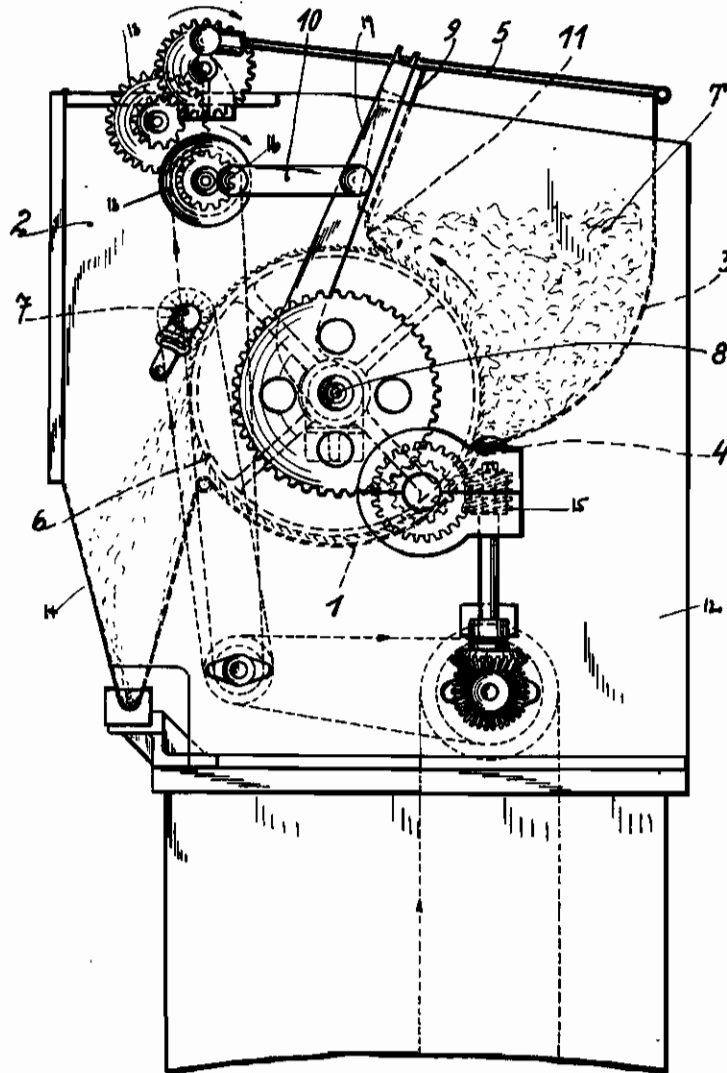


PUBLISHED
MAY 11, 1943.
BY A. P. C.

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TOBACCO SPREADER
Filed June 14, 1939

Serial No.
279,073



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ALIEN PROPERTY CUSTODIAN

TOBACCO SPREADER

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Application filed June 14, 1939

The present invention relates to cigar wrapping machines, and more particularly to certain improvements in the tobacco spreader mechanism for feeding the tobacco in loose condition to the tobacco rod mechanism of the machine.

Heretofore in tobacco spreaders the scraper which operates upon the pin roller has been disposed radially with respect to the axis of the roller and comprises a flat plate. It is found in practice that with this construction there is a tendency for the tobacco in the feed hopper to pack or jam against this plate, particularly at its inner edge adjacent the pin roller.

It is an object of the present invention to overcome the disadvantages arising from this construction.

According to the present invention the scraper is disposed angularly over the pin roller with its upper portion overhanging the charge of tobacco in the feed hopper and the inner end of the scraper is provided with a curved lip or spade portion adapted to receive the tobacco entrained by the pin roller and to substantially shear off the charge of tobacco at the outer ends of the pins of the roller so as to provide a desired thin layer of tobacco on the periphery of the roller and also to deflect or guide upwardly and backwardly the excess mass of moving tobacco adjacent the pin roller so that this excess amount of tobacco is kept in motion and caused to fall back from the inclined surface of the plate into the mass or charge of tobacco in the hopper.

