Nov. 1, 1927. 1,647,280

F. DI IANNI

CIGARETTE MACHINE CATCHER

Filed July 31. 1926

Fig. 1.

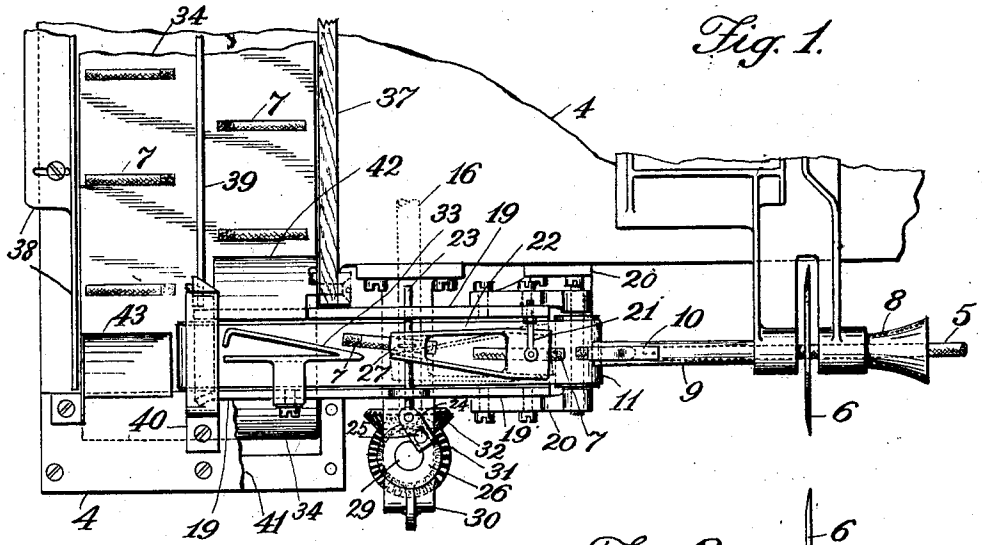


Fig. 2.

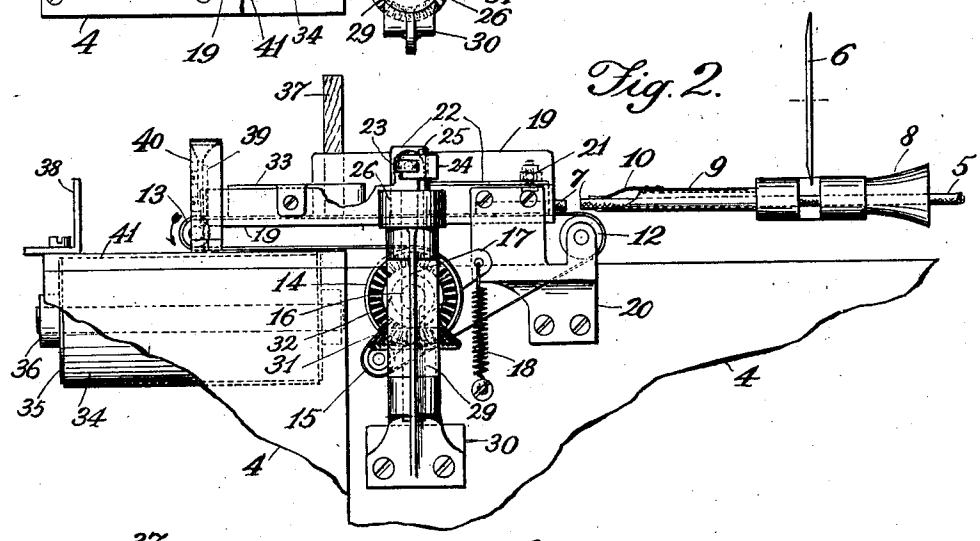
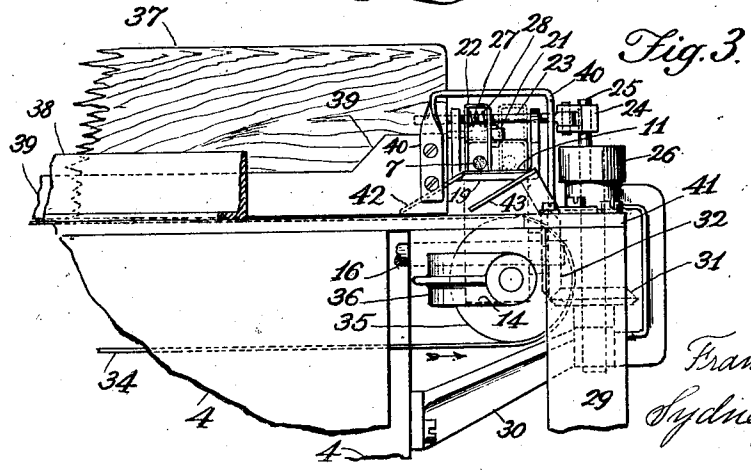


