

June 2, 1953

H. B. SECOR

2,640,223

OYSTER PREPARING MACHINE

Filed June 8, 1948

2 Sheets-Sheet 1

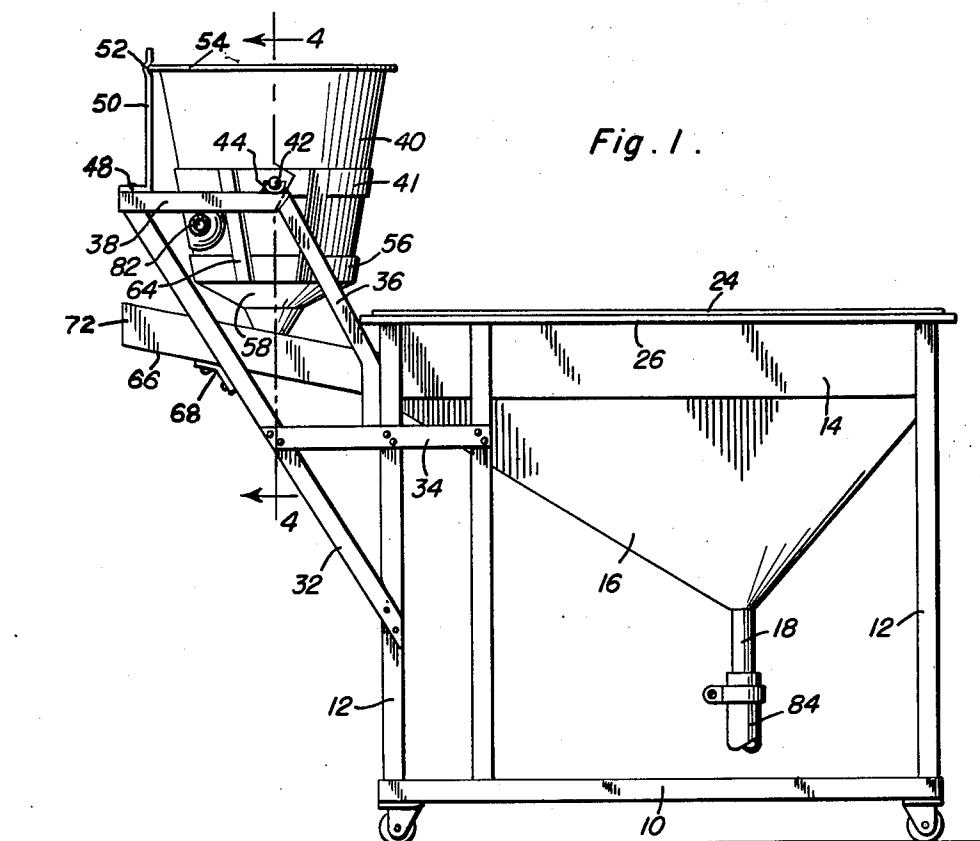
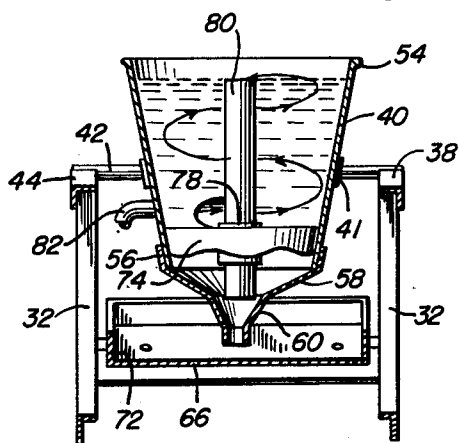


Fig. 4.



