No. 718,987. PATENTED JAN. 27, 1903.

W. E. DEMENT.

CAN SALTING MACHINE.

APPLICATION FILED FEB. 18, 1902.

NO MODEL. 3 SHEETS—SHEET 1.

Fig. 1.

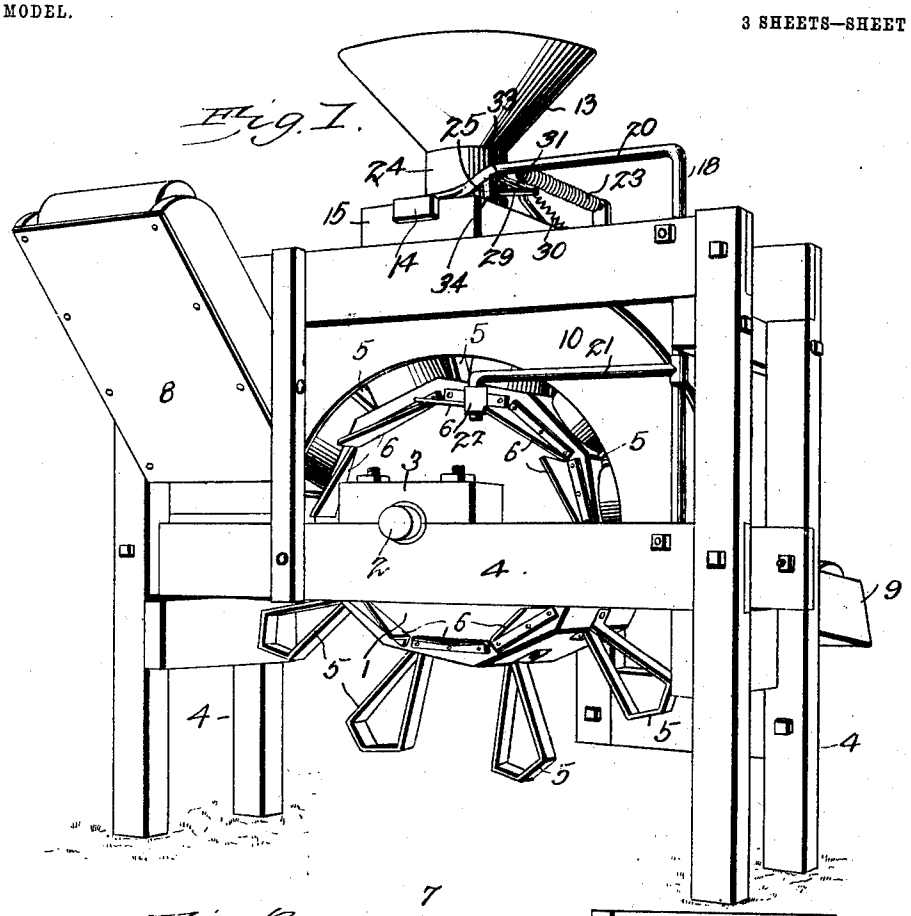
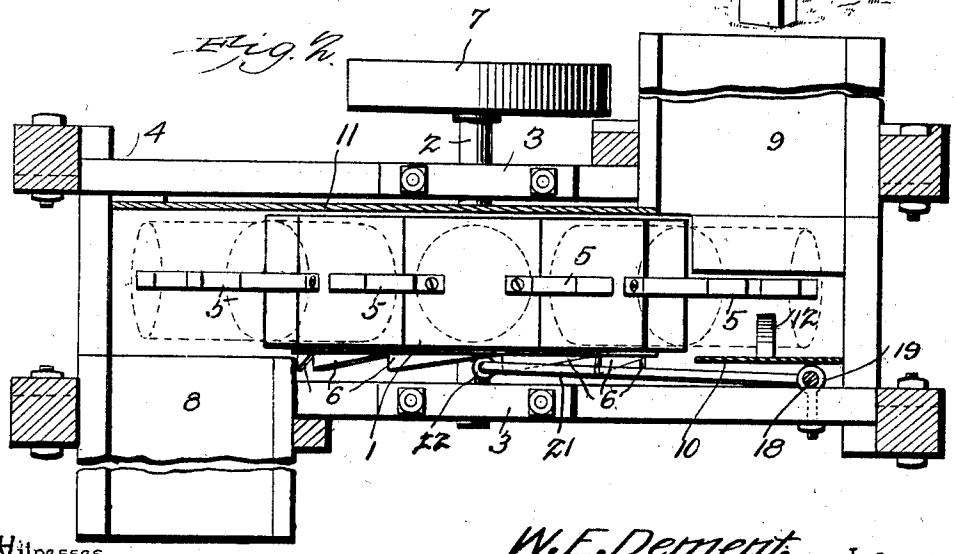


Fig. 2.



