reversing the direction of travel of said shaft.

4. A dish washer comprising a drum, a basket mounted in said drum, an oscillatory shaft supporting said basket, and provided with radial lugs, springs each secured at one end to said drum and having their free ends in engagement with said lugs, and means for creating a tension on said springs, whereby they absorb the momentum, and assist in reversing the direction of travel of said shaft.

In testimony whereof I affix my signature in presence of two witnesses.

LEONARD H. CAMPBELL.

Witnesses:
HOWARD E. BARLOW,
G. CROSSLEY.