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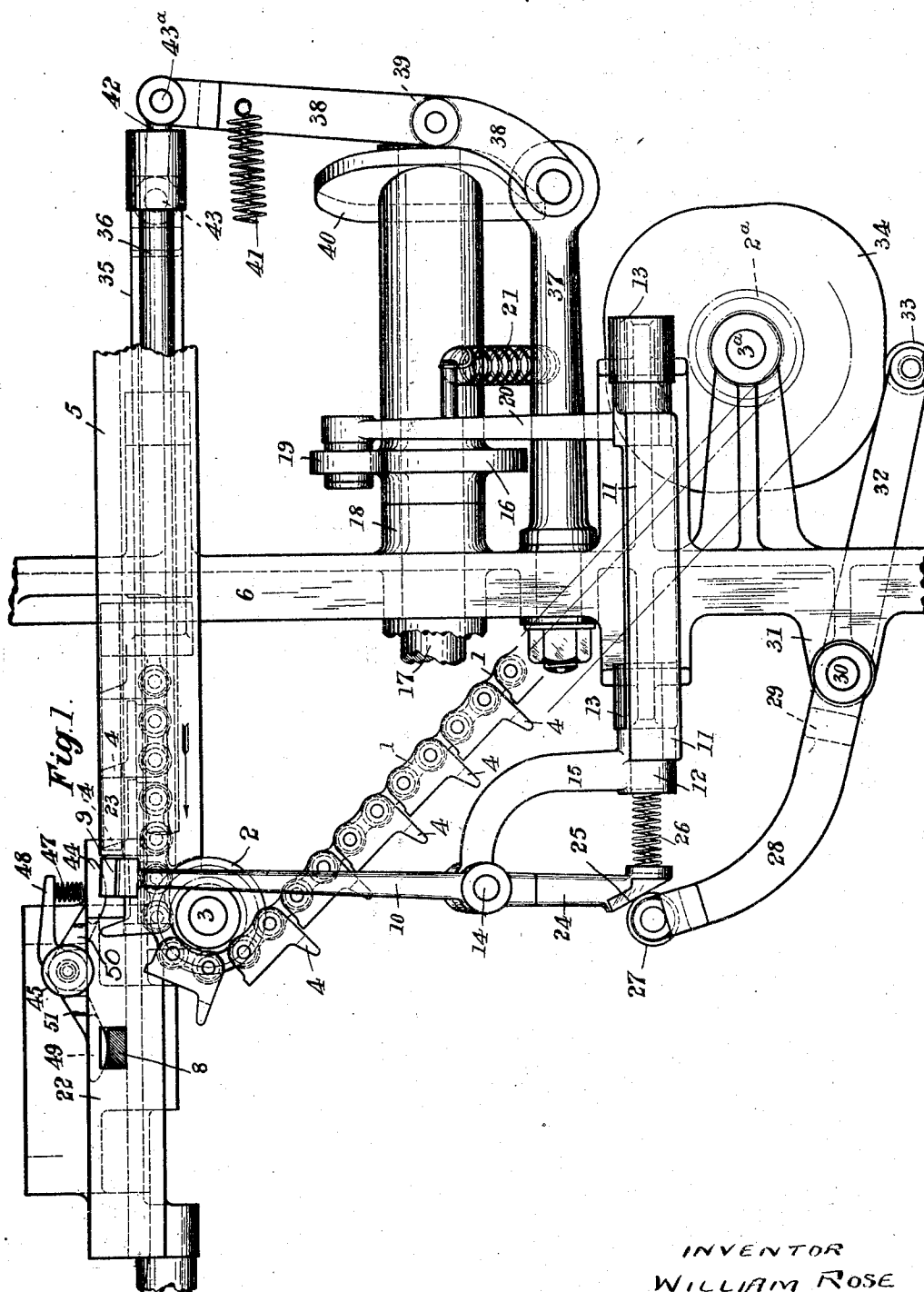
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MACHINE FOR WRAPPING SWEETMEATS AND OTHER ARTICLES

