(No Model.)

R. G. PING.

DISH CLEANER.

No. 601,275. Patented Mar. 29, 1898.

Fig: 1.

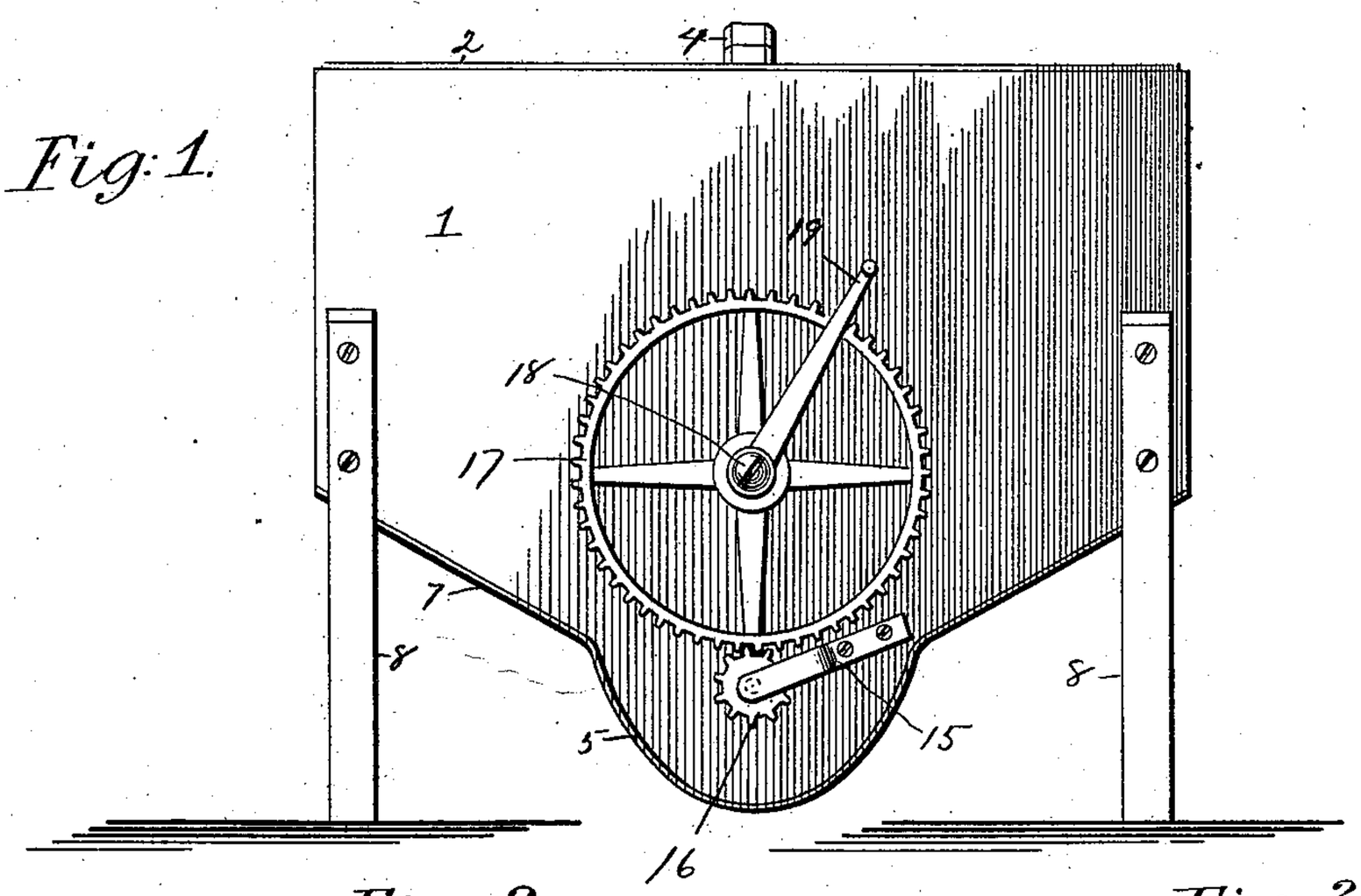


Fig: 2.