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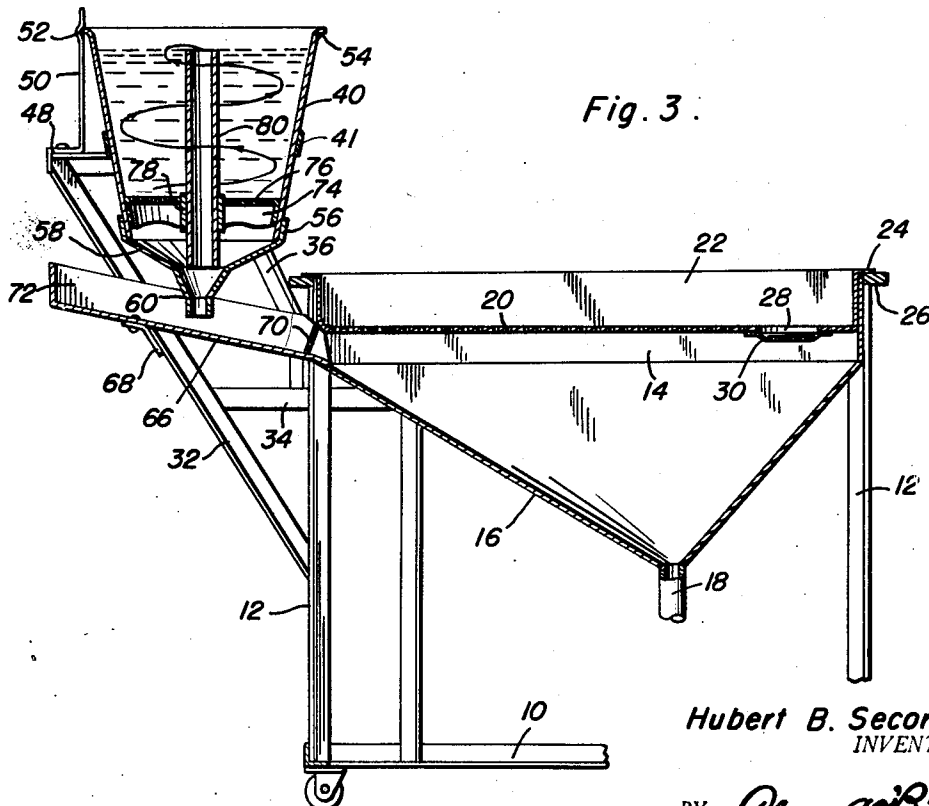
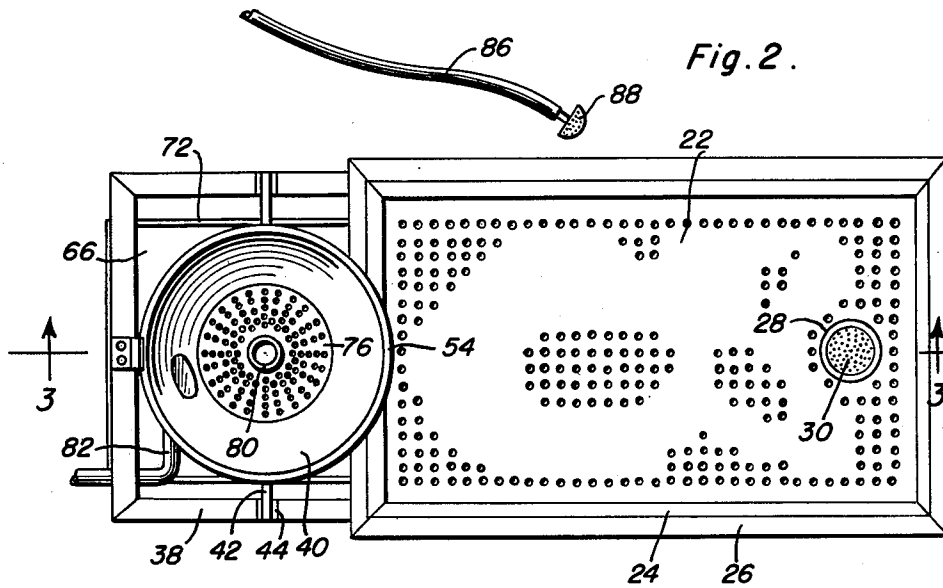
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UNITED STATES PATENT OFFICE

2,640,223

OYSTER PREPARING MACHINE

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Application June 8, 1948, Serial No. 31,733

9 Claims. (Cl. 17-6)

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This invention relates to new and useful improvements in machines for preparing shelled food, and the primary object of the present invention is to provide a machine that will agitate and wash shelled oysters or other shelled edibles and which will conduct the waste, such as pieces of shell, foreign matter or the like to a discharge point.

Another important object of the present invention is to provide a device for preparing mollusks and crustaceans, or other such food stuffs, including a container in which the mollusks and crustaceans are rinsed and embodying a screened conduit through which waste matter passes through a waste hopper.

A further object of the present invention is to provide a portable oyster washing machine including a mixing chamber and embodying novel and improved means for agitating and cleaning oysters or the like which are disposed within the chamber.

A still further aim of the present invention is to provide a machine for preparing oysters and the like that is small and compact in structure, strong and reliable in use, simple and practical in construction, relatively inexpensive to manufacture, neat and attractive in appearance, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view of the oyster cleaning machine constructed in accordance with the present invention;

Figure 2 is a top plan view of Figure 1;

Figure 3 is a longitudinal vertical sectional view taken substantially on the plane of section line 3-3 of Figure 2; and

Figure 4 is a fragmentary transverse vertical sectional view taken substantially on the plane of section line 4-4 of Figure 1.

