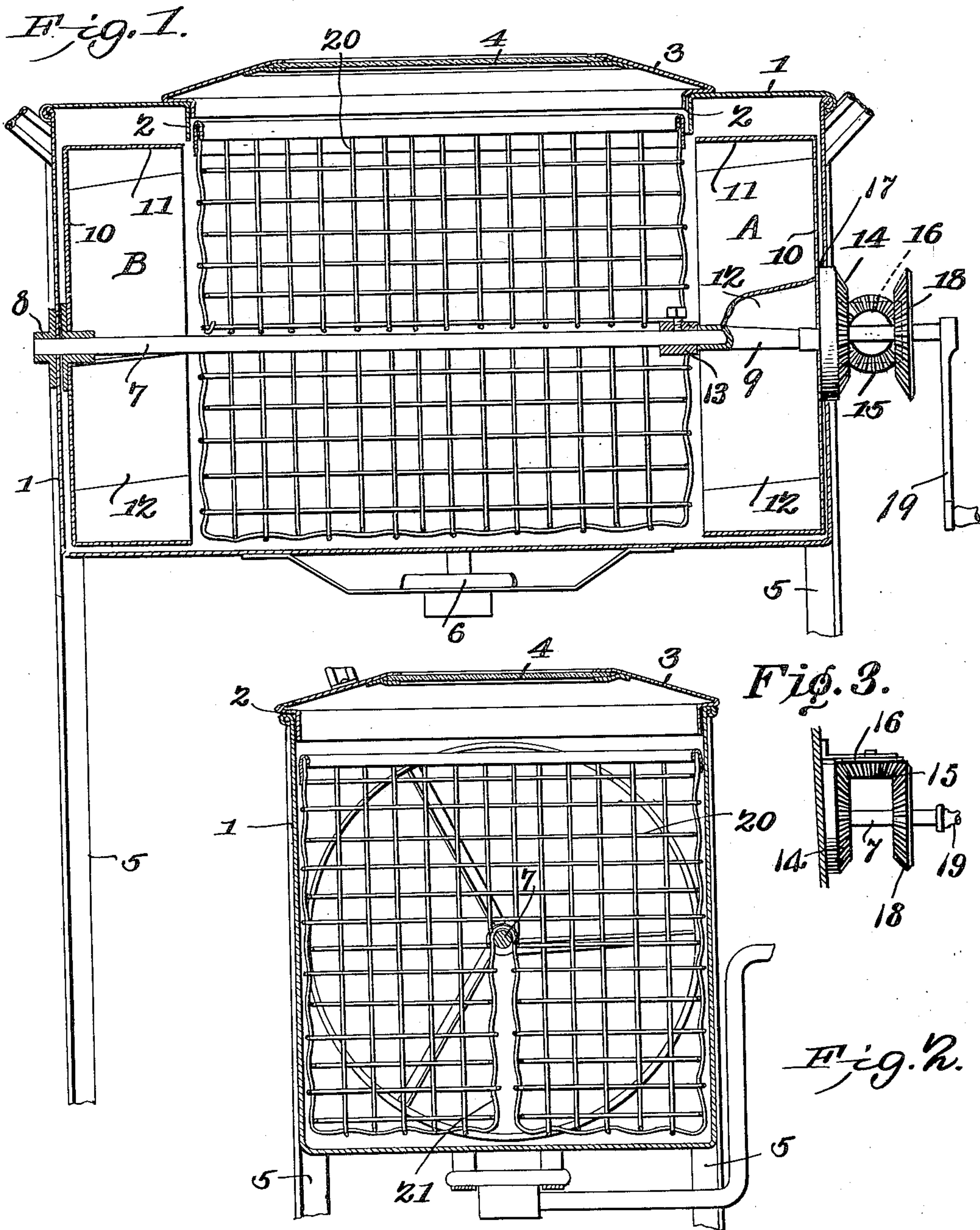


PATENTED JUNE 4, 1907.

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WITNESSES:  
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# UNITED STATES PATENT OFFICE.

THOMAS E. JONES, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO  
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## DISH-WASHER.

No. 855,785.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed May 14, 1906. Serial No. 316,752.

*To all whom it may concern:*

Be it known that I, THOMAS E. JONES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Dish-Washer, of which the following is a specification.

This invention relates to machines for washing dishes and its object is to provide means whereby dishes can be thoroughly cleansed by agitating water at opposite sides of the dish container so that all parts of the dishes will be acted upon by the water and quickly and thoroughly cleaned.

With the above and other objects in view the invention consists of a casing having a shaft extending therethrough and the central portion of which constitutes a support for a basket which hangs at opposite sides of the shaft and is adapted to receive the dishes to be cleaned.

An agitating wheel is secured to the shaft within one end of the casing and loosely mounted on said shaft in the other end of the casing is another agitating wheel which is provided with a toothed ring adapted to mesh with a gear mounted on the casing and operated by a gear on the shaft whereby when the shaft is rotated the two agitating wheels are revolved simultaneously in opposite directions.

The invention also consists of certain other novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a longitudinal section; Fig. 2 is a transverse section; Fig. 3 is a plan view of the drive gears and the supporting bracket.

