A. M. AUGENSEN.

CAN FEEDING MECHANISM.

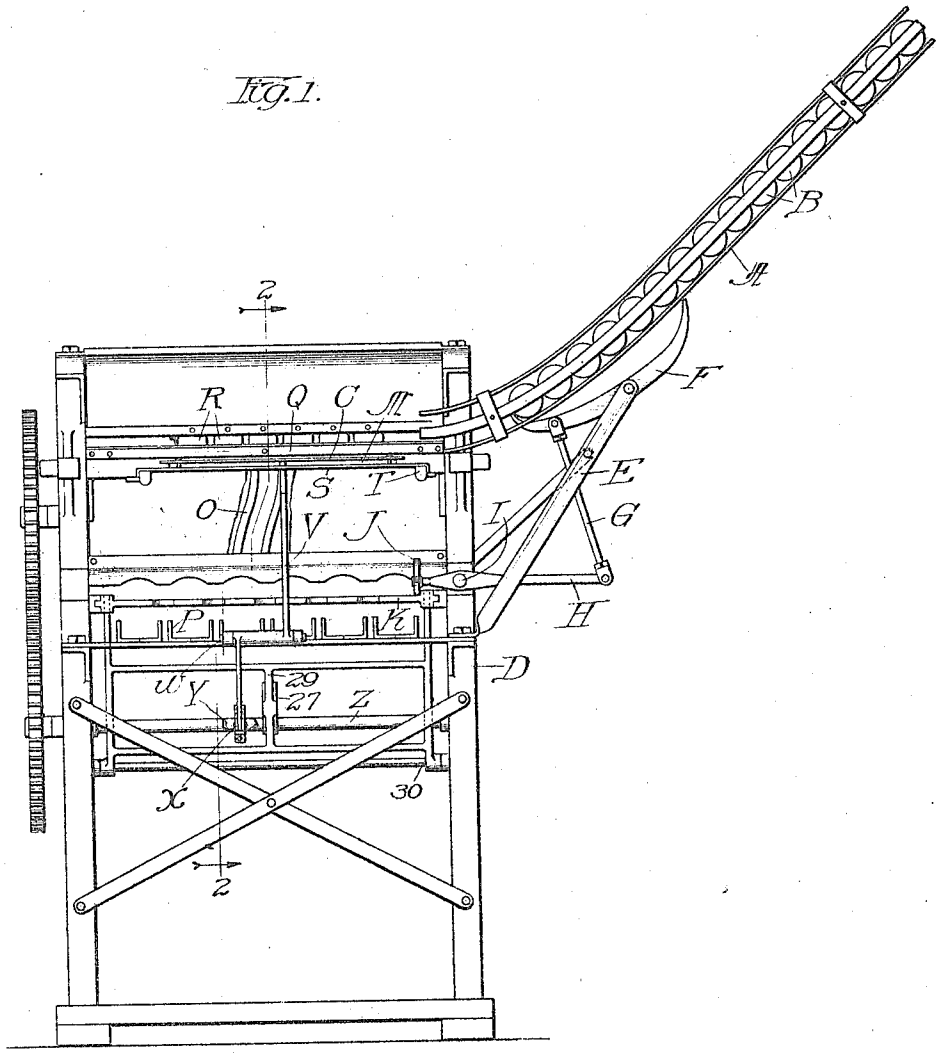
APPLICATION FILED MAR. 25, 1912.

1,206,398.

Patented Nov. 28, 1916.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
Robert H. Weir
M. M. Boyle

Inventor:
August M. Augensen
by Rudolph Dreyfoos Atty.

A. M. AUGENSEN.

CAN FEEDING MECHANISM.

APPLICATION FILED MAR. 25, 1912.

1,206,398.

Patented Nov. 28, 1916.

