A. R. THOMPSON.

CAN DISCHARGE DEVICE.

APPLICATION FILED APR. 3, 1920.

1,422,798. Patented July 11, 1922.

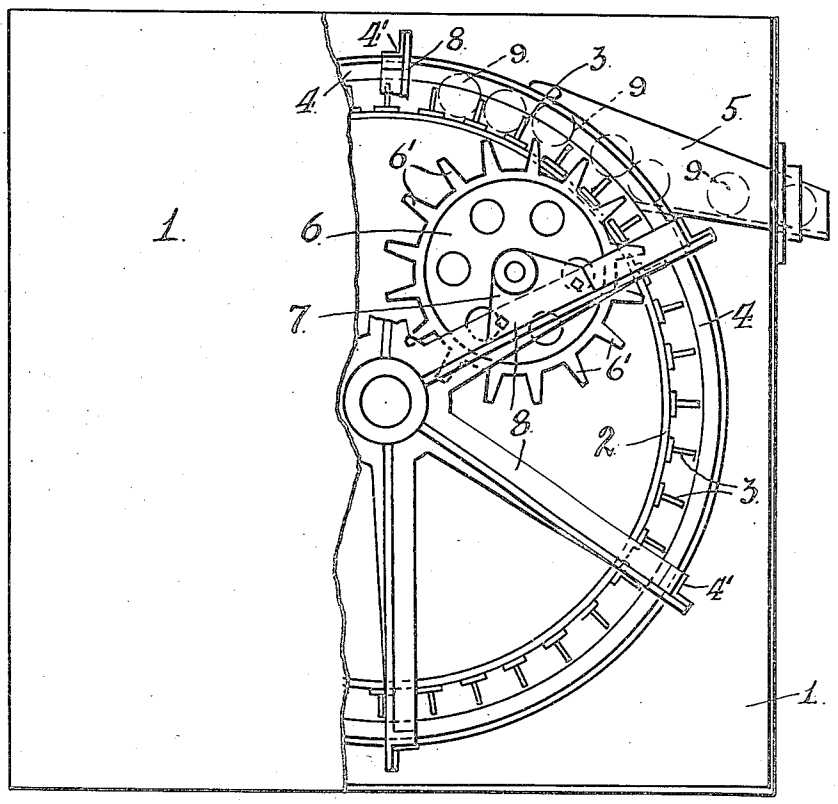


Fig. 1.

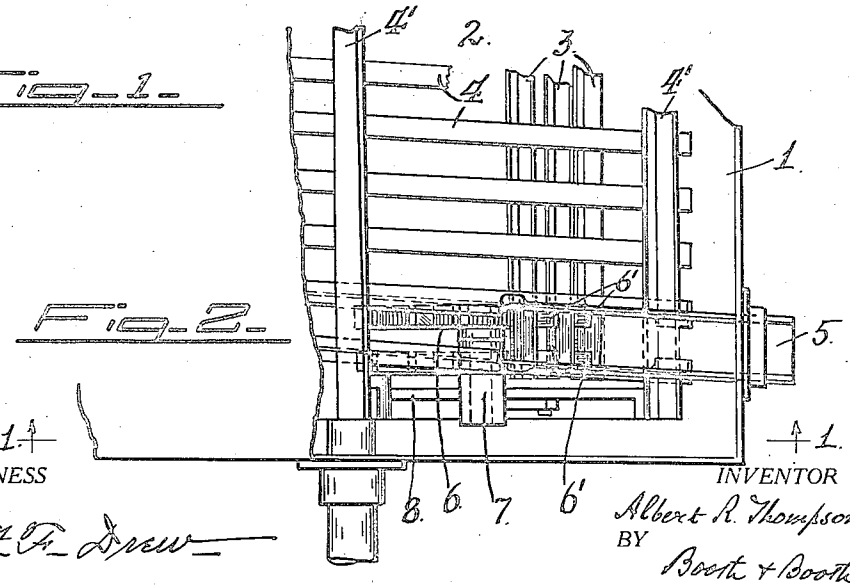


Fig. 2.

WITNESS

Wm. A. Drew

INVENTOR

Albert R. Thompson

BY

Booth & Booth

ATTORNEYS

UNITED STATES PATENT OFFICE.

ALBERT R. THOMPSON, OF SAN JOSE, CALIFORNIA, ASSIGNOR TO ANDERSON-BARNGROVER MFG. CO., OF SAN JOSE, CALIFORNIA, A CORPORATION OF CALIFORNIA.

CAN-DISCHARGE DEVICE.

1,422,798. Specification of Letters Patent. Patented July 11, 1922.

Application filed April 3, 1920. Serial No. 370,937.

To all whom it may concern:

Be it known that I, ALBERT R. THOMPSON, a citizen of the United States, residing at San Jose, in the county of Santa Clara, and State of California, have invented certain new and useful Improvements in Can-Discharge Devices, of which the following is a specification.

My invention relates to devices for discharging cans and other containers from the chambers or vessels through which they are advanced and in which they are treated.

