

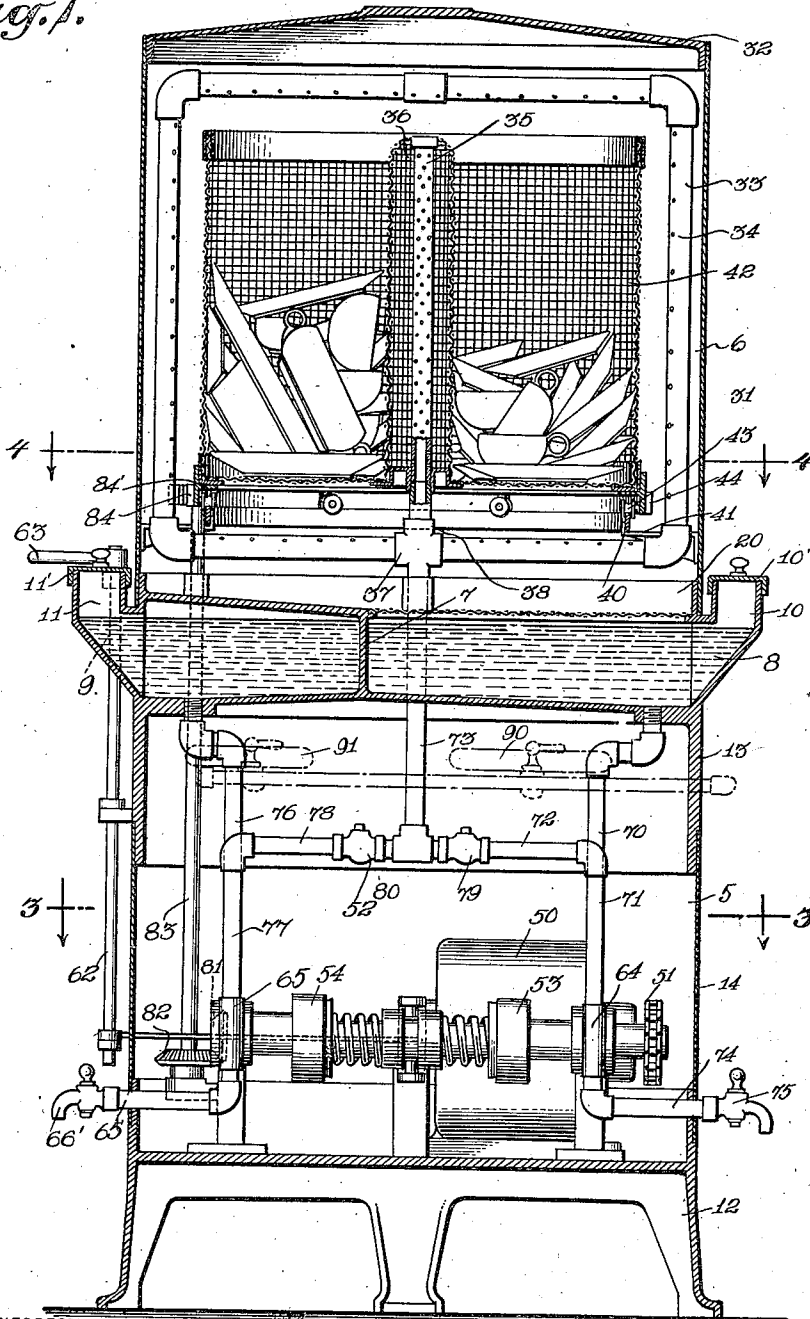
C. E. WING.
DISHWASHING MACHINE.
APPLICATION FILED NOV. 16, 1920.

1,405,243.

Patented Jan. 31, 1922.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES
For naylor
P. H. Patterson.

INVENTOR
C. E. WING.
BY *Mund Co*
ATTORNEYS

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2 SHEETS—SHEET 2.

Fig. 3.