Fig: 3.

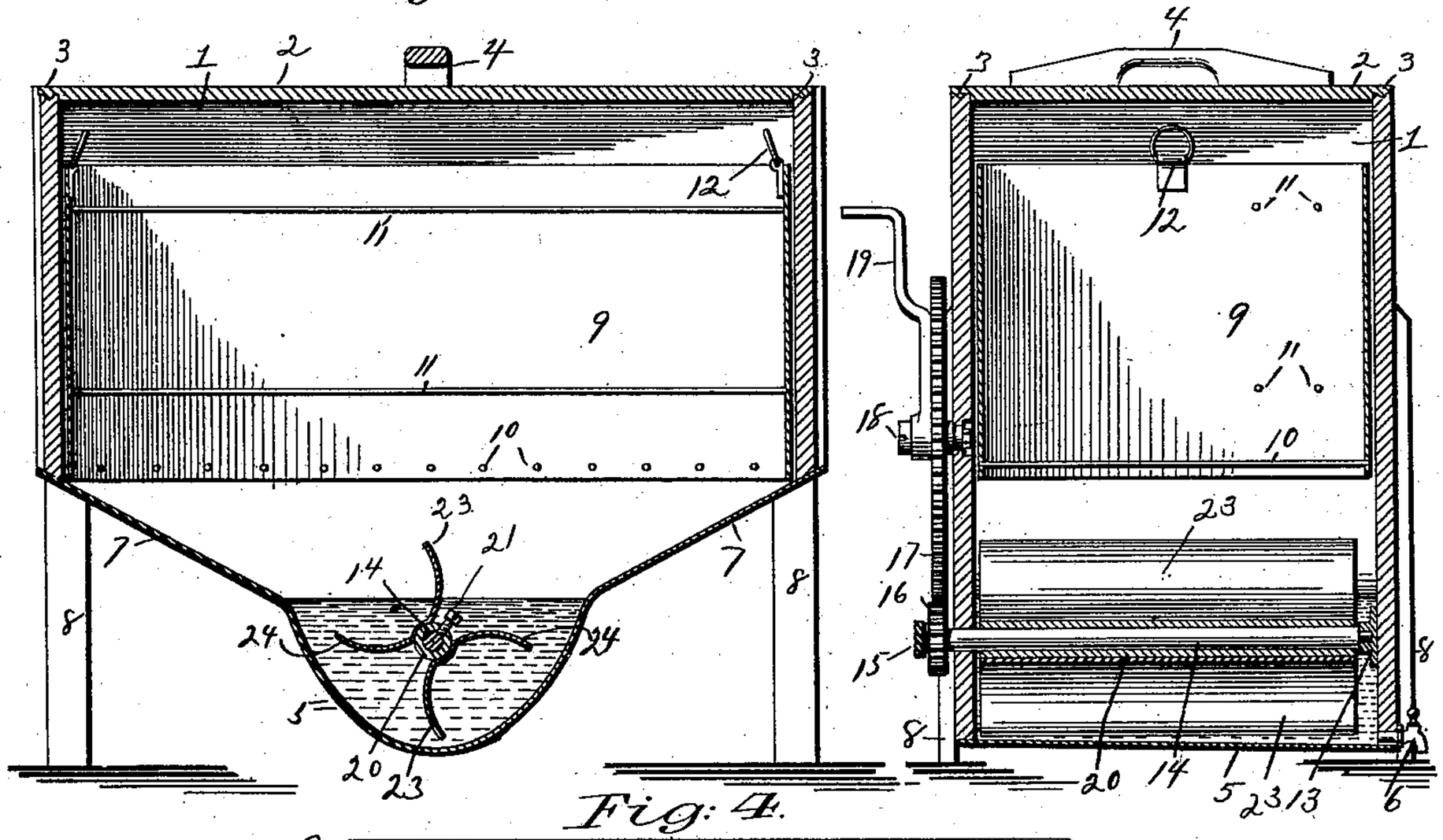
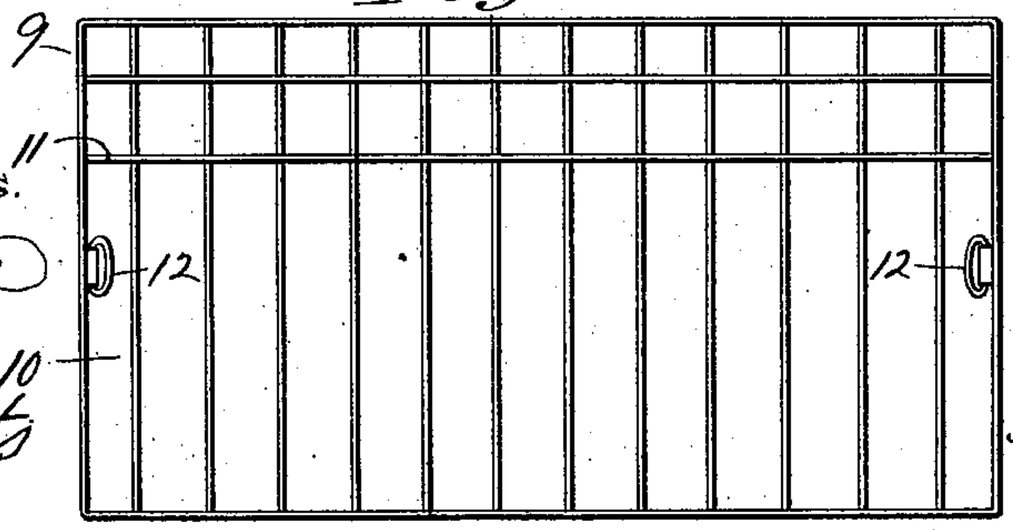


