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2,443,010

PUSHER CONVEYER

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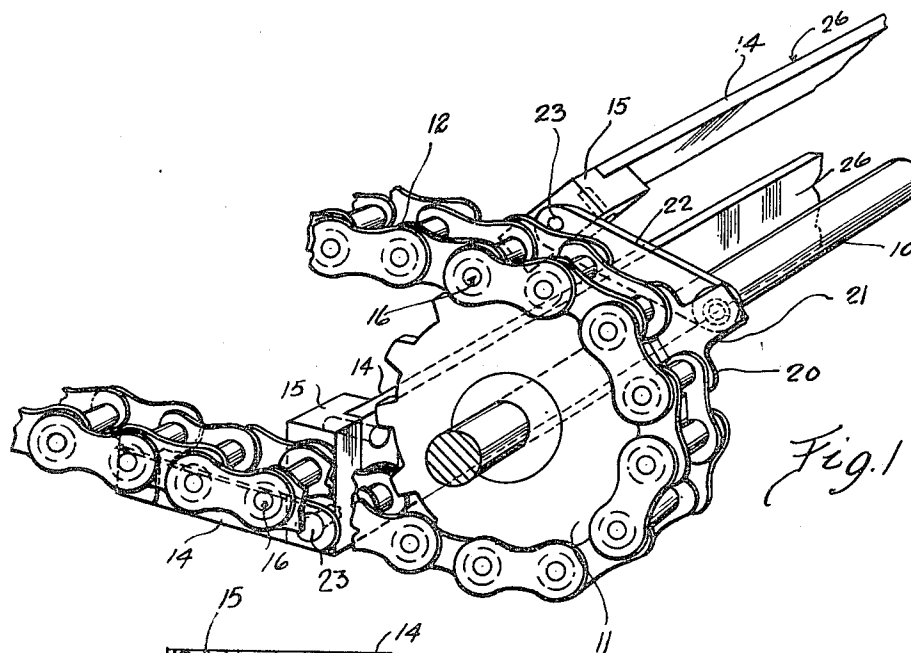


Fig. 1

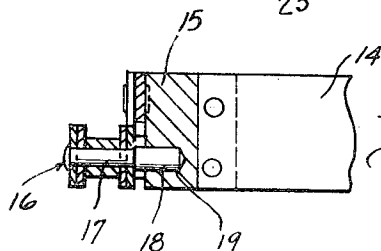


Fig. 3

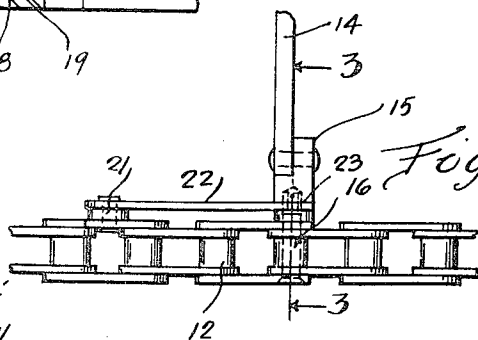


Fig. 2

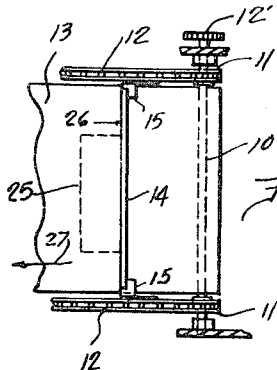


Fig. 4

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PUSHER CONVEYER

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1 Claim. (Cl. 198—175)

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This invention relates to certain novel improvements in conveyors. More particularly, the invention relates to a conveyor for moving an article upon a horizontal plane by means of a plurality of followers. In this aspect of the invention, it is the principal object to provide a mechanism of this character wherein provision is made for maintaining the follower in a substantially vertical position while traveling in a horizontal plane and which will pivot the follower in an inclined direction rearwardly with respect to the direction of movement of the follower whereby when the follower reaches the end of its travel in the horizontal plane and is moved through an arcuate path for return movement, the follower will pivot rearwardly with respect to the direction of its travel, thereby eliminating an otherwise flapping action, with the result that a substantially silent operation in the movement of the conveying means is achieved.

