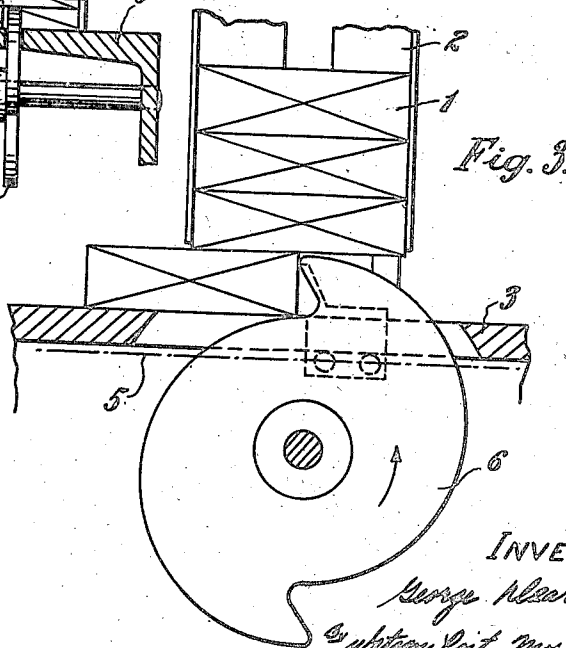
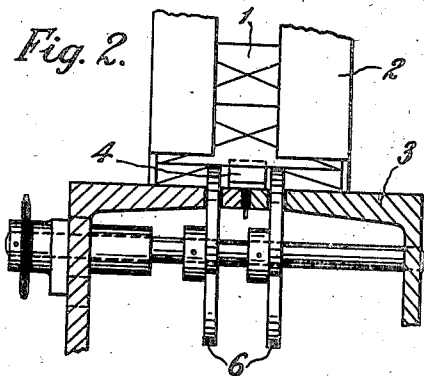
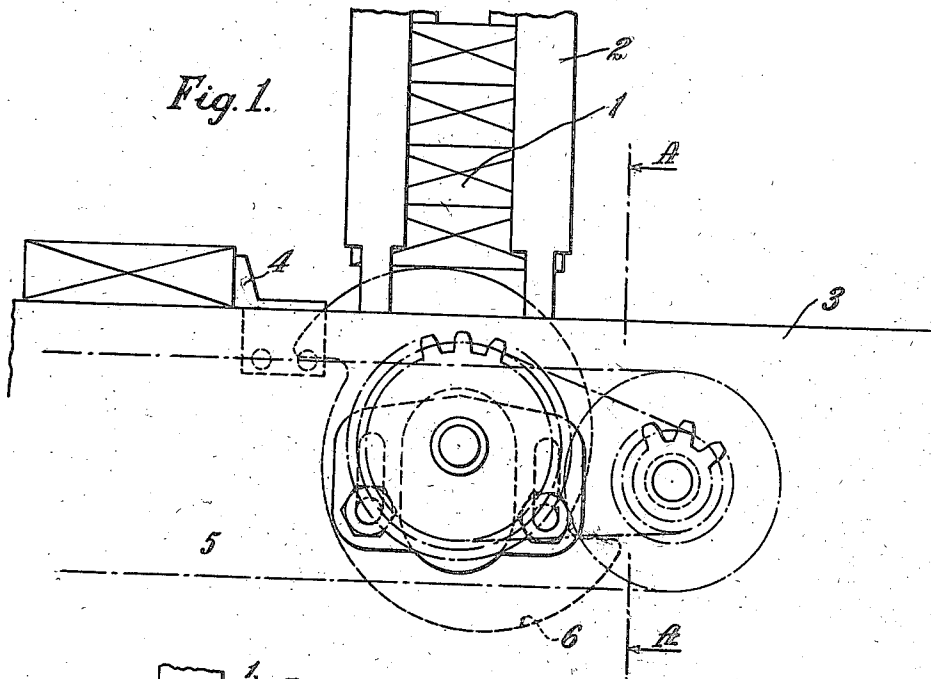


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G. DEARSLEY
PACKING MACHINERY
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1,886,378



INVENTOR.

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UNITED STATES PATENT OFFICE

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PACKING MACHINERY

Application filed December 23, 1929, Serial No. 416,184, and in Great Britain December 27, 1928.

This invention relates to packing machinery, and has for its object the provision of means whereby a vertical stack of articles to be removed from a magazine may be fed therefrom so as to permit a continuous conveyor or like device to engage with the lowermost article or articles after the same has or have been given an initial movement, and to permit the remaining articles in the stacker to be lowered in the magazine with a minimum of vibration or shock.

