(No Model.) 3 Sheets—Sheet 1.

E. E. SPARR.

DISH CLEANER.

No. 600,182. Patented Mar. 8, 1898.

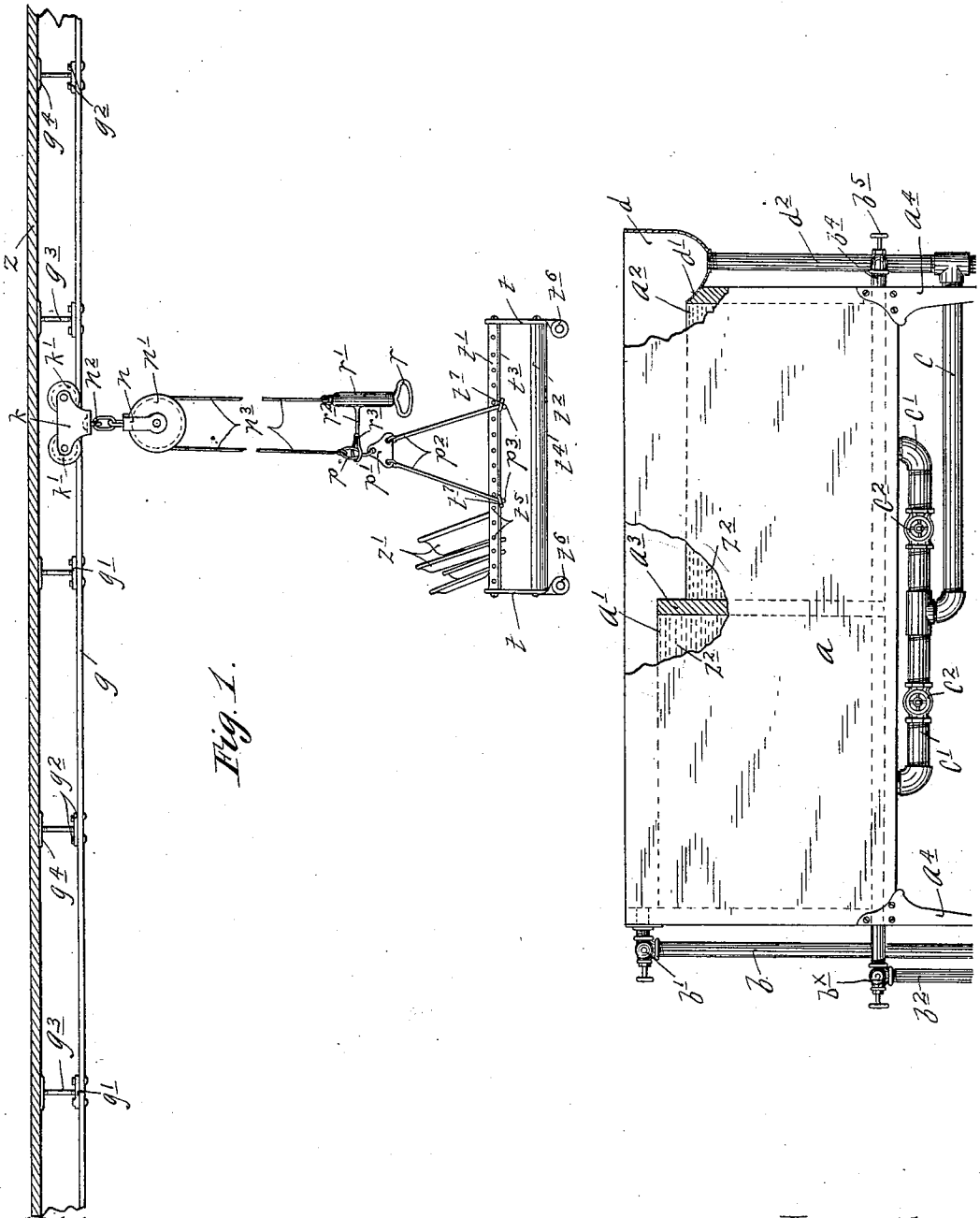


Fig. 1.

Witnesses.
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(No Model.) 3 Sheets—Sheet 2.