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NO MODEL. 3 SHEETS—SHEET 2.

Fig. 5.

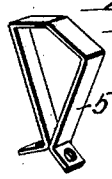
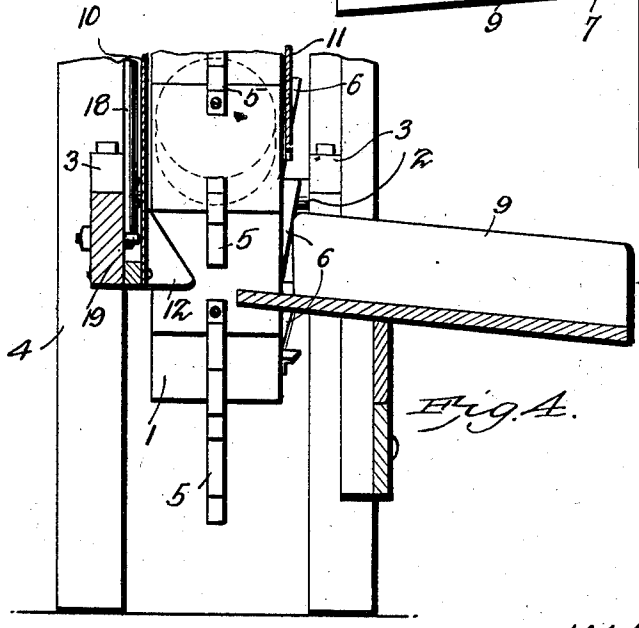


Fig. 6.



Fig. 3.

Fig. 4.



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NO MODEL. 3 SHEETS—SHEET 3.

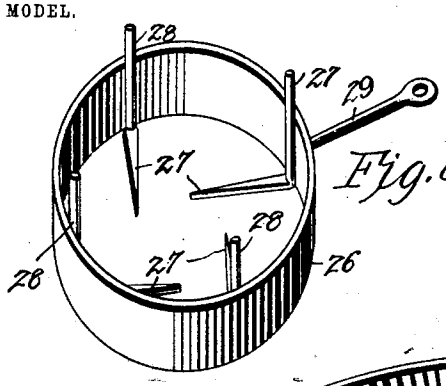


Fig. 8.