The present invention consists of a packing machine wherein means are provided whereby the lowermost article or articles of a pile arranged in a magazine is or are removed therefrom in such a manner that the speed is gradually increased from rest up to a required maximum.

Further, the present invention consists of a packing machine wherein means are provided for supporting the lowermost article of a pile of articles in a magazine, and gradually lowering the same into the path of a device operable to remove the same from the magazine.

Again, the present invention consists of a packing machine wherein means are provided for gradually lowering a pile of articles in a magazine and imparting an initial movement to the lowermost article or articles in a direction transverse to the direction of movement of the articles in the magazine.

The invention will be more particularly described with reference to the accompanying drawing which shows a portion of a machine for wrapping cigarette boxes in an outer wrapper of thin transparent paper, and in which:—

Fig. 1 is a side elevation of the machine, showing the invention applied thereto.

Fig. 2 is a section on the line A—A Fig. 1, drawn to a reduced scale, and

Fig. 3 is a diagrammatic elevation similar to Fig. 1 with the parts thereof arranged in a different position.

Referring to the drawing; packets 1 are arranged in superimposed relationship in a vertical magazine 2 mounted above the bed 3 of a wrapping machine, and the packets are

removed from the base of the magazine 2 by a pusher piece 4 carried on a chain 5.

In order to prevent the packets dropping with a shock each time the lowermost packet is removed by the pusher piece 4, a pair of cam shaped members 6 are provided, one at each side of the magazine which support the packets and lower them gradually onto the bed of the machine.

The leading edges of the cam shaped members are so shaped that as they enter the magazine they move the lowermost packet slowly from rest and accelerate the same in the direction of movement of the pusher piece 4, and the pusher piece is so timed as to come into contact with the rear end of the lowermost packet when the said packet is moved about half-way out of the magazine as shown in Fig. 3.

Owing to the fact that the packet is moving at a speed approaching that of the conveyor the pusher piece engages with the same without shock, and the packet is removed from the machine in such a manner that the contents are not subjected to any undue vibration.

The pusher piece is constructed as shown in Fig. 2 so as to be capable of passing between the two cam shaped members 6 and gradually pick up the lowermost packet and move the same through the wrapping mechanism.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In apparatus for removing stacked articles from the bottom of a magazine, the combination with a support disposed beneath said magazine, a conveyor arranged to remove articles from said support, of means for lowering the articles one at a time from said magazine on said support into the path of said conveyor, and thereafter imparting an initial movement to the same away from said magazine in the direction of movement of the conveyor.

2. In apparatus for removing stacked articles from the bottom of a magazine, the combination with a support disposed beneath said magazine, of a conveying means arranged to remove articles from said support, a stepped radial cam having a portion of gradually de-

creasing radius arranged to engage the bottom of the lowermost article to position the latter on said support in the path of said conveyor, and a following portion arranged to engage the side of the article and simultaneously move the latter with increasing speed away from the magazine in the direction of movement of the conveyor.

3. In apparatus for removing stacked articles from the bottom of a magazine, the combination with a support disposed beneath said magazine, of a conveyor of the continuous pusher piece type for removing articles from said support, means for lowering the articles one at a time from said magazine on said support and into the path of the successive pusher pieces, and thereafter imparting an initial movement to the same away from the magazine in the direction of movement of the conveyor.

4. In apparatus for removing stacked articles from the bottom of a magazine, the combination with a support disposed beneath said magazine, of a conveying means arranged to remove articles from said support, a stepped radial cam having a portion of gradually decreasing radius arranged to engage the bottom of the lowermost article to position the latter on said support in the path of said conveyor, and a following portion arranged to engage the side of the article and move the latter with increasing speed away from the magazine in the direction of movement of the conveyor, the axis of said cam being disposed below the support.

5. In apparatus for removing stacked articles from the bottom of a magazine, the combination with a conveyor disposed immediately beneath the magazine and moving in a predetermined path, of means for lowering the articles one at a time from said magazine into the path of the conveyor, said means comprising a rotatable radial cam having a spiral portion and an abutment portion, said spiral portion of the cam serving to gradually lower the articles in the magazine, and said abutment portion serving to engage the lowermost article and impart an initial movement to the same away from the magazine in the direction of movement of the conveyor, said cam being so positioned with respect to the conveyor that the abutment portion thereof moves substantially in the direction of movement of the conveyor at the instant of engagement of the abutment portion with the article.

In testimony whereof I hereunto affix my signature.

GEORGE DEARSLEY.