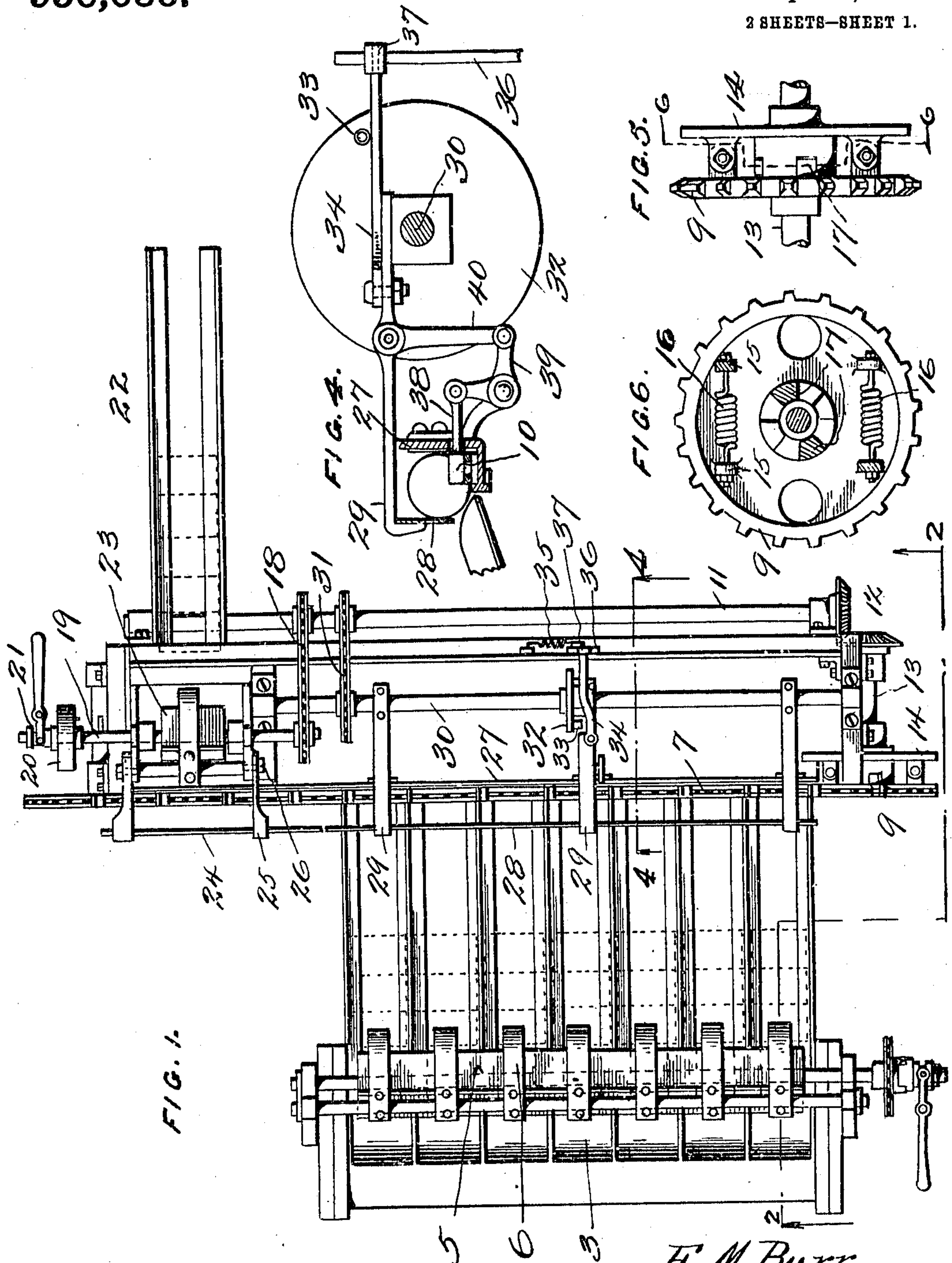


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CAN FEEDING APPARATUS.  
APPLICATION FILED DEC. 17, 1908.

956,036.

Patented Apr. 26, 1910.

