

May 27 , 1924.

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A. R. THOMPSON
VARIABLE FEED FOR COOKERS

Filed Sept. 11, 1922 2 Sheets-Sheet 1

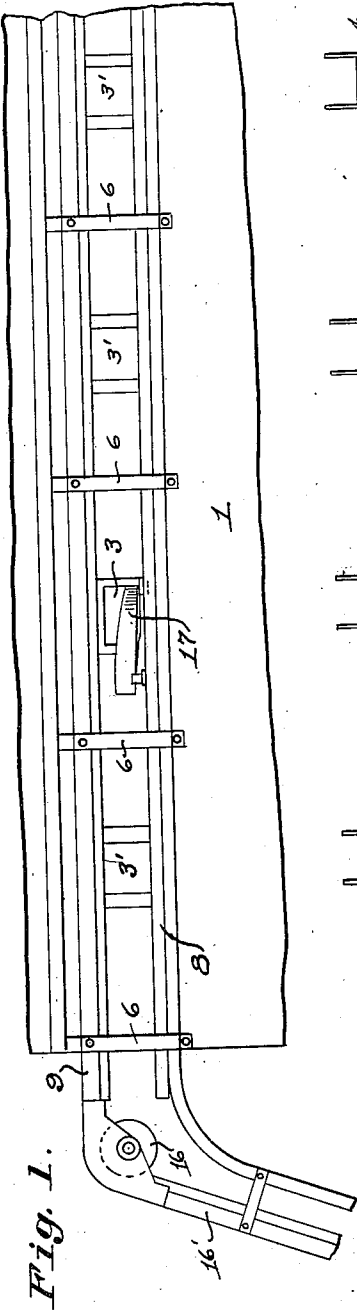


Fig. 1.

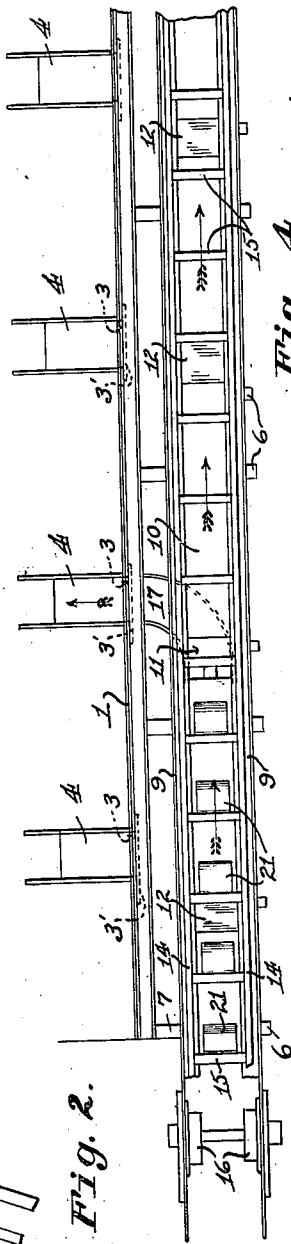


Fig. 2.

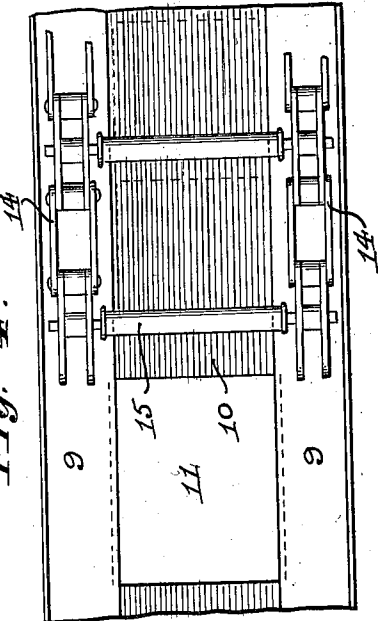


Fig. 4.

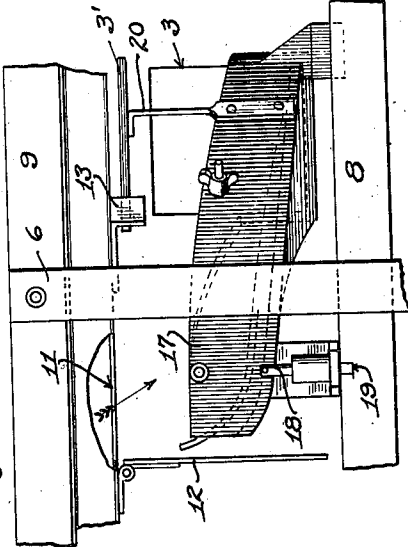


Fig. 3.