Fig: 4.



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UNITED STATES PATENT OFFICE.

ROBERT G. PING, OF AUDUBON, IOWA.

DISH-CLEANER.

SPECIFICATION forming part of Letters Patent No. 601,275, dated March 29, 1898.

Application filed September 27, 1897. Serial No. 653,080. (No model.)

To all whom it may concern:

Be it known that I, ROBERT G. PING, a citizen of the United States, residing at Audubon, in the county of Audubon and State of Iowa, have invented a certain new, useful, and valuable Improvement in Dish-Washing Machines, of which the following is a full, clear, and exact description.

My invention has relation to dish-washing machines; and it consists in the novel construction and arrangement of its parts, as hereinafter described.

The object of my invention is to provide a machine that will thoroughly wash and cleanse dishes, using a minimum amount of water.

The further object of the invention is to provide a removable tray, said tray adapted to contain the dishes, &c., the casing having an upper portion adapted to receive said tray, a concaved portion located in the bottom of the machine, said concaved portion adapted to contain the water and housing a set of revolving blades, the ends of the bottom of the machine being inclined and the removable tray resting at its ends on the inclined ends of the bottom, thus leaving the lower part of the machine open, there being no other support for the removable tray than the inclined ends of the bottom, and hence there is no interference with the throwing of the water on the dishes, &c.

The further object of the invention is to provide blades of suitable construction adapted to throw the water toward one end of the machine and when revolving in the opposite direction adapted to throw the water in the opposite direction.

In the accompanying drawings, Figure 1 is a side elevation of the machine. Fig. 2 is a central longitudinal sectional view of the machine. Fig. 3 is a central transverse sectional view of the machine. Fig. 4 is a top plan view of the removable tray.