Fig. 3.



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FRANK DI IANNI, OF BROOKLYN, NEW YORK, ASSIGNOR TO AMERICAN MACHINE & FOUNDRY COMPANY, A CORPORATION OF NEW JERSEY.

CIGARETTE-MACHINE CATCHER.

Application filed July 31, 1926. Serial No. 126,140.

This invention relates to an improved cigarette machine catcher of the type wherein two separate collocations of cigarettes are collected, and the main object of the invention is the production of a simplified and more efficient catcher of this type than those heretofore known and used. With this and other objects not specifically mentioned in view, the invention consists in certain constructions and combinations which will be hereinafter fully described and then specifically set forth in the claims hereunto appended.

In the accompanying drawings, in which like characters of reference indicate the same or like parts, Figs. 1, 2 and 3 are respectively plan view, side elevation, and end view of the improved catcher.

In carrying the invention into effect, there is provided means of well known construction and operation, for catching two separate collocations of cigarettes, means of well known construction and operation for successively forwarding cigarettes toward said catching means, and operative connections and an oscillating switch engaged by the cigarettes on said forwarding means and acting to alternately move them to opposite sides of said forwarding means in order that they may be alternately delivered to said separate collocations.

Referring to the drawings, 4 indicates the frame of a cigarette machine in connection with which the device is used; 5 indicates the cigarette rod produced by the cigarette machine; and 6 indicates the cutoff knife which cuts the rod 5 into individual cigarettes marked 7. As usual, the rod 5 is directed to the ledger plate of the cutoff mechanism by the bell-mouth 8, and the cut cigarettes move away from the knife 6 through the guide tube 9, which is provided with a flat spring 10 at its delivery end for lightly engaging the cigarettes as they issue from the tube 9, in order to aid in controlling the spaced relation of the cigarettes thereafter. As the cigarettes come from the tube 9, they are deposited upon a forwarding belt 11 which runs at a higher linear speed than the cigarette rod in the cigarette making machine so that the individual cigarettes, as they are delivered to the belt, are delivered thereto in separated relationship. The belt 11 is supported by the guide pulleys 12 and 13, driving drum 14, and idler pulley 15, the driving drum being mounted on the shaft 16 which is one of the shafts of the cigarette machine in connection with which the device is used. The idler pulley 15 is carried by one arm of a lever 17 loosely mounted on the shaft 16 and it is caused to hold the belt 11 in tension by means of a spring 18 attached to the opposite end of the lever 17 and to a stud in the frame of the cigarette machine. The operating run of the belt 11, between the guide pulleys 12 and 13, runs in a U-shaped trough 19 which is supported on a bracket 20 attached to the frame 4. This bracket carries bearings for the guide pulley 12. To the rear side wall of the trough 19 is attached an eye-rod 21, to the eye of which is pivoted the receiving end of a tapered switch 22 overlying the belt 11. This receiving end extends over approximately the entire width of the belt 11. The delivery end of the switch 22 which occupies approximately one-half the width of the belt 11 is attached to a rod 23 slidable through the side walls of the trough 19 and connected by a link 24 to a crankpin 25 on a disk 26. The rod 23 is provided with a pin 27 which holds a spring 28 placed around the rod 23 within the switch 22. The disk 26 is mounted on the upper end of a shaft 29 supported in a bracket 30 attached to the frame 4. The shaft 29 is driven by a bevel gear 31 meshing with a bevel gear 32 on the shaft 16 before referred to. The shaft 16 is so geared that the disk 26 makes half of a revolution for every cutting stroke of the knife 6; that is to say, the switch 22 makes one move for every cigarette passing through it and alternate cigarettes are therefore delivered to opposite sides of the belt 11 and at opposite sides of a wedge-shaped deflector 33, beyond the switch 22 and suspended from the side wall of the trough 19 with its wedge point centrally located over the belt 11.