In this connection, it has been the practice to secure the opposite end portions of an elongated follower bar to the chains, and when thus secured this rigid follower has the tendency to dig into the article which it is moving over the horizontal plane, as the follower begins its movement through an arcuate path for return movement.

In my invention, the object is to secure an elongated follower bar to the conveying chains in a manner such that when the follower reaches the end of its travel in a horizontal plane, instead of pushing the article which it is moving upon the horizontal plane, the follower will in effect slide away from the article as the follower travels through the arcuate path for return movement. In this movement, there is no flapping of the follower bar against the article being pushed, when the follower bar moves through the arcuate path for return movement, the flapping being the result of the looseness between the links constituting the chain.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings showing the preferred form of construction, and in which:

Fig. 1 is a fragmentary perspective view of the invention;

Fig. 2 is a fragmentary plan view of the same;

Fig. 3 is a fragmentary sectional detail view taken substantially on line 3—3 of Fig 2; and

Fig. 4 is a fragmentary plan view of a conveyor embodying the invention.

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Referring more particularly to the drawings in which I have illustrated the preferred form of construction for carrying my invention into effect, 10 indicates a shaft upon the ends of which are mounted sprocket gears 11. On this shaft a driver gear is indicated at 12', and this driver gear rotates the shaft 10, which in turn rotates the sprocket gears 11. These sprocket gears 11 have operative connection with sprocket chains 12, there being two of such chains substantially spaced apart as shown in Fig. 4 and between which there is positioned a horizontal platform 13. A follower bar is indicated at 14. This bar preferably is of a flat and elongated formation and has secured to the ends thereof mounting blocks 15. These mounting blocks are pivotally connected as at 16 to the sprocket chains 12. This pivotal connection includes a stud pin 17 having extending therefrom an enlarged stud 18 which fits into a socket 19 formed in each of the mounting blocks 15 (Fig. 3). Certain links of the sprocket chains 12, such as 20, are provided with extensions 21. These extensions 21 are pivotally connected by means of a link 22 to the mounting blocks 15 as at 23.

When the follower bar 14 is traveling in a horizontal plane over the platform 13 for the purpose of moving an article 25 upon this platform, the follower bar 14 will extend in a substantially vertical position with the flat surface 26 thereof flatly engaging an adjacent side of the article 25. When the chains 12 are moved about the sprocket gears 11, the link 22 serves to pivot the follower bar 14 in an inclined direction rearwardly with respect to the direction of movement of the chains. This results in having the follower bar 14 in effect sliding away from the article when it reaches the end of its horizontal travel and is moved through an arcuate plane about the sprocket wheels 11 for return movement to a position to engage and convey an article upon the platform 13 in the direction indicated by the arrow 27. In this manner the follower bar 14 is prevented from having its longitudinal top edge dig into the article being conveyed.

In this accomplishment the invention is especially useful in conveying loaves of bread through a wrapping machine from a bread slicing machine. In such use of the invention, the loaves of bread, being fresh and recently sliced, are substantially pliable. If the follower bar 14 were maintained in a rigid position with respect to the chains 12, it will be readily seen that upon making its return movement such bar would have

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a tendency to dig into the bread while moving through this arcuate plane for the return movement. This is eliminated by my improved follower bar 14 for, as stated before, the link 22 pivots the follower bar 14 in an inclined direction rearwardly with respect to the direction of movement of the bar and, as a consequence, the bar cannot dig into the article which it is moving upon the platform 13. Furthermore, the link 22 provides a connection between the chains 12 and bar 14 and, as such, there is no flopping or rattling of the bar 14, thus rendering the movement of the chains and bar substantially silent.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification, without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claim.

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

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In combination, a pair of spaced sprocket chains, a follower positioned transversely between the chains, a mounting block for each end of the follower, means pivotally connecting the mounting block to the chains, an extension on opposite corresponding links of said chains, and a link connection between said extensions and the mounting blocks.

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