My invention is particularly applicable to machines or apparatus known in the canning art as cookers or coolers and especially to that type of cooker or cooler now well known and which in general comprises a casing or chamber within which is mounted a rotating reel having around its circumference a series of spaced rails parallel with its axis, and surrounded by an exterior helically directed fixed rail or rails, forming a helical can path or canway through which the cans are advanced by the reel rails. At the end of the canway, or at any intermediate point at which a discharge is provided for, the cans are successively discharged from the canway to a discharge chute or other delivery device, by which the cans are directed out of the chamber. In some cases the cans roll out from the canway by gravity, and in other cases a more positive discharge is provided, as for example, a switch of some kind, or a fixed finger interposed in the path of the can.

My present invention concerns a positive discharge, and its object is to provide a simple and effective means for ejecting the cans from the canway. To this end my invention consists in the novel can-discharge means which I shall hereinafter fully describe with reference to the accompanying drawings, in which—

Fig. 1 is an elevation of the discharge end of a "cooker" or "cooler", broken away on the line 1—1 of Fig. 2, to show the interior rotatable reel and can-path, and the application thereto of my can-discharge means.

Fig. 2 is a top plan view of the same.

1 is the box or casing of the cooker or cooler. Within said casing is a rotatable reel 2 having around its circumference a series of spaced rails 3 parallel with its axis, and surrounding this reel within the casing is an exterior helically directed fixed rail or rails 4 carried by longitudinal bars 4′, and forming a helical can-path or canway through which the cans are advanced by the reel rails in a manner now well known in the art.

5 is a discharge-chute fitted to the box, its inner end being in position to receive the cans ejected from the canway and its outer end passing to the exterior of the box, as shown.

6 is the ejector member of my discharge means. It is a rotatably mounted double wheel, each member having correspondingly positioned peripheral teeth 6′ spaced a distance approximately equal to the width of the canway and of a size adapted to project into said canway between the reel rails. The teeth of one member of the double wheel are spaced from those of the other member a distance approximately a little less than the length of the cans. The ejector wheel 6 is mounted in a bearing 7 carried by one of the arms of a fixed end spider frame 8 in the cooker, and its position is such that it engages or intermeshes cogwise with the reel-rails 3.

The operation is as follows: The cans, indicated in Fig. 1, by 9, lie in the canway between the reel-rails 3, and as a given can reaches the point where the teeth 6′ of the ejector wheel begin to penetrate the space between the adjacent reel rails 3, it will be squarely lifted at each end by a pair of such teeth from the said rails. Then as rotation continues, and the ejector wheel teeth project further into the can-way, the can will be lifted higher and so on until it is lifted clear of the reel rails 3, and pushed out of the canway through a suitably disposed opening therein into the chute 5, down which it will roll by gravity to its discharge.

I claim:—

1. In apparatus of the character specified; a casing; a spiral canway therein; and a rotatable reel arranged axially of the spiral canway and having a peripheral series of spaced rails parallel with its axis; with a rotatable wheel mounted within the reel, above the axis thereof, having peripheral teeth adapted to project through and beyond the periphery of the reel whereby the wheel is rotated by the reel; said teeth projecting sufficiently to lift the cans and eject them from the canway as the cans pass over the wheel, substantially as described.

2. In combination, a casing; a spiral canway therein; a rotatable reel arranged axially of the spiral canway and having a peripheral series of spaced rails parallel with its axis; a chute to receive the cans ejected from the canway; a rotatable wheel mounted within the reel above the axis thereof, said wheel having a double series of peripheral teeth spaced a distance less than the length of the cans and projecting through and beyond the periphery of the reel and whereby the wheel is rotated by the movement of the reel, and said teeth lift the cans and eject them from the canway into the chute as the cans pass over the wheel, substantially as described.

3. In combination; a rotatable reel having a peripheral series of spaced rails parallel with its axis; and a fixed helically disposed rail surrounding said reel and forming with the rails thereof a canway along which the cans are advanced; with a rotatable wheel mounted within the reel and above the axis thereof and having a series of teeth on its periphery adapted to project between adjacent reel rails and intermesh with said rails, whereby the wheel is rotated by the reel; the teeth of said wheel projecting sufficiently between the reel rails from the inside outwardly to lift and eject the cans from the canway clear of the rails, substantially as described.

4. In combination a casing, a rotatable reel therein having a peripheral series of spaced rails parallel with its axis; and a fixed helically disposed rail in the casing surrounding said reel and forming with the rails thereof a spiral canway through which the cans are advanced through the box; and a chute adapted to receive cans from the canway, with a rotatable wheel mounted within the reel and above the axis thereof adjacent the chute, said wheel having a double series of peripheral teeth, spaced a distance less than the length of the cans and adapted to project between and intermesh with the reel rails, whereby the wheel is rotated by the movement of the reel and the wheel teeth projecting between the reel rails lift the cans by each end and eject them from the canway as the cans pass over the wheel, substantially as described.

In testimony whereof I have signed my name to this specification.

ALBERT R. THOMPSON.