S. TEVANDER.

CAN FEEDING AND TIMING MECHANISM.

APPLICATION FILED FEB. 9, 1914.

1,166,492.

Patented Jan. 4, 1916.

Fig. 1

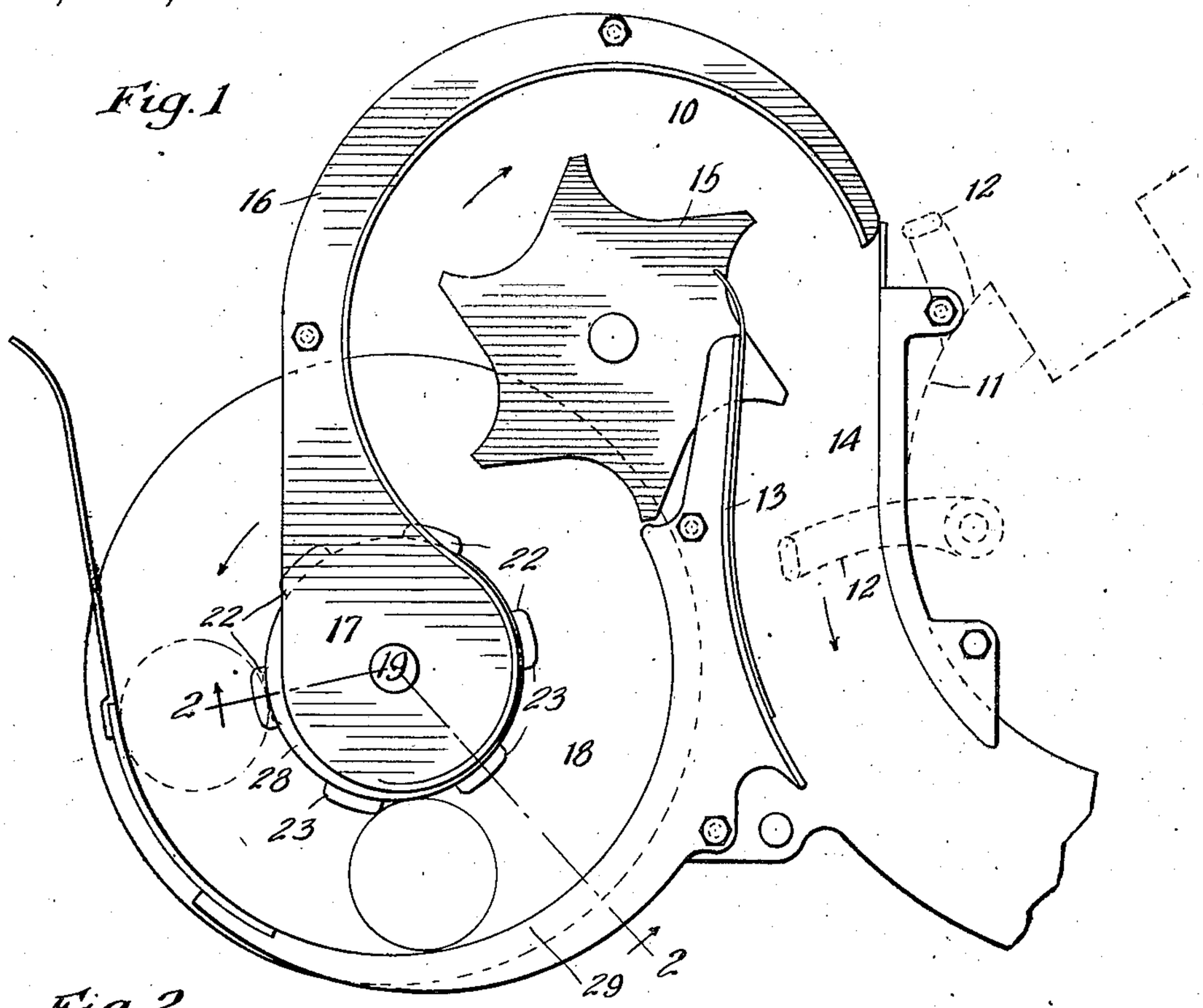


Fig. 2

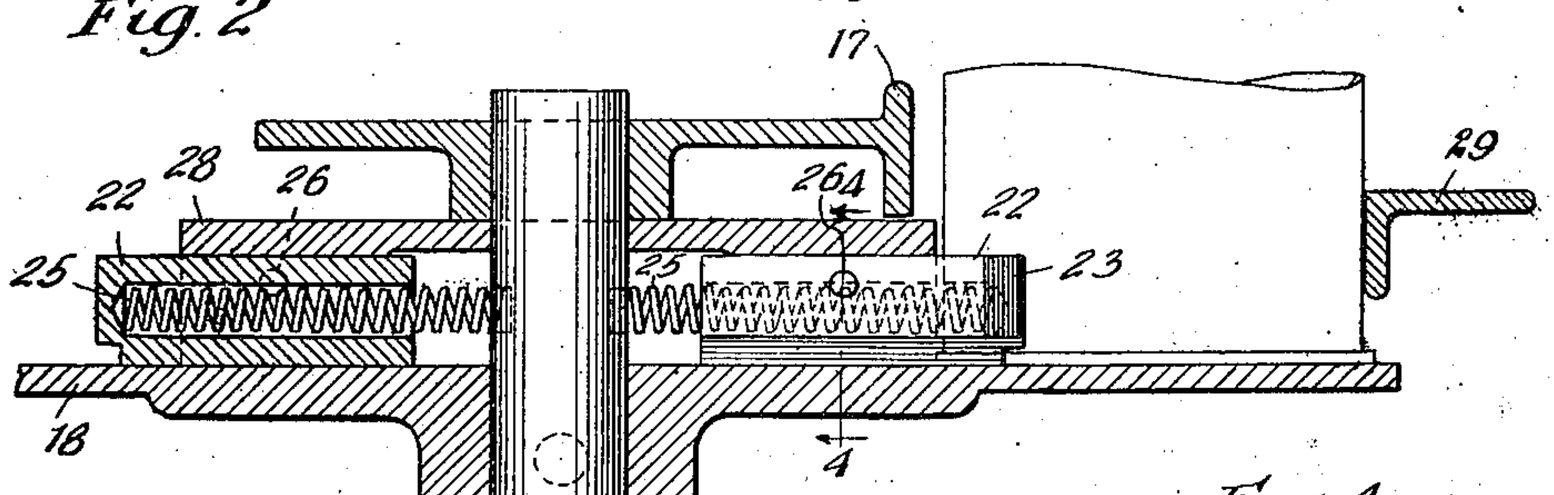


Fig. 3

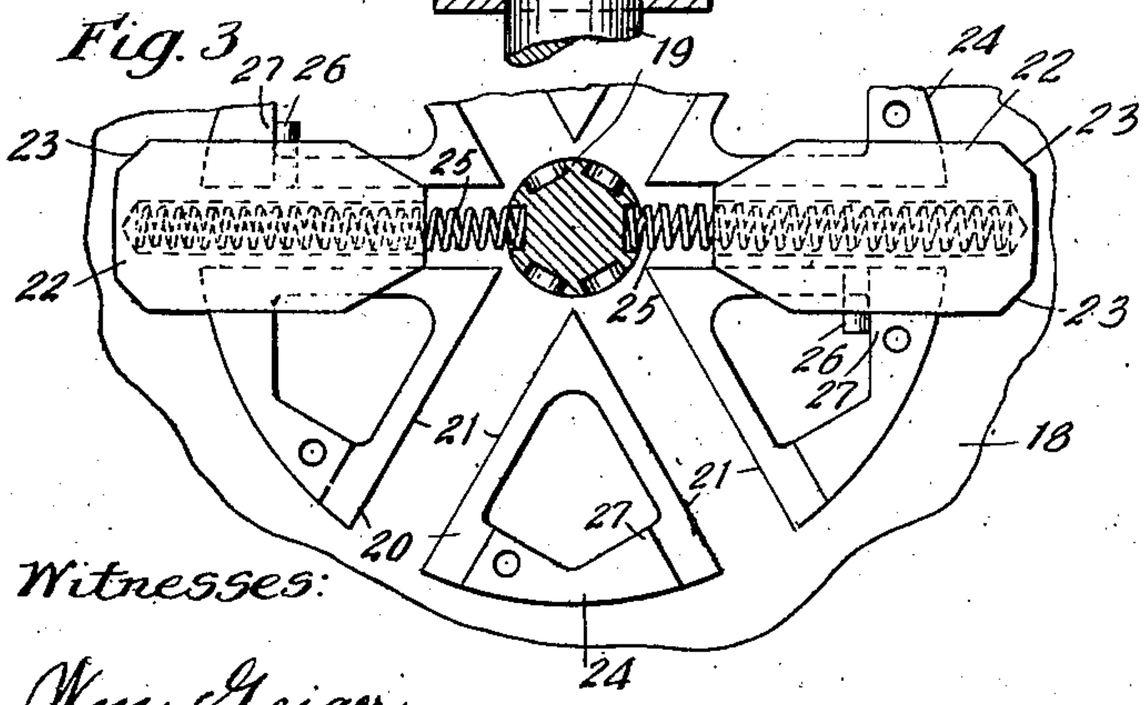
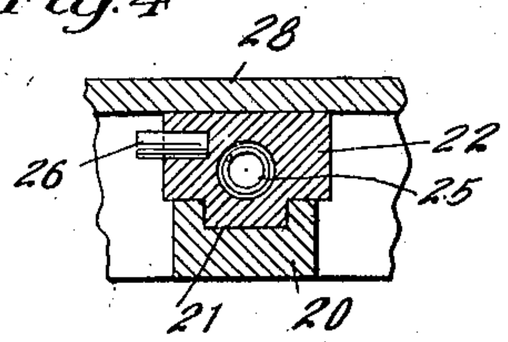


Fig. 4



Witnesses:

Wm. Geiger

Thomas J. O'Brien.

Inventor:

Swan Tevander

By Munday, Evarts, Adcock & Clarke

his Attys

UNITED STATES PATENT OFFICE.

SWAN TEVANDER, OF MAYWOOD, ILLINOIS, ASSIGNOR TO AMERICAN CAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

CAN FEEDING AND TIMING MECHANISM.

1,166,492. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed February 9, 1914. Serial No. 817,496.

To all whom it may concern:

Be it known that I, SWAN TEVANDER, a citizen of the United States, residing in Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Can Feeding and Timing Mechanism, of which the following is a specification.

This invention relates to improvements in can feeding and timing mechanism.

An object of the invention is to provide means for feeding and properly timing and spacing can bodies as the same are fed to a can closing or other machine for operating on can bodies, said means being also adapted to feed and time other articles.