Filed June 13, 1923

3 Sheets-Sheet 1



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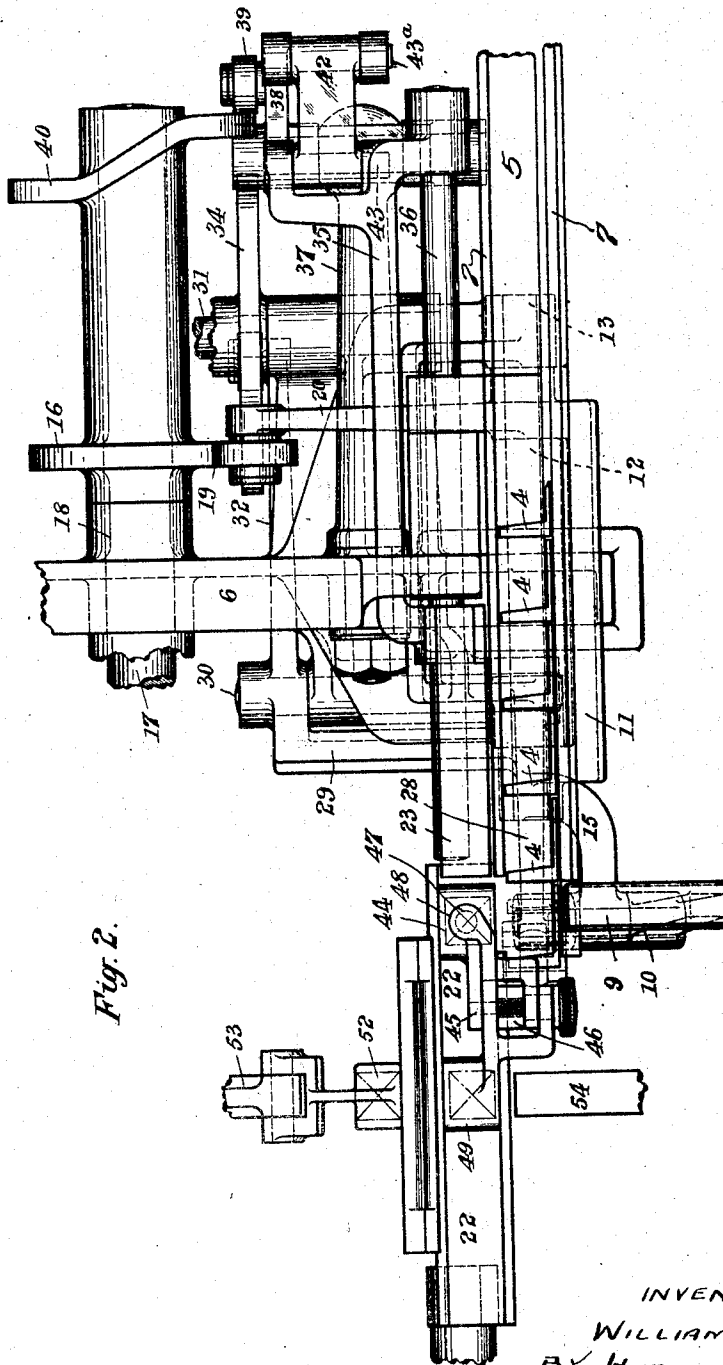


Fig. 2.