2 SHEETS—SHEET 1.



WITNESSES

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INVENTOR

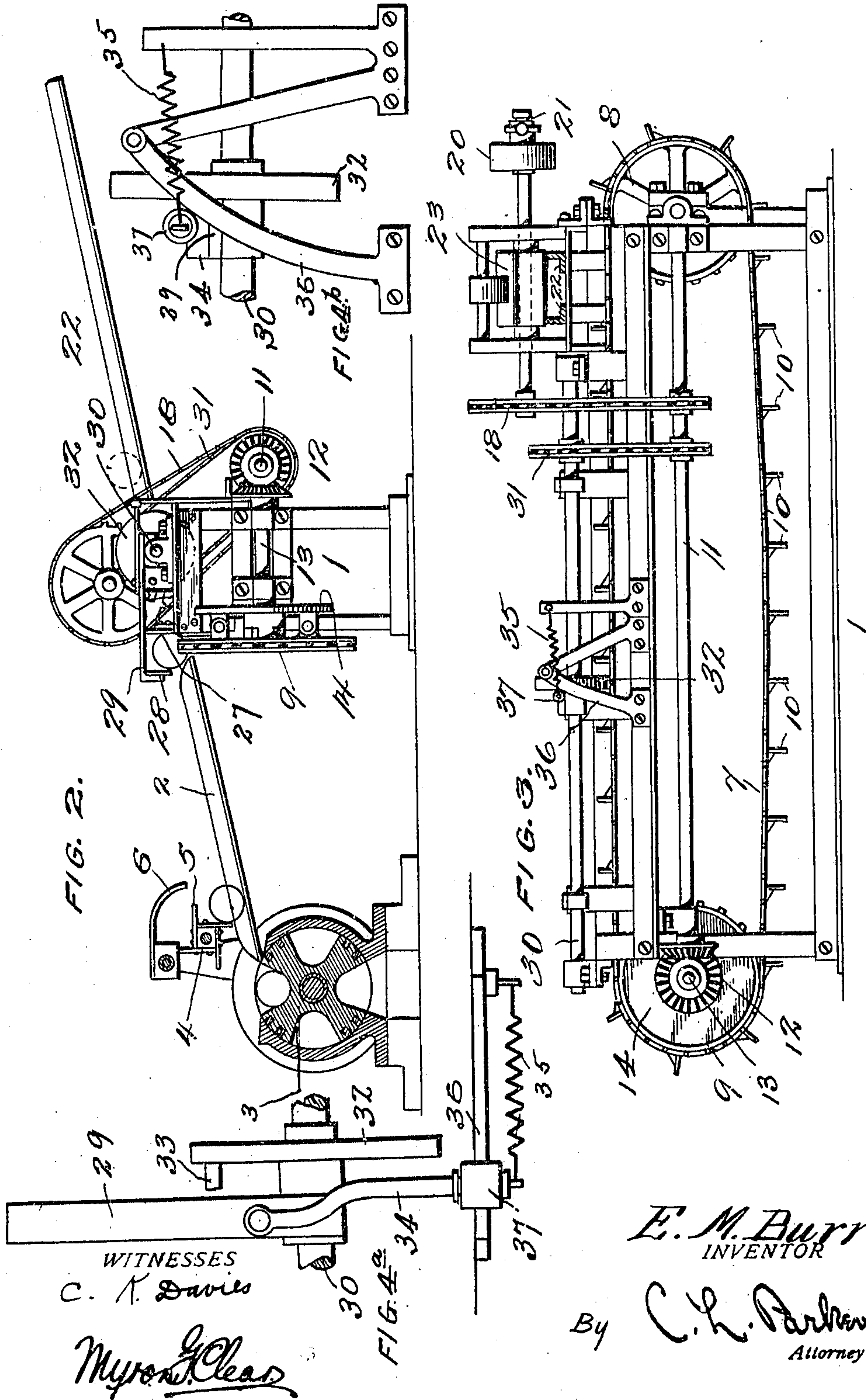
By C. H. Parkman.  
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# UNITED STATES PATENT OFFICE.

ELLIS M. BURR, OF CHAMPAIGN, ILLINOIS.