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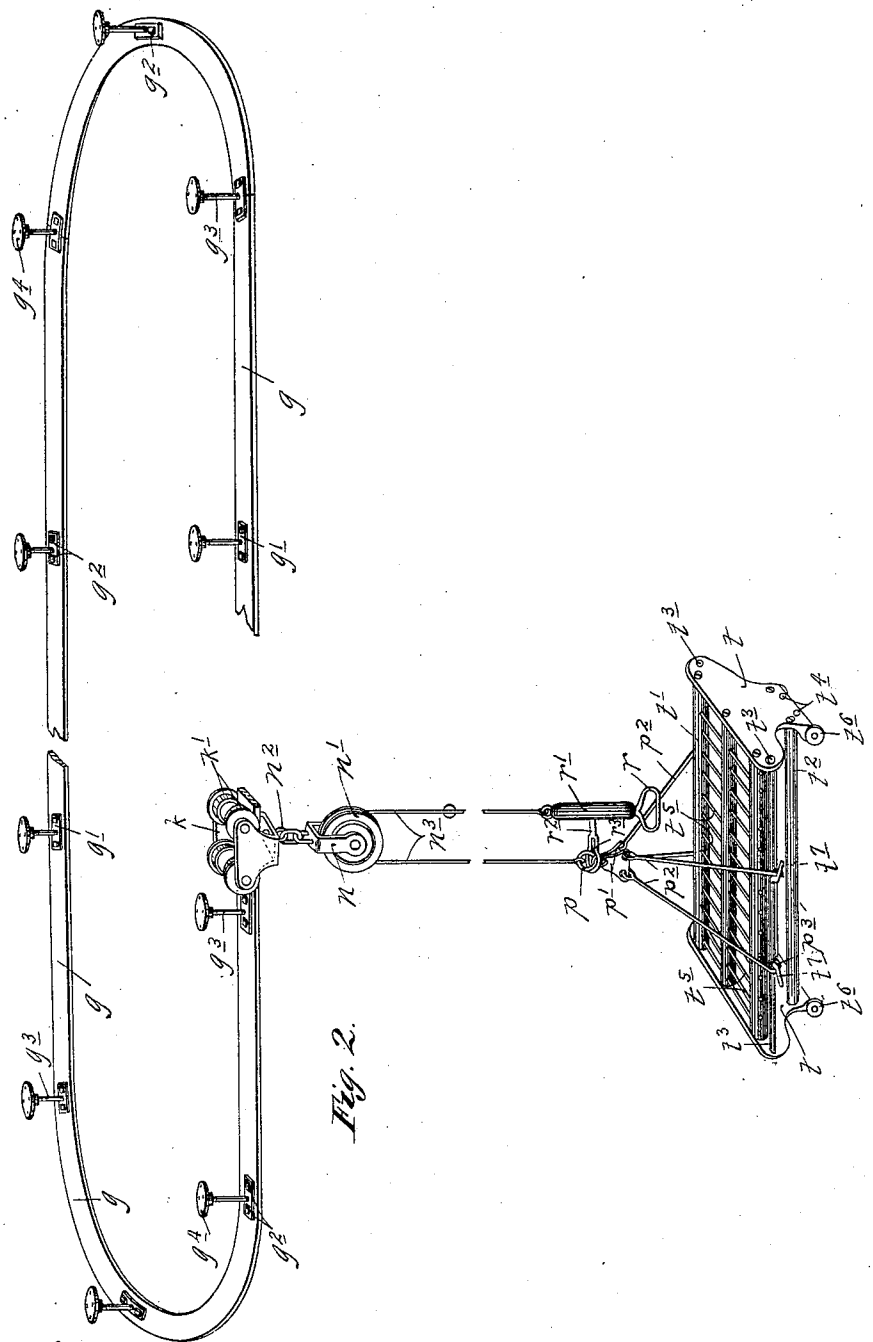


Fig. 2.

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(No Model.) 3 Sheets—Sheet 3.

E. E. SPARR.

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Fig. 3.

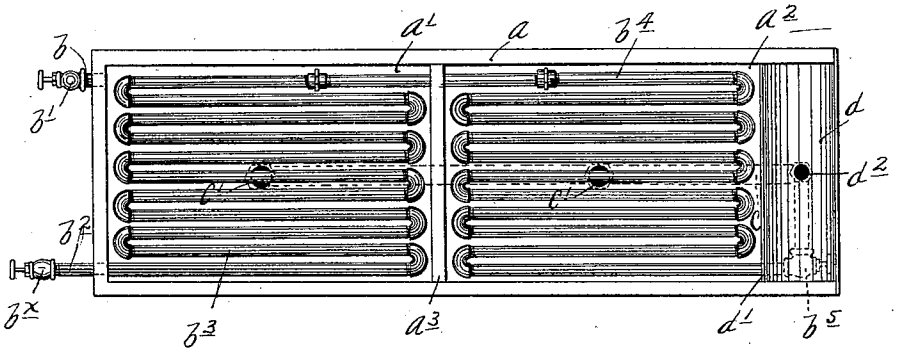
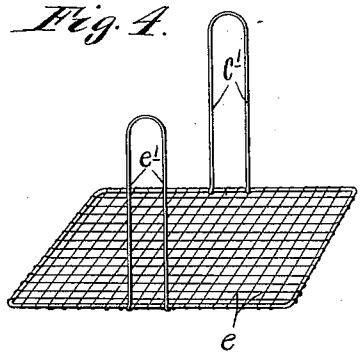


Fig. 4.



