No. 707,443. Patented Aug. 19, 1902.

J. D. MORLEY.

DISH WASHING APPARATUS

(Application filed Dec. 14, 1901.)

(No Model.)

Fig. 1.

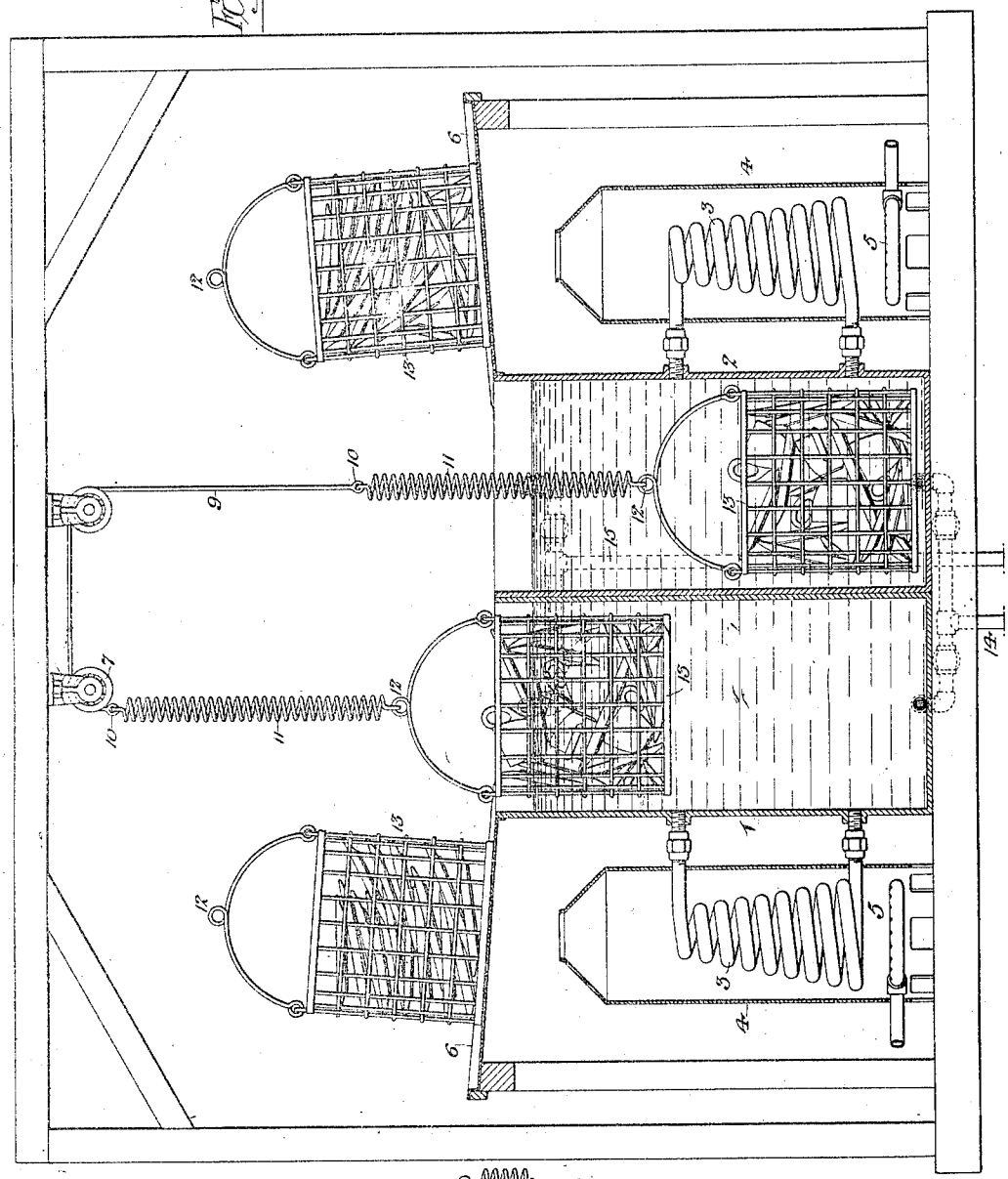
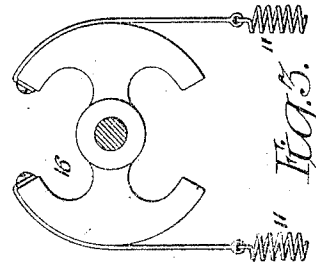
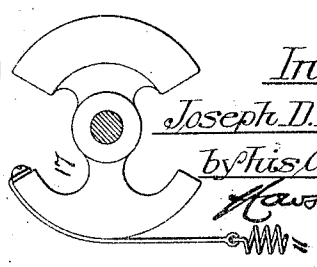


Fig. 5.





Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH D. MORLEY, OF LAKE PLEASANT, NEW YORK.

DISH-WASHING APPARATUS

SPECIFICATION forming part of Letters Patent No. 707,443, dated August 19, 1902.

Application filed December 14, 1901. Serial No. 85,906. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH D. MORLEY, a citizen of the United States, and a resident of Lake Pleasant, Hamilton county, New York, have invented certain Improvements in Dish-Washing Apparatus, of which the following is a specification.

The object of my invention is to construct a hand-operated dish-washing apparatus especially intended for use in kitchens of small hotels, boarding-houses, restaurants, and other establishments where power is not available, the object of my invention being to provide apparatus which, while of comparatively simple and inexpensive construction, will permit of the washing of a large number of dishes at one time with an expenditure of a minimum amount of labor.

In the accompanying drawings, Figure 1 represents in longitudinal section a dish-washing apparatus constructed in accordance with my invention, and Figs. 2 and 3 views illustrating modifications of parts of the same.