Another object of the invention is to provide a construction obtaining these advantages and which may be incorporated in the usual tobacco spreader structure so that the other parts of the apparatus do not have to be rearranged or reconstructed to obtain the advantages of this invention.

With the foregoing and other objects in view, the invention will be more fully described hereinafter.

In the drawing, wherein like symbols refer to like or corresponding parts throughout the several views.

The figure is an end elevation of a tobacco spreader equipped with a scraper mechanism constructed according to the present invention.

Referring now to the drawing, 12 designates the body portion or frame of the machine and in which is disposed a feed hopper having a downwardly looped or curved bottom wall 1, side walls 2 and a rear wall 3 hinged at 4 in the usual manner and connected at its upper end to a crank rod 5. The rod 5 is caused to reciprocate by a

suitable gearing 13 to which the rod is connected in the usual manner. The rear wall 3 is thus caused to vibrate and maintain the charge of tobacco in the hopper in loose condition so that it may flow freely into engagement against the peripheral surface of the pin roller 6. Cooperating with the pin roller 6 is a peg roller 7 adapted to take off and fluff the tobacco particles or fibres which are carried upon the pins of the roller 6 and to free the fluffed tobacco so that it may fall or gravitate into the chute 14 which leads to the tobacco rod forming mechanism of the machine. The pin roller 6 is operated by suitable gearing 15 supported in the frame 12 and one of the gears 13 is provided with an eccentric pin 16 to which the link 10 is connected, the link 10 at its other end being pivoted to a yoke 17 to reciprocate the latter. The yoke 17 has its lower end curved and pivotally mounted upon the shaft 8 of the pin roller 6 so that the yoke extends upwardly and backwardly from the roller 6 at an angle to the radius thereof.

The scraper blade 9 is supported to the upper end of the yoke and projects down into the tobacco hopper in substantially the same angular relation as the yoke to the pin roller 6 so that the upper end of the plate 9 is inclined upwardly and backwardly within the hopper so as to overhang the charge of tobacco therein. The lower end of the inclined plate 9 is provided with a rearwardly curved lip 11 providing a combined cutter and guide which terminates at substantially a tangent to the roller 6 and at the outer ends of the pins of the roller. The lip 11 faces rearwardly so as to receive the oncoming tobacco which is carried by the roller 6 to divide the mass of tobacco into a thin film equal substantially to the depth of the pins on the roller 6 which is free to pass beneath the lip 11. The remaining entrained mass of tobacco is carried forward by the turning of the roller 6 and is forced upwardly over the curved lip 11 and against the inclined plate from which the tobacco falls loosely back into the mass of tobacco in the hopper.

The mass of tobacco T is thus kept in loose condition and is also constantly agitated by the vibration of the rear wall 3 and also by the movement of the scraper 9, which forms the front wall of the hopper, and further by the inclination of the scraper 9 which tumbles or rolls the tobacco raised on the lip 11 back into the tobacco mass.

Of course the angle of inclination of the scraper plate 9 may be varied to suit different conditions and forms of the tobacco so as to obtain the desired results. This improved struc-

ture of scraper prevents the clogging of the passage between the scraper and the pin roller and insures the free, even and steady feeding of a layer of the tobacco over the surface of the pin roller to substantially the depth of the pins and quickly and easily removes without appreciable resistance the excess amount of tobacco entrained by the roller and which is of greater height than the pins.

In operation the scraper 9 is reciprocated through the link 10 and yoke 17 of the scraper so that there is a shearing or spade action of the curved lip 11 against the oncoming mass of tobac-

co carried by the roller 6. The division of the mass of tobacco is thus easily accomplished without undue resistance and there is no danger of the tobacco becoming compacted against the scraper blade and the tobacco is maintained relatively loose within the feed hopper.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof.

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