(No Model.)

G. B. HEIDEMAN.

DISH CLEANER.

No. 574,606. Patented Jan. 5, 1897.

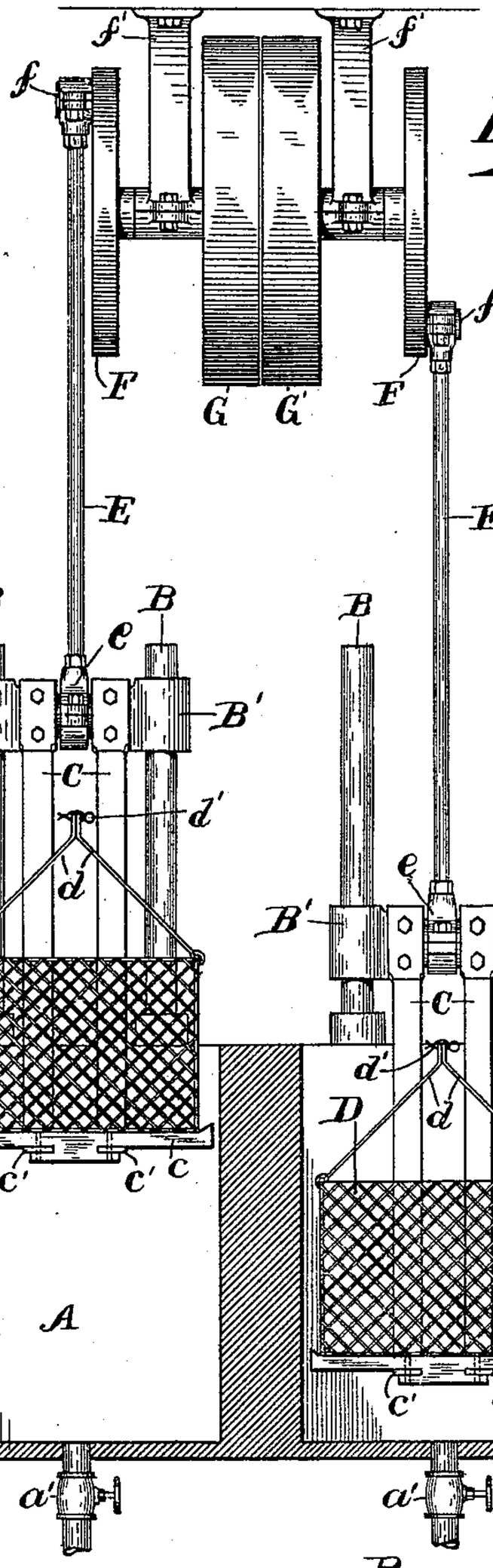

Fig. 1

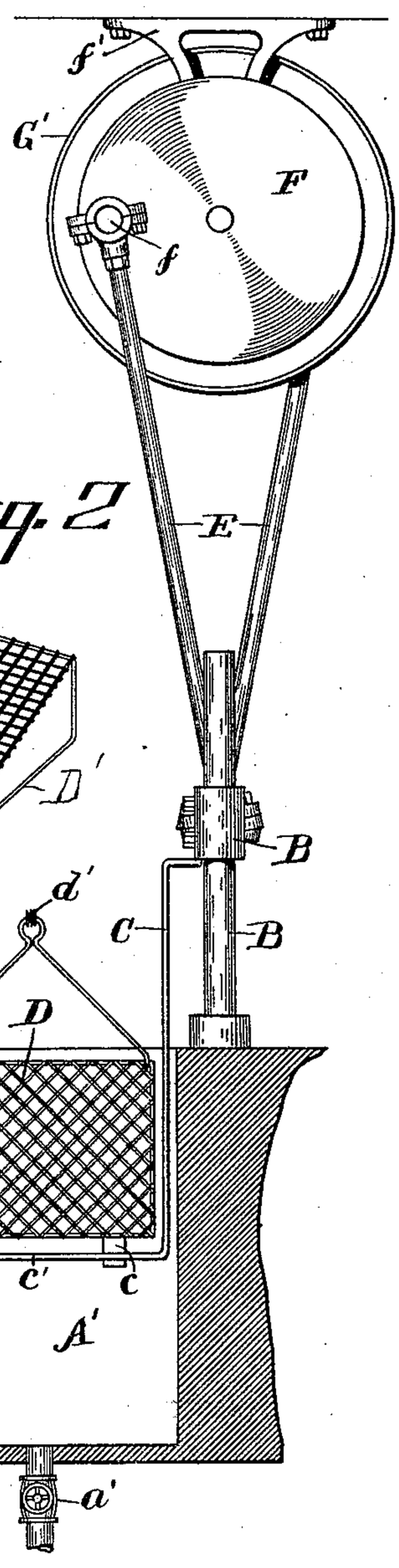

Fig. 2

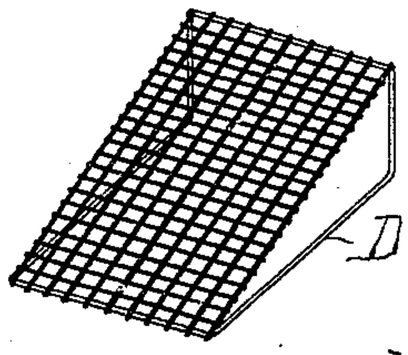

Fig. 4

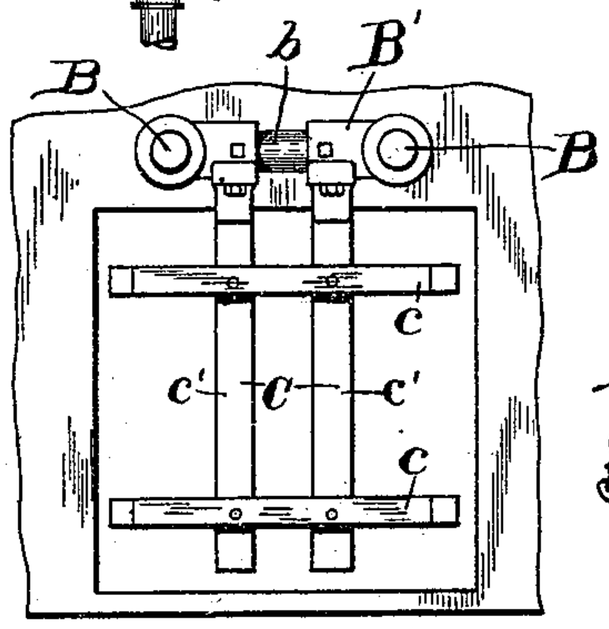

Fig. 3

WITNESSES

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GEORGE B. HEIDEMAN, OF BELLEVUE, KENTUCKY.

DISH-CLEANER.

SPECIFICATION forming part of Letters Patent No. 574,606, dated January 5, 1897.

Application filed August 3, 1896. Serial No. 601,424. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. HEIDEMAN, a citizen of the United States, and a resident of Bellevue, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Dish-Cleaners, of which the following is a specification.

My invention relates to a machine for washing dishes, and is particularly designed for use in hotels and restaurants, where a large number of dishes are required to be handled quickly.

The invention consists in the means illustrated in the accompanying drawings, hereinafter described in connection therewith, and particulary referred to and pointed out in the claims.

Referring to the drawings, in which like parts are indicated by similar reference-letters wherever they occur throughout the various views, Figure 1 is a view in front elevation of the dish-holders and operative mechanism and the tanks in central longitudinal section. Fig. 2 is a view in transverse section of one of the tanks and an end elevation of the operating mechanism. Fig. 3 is a detailed plan view of one of the tanks with the basket or tray removed and the basket-holder in position. Fig. 4 is a perspective view of an inclined removable bottom for the basket to be employed in washing silverware.