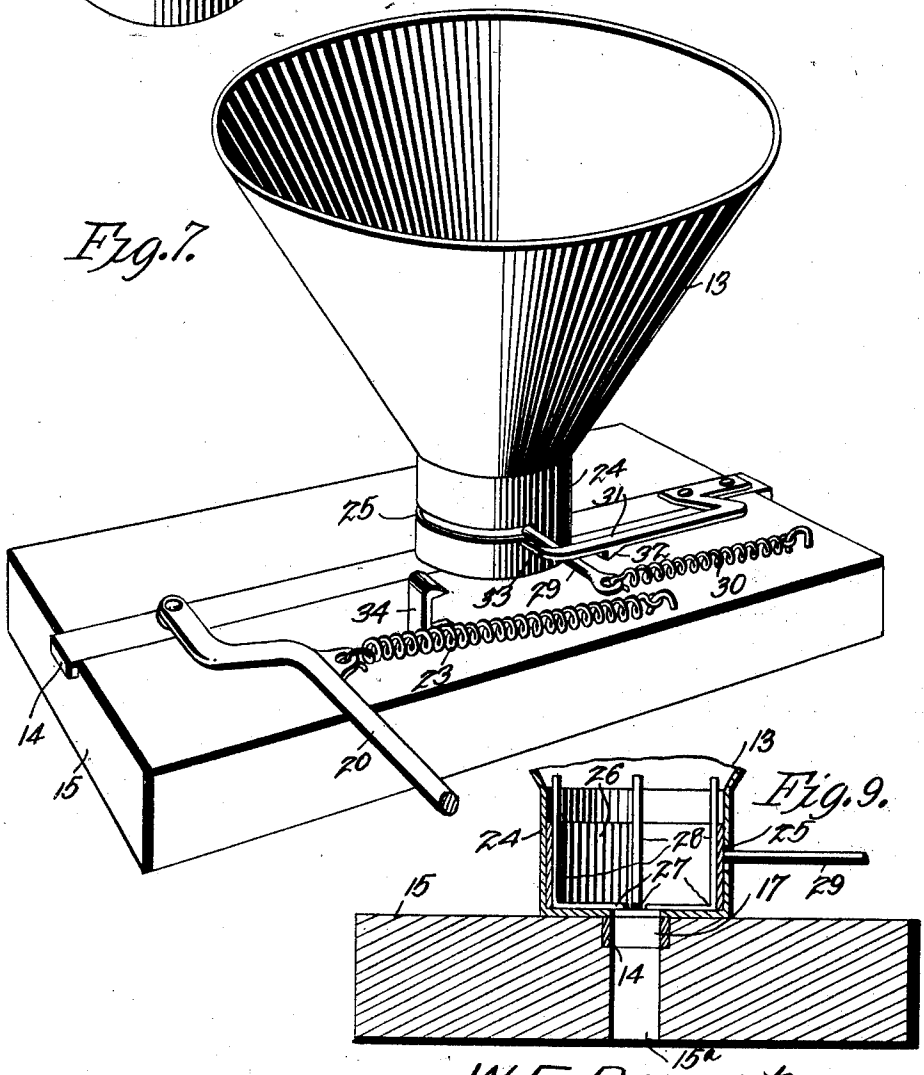


Fig. 7.

Fig. 9.

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UNITED STATES PATENT OFFICE.

WALLACE E. DEMENT, OF BLAINE, WASHINGTON, ASSIGNOR OF TWO-THIRDS TO JAMES MARCUS AND MORRIS ARONSON, OF BLAINE, WASHINGTON.

CAN-SALTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 718,987, dated January 27, 1903.

Application filed February 18, 1902. Serial No. 94,690. (No model.)

To all whom it may concern:

Be it known that I, WALLACE E. DEMENT, a citizen of the United States, residing at Blaine, in the county of Whatcom and State of Washington, have invented a new and useful Can-Salting Machine, of which the following is a specification.

My invention is an improved machine for depositing measured quantities of salt in cans prior to the packing of the cans with fish or other substances to be seasoned by the salt; and it consists in the peculiar construction and combination of devices hereinafter fully set forth and claimed.

The object of my invention is to provide an improved machine for automatically depositing the seasoning-salt in cans just prior to the packing of the latter with fish or other material, which salting-machine may be operated while the process of packing the cans is being carried out, thus rendering it unnecessary to deposit the seasoning-salt in a large number of cans prior to the packing of the latter, as is now the case, and obviating the rusting of the cans caused by the presence of the salt therein for some hours prior to the packing and sealing of the cans.

In the accompanying drawings, Figure 1 is a perspective view of a can-salting machine embodying my improvements. Fig. 2 is a horizontal sectional view of the same, taken on a plane intersecting the relatively fixed guides between which the carrier rotates, but not intersecting the carrier. Fig. 3 is a vertical transverse central sectional view of the same. Fig. 4 is a detail transverse sectional view of the same, taken on a plane intersecting the discharge-chute. Fig. 5 is a detail perspective view of one of the peripheral carrier-arms. Fig. 6 is a similar view of one of the cams with which the revoluble carrier is provided for imparting oscillatory motion to the arm which operates the salt-dropping slide. Fig. 7 is a detail perspective view of the mechanism for dropping charges of salt into the cans. Fig. 8 is a detail perspective view of the oscillating stirrer. Fig. 9 is a detail sectional view taken on a plane intersecting the neck of the hopper, the stirrer, and the slide.

In the embodiment of my invention I provide a revoluble carrier 1, the axle 2 of which is horizontally disposed and is mounted in suitable bearings 3 in a suitable supporting-frame 4. The revoluble carrier is provided with outwardly-projecting peripheral arms 5, each of which in the embodiment of my invention here shown is substantially V-shaped and is formed of a single bar of metal bent as shown in Fig. 5. The opposing sides of the proximate carrier-arms 5 are parallel with each other, and the effect of the said arms, which are disposed about midway between the sides of the revoluble carrier on the periphery thereof, is to provide the said carrier with peripheral carrier-openings of a size adapted to receive the cans. The said revoluble carrier 1 is provided on one side with a series of cam-teeth 6, which may be either of the form here shown or of any other suitable form. Any suitable means may be employed for rotating the revoluble carrier. I here show a power-pulley 7 on the axle-shaft 2 for this purpose.