Referring now to the drawings in detail wherein, for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents a wheeled frame including a plurality of uprights or posts 12 fixed thereto which support a hopper 14 having sloping or inclined lower walls 16 that lead to a discharge drain or pipe 18 rigidly attached to or forming an integral part of the said hopper. Positioned within the open upper end of the

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hopper 14 is a perforated tray or screened panel 20 having upstanding peripheral walls 22 that terminate in outwardly projecting bearing flanges 24 which engage the sides of an open framework 26 fixed to the uprights 12. The tray 22 is provided with an enlarged opening 28, adjacent one end thereof, and registers with a strainer or screen 30 fixed to the lower face of the tray 20.

Rigidly attached to a pair of the uprights 12 is a pair of upwardly inclined support rails or bars 32 which are braced to the uprights 12 by brace members or bracing 34. Fixed to the members 34 are the lower straight terminals of a further pair of upwardly inclined rails or supports 36 which cooperate with rails 32 to fixedly engage a U-shaped support member 38.

The numeral 40 represents a substantially frusto-conical container or bucket, the ends of which are open. Fixed to and projecting outwardly from an upper ring or band 41 that embraces the container 40, adjacent the ends thereof, is a pair of diametrically disposed trunnions or bearing shafts 42 that are rotatably supported in the concaved faces of a pair of semi-cylindrical bearings 44 fixed on the leg portions of the support member 38.

Secured by a rivet or the like to the web portion of the member 38 is the angulated end 46 of an upstanding spring or holding arm 50 having a recess or detent 52 provided adjacent its free end that engages the outwardly turned edge 54 of the major end of said container to normally hold the container against pivotal movement or which will prevent pivotal movement of the container 40 in one direction.

Embracing the lower end of the container 40 is the upstanding flange portion 56 of a funnel or closure 58 having sloping walls that lead to a central, depending drain or outlet pipe 60. The flange portion 56 is connected to the aforementioned ring or band 41 by a plurality of bars or straps 64.

Preferably integrally formed with one end of the waste hopper 16 is an outwardly extending, upwardly inclined trough or conduit 66 that is fixed to the rails 32 by angle brackets 68 and which is disposed beneath the outlet pipe 60.

A screen 70 is fixed between the side walls 72 of the trough 66, at the lower end thereof, to screen or strain waste entering the hopper 16.

Slidably engaging the container 40 and supported by the container adjacent the lower end thereof is the inclined or substantially frusto-conical flange portion 74 of a perforated annular plate or wall 76, the central portion of which

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is formed with an aperture that fixedly engages a support sleeve 78 which receives an open-ended tube or overflow pipe 80. The upper terminal of the overflow pipe 80 terminates adjacent the upper end of the container 40 and the lower terminal of the pipe 80 communicates with and axially aligns the outlet pipe 60.

Integrally formed with the container 40, adjacent the lower end thereof, and above the normal position of the wall 76, is an inlet nipple 82 that is connected to a suitable supply of fluid which is preferably forced into the container 40 under pressure.

In practical use of the present invention, the inlet nipple 82 is connected to a hose or other such supply conduit that leads from a source of fluid. When a suitable valve (not shown) is actuated to permit fluid to flow from the source into the container 40, oysters or the like which are disposed within the container 40 will be agitated and cleaned as the fluid will move in a substantially spiral path toward the upper end of the container 40. Since the fluid enters the container 40 under pressure, it is evident that very little will pass through the perforated wall 76 until such time when the oysters are properly cleaned. The liquid draining through the perforated wall 76 will take with it the foreign matter and broken shells of the oysters and conduct the same through the outlet pipe 60 onto the trough 66, where the said waste will again be screened by the member 70 before entering the waste hopper 16. The drain 18 of the hopper 16 may be connected to a suitable, preferably flexible tubing 84 which may lead to a sump or such other means for disposing of the waste material.

Obviously, the container 40 may be manually agitated or rocked on the trunnions 42 to further agitate the oysters or the like which are disposed within the container 40. The container 40 may be quickly and readily tilted or rocked on the bearing 44 when the holding arm 50 is disengaged with the flange 54 so that the same may be emptied upon the tray 22 to further drain the liquid from the oysters.

Should the liquid medium in the container 40 reach such a height to normally cause an overflow thereof, the said fluid medium will enter the upper terminal of the overflow pipe 80 and will be conducted to the hopper 16 and will also tend to take with it any foreign matter which may collect on the trough 66 or the closure 58.