The invention furthermore consists in the improvements in the parts and devices and in the novel combinations of the parts and devices herein shown, described or claimed.

In the drawing forming a part of this specification Figure 1 is a top plan view of part of a feed table used in connection with a closing machine and showing my improvements in connection therewith. Fig. 2 is an enlarged vertical sectional view taken substantially on the line 2—2 of Fig. 1. Fig. 3 is a detail, top plan view and partly in section of a part of the feeder and timer proper, some of the parts being removed in order to better illustrate the construction, and Fig. 4 is a detail vertical section taken substantially on the line 4—4 of Fig. 2.

In said drawing, 10 denotes a stationary table located adjacent a can closing machine indicated diagrammatically by dotted lines 11 which is provided with feed fingers 12 for propelling the cans to the seaming mechanism or other operating station. Guide rails 13 and 14 form a pathway or passage for the cans as the same are conveyed to the seaming mechanism after they are advanced by the rotatable star wheel 15, the cans being held in place while being moved by the star wheel by a circular guide rail 16 which is provided at one end with a circular end portion 17 disposed above a rotatable feed disk 18 driven from any suitable source of power (not shown). The disk or plate 18 is rigidly secured to a rotatable shaft 19, said disk having a plurality of spokes or arms 20, each of which is provided with a radially extending groove 21 in which is slidably mounted a plate 22 which plate 22, at its outer end, is beveled or rounded off at the corners as indicated at 23 and all of said plates 22 are yieldingly pressed outwardly so as to have their ends extend beyond the periphery of the circular, upwardly extending drum 24 formed integrally with the disk 18. The plates 22 are yieldingly held by means of springs 25 and are limited in their outward movement by pins 26 which engage shoulders 27 formed on the drum 24. The slide plates 22 are held in position by means of a top plate or disk 28 secured to the drum 24 by screws or other suitable means. Mounted concentrically with the shaft 19 and spaced from the drum portion 24 is a circular guide rail 29 which, with the circular portion 17 and the drum 24, forms an annular guideway for the cans as the same are timed and fed to the star wheel 15.