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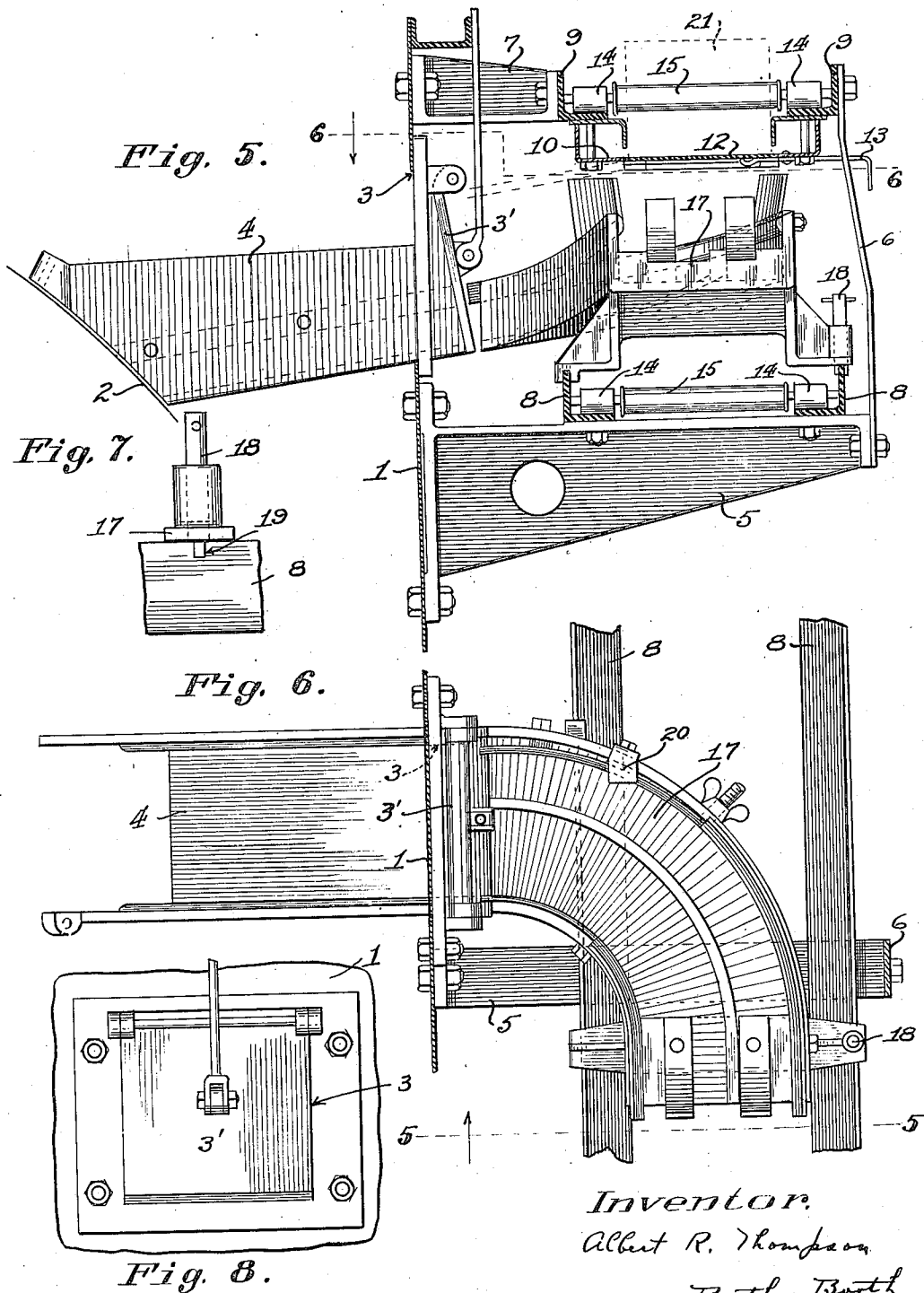
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

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

VARIABLE FEED FOR COOKERS.

Application filed September 11, 1922. Serial No. 537,642.

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 Variable Feed for Cookers, of which the following is a specification.

My invention relates to can-feed mechanisms for cookers and other machines for treating canned goods, and is especially intended for association with such treating machines as are provided with a plurality of can-openings at successive points along the can path, by the selective use of which the time of treatment may be varied according to the particular requirements of the goods, such effect being commonly known in the canning art as a "variable cook".

Machines of this type, which for the sake of illustration I shall herein refer to as "cookers", comprise a shell and interior elements constituting the can-path through which the cans are advanced from their point of entrance to their point of discharge. In the shell are successive entrance openings, each communicating with the can-path at a different point along its length, and in order to supply the cans to such of these openings as may be determined upon, various selective feed mechanisms are employed.