I have shown in the drawings my invention in connection with two tanks, one the washing and the other the rinsing tank; but the number of tanks may be duplicated, if desired.

Referring to the parts by reference-letters, A and A′ represent the two tanks built up together, preferably of wood lined with copper or other suitable sheet metal, the tank A being the washing-tank and the tank A′ being the rinsing-tank. In practice there is a board or table (not shown) arranged at the side of each tank, one for placing the dishes to be washed upon and the other those that have been washed and rinsed. Both of these tanks are supplied with induction-pipes for hot water, which pipes are provided with suitable valves *a*, discharge-pipes at the bottom, provided with valves *a′*, and overflow-pipes a^2.

Upon the rear wall of the structure opposite each of the tanks A and A′ are upright columns B, upon which the double boxes B′ are fitted to slide. To the front of these boxes are secured arms C, preferably of spring-steel, the lower ends of which are bent at a right angle, and upon them are removably secured bars *c*, which support the wire baskets D, which hold the dishes while they are being washed and rinsed. Each of the boxes B′ has a central shaft or journal *b* to receive boxes *e* of the pitman E, which connect the sliding boxes to crank-pins *f*, secured in the face of the disks F, which are secured upon the ends of the driving-shaft, supported in hangers *f′*. The shaft is fitted with the customary tight and loose pulleys G and G′. The bars *c* have T-shaped downward projections to receive the horizontal arms *c′* of the arms C. There are pins, as shown in dotted line, Fig. 1, which pass through the bars *c* and arms *c′* to retain the arms C in place.