The operation is as follows: The filled cans or other articles are fed promiscuously by a conveyer or other suitable means (not shown) onto the rotatable disk 18 which then carries the cans forward. In the event that the cans are crowded too closely together or do not fall between two of the yieldingly pressed plates 22, the cans will be caught between the stationary curved guideway 29 and one of the yieldingly pressed plates 22 and consequently, as the can is advanced by the rotating disk 18, it will be axially rotated or rolled along the curved guideway 29 until the can falls in proper position between two of the yieldingly pressed plates or members 22, it being understood that the springs which normally hold the plates 22 in their outermost position are light enough to permit the plates 22 to yield without danger of denting or crushing the can bodies. In this way, no matter how the cans are fed onto the disk 18, they will be automatically spaced and timed and then fed forwardly to be subsequently engaged by the star wheel 15.

Although I have herein shown and described what I now consider the preferred embodiment of my improvements, yet it will be understood that various changes and modifications may be made without departing from the spirit of the invention, and all such changes and modifications are contemplated as come within the scope of the claims appended hereto.

I claim:

1. Article feeding and timing mechanism

of the character described including, in combination: a movable member having a plurality of yieldably mounted, spaced elements thereon adapted to engage against or between the articles being fed; and a relatively stationary member on which the articles are adapted to roll, and disposed adjacent said movable member and forming a guideway therewith for the articles being fed, said spaced elements being yieldable from said stationary member; substantially as specified.

2. Article feeding and timing mechanism of the character described including, in combination: a rotatable member having a plurality of yieldably mounted, spaced elements thereon and carried thereby; and a relatively stationary member on which the articles are adapted to roll, and arranged concentrically with said rotatable member and forming therewith a guideway for the articles being fed, said spaced elements being yieldable from said stationary member; substantially as specified.

3. Article feeding and timing mechanism of the character described including, in combination: a movable member having a plurality of yieldingly controlled, slidably mounted elements mounted thereon and carried thereby; and a relatively stationary member on which the articles are adapted to roll, and located adjacent said movable member and forming with the latter a guideway therebetween for the articles being fed, and timed, said spaced elements being yieldable from said stationary member; substantially as specified.

4. Article feeding and timing mechanism of the character described including, in combination: a rotatable member having a plurality of outwardly spring-pressed, radially slidable elements mounted thereon and rotatable therewith; and a relatively stationary curved member arranged concentrically with the rotatable member and forming with the latter a guideway for the articles being fed, substantially as specified.

5. An article feeding and timing mechanism having a relatively movable member and a relatively stationary member on which the articles are adapted to roll, and forming therebetween a guideway for the articles being advanced, one of said members having a plurality of yieldably mounted members thereon automatically adapted to uniformly space and time the articles being fed, said spaced elements being yieldable from said stationary member; substantially as specified.

6. Article feeding and timing mechanism of the character described including, in combination: a rotatable disk on which the articles are adapted to be placed and thereby moved, said disk being provided with a plurality of yieldingly controlled, independently movable, spaced elements rotatable in unison therewith; and a curved, relatively stationary guide rail along which the articles are adapted to roll, and arranged concentrically to the axis of rotation of said disk, said spaced elements being yieldable from said guide rail; substantially as specified.

7. Article feeding and timing mechanism of the character described including, in combination: a rotatable disk onto which the articles are adapted to be placed and moved forward thereby, said disk being provided with a plurality of radially slidable, spaced, outwardly spring-pressed members movable in unison with said disk; and a curved guide rail disposed above said disk, substantially as specified.

Signed this 3rd day of February, 1914, in the presence of two witnesses.

SWAN TEVANDER.

Witnesses:
H. M. MUNDAY,
ESTHER ABRAMS.