My invention has for its object the provision of a simple and effective selective or variable feed adapted without interference with the influence of gravity, to control the cans both in their travel and necessary change of direction, and in the selection of any predetermined entrance opening of the cooker. To this end my invention consists in the novel can-feed which I shall now fully describe by reference to the accompanying drawings, in which—

Fig. 1 is a side elevation of a portion of a cooker with my improved can feed applied thereto.

Fig. 2 is a plan view of the same.

Fig. 3 is a side elevation, enlarged, of a portion of the can feed mechanism showing the selective feed chute.

Fig. 4 is an enlarged plan view of a portion of the can conveyor and can track or runway.

Fig. 5 is a transverse section, enlarged, of a portion of the cooker and the can feed

mechanism, and is taken on the line 5—5 of Fig. 6.

Fig. 6 is a sectional plan view taken on the line 6—6 of Fig. 5.

Fig. 7 is a detailed view of the selective chute locking device.

Fig. 8 is a detailed elevation of one of the cooker openings with its controlling door.

1 is a portion of the shell of a machine for treating canned goods, which for simplicity, I will term a cooker. Within the shell are suitable devices or members constituting the can path through the shell. These need not be detailed herein as they form no part of my invention, and it will be sufficient to indicate said can path by the numeral 2 in Fig. 5.

In the side of the shell are the entrance openings 3, Figs. 1, 2, 3 and 5. These may be in any number, located successively and each communicating, by means of its own individual inner gravity chute 4, Figs. 2, 5 and 6, with the can-path, at successive points along said path. Each of the openings 3 has a door 3', as shown in Figs. 5, 6 and 8.

To the side of the shell are fixed the lower brackets 5, Fig. 5, from the outer ends of which rise the standards 6. Upper brackets 7 secured to the side of the shell project in the direction of the upper ends of the standards 6.

Carried by the lower brackets 5 are the spaced rails 8, and carried by and between the upper brackets 7 and the upper ends of the standards 6 are the spaced rails 9.

Carried by and underlying the upper rails 9 is a floor member 10, Figs. 3, 4 and 5, in which at intervals are openings 11, controlled by doors 12, each door being provided with a latch 13 for holding it shut. A conveyor comprising side chains 14, Figs. 2, 4 and 5, and spaced cross flights 15, is mounted upon terminal and directing sprockets, one of which is shown at 16, in Figs. 1 and 2, the initial portion of the conveyor constituting an elevator, as shown at 16' in Fig. 1, and the remaining portion passing in its upper or advancing run over the upper guide rails 9, and in its lower or return run over the lower guide rails 8, the flights 15 of the conveyor traveling on said rails.

Mounted for sliding movement upon the

lower rails 8 is the selective feed member 17 underlying the floor member 10 of the upper rails. This feed member is a chute arcuate in its length, as shown in Figs. 3, 5 and 6, its head or receiving end lying parallel with its direction of sliding movement, and its foot or delivery end lying at right angles thereto and projecting far enough to lie close to the side of the shell and in passing registry with each of the shell entrance openings 3. It is also inclined downwardly from its head to its foot.

The sliding selective member or chute 17 is provided with a latch pin 18, Figs. 3, 5, 6 and 7, adapted to engage notches 19 in one of the lower rails 8, to lock it in its several positions, and it is also provided with a rest 20, Figs. 3 and 6, in position to support the door 3' of the entrance-opening 3, when said door is lifted to expose said opening.

The operation is as follows:—

The cans supplied to the foot of the elevator 16' are carried up to the horizontal portion of the conveyer extending along the side of the shell, where they pass onto the floor member 10 and are rolled along on said floor, between the guide rails 8, by the cross flights 15 of the conveyer, as indicated at 21 in Figs. 2 and 5.

Assuming the length of cook required to correspond with the distance between the second entrance opening 3 and the end of the cooker, the door 3' of said second entrance opening 3 will be lifted and supported upon the rest 20 of the selective chute 17, which said chute is adjusted and locked on its rails 8 with its delivery end in registry with the exposed opening 3, as shown in Figs. 1 and 2, and in this position its head or upper end will lie directly below and in registry with the second opening 11 of the floor 10, the door 12 of which has been dropped. The cans will therefore drop through the opening 11 of the floor 10, into the head end of the selective chute 17, and, rolling down through the arcuate length of said chute will change their direction of travel through an arc of 90 degrees and will enter the opening 3 and roll through the inner chute 4 into the can path.