## CAN-FEEDING APPARATUS.

956,036.

Specification of Letters Patent.

Patented Apr. 26, 1910.

Application filed December 17, 1908. Serial No. 467,935.

*To all whom it may concern:*

Be it known that I, ELLIS M. BURR, citizen of the United States, residing at Champaign, in the county of Champaign and State of Illinois, have invented certain new and useful Improvements in Can-Feeding Apparatuses, of which the following is a specification.

The present invention relates to means for feeding cans to cookers, though not necessarily limited to this particular use.

The primary object is to provide simple and effective mechanism, whereby cans carried successively from a sealing machine or other apparatus, will be delivered simultaneously into feed tracks or runways, which deliver the cans to the cooker or other apparatus, as desired.

One embodiment of the invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a plan view of the apparatus. Fig. 2 is a view on the line 2—2 of Fig. 1. Fig. 3 is a rear elevation. Fig. 4 is a sectional view on the line 4—4 of Fig. 1. Fig. 4<sup>a</sup> is a fragmentary plan view of a portion of the apparatus, showing the disk 32 and members associated therewith. Fig. 4<sup>b</sup> is a fragmentary end view of a portion of my apparatus, showing an end view of the disk 32 and members associated therewith. Fig. 5 is a detail view of the yielding connection between the driving mechanism and the conveyer. Fig. 6 is a sectional view on the line 6—6 of Fig. 5.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment disclosed, a suitable supporting frame 1 is employed, from which extends a plurality of downwardly inclined tracks or runways 2 for the cans, these tracks or runways delivering to the rotary valve 3 of a cooker or other apparatus. Arranged over the tracks or runways in advance of said rotary valve, is can-controlling means, consisting of a rotary member 4 having can-engaging blades 5 and stop fingers 6 operated by said blades.

The present invention relates more particularly to the mechanism for delivering the cans into the tracks or runways 2.

In the present embodiment, an endless conveyer is employed, comprising a sprocket

chain 7 that operates around sprocket wheels 8 and 9 journaled on the frame 1, said chain having outstanding can-engaging paddles or fingers 10. This conveyer is operated from a shaft 11 geared as shown at 12, to a stub shaft 13, which carries a disk 14 located alongside the wheel 9. Said wheel and disk, as shown more particularly in Figs. 5 and 6, are provided respectively with outstanding lugs 15, which are connected by springs 16. It will thus be evident that the driving means can move with relation to the conveyer. This relative movement, however, is limited by lugs 17 carried respectively by the wheel 9 and disk 14, and so disposed that those carried by the disk will engage those carried by the wheel. The shaft 11 is geared, as illustrated at 18 to a driving shaft 19, on which is mounted a pulley 20 that can be clutched to or unclutched from the driving shaft 19 by suitable mechanism, shown at 21.

The conveyer, as illustrated in Fig. 1, operates transversely of the various tracks or runways 2, and the cans are fed thereto by means of an inclined chute 22 located at one end of the conveyer, can-controlling means 23, similar in all respects to the above described means 4—6, being employed. It will thus be evident that the cans rolling down the chute 22, will be carried endwise by the conveyer, being stopped in their rolling movement by a wall 24 carried on arms 25 that are pivotally mounted on the frame of the machine, as shown at 26. In order to retain the cans on the conveyer, a rear stationary wall 27 is located on one side of said conveyer, and a vertically movable wall 28 is arranged on the opposite side. This wall 28 is carried by arms 29 journaled on a countershaft 30, which is geared to the shaft 11, as shown at 31. With this arrangement, it will be evident that the conveyer will present a plurality of cans simultaneously to the various tracks or runways 2, and it will also be obvious that when so presented if the wall 28 is elevated, the cans will roll from the conveyer on to and down the tracks or runways.

Means for effecting the periodical and automatic movement of the wall 28 is provided, said means being preferably as follows. The shaft 30 is provided with a disk 32 carrying a crank pin 33, and an arm 34, pivoted upon



the central supporting arm 29, is normally disposed in the path of movement of the crank pin, being yieldingly held therein by a spring 35. It will thus be evident that as the shaft rotates the pin 33 will move on to the arm 34, and carrying the same downwardly, will elevate the wall 28. An inclined track 36 is, however, disposed in the path of movement of the free end of the arm 34, so that as said arm moves downwardly, it will move outwardly until disengaged from the pin 33. A roller 37 is preferably journaled on the arm, and operates against said track.