2 SHEETS—SHEET 2.

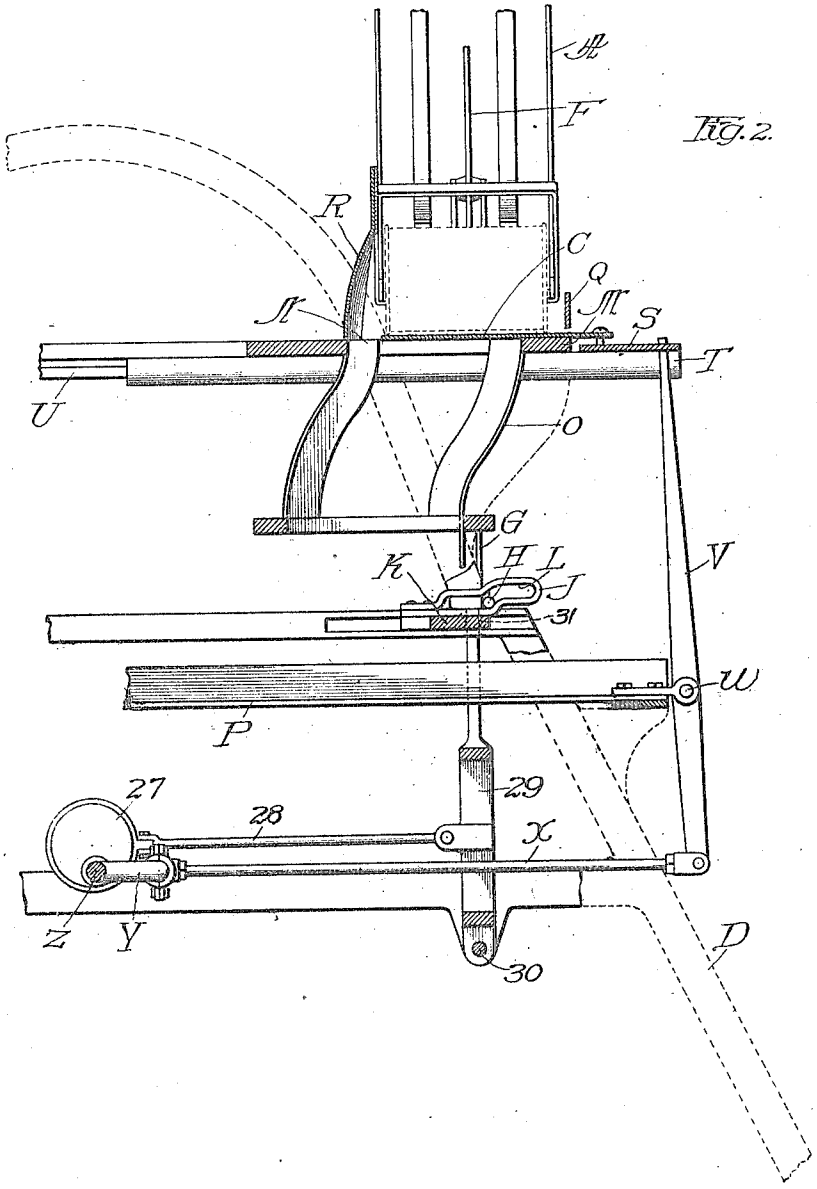


Fig. 2.

Witnesses:
Robert F. Weir
M. M. Boyle

Inventor:
August M. Augensen
by Rudolph Kuhn Jr.
Atty.

UNITED STATES PATENT OFFICE.

AUGUST M. AUGENSEN, OF MAYWOOD, ILLINOIS, ASSIGNOR TO SANITARY CAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

CAN-FEEDING MECHANISM.

1,206,398. Specification of Letters Patent. Patented Nov. 28, 1916.

Application filed March 25, 1912. Serial No. 686,116.

To all whom it may concern:

Be it known that I, AUGUST M. AUGENSEN, citizen of the United States, residing at Maywood, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Can-Feeding Mechanism; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to can feeding devices and I have shown and described the same as used in connection with can filling and other machines.

The invention has for its object to provide simple and efficient means whereby a given number of cans will be fed to a machine, such as a can filling machine at regular intervals and to provide means whereby said cans will, upon entering the machine, be properly positioned therein.

The invention consists in the features of construction and combinations of parts hereinafter fully described and particularly claimed.

In the accompanying drawings illustrating the invention: Figure —1— is a view in front elevation of a can filling machine equipped with a feeding device embodying my invention. Fig. —2— is a fragmentary vertical longitudinal section of the same on an enlarged scale on the line 2—2 of Fig. —1—.