Near one end of the frame 4, at one side thereof, is secured a feed trough or chute 8, adapted to contain a number of cans and to deliver them by gravity to the revoluble carrier, and the discharge end of the said feed-chute is disposed opposite one side of the revoluble carrier, so that as the arms of the latter successively pass the discharge end of said feed-chute the cans are successively fed by the said feed-chute into the spaces or openings on the periphery of the carrier between the peripheral arms 5 thereof. On the opposite side of the carrier is a discharge-chute 9, which is also secured to the frame 4 and the inner end of which is disposed opposite the plane of revolution of the carrier-arms 5, so that the cans carried by the said carrier are successively disposed opposite the inner end of said discharge-chute. The frame 4 is provided with guide-plates 10 11, which are fixed thereto and are disposed above the axial center of the revoluble carrier. The guide-plate 10 extends from a point above the discharge end of the feed-chute to a point opposite the inner end of the discharge-chute, and the guide-plate 11 extends from a point opposite

the discharge end of the feed-chute to a point above the inner end of the discharge-chute. The said guide-plates are on opposite sides of the carrier and serve to retain the cans in the spaces between the peripheral arms on the upper side of the carrier.

A fixed cam 12 is disposed opposite the inner end of the discharge-chute and serves to successively displace the cans laterally from between the peripheral arms of the revoluble carrier as the cans reach a point opposite the inner end of the discharge-chute, so that the cans are caused by the said cam to roll from the carrier onto the inner upper end of the discharge-trough, the cans successively rolling down the said discharge-trough by gravity.

A mechanism for dropping measured quantities of salt into the cans in succession as the latter are disposed on the upper side of the carrier by the rotation thereof is secured on the frame above the axial center of the revoluble carrier. In the embodiment of my invention here shown this salt-dropping mechanism comprises a hopper 13, a slide 14, and means to reciprocate the slide.

The slide operates in a groove in the upper side of a bar 15, that extends transversely across the upper side of the frame at the center thereof, and said bar has an opening 15^a with which at each stroke of the slide in one direction an opening 17 in said slide registers. Said opening 17 is of a size to contain enough salt to season the contents of a single can. At the outer end of the stroke of the slide the opening 17 is below the center of the hopper and becomes filled with a charge of salt, as will be understood.

The hopper is here shown as funnel-shaped, but may be of any other suitable form, and is provided with a cylindrical neck 24, which has a lateral slot 25 in one side. In the neck of the hopper is fitted an oscillating sleeve 26 of vertical cylindrical form, which is provided with inwardly-projecting stirrers 27 and with upwardly-projecting stirrers 28. An operating-arm 29 projects radially from the sleeve and operates in the slot 25. A spring 30 acts against said arm to keep the latter normally at one end of said slot. In the embodiment of my invention here shown the spring 30 is a coil-spring and has its ends connected to the arm 29 and the bar 15, respectively.

A rock-shaft 18 is vertically disposed and journaled in suitable bearings 19 on one side of the frame 4. Said rock-shaft has an operating-arm 20 at its upper end and is further provided with a tappet-arm 21, which carries a tappet 22, here shown as an antifriction-roller, which engages the cam-teeth 6 on one side of the revoluble carrier. A spring 23, here shown as a coiled extensile spring, is connected to the bar 15 and the operating-arm 20 and coacts with the tappet and the cam-teeth of the carrier to impart reciprocating motion to the salt-dropping slide, as will be understood.

An arm 31 is attached to and extends on one side of the slide. Said arm has a tappet 32 in the path of and adapted to engage arm 29 of the oscillating stirrer element 24, here shown, as before described, as a cylindrical neck having inwardly and upwardly projecting stirrers. The end of the arm 31, which rides over the arm 29, is inclined upwardly to form a cam 33. A fixed cam 34 projects from the upper side of the bar 15.

On the instroke of the slide—that being the stroke which carries the opening 17 from above the opening 15^a to a point under the center of the hopper—the tappet 32 engages the arm 29 and moves the latter, together with the oscillating stirrer element, in one direction through a partial revolution against the tension of the spring 30. As the opening 17 is brought under the neck of the hopper the cam 33 engages the cam 34, thereby raising the tappet 32, so that the same disengages the arm 29, whereupon the spring 30 suddenly moves the oscillating stirring element in the reverse direction and causes the arm 29 to strike against one end of the slot 25 so forcibly as to jar the stirring element and the hopper. The action of the stirring element and the jar thus imparted thereto cause the salt to be stirred in the neck of the hopper and to be jarred and dislodged therefrom and insure the filling of the opening 17 with a charge of salt, thus counteracting the tendency of the salt, when damp to clog in the neck of the hopper.

