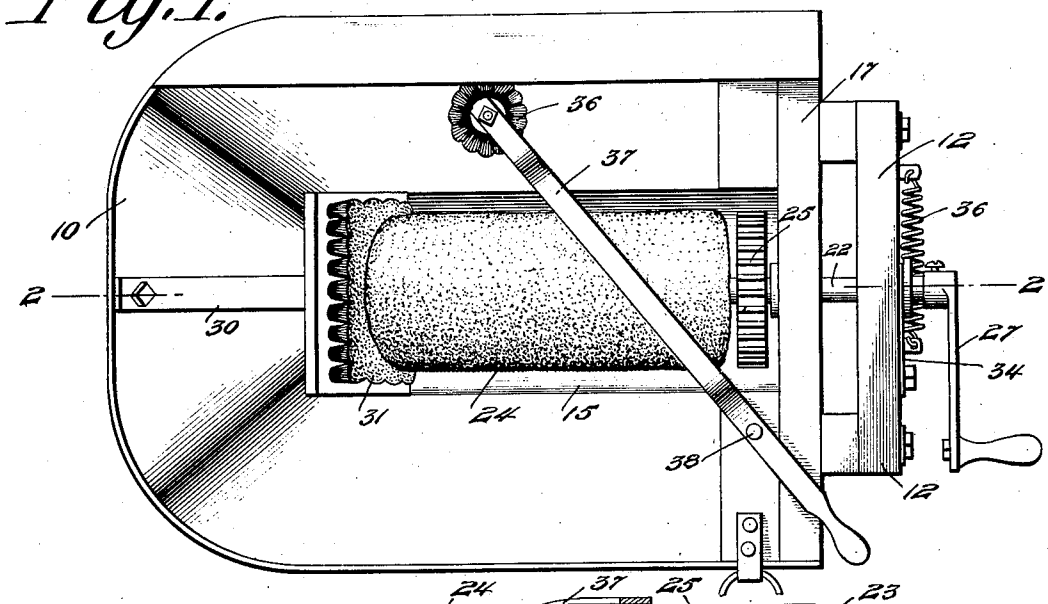
No. 862,138. PATENTED AUG. 6, 1907.

J. E. CONWAY.

DISH WASHING MACHINE.

APPLICATION FILED FEB. 21, 1907.

Fig. 1.



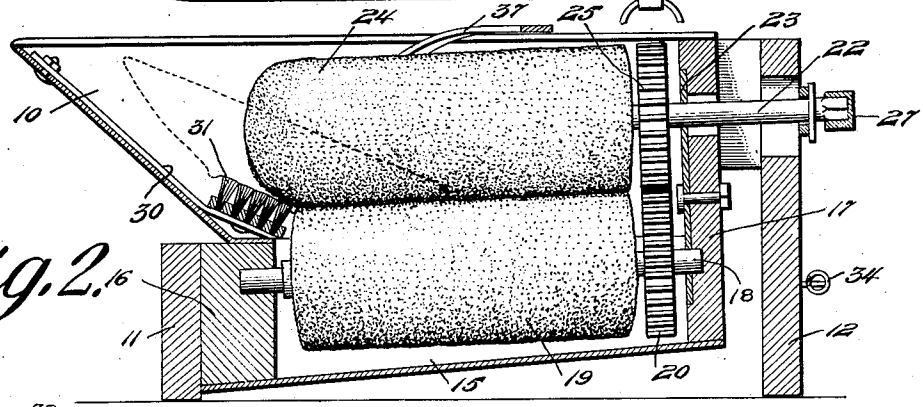


Fig. 2.

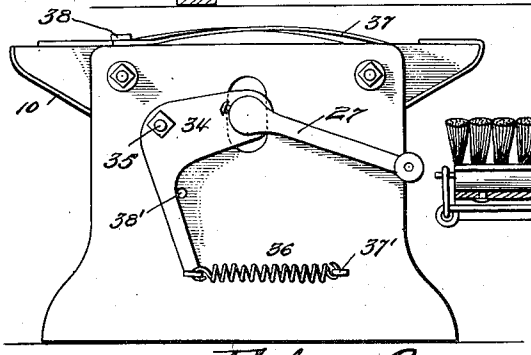


Fig. 3.