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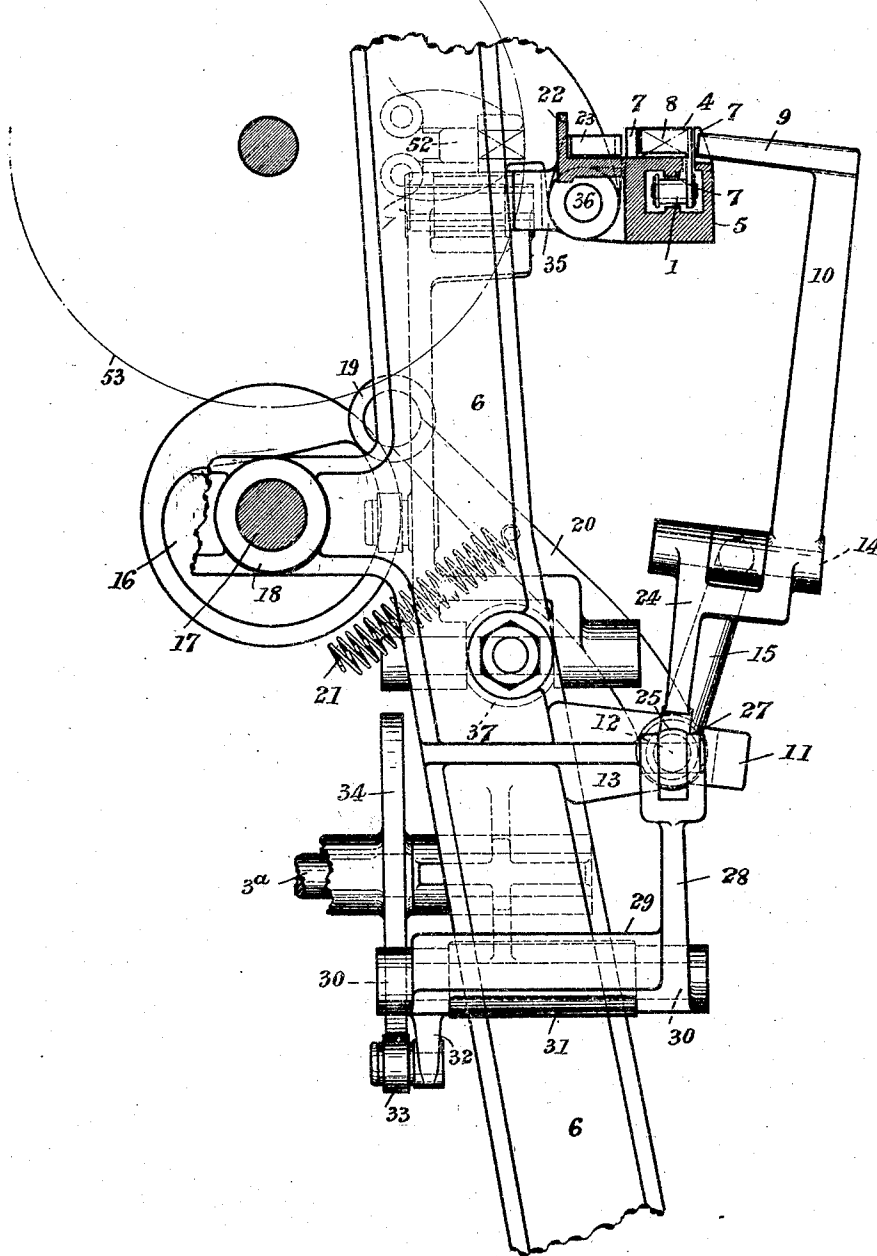
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Fig. 3.



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UNITED STATES PATENT OFFICE.

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MACHINE FOR WRAPPING SWEETMEATS AND OTHER ARTICLES.

Application filed June 13, 1923. Serial No. 645,220.

To all whom it may concern:

Be it known that I, WILLIAM ROSE, a subject of the King of Great Britain, residing at Albion Works, Gainsborough, in the county of Lincoln, England, have invented new and useful Improvements in Connection with Machines for Wrapping Sweetmeats and Other Articles, of which the following is a specification.

10 This invention relates to improved means by which sweetmeats, or other articles, (which I will, for the purposes of description, refer to as sweetmeats) are pushed, in succession, from a continuously traveling conveyor, the said invention being particularly intended for use in connection with wrapping machines in which the articles to be wrapped are fed to a mould-wheel during the rotation of which mould-wheel the wrapping is effected.