The machine consists of the upper rectangular portion 1. The upper end of said portion is closed by means of the removable top 2, the said top making a tight joint with the upper edges of the portion 1 by means of the dovetailing, as at 3 in Figs. 2 and 3. The top is provided with a suitable handle 4. The bottom of the machine is provided at its middle with the concaved portion 5, said portion extending transversely across the machine, as shown in Fig. 3. Said portion 5 at its lower side is slightly inclined from the rear, as shown in Fig. 3, and at its lowest point is provided with the faucet or draw-off cock 6, said cock being at the lowest point of the machine. The upper edges of the concaved portion 5 are connected by means of the inclined sections 7 with the ends of the machine. The machine is supported by means of the legs 8. The removable tray consists of the rectangular metallic sides 9, the cross-rods 10, connecting the lower edges of the sides, and the horizontal rods 11, connecting the upper and lower portions of the ends of the removable tray, the rods 10 10 running transversely across the tray and the rods 11 11 extending longitudinally. The tray 9 is adapted to fit snugly within the portion 1, the lower edges of the ends of the tray resting on the inclined sections 7 7 of the bottom. Thus the tray 9 is supported. The dishes and other articles to be washed are placed upon the rods 10 10 and held in perpendicular positions by means of the rods 11 11. The upper edge of the tray 9 is provided with the bail-ears 12 12. Within the concaved portion 5 and on the inside of the machine the bearing 13 is provided, the inner end of the shaft 14 being journaled in said bearing. The outer end of said shaft is journaled in the bearing 15, said bearing being secured on the outside of the machine. The pinion 16 is fixed to the shaft 14 between the bearing 15 and the outer side of the machine. The pinion 17 is journaled on the spindle 18, said spindle being fixed to the side of the machine, as shown in Fig. 3, the inner end of said spindle 18 being countersunk in the side of the machine, so as not to interfere with the removal or placing in of the tray 9. The pinion 17 is provided with a handle 19, by means of which the said pinion 17 is revolved. The pinion 17 meshes with the pinion 16, as shown in Figs. 1 and 3. The removable collar 20 surrounds the shaft 14, said collar being held in a stationary position on said shaft by means of a set-screw 21. (See Fig. 2.) The blades 23 and 24 are secured to the collar 20. The blades 23 23 have their concaved faces opposite the concaved faces of the blades 24 24. The convexed faces

of the said blades are also opposite. Thus when the shaft 14 is revolved in one direction the concaved blades 23 23 will elevate the water contained in the concavity 5 and throw the same up through the open bottom of the removable tray 9 and against the dishes, the said blades 23 23 throwing the water with great force up in one corner of the machine. By reversing the revolution of the shaft 14 the blades 24 24 will elevate the water and throw it forcibly up into the opposite end of the machine, thus cleansing the dishes in that end. The water as it falls from the dishes is deposited upon the inclined sections 7 7 of the bottom and is conveyed back into the concavity 5, from whence it is again thrown on the dishes. The sediment that is removed from the dishes forms a deposit in the bottom of the concavity 5 and passes toward the draw-off cock 6, the inclination of the bottom of the concavity causing the deposit to travel toward the said cock. By opening the cock the sediment is drawn off and the water contained within the concavity 5 at the same time is withdrawn from the machine.

After washing the dishes as above described the top 2 is removed and clean hot water is poured over the dishes. This removes any sediment which may have been thrown against the dishes by the concaved blades. The tray 9, containing the dishes, is then removed from the machine and placed in a suitable position, and the dishes contained in the said tray are thus drained, and when dried they can be removed from the tray 9 perfectly clean.

It will be observed that the collar 20 may be removed from the shaft 14 at will by loosening the set-screw 21 and slipping the collar off the shaft. Thus another collar having blades set at various angles may be substituted in the place of the collar removed, and the machine may thus be adapted to wash any particular kind of glass or china ware. In the form of the blades as shown in Fig. 2 the inner edges of the blades 23 23 are integral with the inner edges of the blades 24 24.

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

In a machine for washing dishes a receptacle adapted to contain the dishes, the machine adapted to contain water in its bottom, a journaled bearing on the inside of the machine, a journaled bearing located on the outside of the opposite side of the machine, a shaft journaled in said bearings, a collar adapted to be made fast to the said shaft, said collar adapted to surround the shaft, suitable blades mounted on said collar, a suitable means for revolving said shaft.

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

ROBERT G. PING.

Witnesses:

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