My invention has for its particular object to provide simple and efficient means for feeding a predetermined number of cans to the machine at regular intervals, and consists further in providing simple and efficient means timed relatively to the feeding means to turn the cans fed to the machine through an arc of ninety degrees and deliver the same into the guides through which they are fed into the proper position relatively to the feed spouts from which they receive their contents.

In the accompanying drawings illustrating the invention, A indicates a chute leading from a source of supply of cans B to the receiving table C of the can filling machine. The said chute A is of skeleton structure and comprises a runway down which the cans are adapted to roll on their axes and which is of a size in cross-section substantially equal to a central vertical longitudinal section of the cans B to be fed therethrough. Mounted upon the frame D of the machine is a bracket E of any suitable construction in the upper end of which an escapement lever F is pivotally mounted, the respective ends of the latter being spaced apart a distance substantially equal to six times the diameter of a can B and being adapted to alternately project in the path of cans traveling through said chute A for the purpose of retarding the same and permitting a given number thereof to pass upon the feed table C of the machine at regular intervals. The said escapement lever F is connected by means of a link G with a lever H pivotally mounted on the frame of the machine at I and engaged at its other end in a cam J carried by a reciprocable member K of the machine. As clearly shown in Fig. 1, the reciprocating member K is disposed above the channel guide tracks P and is adapted to feed the cans forward along said tracks after the same have been deposited thereon. The said cam J consists of a member having a longitudinal slot L in which the fast-named end of said lever H is received, the respective opposite end portions of said slot L being offset relatively to each other so that as said end of said lever H travels therein the same will be swung through an arc equal to the difference in elevation of said respective ends of said slot L thereby rocking said lever H and thereby the escapement lever F. In the position shown in Fig. —1— the lower end of said escapement lever is disposed in the path of the cans in the chute A and the other end thereof is disposed out of the path of said cans. In rocking said lever the first-named end thereof will be withdrawn from the path of the cans and simultaneously the other end of said lever will enter the chute A and retard the cans disposed above its point of projection into said chute. It will be noted that in the instance illustrated when the lower end of said lever F is withdrawn from the chute A six cans B roll upon the feed table C of the machine. The said feed table consists of a plate M provided with openings N through which the cans are adapted to pass into suitable guides O adapted to deliver the same upon the channeled guides P through which said cans are adapted to be pushed into position underneath the feed spouts of the machine. The said table M is

equipped with stops Q at one side and with guide plates R at the other side of said openings N. Reciprocably movable over said plate M is the plate C constituting the feed table proper of the machine. The latter is adapted when disposed at the inner limit of its movement to cover or partially cover said openings N and when disposed at the other limit of its movement to uncover said openings. Said plate C is connected in a suitable manner with the reciprocable bar S mounted on guide rails T moving in the ways U on the frame of the machine. The said bar S is connected with one end of a lever V pivotally mounted between its ends, as at W, on the frame of the machine and connected at its other end with the pitman X connected with the crank Y of the shaft Z. The latter carries an eccentric 27 connected by means of a pitman 28 with a lever 29 between the ends of the latter, said lever being pivotally supported upon the frame of the machine at its lower end, as at 30, and being engaged at its upper end with the reciprocable member 31 carrying said cam J. The rocking movements of said levers V and 29 are timed relatively to each other so that the reciprocable movements of the plate C and the cam J take place at proper intervals to feed the cans upon said plate C and to withdraw the latter to uncover the openings N so as to cause said cans to pass through the guides O upon said channeled members P.

As shown in Fig. —2—, the cans are received upon the inner end portion of said plate C at a time when the latter is disposed at the inner limit of its movement. Immediately after receiving the cans the said plate C is drawn outwardly by a movement of the lever V thus throwing the ends of the cans against the stops Q and, as said plate C continues its outward movement, the said cans will turn upon the inner edge of the same as a fulcrum and thus turn through an arc of substantially ninety degrees and pass through said guides O onto the channeled guides P. The guides O are all substantially ogee-curved but of different degree to compensate for the greater spacing apart of the respective channel guides P relative to the openings N through which the cams pass. The guide plates or members R are concave shells of sheet metal which are adapted to prevent the inner and uppermost corners of the cams from binding and becoming lodged in the openings N, as will be obvious.