In order that the proper alinement of the cans with the runways during the delivery operation may be insured, means for stopping the conveyer is employed. This means, as illustrated in Fig. 4, consists of a pin 38 moving through the rear wall 27 into and out of the path of the fingers or paddles 10 of said conveyer. This pin is mounted on a bell crank 39, the rear arm of which has a link connection 40 with the adjacent supporting arm 29 of the side wall. It will thus be seen that when the arm 29 moves upwardly, carrying the wall 28, the pin 38 will move in advance of one of the fingers, consequently stopping the conveyer so that the cans will roll therefrom into the tracks or runways. This stoppage of the conveyer is permitted by the yielding connection 16 between the conveyer and the driving mechanism.

Briefly described, the operation of the apparatus is as follows. The cans are consecutively delivered down the runway 22 onto the conveyer which moves relatively slowly and are carried lengthwise by said conveyer in the transversely disposed track or runway to the downwardly inclined feed tracks or runways. When a series of the cans are presented to the tracks or runways 2, the crank pin 33 strikes the arm 34, thereby raising the retaining wall 28 and releasing the cans. Simultaneously with this movement, the stop pin 38 engages the conveyer and halts it. The cans, being thereby released, simultaneously roll down into the tracks or runways, and as the mechanism continues to operate, the arm 34 is released from the crank pin 33, and the parts resume their original relations until another series of cans are presented.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is:—

1. In can feeding mechanism, the combination with a track or runway having a movable wall, of means for moving the wall including a swinging arm connected to said wall, a rotary device having a crank pin that engages the arm to periodically move the same, and means for swinging the arm into the path of movement of the pin and out of engagement with said pin.

2. In can feeding mechanism, the combination with a track or runway having a movable side wall to release the cans, of a swinging arm connected to said wall, a rotary driving element having a crank pin that engages the arm to operate the same, an inclined track disposed in the path of movement of the arm to disengage the same from the pin, and a spring connected to the arm for returning said arm into the path of movement of the pin.

3. In can feeding mechanism, the combination with a conveyer including a driven wheel, of driving means therefor including a driving disk, spring connections between the disk and wheel, a vertically swinging side wall for retaining the cans on the conveyer, a stop pin movable into and out of engagement with the conveyer, and common means operated by the driving mechanism for moving the stop pin and wall.

4. In can feeding mechanism, the combination with a supply track or runway and a plurality of discharge tracks or runways, of a conveyer operating between and transversely thereof, a retaining wall located alongside the conveyer transversely of the tracks or runways, swinging arms secured to the retaining wall, a pin for periodically stopping said conveyer, means connected with one of said swinging arms to operate the pin, and means for operating said swinging arms.

5. In can feeding mechanism, the combination with a conveyer, of means for moving the same, means for stopping the conveyer, mechanism for simultaneously discharging a plurality of cans from the conveyer while stopped, said mechanism consisting of a wall, means for moving the wall including a swinging arm connected to said wall, a rotary device having a crank pin that engages the arm to periodically move the same, and common means for actuating the stopping and discharging means.

6. In can feeding mechanism, the combination with a conveyer, of driving means therefor having a yielding connection therewith, means engaging the conveyer to periodically stop the same, said means including a pin movable into and out of engagement with said conveyer, a vertically swinging side wall for retaining the cans on said conveyer, and common means for actuating



the driving means for the conveyer, the stopping means for said conveyer and the vertical swinging wall.

5 7. In can feeding mechanism, the combination with a conveyer, of driving means therefor, means engaging the conveyer to periodically stop the same, including a member adapted to be moved into and out of engagement with said conveyer, a movable

wall for retaining the cans on said conveyer, and common means for actuating the stopping means and the movable wall.

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

ELLIS M. BURR.

Witnesses:

GEO. E. MARTIN,

C. A. TUFTS.