The apparatus shown in Fig. 1 comprises two tanks 1 and 2, preferably of metal and of cylindrical form, the tank 1 being the washing-tank, containing soapy water, and the tank 2 the rinsing-tank, containing clean water, each of these tanks communicating with a water heater and circulator, whereby the supply of water in each tank can be constantly kept hot. In the present instance each water-heater consists of a coil of pipe 3, contained in a suitable casing 4 and communicating at its upper and lower ends with the tank, a burner 5, using gas, oil, or other available fuel, or a fire of wood or coal being employed to properly heat each coil. As shown in the drawings, the heating-coils are disposed alongside of the tanks 1 and 2; but they can, if desired, be placed beneath the tanks where economy of space is necessary. Extending outwardly from the top of each tank is a metallic tray 6, preferably inclined downwardly toward the tank, so as to drain into the latter, these trays being kept hot by the waste heat from the water-heaters below the same. Centrally above each tank is a pulley 7, the hanger of which may be secured to the ceiling of the kitchen or to a beam secured to the ceiling or may be supported in any other suitable way. Passing around these pulleys is a rope, chain, or other flexible connection 9, terminating at each end in an enlargement 10, which prevents the rope or chain from being drawn over the pulley, this enlargement in the present instance being in the form of a ring, to which is connected the upper end of a coiled spring 11, the lower end of said spring engaging with a ring 12, secured to or forming part of the bail of a wire-gauze or other open-work basket 13, adapted to enter the tank 1 or 2 and free to move up and down therein. The dirty dishes to be washed are placed in one of these baskets 13, and the latter is hung to the spring 11 above the tank 1, a basket containing dishes to be rinsed being hung to the spring 11, which is above the tank 2, and the rope or chain 9 is then moved back and forth over the pulleys 7, so as to cause the baskets to move up and down in their respective tanks, a partial turning movement being at the same time, if desired, imparted to each basket, such turning movement being permitted by the loose connection of the lower end of each spring 11 to the ring of the basket and to the ring on the rope or chain 9. The springs 11 serve to prevent any sudden jerk upon the baskets when the direction of movement of the same is changed, and thereby relieve the flexible connection 9 from strain and permit of the operation of the apparatus with an expenditure of a minimum amount of labor, one basket and its load counterbalancing the other, so that the desired movement can be very easily effected, the washing of the dishes being thoroughly accomplished in less time than by the usual method of hand-washing

The tray 6, which is used in connection with the tank 1, serves to receive the baskets of dirty dishes, and the tray 6, which is used in connection with the tank 2, receives the baskets of dishes after the same have been washed and rinsed, the temperature of the rinse-water being preferably maintained at such a degree that the rinsed dishes will dry rapidly without the necessity of being wiped.

A pipe 14, having valved branches communicating with the lower portion of each tank, serves to drain the latter when desired, and a pipe 15, having a valved branch communicating with the upper portion of each tank, serves to remove from the latter the grease

which rises to the top of the water in the tanks, thereby preventing the accumulation upon the water in either tank of a greasy scum, which would foul the dishes after they had been washed.

Although I prefer in carrying out my invention to use the pair of pulleys 7 and the flexible connection 9, said invention may be embodied in a machine in which these elements are replaced by a lever having the dish-receiving baskets suspended from its opposite arms by means of the springs 11 or other suitable connections, as shown, for instance, at 16 in Fig. 2, and some of the features of my invention may be embodied in an apparatus having but a single tank, the basket-suspending device being suitably counterbalanced, as shown at 17 in Fig. 3.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The combination in dish-washing apparatus, of a tank for containing wash-water, a dish-receptacle movable up and down in said tank, and a reciprocable suspension device for said receptacle having as one of its elements a vertically expansible and contractible spring, substantially as specified.

2. The combination in dish-washing apparatus, of a tank for containing wash-water, a circular dish-receptacle movable up and down in said tank, and a supporting device from which said receptacle is suspended by means of an eye, whereby it is free to turn back and forth, said suspension device being also susceptible of up-and-down movement, substantially as specified.

3. The combination in dish-washing apparatus, of a tank for containing wash-water, a dish-receptacle movable up and down in said tank, and a suspension device on which said receptacle is mounted so as to be free to turn back and forth, said suspension device being also susceptible of up-and-down movement, and having as an element a spring capable of expanding and contracting vertically, substantially as specified.

4. The combination in dish-washing apparatus, of a pair of tanks located side by side, one for containing wash-water and the other for containing rinse-water, a pair of dish-receptacles, one in each tank, and a suspension device extending from one dish-receptacle to the other, whereby one is caused to counterbalance the other, and up-and-down movements of the receptacle can be readily effected by hand, substantially as specified.

5. The combination in dish-washing apparatus, of a pair of tanks located side by side, one for containing wash-water and the other for rinse-water, a pair of dish-receptacles one in each tank, a pair of pulleys located one above each tank and a flexible connection passing over said pulleys and having a dish-receptacle suspended from each end, substantially as specified.

6. The combination in dish-washing apparatus, of a pair of tanks located side by side, one for containing wash-water and the other for rinse-water, a pair of dish-receptacles one in each tank, a pair of pulleys located one above each tank and a flexible connection passing over said pulleys and having a dish-receptacle suspended from each end by means of a coiled spring, substantially as specified.

7. The combination in dish-washing apparatus, of a pair of tanks disposed side by side, one for containing wash-water and the other for containing rinse-water, a pair of dish-receptacles one in each tank, a pair of pulleys located one above each tank, and a flexible connection passing over said pulleys and having a dish-receptacle suspended from each end of it, said flexible connection having enlargements whereby its movement over the pulleys is restricted, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH D. MORLEY.

Witnesses:
EDGAR CALL,
JOHN ROURKE.