The basket D is provided with two bails *d*, one upon each side, the upper portion of the bail being turned into a loop to receive the hook from a traveling crane for lifting the baskets out of the tank after the dishes have been cleansed. The eyes of the opposite bails come together, as seen, when the baskets are filled with dishes, and are held together while the baskets are traveling up and down in the tanks by a spring-clip *d′* to prevent them from dropping inward and breaking the dishes.

In operation the tank A is first supplied with soda or other cleansing substance, the dishes to be washed placed in the basket, and the basket placed upon its holder. The valve *a* is opened, supplying the tank with hot water from a water-heater or other source of supply, and the machine started in operation. The rapid up-and-down movement of the basket in the heated fluid, in addition to the gyrating motion given it by the spring-arms C, rapidly removes the grease from the dishes. When they are sufficiently cleansed, the basket is removed from tank A and placed in tank A′. The tank A′, like the tank A, is supplied through its valve *a* with clean hot water, which rinses off any impurities that may remain on the dishes after they have gone through the cleansing operation in the tank A. It should be understood that an extra basket is employed, which is filled while the operation of washing and rinsing is going on, thus making the operation practically

continuous. The dishes removed from the basket in the tank A′ are placed upon the draining-table and, being highly heated in the process, do not require to be wiped.

For washing knives, forks, and spoons separate baskets of finer mesh are placed within the baskets D, the mesh being fine enough to prevent the tangs of the forks or other cutlery from protruding through. The operation is the same as for washing dishes. In order to wash the silverware, such as sugar-bowls, cream-pitchers, &c., I have provided the inclined bracket-bottoms D′, (shown in Fig. 4,) which are placed in the bottom of the baskets D and the vessels placed upon them upside down, so that when the baskets are in rapid motion the water will flow in and out of the vessels easily and not jar or throw them out of the baskets, which would be the case if placed upon the horizontal bottom of the baskets.

I have shown the operating mechanism in the drawings arranged overhead; but it is obvious that the driving-shaft and crank-disks may be placed underneath the floor and the pitman made to project through the floor and connect with the shafts *b*, if desired.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a dish-washing machine the two water-tanks, upright columns opposite each of said tanks, boxes fitted to slide upon said columns, basket-supporting arms secured to said boxes and projecting down into said tanks, baskets supported upon said arms, pitmen coupled at one end to said boxes and at the opposite ends to crank-pins, and means such as shown to operate said pitmen for the purpose of imparting a vertical reciprocating motion to the baskets within the tanks, substantially as shown and described.

2. In a dish-washing machine two tanks, uprights opposite each tank, connected boxes sliding upon said columns, flexible basket-supporting arms secured to said boxes and projecting into said tanks, baskets supported upon said arms, and means such as shown for imparting a vertical reciprocating movement to said baskets, combined and arranged substantially as shown and described.

3. The combination in a dish-washing machine of a washing and rinsing tank arranged side by side, upright columns opposite each tank, connected boxes sliding upon said columns, supporting spring-arms secured to said boxes extending down into said tanks and having horizontal arms, bars connected to said horizontal arms to support baskets for holding dishes, baskets resting upon said arms, and pitmen connecting the sliding boxes and actuating mechanism to impart a vertical reciprocating movement to said baskets, substantially as shown and described.

4. The combination in a dish-washing machine of the tanks, uprights opposite said tanks, the connected boxes fitted to slide upon said uprights, arms secured to said boxes and extending into said tanks, baskets supported upon said arms, said baskets having bails upon opposite sides and loops at their upper ends, and a spring-catch to hold the said bails together, substantially as shown and described.

5. The combination substantially as hereinbefore set forth of the two tanks, uprights opposite each tank, connected boxes fitted to slide upon said uprights and having a journal-shaft connecting the boxes of each pair, arms secured to said boxes and extending into the tanks to support dish-holding baskets, the baskets supported upon said arms, a driving-shaft having tight and loose pulleys thereon and disks carrying crank-pins at their opposite ends, and pitmen connecting said crank-pins and the sliding boxes.

GEORGE B. HEIDEMAN.

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