The catcher belt 34 runs at right angles to the forwarding belt 11 on a pulley 35 supported in a bracket 36 attached to the frame 4, and on another pulley, not shown, which is at a distance from the pulley 35 and is also supported from the frame 4. The receiving space of the catching belt 34, between the board 37 and the adjustable end guide 38, is divided into two parts by the longitudinal partition 39 suspended from the bracket 40 attached to the cover-plate 41 of the frame.

Cigarettes delivered by the switch 22 at the angular side of the deflector 33 are pushed off the belt 11 and dropped on the incline 42 which guides them into the rear division of the belt 34. (See full lines in Figs. 1 and 3.) Cigarettes delivered at the straight side of the deflector pass to the end of the belt 11, from which they are dropped upon an incline 43 and from there reach the forward division of the catching belt 34 (see dotted lines in Figs. 1 and 3).

The action of the switch 22 being timed to the production of the machine, all cigarettes in each division of the catcher belt 34, in case of cork tips, etc., are pointed in the same direction.

Changes and variations within the scope of the claims may be made in the structure by means of which the invention is carried into effect, for the specific structure shown is but one of numerous possible concrete embodiments of the same. The invention therefor is not to be restricted to the precise details of the structure shown and described.

What is claimed is:

1. In a cigarette catcher, the combination with a traveling belt receiving cigarettes in tandem, of means for moving alternate cigarettes to opposite sides of said belt, and means for guiding the cigarettes on one side of the belt over its edge.

2. In a cigarette catcher, the combination with a traveling belt receiving cigarettes in tandem, of means for moving alternate cigarettes to opposite sides of said belt, and means for guiding the cigarettes on one side of the belt over its edge, said moving means being crank-actuated.

3. In a cigarette catcher, the combination with a traveling belt receiving cigarettes in tandem, of means for moving alternate cigarettes to opposite sides of said belt, and means for guiding the cigarettes on one side of the belt over its edge, said moving means having an oscillating switch overlying said belt and engaging the carried cigarettes.

4. In a cigarette catcher, the combination with a traveling belt receiving cigarettes in tandem, of means for moving alternate cigarettes to opposite sides of said belt, and means for guiding the cigarettes on one side of the belt over its edge, said moving means having an oscillating switch with two walls overlying said belt and alternately engaging the cigarettes.

5. In a cigarette catcher, the combination with a traveling belt receiving cigarettes in tandem, of means for moving alternate cigarettes to opposite sides of said belt, and means for guiding the cigarettes on one side of the belt over its edge, said guiding means having a stationary deflecting wall engaging the cigarettes.

6. In a cigarette catcher, the combination with a traveling belt receiving cigarettes in tandem, of means for moving alternate cigarettes to opposite sides of said belt, and means for guiding the cigarettes on one side of the belt over its edge, said guiding means being stationarily mounted over said belt and having one wall lying parallel to the direction of belt movement and another wall disposed at an angle to the same.

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

FRANK DI IANNI.