The object of the present invention is to provide an improved means for transferring articles from a continuously moving conveyor. According to this invention the sweetmeats are successively pushed from the continuously travelling conveyor by means of a pusher which is mounted so as to be movable about two axes at right angles to each other whereby the pusher can be operated in such manner that, during its pushing movement, it follows the movement of the conveyor and afterwards takes up its original position in readiness to make its next pushing movement.

35 The sweetmeats are successively pushed from the conveyor into a stationary trough, or channel, in which operates a second pusher which pushes successively the sweetmeats into a position at which a third pusher operates to push the sweetmeat, along with the wrapper, towards, and into, the mould-wheel of the wrapping-machine or other required place.

45 The distance of the second pusher from the third pusher is so regulated that, between each two successive operations of the second pusher the third pusher makes its forward and backward movements, the movement of the second pusher being preferably so regulated that it remains at rest whilst its end constitutes a guide for the sweetmeat which is being pressed towards the mould-wheel, or the equivalent, by the third pusher.

55 The first pusher will preferably have its

requisite movements imparted to it, from the shaft from which the motion is derived for continuously driving the conveyor.

The arrangements may be such that the sweetmeats are held in the positions to which 60 they have been brought by a preceding plunger until they are operated by the succeeding plunger.

In order that the manner in which this invention can be performed may be well 65 understood, I will describe with reference to the accompanying drawings a construction in accordance therewith employed as an adjunct to a wrapping machine.

Figure 1 is a front elevation, Figure 2 is 70 a plan and Figure 3 is an end-view of so much of the apparatus as is necessary for the illustration of my invention.

The conveyor chain 1 is supported on sprocket wheels two of which are represented, at 2, and 2^a, in Figure 1.

The sprocket-wheel 2, is rotatable upon the spindle 3, carried by the framework 6, of the apparatus, and the sprocket-wheel 2^a is secured to a rotatable spindle 3^a having its 80 bearing in a projection from the framework.

Rotatory movement is imparted to the spindle 3^a, by any suitable means; such as chains, toothed gear, or the like, from any suitable motor or moving part of the machine. 85

Equally spaced carrier-members 4, are secured to the conveyor chain 1 which is arranged to travel, (in the direction indicated by the arrow on Figure 1) between the sides 90 of the channel 5, a portion of which channel constitutes ledges 7, along which the sweetmeats are carried by the conveyor, a sweetmeat 8 being placed between ledges 7, in front of each of the carriers 4, 95 so that the said sweetmeats are successively brought, by the movement of the conveyor 1, in front of a first pusher 9, which is carried at, or formed on, the upper end of the arm 10, which is carried by, and can oscillate upon, a pin 14, on the extension piece 15, of the rocking-frame 11, which is pivotally supported on a spindle 12, carried in a bracket 13, projecting from the framework 6. 100

A cam 16 is secured to a shaft 17, which is supported in a bearing 18, on the framework 6 and has rotatory movement imparted to it (and consequently to the cam 16) by any suitable sprocket-wheels and chain, toothed 110

gears, or the like, from the aforesaid shaft of the motor, or other suitable moving part of the machine.

A roller 19, is mounted on the outer end of the arm 20, extending from the frame 11, the said roller being kept in contact with the cam 16, by the spring 21.

As the cam 16 rotates it imparts rocking movement to the frame 11, and the first pusher 9 is thereby actuated at the requisite times, to push each sweetmeat in front of the second pusher 23 which operates in a runway 22.

The first pusher 9 is operated in such manner that, during its forward, or pushing movement, it follows the movement of the conveyor 1, and after it has pushed a sweetmeat into the runway 22 it afterwards takes up its original position ready for its next operation.

The end 25 of the tail-piece 24, which constitutes the lower end of the arm 10 is in line with the axis of the spindle 12, on which the frame 11 is supported, a spring 26 keeping the said end 25 in contact with a roller 27, carried at the end of one arm of a lever 28, extending from a piece 29, which can rock on a spindle 30, carried by a bracket 31, extending from the framework 6. At the other end of the piece 29, is a lever 32, carrying a roller 33, which bears against the periphery of the cam 34, secured to the rotatable spindle 3^a.