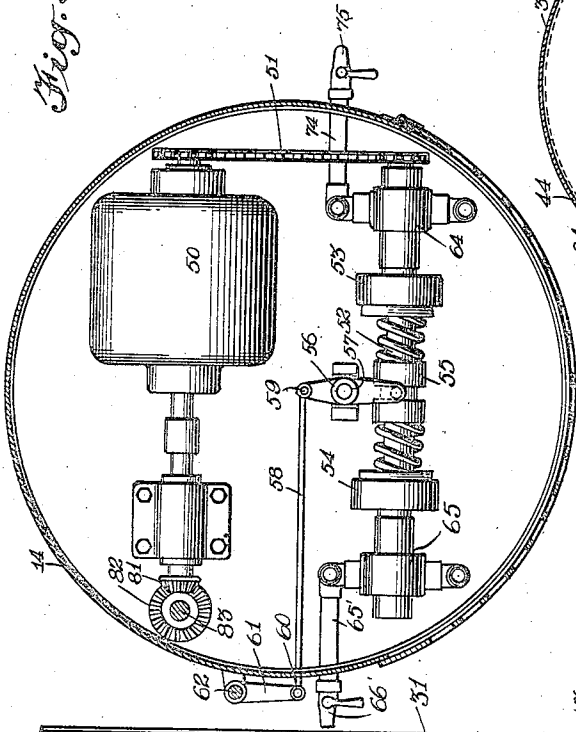
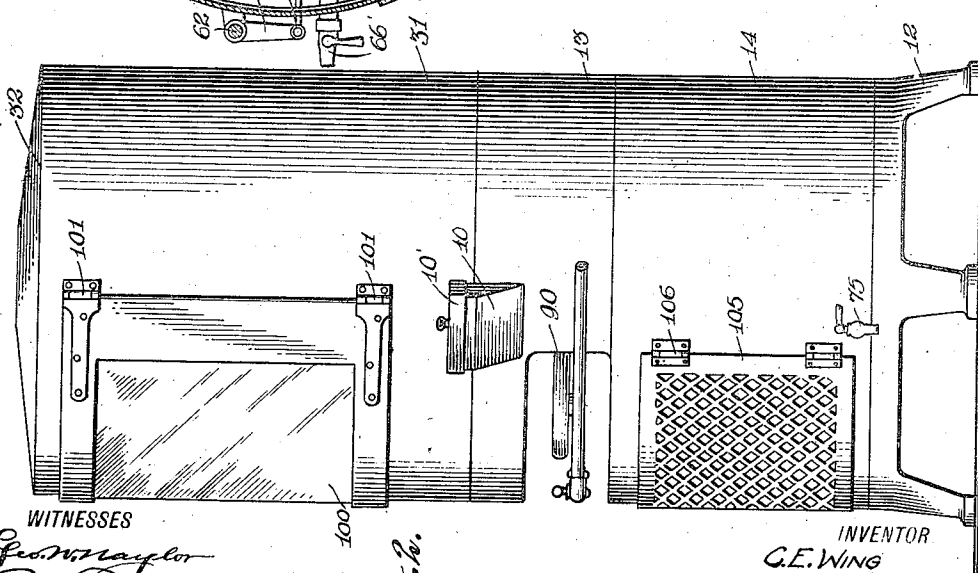
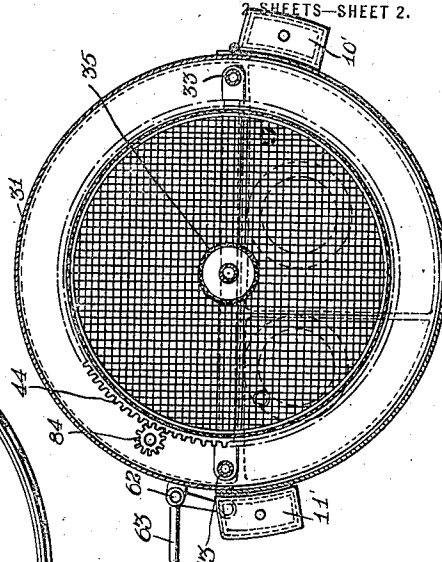


Fig. 4.



WITNESSES

Geo. W. Taylor
P. H. Patterson

Fig. 2.

INVENTOR
C. E. WING

BY *Mum & Co*
ATTORNEYS

UNITED STATES PATENT OFFICE.

CLAUDE E. WING, OF NEW YORK, N. Y.

DISHWASHING MACHINE.

1,405,243.

Specification of Letters Patent.

Patented Jan. 31, 1922.

Application filed November 16, 1920. Serial No. 424,393.