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UNITED STATES PATENT OFFICE.

ERICK E. SPARR, OF ST. PAUL, MINNESOTA.

DISH-CLEANER.

SPECIFICATION forming part of Letters Patent No. 600,182, dated March 8, 1898.

Application filed August 21, 1897. Serial No. 649,010. (No model.)

To all whom it may concern:

Be it known that I, ERICK E. SPARR, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Dish-Washing Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide an improved dish-washing apparatus; and to this end it consists of the novel devices and combinations of devices hereinafter described, and defined in the claim.

The preferred form of my improved apparatus is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a side elevation, with some parts broken away and others sectioned, showing my said apparatus. Fig. 2 is a perspective view, with some parts broken away, showing the overhead track or rail, a truck movable thereon, and a dish-rack suspended from said truck. Fig. 3 is a plan view of the washing and rinsing tanks, and Fig. 4 is a perspective view of a reticulate or woven-wire catch-tray or false bottom.

I employ a pair of vats or tank-sections which are so constructed or connected that one will overflow into the other and that the water within the same will stand at different levels. As shown, both of these vats or tank-sections are formed in an elongated tank a, which is divided into two compartments a' and a^2 by means of a transverse vertical partition a^3, the upper edge of which terminates short of the top of the tank a, so that the water may overflow from the vat or tank-section a' into the vat or tank-section a^2. On account of the work which they perform I will hereinafter refer to the tank-sections a' and a^2, respectively, as the "rinsing-vat" and the "washing-vat." A cold-water-supply pipe b opens into the rinsing-vat a'. This pipe b is preferably provided with a valve b'. A steam-pipe b^2 extends into the rinsing-vat a' and at the bottom of the same is bent upon itself to form a series of U-shaped heating-sections, as indicated at b^3. The said steam-pipe b^2 b^3 then extends onward into the washing-vat a^2, and at the bottom of this vat is again bent upon itself to form a series of U-shaped heating-sections, (shown at b^4.)

c indicates a waste-pipe which is connected to the bottom of each vat a' a^2 by branch sections c', provided with a valve c^2. The right-hand or discharge end of the washing-vat a^2 is cut considerably lower than the top of the partition a^3, so that the water within the said washing-vat will always stand considerably lower than the water within the rinsing-vat. At its discharge or right-hand end said washing-vat a^2 overflows into a catch-trough d, which extends transversely across said vat and is provided with a low-cut inner wall d', which acts as a skimmer and fixes the altitude of the column of water within said tank or vat a^2. The overflow-trough d is connected to the waste-pipe c by means of a pipe d^2. As shown, the last branch of the pipe-sections b^4 is extended and opens into the pipe-section d^2 and is provided with a valve b^5. In Fig. 1 the bottom of the elongated tank a is shown as supported some little distance above the floor by means of short legs a^4.

e indicates a reticulate or wire-woven catch-tray or false bottom which is provided with lifting-links e'. This tray or false bottom is preferably placed on the bottom of the washing-vat a^2 and serves to catch small articles which are being washed as well as refuse particles washed from the dishes and which are too large to be drawn off through the waste-pipes c c'. Of course, if desired, such a tray or false bottom may also be placed within the rinsing-vat a'.

I provide an overhead track which is secured to the ceiling and one section of which passes directly over both of the vats a' and a^2. Preferably this track is endless—that is, extends from and returns to the section which stands over the vats. As shown, this overhead track is made up of flat bars or rail-sections g, which are connected together at their joints by tie-plates g', which overlap the connected ends and are bolted thereto, as shown at g^2. Said tie-plates g' are considerably narrower than the rails or track-sections g, so as to permit the wheels of the truck hereinafter described to freely pass. The track above described is shown as supported from the ceil-

ing z by means of short rods g^3, which are screw-threaded at their ends and are screwed into the tie-plates g^2 at their lower ends and into base-pieces g^4 at their upper ends. The said base-pieces g^4 may be secured to the ceiling by means of screws or in any other suitable manner.

The truck which runs over the overhead track g is made up of a U-shaped bracket k, the upturned prongs of which straddle the track, and flanged rollers or wheels k', which are pivotally mounted on said upturned prongs and run over the upper surface of the track-sections g.