The second pusher 23, is secured to, or forms an extension of, the forward end of a carriage 35, slidably carried on a spindle 36, supported by the framework 6.

A support 37 is secured to the framework 6 and has pivoted thereto at its end, an arm 38, carrying a roller 39, which is kept in contact with a face-cam 40, by means of a spring 41, attached thereto, its other end being attached to any suitable stationary part.

The cam 40 is secured to, and rotated by, the shaft 17. The upper end of the arm 38, is connected to a link 42 by a pin 43^a, and the link is connected to the carriage 35 by a pin 43.

When the apparatus is in action the pusher 9 pushes a sweetmeat out of the channel 5, into the runway 22, and at the same time travels in the direction in which the conveyor 1 is travelling (that is towards the left of Figure 1) and at the same speed as the said conveyor and afterwards the said pusher again takes up its original position in readiness to repeat the said movements for acting upon the next succeeding sweetmeat which has then been brought forward by the movement of the conveyor.

A first retaining finger 44, is pivoted on the stud 45, carried in a boss 46 on the runway 22. There is a spring 47, between the said retaining finger and the tailpiece 48, of a second retaining finger 49, which is also

pivoted on the stud 45. A stop 50 on the first retaining finger 44, limits the downward movement thereof, and a similar stop 51, on the second retaining finger 49, limits the downward movement of that finger, the two stops 50 and 51 being adapted to come into arresting engagement with the upper edge of the upstanding side of the runway 22.

Each sweetmeat is, in turn, transferred by the pusher 9, from its position in front of one of the conveyor carriers 4, to the runway 22, where it occupies a position in front of the second pusher 23, and beneath the first retaining finger 44.

The said second pusher 23, is then operated by the cam 40, and the parts upon which it acts and the sweetmeat is pushed along the runway 22, to a position, underneath the second retaining finger 49 and opposite a mould or recess of the mould-wheel (indicated at 52 and 53 respectively) of the wrapping machine.

A third pusher 54, is then operated by any suitable means to push the sweetmeat (which may carry with it a wrapper, in the usual way) into the mould, or recess, 52.

The shape of the cam 40, which operates the second pusher 23, is such that the said pusher remains at rest for the requisite time for its forward end to constitute a guide for the sweetmeat, as it is pressed towards the mould 52, by the third pusher 54.

Movement of partial rotation will then be imparted to the mould-wheel 53, and another mould, or recess, will take up a position in proximity to the runway 22, and opposite to the pusher 54, and the hereinbefore described sequence of movements of the several parts will be repeated to deal with successive sweetmeats as long as the apparatus remains in action.

It is understood of course that the invention can be similarly employed in dealing with any articles with which it is capable of dealing and that the invention is not limited to the precise details of construction hereinbefore described and illustrated in the accompanying drawings as it will be evident that modifications can be made without departing from the nature of the invention.

What I claim is:—

1. In a feeding apparatus, a conveyor adapted to advance articles along a channel, in combination with a pusher adapted to oscillate about axes substantially at right angles to each other, and to follow the motion of the conveyor during the active movement of the pusher, substantially as described.

2. In apparatus for feeding articles from a continuously moving conveyor and adapted to convey articles along a channel, a member rocking about an axis, and a second member pivoted at a moving point of said

first member, and having its pivotal axis at right angles to the axis of the first member, in combination with a pusher at the end of the second member.

5 3. Apparatus in accordance with claim 1, having a runway into which the articles dealt with are successively fed by the pusher, a second pusher in said runway, a third
10 pusher adapted to push the articles off the second pusher to any required place, in combination with means operating said second pusher adapted to cause the articles to be

pushed successively along the runway to a position in front of the third pusher and to cause the second pusher to remain stationary at the end of its pushing movement
15 for such time that its forward end constitutes a guide for the articles while they are pushed off said forward end by the third
20 pusher.

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

WILLIAM ROSE