The travel of the cans under the influence of gravity is thus not impaired though their direction is under control. If now it be desired to subject the goods to a longer time of cook, say, for example, that dependent upon the use of the first entrance opening, the adjustment of the device is as follows:—The second entrance opening 3 is closed by its door 3', and the second floor opening 11 is also closed. The first entrance opening into the shell is uncovered, the door of the first opening in the floor 10 is dropped, and the selective chute 17 is slid toward the left and locked in position with its

head under the first floor opening and its foot in registry with the first entrance opening. The cans will now drop through the uncovered first opening 11 of the floor 10 and thence, directed by the arcuate selective chute 17 will pass into the shell through the first entrance opening and thence into the can path at a point closer to its beginning than that at which they would have entered if fed through the second shell opening.

In like manner, the selective chute 17 may be adjusted to use the third entrance opening into the shell for a shorter cook, and so on.

I claim:—

1. In combination with a shell for treating canned goods said shell having an interior can-path and a plurality of openings in its wall communicating with the can path at successive points in its length, a can runway exterior to said shell and extending parallel with the line of said openings, said runway having door controlled openings in its bottom at intervals of its length; and a selective chute associated with and underlying said runway, said chute being curved in its length through an arc of ninety degrees and mounted for movement to place its head in registry with a predetermined opening of the runway and its foot in registry with a corresponding opening of the shell.

2. In combination with a shell for treating canned goods said shell having an interior can-path and a plurality of openings in its wall communicating with the can path at successive points in its length, a can runway exterior to said shell and extending parallel with the line of said openings, said runway having door controlled openings in its bottom at intervals of its length; and a selective chute associated with and underlying said runway, said chute being lengthwise arcuate with its head portion lying in the direction of travel of the cans in the runway, and its foot portion lying at right angles to its head portion and extending to the vicinity of the openings in the shell, and said chute being mounted for movement lengthwise of the can runway to place its head portion in registry with a predetermined opening of the runway and its foot portion in registry with a corresponding opening of the shell.

3. In combination with a shell for treating canned goods said shell having an interior can-path and a plurality of openings in its wall communicating with the can path at successive points in its length, a rail assembly supported by the wall of the shell and extending parallel with and adjacent the line of openings therein a can-runway carried by said rail assembly and having in its bottom door-controlled openings at inter-

vals of its length; and a selective chute slidably mounted upon said rail assembly under the can-runway, said chute being arcuate in its length, its head portion lying parallel with the chute and its foot portion at right angles thereto, and adapted to be adjusted to place its head portion in registry with a predetermined opening of the runway and its foot portion in registry with a corresponding opening of the shell.

4. A can-feed mechanism for machines for treating canned goods in which a plurality of openings communicating with the can path at successive points in its length are employed, comprising a rail assembly supported by the wall of the machine and extending parallel with and adjacent the line of openings therein; a can-runway carried by said rail assembly and having in its bottom door-controlled openings at intervals of its length; a selective chute slidably mounted upon said rail assembly under the can-runway, said chute being arcuate in its length, its head portion lying parallel with the chute and its foot portion at right angles thereto, and adapted to be adjusted to place its head portion in registry with a predetermined opening of the runway and its foot portion in registry with a corresponding opening of the machine, and coacting members on said chute and rail assembly to fix the chute in the position to which it is adjusted.

5. In combination with a shell for treating canned goods said shell having an interior can-path and a plurality of openings in its wall communicating with the can path, at successive points in its length, a rail assembly supported by the wall of the shell and extending parallel with and adjacent the line of openings therein; a can-runway carried by said rail assembly and having in

its bottom door-controlled openings at intervals of its length; a conveyer carried by said rail assembly to move the cans along the runway; and a selective chute slidably mounted upon said rail assembly under the can-runway, said chute being arcuate in its length, its head portion lying parallel with the chute and its foot portion at right angles thereto; and adapted to be adjusted to place its head portion in registry with a predetermined opening of the runway and its foot portion in registry with a corresponding opening of the shell.

6. A can-feed mechanism for machines for treating canned goods in which a plurality of openings communicating with the can path at successive points in its length are employed, comprising a rail assembly supported by the wall of the machine and extending parallel with and adjacent the line of openings therein; a can-runway carried by said rail assembly and having in its bottom door-controlled openings at intervals of its length; a conveyer carried by said rail assembly to move the cans along the runway; a selective chute slidably mounted upon said rail assembly under the can-runway, said chute being arcuate in its length, its head portion lying parallel with the chute and its foot portion at right angles thereto, and adapted to be adjusted to place its head portion in registry with a predetermined opening of the runway and its foot portion in registry with a corresponding opening of the machine, and coacting members on said chute and rail assembly to fix the chute in the position to which it is adjusted.

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

ALBERT R. THOMPSON.