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ARTICLE COUNTER ACTUATOR

2,503,670

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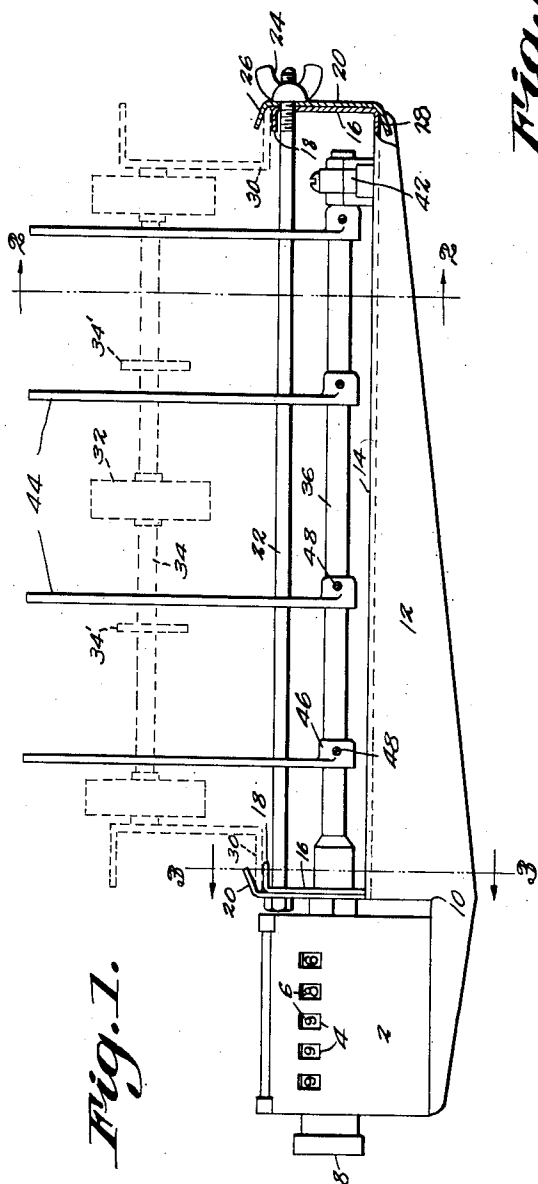


Fig. 2.

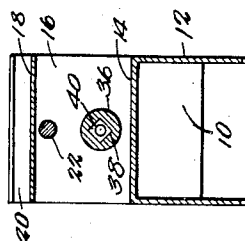
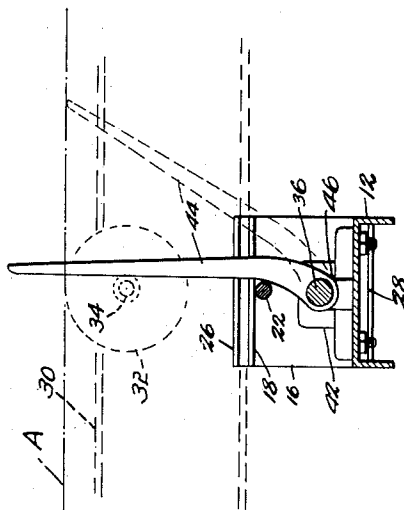


Fig. 3.

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ARTICLE COUNTER ACTUATOR

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1 Claim. (Cl. 235—91)

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My present invention relates to an improved article counter actuator of the type especially adapted for counting the number of articles or items passing along a conveyor.

The structure of my invention is particularly designed to cooperate with a wheel-type gravity conveyor for packages which may have openings therein, such as fruit crates or other similar containers. In said structure there is a plurality of fingers that are fixed with relation to each other, so that only a single article will be counted and accidental counting will be avoided.

In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention according to the best mode I have thus far devised, but it will be understood that various changes and alterations may be made in the exemplified structure within the scope of the appended claim.

In the drawings:

Fig. 1 is a front elevational view of the counter of my invention, as applied to a conventional wheel-type gravity conveyor, said conveyor being illustrated in dotted lines.

Fig. 2 is a sectional view at line 2—2 of Fig. 1.

Fig. 3 is a sectional view at line 3—3 of Fig. 1.

Referring now to the drawings wherein I have disclosed the present preferred embodiment of my invention I employ a conventional counter 2 having openings 4 through which are visible the dials 6. A resetting knob 8 is provided for use as desired.

The counter is supported in the notch 10 of the base 12 of sheet metal and U-shaped in cross-section. The upper surface 14 of the base is plane and formed with end flanges 16 having angular edges 18. Clamp arms 20 are secured on the rod 22 by wing nut 24 and the inclined edges 26 and 28 of the clamp arms 20 will engage the edges of the usual conveyor supports 30 carrying article-supporting wheels 32 on shaft 34, said shaft extending through the conveyor frame members 34'. The conveyor illustrated is intended to represent a conventional wheel-type, beltless, gravity conveyor.

The actuating shaft 36 operates the counter 2 by means of the squared opening 38 for the squared shank 40 of the counter shaft, and the shaft 36 is journaled in bearing 42 on the base 12.

Fingers 44 having hubs or collars 46 are fixed by screws 48 to the actuating shaft and as the article on the conveyor strikes one or more fin-

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gers, the shaft 36 will rotate thereby rotating the counter shaft and operating the mechanism therein. This may be noted by reference to Fig. 2. In this figure, the full line position of the finger 44 is the position assumed by the finger when not engaged by an article moving along the conveyor. In this connection, the underside of an article moving along the conveyor has been designated A in Fig. 2, and is represented by a chain-dotted line in this figure. When such an article strikes the finger 44, it moves it to the dotted line position illustrated for said finger 44 in Fig. 2. The usual spring means in the counter will return the shafts and fingers to upright position against the rod 22.

It will be apparent from the above description that the actuation of the device will still be affected should one or more fingers slip from a crate slat as one or more other fingers will still be depressed by engagement with the crate.

It will further be noted from the above description that the rod 22, end flanges, and clamp arms, cooperate to permit releasable clamping of the entire device at any desired point along a conveyor, the parts of the device being so arranged that the rod 22 will additionally serve as a stop limiting movement of the fingers in one direction.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:

In a counting device, the combination with an article counter, of a base therefor extended transversely of and below a wheel-type article conveyor, said base being adapted at one end to provide a support for the counter, upturned end flanges integral with the base, the tips of the flanges being inturned, clamp arms positioned against the respective end flanges and having inturned tips, the inturned tips of the arms and flanges being proportioned to releasably grip between them the conveyor supports, said conveyor being otherwise out of contact with said device, a threaded rod extended through the arms and flanges in spaced parallel relation to and above the base, a nut threadable on the rod adapted to releasably clamp the arms and flanges to the conveyor supports, an actuating shaft rotatably mounted on the base in spaced parallel relation to and below the rod and having a separable connection with the counter, and a series of spaced fingers fixed on the shaft and extending into the

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path of conveyed articles to be depressed through direct contact by said articles, said fingers being normally biased into engagement with the rod, whereby said rod will constitute a stop limiting movement of the fingers in one direction.

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