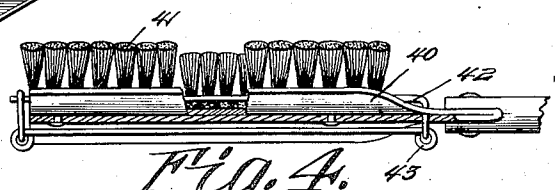


Fig. 4.

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JOHN EDWARD CONWAY, OF OSGOOD, IOWA.

DISH-WASHING MACHINE.

No. 862,138. Specification of Letters Patent. Patented Aug. 6, 1907.

Application filed February 21, 1907. Serial No. 358,672.

To all whom it may concern:

Be it known that I, JOHN EDWARD CONWAY, a citizen of the United States, residing at Osgood, in the county of Palo Alto and State of Iowa, have invented a new and useful Dish-Washing Machine, of which the following is a specification.

This invention relates to dish washing machines, and has for its principal object to provide a device of very simple and economical construction which may be used for washing plates, saucers, cups, bowls or other articles, as well as cutlery.

A further object of the invention is to provide a machine which may be readily manipulated, and into which the dishes or other articles to be washed may be readily introduced.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of construction may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is a plan view of a dish washing machine constructed in accordance with the invention. Fig. 2 is a longitudinal sectional view of the same on the line 2—2 of Fig. 1. Fig. 3 is an end elevation of the machine. Fig. 4 is a sectional detail view of a portion of one of the main brushes.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The body of the machine is formed of wood or metal, or a combination of both, and includes a pan or tub 10 that is supported by a pair of small standards 11 and 12, these being provided with flat faces, so that the device may be placed on a table or other suitable support when in use.

The body portion of the pan is tapered, narrowing gradually in the direction of a central well 15 having opposite end walls 16 and 17 which form supports for a shaft 18, said shaft carrying a revoluble brush 19, and near one end of this shaft is secured a suitable gear 20. Above the shaft 18 is arranged a shaft 22 which may rock in a suitable opening formed in a bearing plate 23 carried by the end wall 17 and on this shaft 23 is a brush 24 having a tapered or pointed outer end, as shown more clearly in Fig. 2. Near the inner end of the shaft is secured a gear wheel 25 which intermeshes with the gear wheel 20, the two brushes being of uniform size, and the gears being of the same diameter, so that the brushes will be rotated at the same surface speed. The outer end of the shaft 22 passes through an opening in the standard 11 and is provided with a suitable operating crank 27 for convenience in operating the machine by hand, although a power wheel may, of course, be substituted for the crank where mechanism is used to drive the machine.

Near the front of the machine is a metallic strap or bar 30 which serves as a support for a brush 31, this brush being a stationary and being adapted to receive the central portion of the bottom of a saucer, plate, vegetable dish or like article, while the brushes act on the upper and lower surfaces thereof. The strap or bar 30 serves to hold the brush in elevated position against the bottom of the article being washed.

The crank shaft end of the shaft 22 extends through an opening formed in one arm of a bell crank lever 34, said lever being fulcrumed on a stud 35 projecting from the standard 12. The opposite arm of the bell crank lever is connected by a tension spring 36 to a stationary eye 37, the spring tending normally to elevate the cranked end of the shaft 22, and thus rock the shaft in the bearing 23, forcing the upper brush down against the upper surface of the article being washed. The limit of movement of this lever is controlled by a stop 38 that is secured to and projects from the standard 12 and is arranged to be engaged by the approximately vertical arm of the bell crank lever as will be seen on reference to Fig. 3.

When washing a saucer, plate or like dish, the edge of the article is introduced between the upper and lower revoluble rollers with its central portion resting on the brush 39, and as the crank is turned, the two brushes are revolved, while the rotation of the article is retarded by its engagement with the stationary brush 31, and in this manner the article may be thoroughly cleansed.