To all whom it may concern:

Be it known that I, CLAUDE E. WING, a citizen of the United States, and a resident of the city of New York, College Point, borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Dishwashing Machine, of which the following is a full, clear, and exact description.

The present invention relates to new and useful Improvements in dish-washing machines, and it pertains more particularly to devices of this character of the power-operated type.

It is one of the objects of the invention to provide a machine for washing dishes in which washing fluid and rinsing fluid may be separately used.

It is a further object of the invention to provide means for separately introducing the washing fluid and rinsing fluid to the washing chamber.

It is a still further object of the invention to provide mechanism whereby the dishes being washed are subjected to a spray of washing fluid from all angles.

It is a still further object of the invention to provide selective means for operating the impelling means of the washing and rinsing fluids.

With the above and other objects in view, reference is had to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a machine constructed in accordance with the present invention;

Fig. 2 is a side elevation of the machine;

Fig. 3 is a horizontal sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 1.

Referring more particularly to the drawings, the device comprises a lower compartment 5 and an upper compartment 6, and said compartments are separated by means of a reservoir divided by a partition 7 into a washing-fluid chamber 8 and a rinsing fluid chamber 9. The washing fluid chamber 8 is provided with a neck or the like 10 by means of which the fluid is introduced into said chamber, and the rinsing fluid chamber 9 is provided with a neck or the like 11 through which the rinsing fluid is introduced into the chamber. The supply openings 10 and 11 of the chambers 8 and

9 are closed by means of covers or the like 10' and 11', respectively.

The lower compartment 5 is formed of a base 12 and an upper portion 13, preferably held in spaced relation by a cylindrical member 14, and said lower compartment forms the space for the various parts of the mechanism for operating the machine.

The two reservoirs 8 and 9 are formed as an integral part of the upper portion 13 of the lower receptacle 5, and this integral structure is provided with a flange 20 upon its upper face. This flange 20 forms the means by which a cylindrical member 31 is secured to the lower portion to form the washing chamber, and said washing chamber is provided with a cover 32 upon its upper end.

Mounted within the washing chamber 6 is a rectangular frame 33, and said frame is formed of pipes, perforated as at 34. Centrally disposed with respect to the lower horizontal member of the rectangular frame, is a vertical pipe 35, perforated as indicated at 36, and the interior of said pipe communicates with the lower horizontal pipe of the rectangular frame. This lower horizontal pipe of the rectangular frame is provided centrally of its ends with a fitting 37, and said fitting has upon its upper side a flange 38 within which the heretofore mentioned pipe 35 is received, and any suitable means is employed for forming a water-tight joint between said pipe and the interior of the flange 38, which joint, however, is adapted to permit of free rotation of the vertical pipe 35 in a manner to be hereinafter described.

Mounted in the upper or washing compartment 6 is a circular track 40, and said track is supported by brackets 41. Mounted upon the track is a circular rack 84 and said circular rack 84 is substantially T-shaped in cross section to provide an inwardly projecting flange 84' upon which the basket 42 is adapted to rest. By this construction it is apparent that when the basket rests upon the circular rack and the circular rack is driven, the basket will be revolved within the rectangular frame 33.

Mounted in the lower compartment 5, is a motor 50, and said motor through the medium of a chain 51, is adapted to drive a shaft 52. The shaft 52 is provided intermediate of its ends with two clutches 53

and 54, and said clutches are operated by means of a collar 55 reciprocated longitudinally of the shaft 52 by means of a lever 56 pivoted as at 57. This lever 56 has an operating rod 58 pivotally secured thereto as at 59, the other end of said rod being pivotally connected as at 60 to the lever 61 carried by a vertically extending shaft 62, which latter is provided on its upper end with an operating handle 63.

Mounted adjacent to the clutch member 53, is a pump 64, and mounted adjacent to the clutch member 54, is a pump 65. These clutches and pumps are so arranged that as the clutch 53 is operatively connected, the pump 64 will be driven, and as the clutch 54 is operatively connected, the pump 65 will be driven.

Extending from the washing fluid chamber 8 to the pump 64, is a pipe-line 70, and extending from the pump 65, is a pipe-line 71. This pipe-line 71 communicates with a centrally-disposed pipe 73, by means of a pipe 72, and said pipe 73 communicates with the lower arm of the rectangular frame 33 heretofore mentioned. Leading from the lower portion of the pump 64, is a pipe 74, and said pipe 74 is provided on its outer end with a spigot or the like 75, by means of which said pump 64 may be drained.