The invention is very simple and efficient.

I claim as my invention:

1. A mechanism of the character described and adapted to be used in conjunction with a cam filling machine and comprising an inclined chute through which cans are adapted to travel by gravity, resting on their sides and bearing successively against each other, an escapement lever pivotally mounted contiguous to said chute at the incline thereof and arranged to have its integral ends projected alternately into said chute to prevent passage of cans therethrough and to release a predetermined number thereof, means for rocking said lever, a succession of righting devices over which respectively said predetermined number of cans are caused to be fed by gravity and by the operation of said escapement lever, and means having connection with said escapement lever for actuating all of said righting devices simultaneously.

2. A mechanism of the character described adapted to be used in conjunction with a can filling machine and comprising, in combination: a gravity feed chute down which cans are adapted to fall by gravity; a rocker arm pivoted contiguous to said chute for releasing a predetermined number of cans at intervals from said chute; a reciprocating table onto which the cans pass when delivered from said chute; a plate beneath said table having a plurality of holes therein, the number of said holes corresponding to the number of cans fed at each interval; horizontally arranged guide tracks located below said plate, the number of said tracks corresponding to the number of said holes; chutes leading from each of said holes to said tracks; a stop against which the cans are brought when said table is reciprocated; a reciprocating feed bar located above said tracks and below the bottoms of said chutes for pushing the cans along said tracks; and means for reciprocating said bar and table and for oscillating said rocker arm, substantially as specified.

3. A mechanism of the character described adapted to be used in conjunction with a can filling machine and comprising, in combination: a gravity feed chute down which cans are adapted to fall by gravity; a rocker arm pivoted contiguous to said chute for releasing a predetermined number of cans at intervals from said chute; a reciprocating table onto which the cans pass when delivered from said chute; a plate beneath said table having a plurality of holes therein, the number of holes corresponding to the number of cans fed at each interval; horizontally arranged guide tracks located below said plate, the number of said tracks corresponding to the number of said holes; chutes leading from each of said holes to said tracks; a stop against which the cans are brought when said table is reciprocated; a reciprocating feed bar located above said tracks and below the bottoms of said chutes for pushing the cans along said tracks; and means for reciprocating said bar and table and for oscillating said rocker arm, said means including a cam carried by said feed bar, a lever operated by said cam and con-

nections between said lever and the rocker arm, substantially as specified.

4. A mechanism of the character described adapted to be used in conjunction with a can filling machine and comprising, in combination; a chute down which cans are adapted to feed by gravity; an arcuate-shaped escapement lever located adjacent said chute and arranged to have its ends projected alternately into the chute whereby to feed a predetermined number of cans at a time; a reciprocating table onto which the cans pass when delivered from said chute; a plurality of tracks located below said table; a plurality of chutes beneath the table and having their lower ends disposed above said tracks; stops against which the cans are brought when said table is reciprocated; concave plates opposite said stops at the opposite ends of the cans arranged to prevent the cans from binding thereon as the cans tilt when the table is withdrawn from beneath the cans; and mechanism for oscillating said escapement lever and for reciprocating said table, substantially as specified.

5. A mechanism of the character described comprising, in combination: a reciprocating table onto which a plurality of cans are adapted to be fed at intervals; a stationary plate having a plurality of holes therein located below said reciprocating table; a plurality of tracks below said plate, the number of said tracks corresponding to the number of holes in said plate; a plurality of chutes for guiding the cans as they pass through said holes onto the tracks; stops against which the ends of the cans are brought when said table is reciprocated and moved from beneath the cans; and concave plates R arranged opposite said stops and adapted to prevent binding of the edges of the cans as the same tilt through the holes when the table is reciprocated, substantially as specified.

In testimony whereof I have signed my name in presence of two subscribing witnesses.

AUGUST M. AUGENSEN.

Witnesses:

RUDOLPH WM. LOTZ,

M. M. BOYLE.