Where the article is of such construction as to prevent its free entrance between the two revoluble brushes, it is merely necessary to pull down on the cranked end of the shaft 22, thereby raising the upper brush and leaving an open space between the two brushes to permit the ready introduction of the dish and in the case of a cup or other handled articles, the brushes may be revolved in one direction until the handle strikes the lower brush, and then revolved in the opposite direction until the handle strikes against the opposite side of the brush. Where articles of large diameter are to be washed, such for instance as dinner plates, an auxiliary brush 36 may be used, this brush being carried by a handled lever 37 pivoted at 38 to the frame and being designed to engage with the central portion of the plate or other dish.

Where the plate is of large diameter, the cylindrical brushes will not extend to the center, and it, therefore, becomes necessary to adjust the brush 36 to a position at or about the center of the plate, so that the latter may be washed. This center brush 36 furthermore

serves as a means for holding the dish in place by pressing the same down against the stationary brush 31.

It will be noted that the two cylindrical brushes are of uniform diameter from end to end, and are so geared that they move at the same surface speeds. Inasmuch as the outer ends of the brushes which engage with the central portions of the plates or other articles have much less surface to cover than those portions of the brushes nearest the gear wheels, it follows that a vigorous scrubbing action will take place throughout the entire surface of the plate which is exposed to the action of such brushes.

While brushes of any desired character may be employed, it is preferred to use brushes which may be replaced at small cost, a brush of this type being shown in Fig. 4, and comprising a strip of metal doubled to form two parallel arms 40 which are concaved transversely, and in the concaved portions are seated bristles or strands 41, the central portions of which are confined in place by tie wires 42 which are interlocked in the manner indicated at 43, the central portions of the bristles being thus confined, while the opposite ends of the bristles project beyond the edges of the strips and from the active surfaces of the brush.

As a matter of convenience, one side of the pan or tub 10 is provided with a suitable suspension loop, and at the opposite side the pan is inturned in the form of a flange, so that a small drip pocket may be formed to receive moisture from the brushes when the device is suspended from a nail or other support.

I claim:—

1. In a dish washing machine, a pan or tub, a stationary brush arranged to form a support for the central portion of the articles to be washed, and a pair of revoluble brushes arranged to operate on the opposite faces of such articles.

2. In a dish washing machine, a pan or tub, a stationary brush forming a central support for the dish, and a pair of revoluble brushes arranged to engage with the opposite faces of the dish, the brushes being separable to permit the ready introduction and removal of such dish.

3. In a dish washing machine, a stationary brush forming a central support for a dish, a pair of revoluble brushes for engaging the opposite faces of the dish, and a spring tending to force one of the brushes toward the other.

4. In a dish washing machine, a stationary brush forming a central dish support, a pair of revoluble brushes, supporting shafts therefor, a bearing in which one of the shafts is arranged to rock, and a spring acting on such shaft and tending to move the brushes into engagement with each other.

5. In a dish washing machine, a pan, a stationary brush forming a central support for a dish, a pair of revoluble scrubbing brushes, shafts carrying the same, a rocking bearing for one of said shafts, a spring engaging the rocking shaft and tending to force the brushes into engagement, and an operating crank carried by the rocking shaft and serving also as a means for separating the brushes against stress of the spring.

6. In a dish washing machine, a pan, a stationary brush, a pair of revoluble scrubbing brushes of unequal length, shafts carrying said brushes, a rocking bearing for the uppermost shaft, an operating crank secured to said shaft, a bell crank lever having one arm engaging the rocking shaft, and a spring connected to the opposite arm of the bell crank lever and tending to force the upper brush into engagement with the lower brush.

7. In a dish washing machine, a pan or tub having sloping sides, and a central well, a revoluble brush arranged within the well, an upper revoluble brush, gearing connections between the two brushes, and a stationary brush co-acting with the lower brush to support the dishes to be washed.

8. In a dish washing machine, a pan or tub, a stationary support for the central portion of the articles to be washed, and a pair of movable brushes arranged to operate on the opposite faces of such articles.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN EDWARD CONWAY.

Witnesses:
M. J. CONWAY,
Z. F. DICKINSON.