Leading from the rinsing fluid chamber 9, is a pipe 76, and the lower end of said pipe 76 is connected to the pump 65. Leading from the pump 65 to the pipe 73, are pipes 77 and 78, the pipe 78 being connected to the pipe 73.

The sections 72 and 78 are provided with valves 79 and 80, respectively, by means of which the flow from either of the pumps 64 or 65 may be cut off. The inner end of the motor shaft is provided with a bevel gear 81, and said bevel gear meshes with a bevel gear 82 carried upon the lower end of a vertical shaft 83, the upper end of which is provided with a gear 84 meshing with the rack 44 of the basket, which mechanism forms the means by which the basket is rotated within the rectangular frame 33.

Mounted beneath the washing-fluid chamber 8 and the rinsing-fluid chamber 9 are gas burners 90 and 91, by means of which the fluids in the separate chambers may be separately heated.

Leading from the pump 65, is a pipe 65', and said pipe 65' is provided with a faucet or the like 66', by means of which the pump 65 may be drained.

The upper compartment 6 is provided with a door 100 hinged as at 101 in order that the same may swing to the open position, and permit of insertion of the basket 42. The basket containing the articles to be washed is passed through the door opening and positioned within the receptacle 6, with the lower end of the central pipe 35 received

within the fitting 37. After this has been done, the current is supplied to the motor 50, and the latter starts its operation. Upon operation of the motor 50, the basket begins to revolve through the medium of the gear wheels 81, 82, shaft 83, and gear wheel 84, which meshes with the rack 44 on which said basket rests.

The operating handle 63 is now grasped and rocked to the left in Fig. 1, which operation engages the clutch 53 and starts an operation of the pump 64. This operation of the pump 64 causes a circulation of the washing fluid through the pipe 70, pump 64, pipes 71, 72 and 73, to the rectangular spraying frame, and said fluid is projected into the basket into contact with the articles to be washed. After this operation has been carried out to a point where the articles have been sufficiently cleaned, the operating lever is shifted to the opposite side, which action disengages the clutch 53 and engages the clutch 54. As the clutch 54 is engaged the rinsing fluid from the reservoir 9 is pumped through the pipe 76, pump 65, pipe 77, and to the pipe 73, from whence it is discharged through the rectangular frame, into contact with the articles being washed, in order that they may be properly rinsed. After this operation has been completed, the basket is removed from the chamber 6, and the cleansed articles removed from said basket.

In order to drain the reservoir itself, it is only necessary to operate the valves 66' and 75 when a thorough draining of said reservoir through the pipes 70 and 78 will be had.

While in the present instance, no showing is made of an automatic means for operating the clutches 53 and 54, it is obvious that a suitable timing mechanism may be coupled therewith in order that the machine may operate automatically if desired.

Access to the lower receptacle 5 is had by means of a door 105 hingedly mounted as at 106 in order that repairs and the like may be made to the operating mechanism of the device.

While in the present instance the basket is shown as of the vertical type adapted to revolve within a rectangular frame, it is obvious that if so desired suitable means may be employed for driving the rectangular frame around a stationary basket, and in a construction of this kind, it will here be stated that where the frame 33 is revolved relatively to the basket, the basket and frame may be positioned in a horizontal plane, if desired.

From the foregoing it will be seen that the present invention provides a device in which dishes may be first washed and then subjected to a rinsing operation without a duplication of mechanism except the containers for the two fluids, and a separate pump for operating each, and, furthermore, the inven-

tion provides a simple device which occupies but comparatively small space, thus making it especially adaptable for household use.

I claim:

5 A dish-washing machine comprising a washing chamber, a stationary circular track mounted in said washing chamber, a dish-carrying receptacle, mounted for rotating movement upon said track, said dish-carry-
10 ing receptacle being formed of a foraminous material and having a central vertical com-

partment of relatively small diameter, a rectangular perforated frame within which the dish-carrying receptacle is adapted to rotate, a perforated pipe projecting from said 15 frame and lying within the relatively small vertical compartment of the dish-carrying receptacle, means for rotating said dish-carrying receptacle within the perforated frame, and means for supplying a washing 20 fluid to said frame.

CLAUDE E. WING.