When the oysters are placed upon the tray 22, a suitable hose 86 having a spray 88 may be held over the tray 22 to further clean or rinse the oysters which are now disposed upon the tray 22. The tray 22 may be easily cleaned by a brush or the like or replaced by a further tray having perforations of a size smaller or larger than the perforations shown in the drawings.

Obviously, the present washing machine may be employed in conjunction with shelled seafood, or the like, other than oysters as here described, and by replacing the tray 22 and wall 76 with walls or trays having various diameters of openings therein, the amount of edible material wasted may be held to a minimum.

In view of the foregoing description taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a pre-

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ferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. An oyster preparing machine comprising a frame, a support carried by said frame, a substantially frusto-conical container having its major end disposed above its minor end, means pivotally securing said container to said support, means carried by said support and engageable with said container to hold the latter against pivotal movement, said container having an inlet adjacent its minor end, said inlet being disposed tangentially of said container, means for supplying a liquid to said container through said inlet to agitate and clean material within the container as the liquid moves in a spiral path toward the major end of said container, outlet means for said container, means carried by said container for screening said outlet means, a waste hopper supported on the frame, means for conducting waste from said outlet means to said hopper, and a horizontal screen supported on the frame and within the hopper and disposed sufficiently close to the container and in the path of the pivotal movement of the container as to permit oysters cleaned in the container to be discharged onto the horizontal screen as the container is pivoted toward the horizontal screen.

2. The combination of claim 1 wherein said means pivotally securing said container to said support includes a pair of trunnions carried by said container, and bearings carried by said support rotatably receiving said trunnions.

3. An oyster preparing machine comprising a frame, a support carried by said frame, a substantially frusto-conical open ended container pivoted to said support, a spring arm fixed to said support and engageable with said container to hold the same against pivotal movement, said container having an inlet adjacent its lower end, said inlet being disposed tangentially of said container, means for supplying a liquid medium to said container through said inlet to agitate and clean material in the container as the liquid medium moves in a spiral motion in the container, an outlet for said container, a screen mounted in said container for screening said outlet, a waste hopper carried by said frame, a conduit leading from said outlet to said waste hopper, means for screening material entering said hopper, an overflow tube for the container, and a horizontal perforated wall within the waste hopper and disposed in the path of pivotal movement of the container and sufficiently close to the container to receive oysters in the container as the container is pivoted toward the perforated wall.

4. The combination of claim 3 wherein said last-mentioned means includes a screen fixed in said conduit.

5. An oyster preparing machine comprising a frame, a support carried by said frame, a frusto-conical open ended container pivotally mounted on said support and having an outlet and an inlet, means for supplying a liquid medium under pressure to said container through said inlet to agitate and clean material therein as the liquid medium moves in a spiral motion in the container, a screen removably supported in said container adjacent the outlet thereof, an overflow tube carried by said screen and communicat-

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ing with the outlet for said container, a waste hopper, a conduit leading from said outlet to said hopper, and a horizontally disposed perforated wall within the waste hopper and disposed in the path of pivotal movement of the container and sufficiently close to the container to receive oysters leaving the container as the container is pivoted toward said perforated wall.

6. The combination of claim 5 wherein said inlet is carried by said container intermediate the ends thereof.

7. An oyster preparing machine comprising a frame, an inverted substantially frusto-conical open end container carried by the frame, a waste hopper supported on the frame and including an end portion underlying the container, said container having a tangentially disposed inlet intermediate its ends, a conduit attached to said inlet and extending from a source of liquid for supplying a liquid into the container, a screen received in the lower end of the container and having a central opening, and an overflow tube having a lower end fitted in the opening.

8. The combination of claim 7 and a pair of coaxial trunnions fixed to and projecting from said container intermediate the ends of the container, and semi-cylindrical bearings fixed to said frame and receiving said trunnions.

9. An oyster preparing machine comprising a frame, a waste hopper supported on the frame and having an open upper portion, a horizontally disposed perforated wall within the upper portion of the hopper, said frame including an upwardly extending end portion, an open ended container pivotally mounted on said end portion

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for vertical swinging movement toward and away from said perforated wall, an inclined chute supported on said end portion under the container and extending into the hopper, a screen within the container to prevent oysters placed in the upper end of the container from passing into the chute, and means carried by said end portion engaging the container to prevent pivotal movement of the latter, said container being manually pivoted toward the perforated wall, whereby oysters in the container will pass onto the perforated wall with the drippings passing into the hopper.

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