Having thus described my invention, I claim—

1. In a machine of the class described, the combination of a dropping mechanism, a revoluble carrier under the dropping mechanism, said carrier having a horizontal axis and peripheral means to separately engage and carry the cans, a chute to feed the cans successively to the revoluble carrier at one side thereof and a discharge-chute having its inner end disposed opposite the opposite side of the revoluble carrier, substantially as described.

2. In a machine of the class described, the combination of a dropping mechanism, a revoluble carrier under the dropping mechanism, said carrier having a horizontal axis and peripheral means to separately engage and carry the cans, a chute to feed the cans to the revoluble carrier at one side thereof, a discharge-chute having its inner end disposed opposite the opposite side of the revoluble carrier, and fixed guides on opposite sides and extending above the periphery of the carrier between the said chutes to retain the cans in engagement with the revoluble carrier while passing from the feed to the discharge chute, substantially as described.

3. The combination of a dropping mechanism, a revoluble carrier under the dropping mechanism, said carrier having a horizontal axis and peripheral means to separately engage and carry the cans, a chute to

feed the cans to the revoluble carrier at one side thereof, a discharge-chute having its inner end disposed opposite the opposite side of the revoluble carrier, fixed guides on opposite sides and extending above the periphery of the carrier between the said chutes, for the purpose set forth, and a fixed ejector opposite the inner end of the discharge-chute to successively displace the cans from the carrier and cause them to roll upon the discharge-chute, substantially as described.

4. In a machine of the class described, the combination with a dropping mechanism, including a movable element, of a revoluble carrier, means to feed cans thereto and discharge them therefrom, an oscillating element connected to the movable element of the dropping mechanism and connections between said oscillating element and the revoluble can-carrier, to actuate said oscillating element and thereby impart motion to the movable element of the dropping mechanism, substantially as described.

5. In a machine of the class described, the combination with a hopper, of a movable element to discharge material therefrom, a revoluble carrier having cam-teeth, means to feed cans to the said revoluble carrier, means to discharge cans therefrom, and a rock-shaft having a tappet-arm operated by the cam-teeth of the carrier, said rock-shaft being further provided with an operating-arm connected to the movable element of the dropping mechanism, to actuate said movable element, substantially as described.

6. The combination of a hopper, a stirring element movable alternately in opposite directions, a spring to move the latter in one direction, means to drop charges of material from the hopper, means to move the stirring element against the tension of the spring, and means to release the stirring element from the said moving element, for the purpose set forth, substantially as described.

7. The combination of a hopper, an oscillating stirrer having an operating-arm, a spring to move the stirrer in one direction, a reciprocating slide, a tappet carried thereby to engage and move the operating-arm and hence the stirrer, in one direction, and means to disengage said tappet from said arm, substantially as described.

8. The combination of a hopper, a spring-pressed stirrer, a spring-pressed discharge element, means to move the latter in one direction against the tension of its spring, and a connection between the discharge element and the stirrer to move the latter against the tension of its spring with the discharge element, and to release it therefrom prior to the completion of the movement of the discharge element, substantially as described.

9. The combination of a revoluble can-carrier having a horizontal axis and peripheral means to separately engage and carry the cans, means, on one side of the carrier to feed cans thereto, a discharge-chute having its inner end disposed opposite the opposite side of the revoluble carrier, and a fixed ejector opposite the inner end of the discharge-chute to successively displace the cans from the carrier and cause them to roll upon the discharge-chute, substantially as described.

10. The combination with means for feeding material to cans, of a revoluble can-carrier arranged under the feeding means and having a horizontal axis and peripheral means to separately engage and carry the cans, means to successively feed cans to one side of the carrier and an ejector to successively displace the cans from the opposite side of the carrier in a direction lateral to the plane of movement of said carrier, substantially as described.

11. In combination, means for feeding material to cans, a revoluble can-carrier arranged under said feeding means and having a horizontal axis and peripheral means to separately engage and carry the cans, a can-feeding means for presenting cans to one side of the carrier, and means at the opposite side of said carrier for effecting a lateral gravity discharge of said cans.

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

WALLACE E. DEMENT.

Witnesses:
WM. J. GILLESPIE,
OSWALD J. FRANZKE.