Referring to the figures by numerals of reference 1 is a casing preferably rectangular in form and having a large opening 2 in the top thereof adapted to be closed by a cover 3 having a glass 4 whereby the contents of the device are rendered visible to the operator while the machine is in operation. The casing is supported on suitable standards 5 and may be provided with any desired form of heater 6 for keeping warm the water within the casing.

A shaft 7 extends longitudinally through

the casing and is journaled at one end in a bearing 8 located upon one end wall of the casing and the other end of this shaft extends through a large circular opening 17 formed upon the other end of the casing. A gear 18 is secured to the end portion of this shaft 7 and a crank 19 is also secured to said shaft so as to facilitate the rotation thereof. A collar 13 is secured in any suitable manner to the shaft 7 at a point removed from the opening 17 and arranged loosely on the shaft between this collar and the opening 17 is the hub 9 of an agitating wheel A, said wheel being made up of a disk 10 surrounding the hub, a rim 11 and blades 12. All of the parts of the wheel A are rigidly connected and a beveled gear 14 is secured upon the outer face of the disk 10 and is adapted to rotate within the opening 17. This gear meshes with a gear 15 which is in mesh with the gear 18 hereinbefore referred to and said gear 15 is preferably supported by a bracket 16. The blades 12 of the wheel A are slightly inclined so that when the wheel turns the water within the casing will be agitated thereby and carried upward and thrown toward the center of the casing. Another agitating wheel B is mounted on the shaft 7 within the other end of the casing and this wheel is constructed similarly to the wheel A and its blades are also adapted to agitate the water and to raise it and throw it toward the center of the casing. It is of course understood that instead of utilizing a crank 19 for actuating the shaft said shaft may be driven by any other suitable means.

A dish holding basket 20 is arranged within the casing and is preferably formed of heavy metal fabric and is insertible through the top opening 2 of the casing. This basket has a shaft receiving partition 21 formed at its center and extending from the bottom thereof, said partition consisting of metal fabric folded on itself and spaced apart a sufficient distance to embrace the shaft. The ends of the basket are slotted to correspond with the space within the partition. The partition is of such a height that when the basket is inserted into the casing the top of the partition will rest loosely on the shaft and said basket will be supported with its bottom spaced a short distance above the bottom of the casing so that water is free to circulate thereunder. The basket is adapted



to extend close to the agitating wheels A and B.

In using this machine soapy water is placed within the casing and the dishes to be cleaned are then placed within the basket at opposite sides of the partition 21. Cover 3 is placed over the opening 2 and shaft 7 is then rotated. Wheel B will rotate with the shaft while the gears 14, 15 and 18 will cause the wheel A to rotate in a direction opposite to the shaft. As a result of this movement the two wheels will thoroughly agitate the water and will establish a circulation through the basket and at the same time a portion of the water will be carried upward and thrown inward upon the dishes thereby cleansing them. The material washed from the dishes will settle through the bottom of the basket and on to the bottom of the casing and therefore there is no danger of any particles adhering to the dishes after the cleaning operation. When the operator sees by looking through the glass that the dishes are cleaned the basket is raised from the casing, the dishes are removed and if desired other dishes can be placed therein and the operation repeated.

What is claimed is:

1. In a dish washing machine the combination with a casing; of a dish receptacle supported therein and above the bottom of the casing, said receptacle having openings in the bottom and walls thereof, and oppositely movable water agitating devices within the casing at opposite ends of the receptacle.

2. In a dish washing machine the combination with a casing; of a dish receptacle supported therein above the bottom of the casing said receptacle having openings in the bottom and walls thereof, rotatable agitating devices within the casing at opposite ends of the receptacle, and means for simultaneously rotating the devices in opposite directions.

3. In a dish washing machine the combination with a casing having a drive shaft extending therefrom; of a dish receptacle supported within the casing by said shaft, and oppositely rotatable agitating devices

mounted on the shaft at opposite ends of the receptacle.

4. In a dish washing machine the combination with a casing having a drive shaft therein; of a dish receptacle supported by said shaft within the casing, blades radiating from the shaft between one end of the receptacle and casing, said blades being rotatable with the shaft, blades radiating from the shaft between the other end of the receptacle and casing, and means for rotating said blades and the shaft in opposite directions.

5. In a dish washing machine the combination with a casing having a drive shaft therein, of agitating devices mounted on the shaft within the ends of the casing, means for simultaneously rotating said devices in opposite directions, and a dish receptacle within the casing and interposed between the agitating devices.

6. In a dish washing machine the combination with a receptacle having a shaft rotatably mounted therein; of agitating blades secured to and rotatable with the shaft within one end of the casing, a disk loosely mounted on the shaft at the other end of the casing, agitating blades rotatable with the disk, and mechanism interposed between the drive shaft and disk for rotating said disk in a direction opposite to that of the shaft.

7. In a dish washing machine the combination with a receptacle having a shaft rotatably mounted therein; of agitating blades secured to and rotatable with the shaft within one end of the casing, a disk loosely mounted on the shaft at the other end of the casing, agitating blades rotatable with the disk, a gear rotatable with the disk, a drive gear upon the shaft, and a gear for transmitting motion from the drive gear to the gear on the disk.

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

THOMAS E. JONES.

Witnesses:

CHAS. P. ARNOLD,  
MORRIS S. ROMINGER.