An inverted-U-shaped sheave-bracket n, which is provided with a guide-sheave n', is suspended from the depending portion of the truck bracket or frame k by means of a swiveled connection n^2. A flexible connection n^3 works over the sheave n'. At one end the flexible connection n^3 is provided with a grapple and at its other end with a handpiece and counterpoise. This grapple preferably comprises a round link or ring p, secured directly to said connection n^3, a head or pair of plates p', connected to said ring p, and four rods p^2, loosely pivoted to said head p' and provided at their free ends with hook portions p^3. The handpiece r at the other end of the connection n^3 is shown as connected to the lower end of a counterweight r', which in turn is secured directly to said connection n^3. The counterweight r' is provided with a laterally-extended stem or stud r^2, which is formed with an elongated eye r^3, through which the connection n^3 normally works. This elongated eye r^3 is of such dimensions that the ring p may be readily passed therethrough when turned longitudinally thereof, but when turned transversely thereof will be caught and held thereby.

My improved dish-rack is adapted to be held by the grapple and carried by the truck above described. This dish-rack is preferably constructed as follows:

t indicates flat end plates which are spaced apart longitudinally of the rack by longitudinally-extended parallel wooden rods t' t^2. Said end plates t are drawn and tightly held against the ends of said wooden rods t' t^2, respectively, by means of nutted draw bolts or rods t^3 t^4. A series of partition-rods t^5 are passed transversely through the three parallel upper rods t' to form several series of stalls or seats into which the dishes may be set edgewise for washing purposes.

t^6 indicates small wheels, which are pivotally mounted on the lower corners of the end plates t. The addition of these rollers t^6 to the dish-rack gives a rack in the form of a truck, which may be readily rolled or wheeled about over the floor or other support upon which it rests.

z' indicates dishes, which are shown as placed in the stalls of and are supported by the dish-rack, and z^2 indicates water contained within the vats a' and a^2.

The operation of handling and washing dishes with my improved apparatus above described is substantially as follows: By opening the valve b' in the cold-water-supply pipe b a continuous flow and overflow of water from the vats a' and a^2 is provided for. By the proper manipulation of the steam-controlling valves $b^\times$ and b^5 the water z^2 may be kept at the proper temperature. The water from the tank or rinsing-vat a' will overflow into the washing-vat a^2 and the water from the washing-vat a^2 will overflow into the catch-trough d. As the catch-trough d and its side d' extend completely across said vat a^2 the said side d' acts as a skimmer to cut off the upper greasy surface of the water contained in said vat a^2. The greasy water which thus overflows will be caught in the catch-trough d and find its only escape through the drip-pipe d^2. The dishes are loaded on the dish rack or truck, as already indicated. By means of the overhead truck and track and suspending connections the dish-rack may be readily moved from one point to another, either to collect or to distribute the dishes, and when loaded with dishes the rack and dishes may, by the use of the handpiece r and flexible connection n^3, be lowered and submerged first into the water of the washing-vat a^2 and then into the water of the rinsing-vat a'. Nearly all of the dirt and grease will be removed from the dishes while they are submerged in the water of the washing-vat a^2, and all that remains on the dishes will be surely removed while they are submerged in the rinsing-vat a'.

The hooked ends p^3 are adapted to be hooked onto the upper tie-rods t^3 to connect the grapple to the dish-rack. It will be noted that the said tie-rods t^3 are provided with fingers or projections t^7, which prevent the coöperating pairs of grapple-rods p^2 from drawing too closely together.

Preferably the weight of the counterpoise r' is sufficient to approximately counterbalance the weight of the grapple and dish-rack. When it is desired to secure the dish-rack, even when loaded with dishes, in a raised position, as indicated in Figs. 1 and 2, this may be very readily accomplished simply by drawing downward on the handpiece r until the ring p is passed upward through the elongated eye r^3 of the stem r^2, and then by turning the dish-rack so that said ring p stands crosswise of said eye r^3.

The overhead track may be run from the washing-vats to any part of a restaurant or house. Hence this overhead track not only furnishes a convenient device for moving the loaded dish-rack from one vat to another, but also serves as a most efficient kind of device for collecting and distributing dishes from and to different parts of a restaurant, for example. The fact that the dishes may be loaded onto the dish-rack at a distant point, conveyed to the washing-vats, washed, and returned to the point from which they were collected, or to some proper point of distri-

bution without in the meantime being removed from said rack, greatly reduces the number of dishes which are broken in the process of washing.

It will be understood, of course, that various alterations in the specific details of construction above described may be made without departing from the spirit of my invention.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

In a dish-washing apparatus, the combination with the overhead track and truck movable thereon, of the dish-tray provided with projections t^7, and the suspending connection involving the sheave n' carried by said truck, the flexible connection n^3 running over said sheave, the grapple-head p' secured to one end of said flexible connection, and the four-hooked grapple-rods p^2 p^3 pivoted to said head p' and detachably engageable with said projections t^7 of said rack, substantially as described.

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

ERICK E. SPARR.

Witnesses:

LILLIAN C. ELMORE,

FRANK D. MERCHANT.