

July 2, 1940.

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2,206,699

DEVICE FOR THE FORMATION OF A CIGARETTE ROD

Filed Nov. 20, 1939

Fig. 1

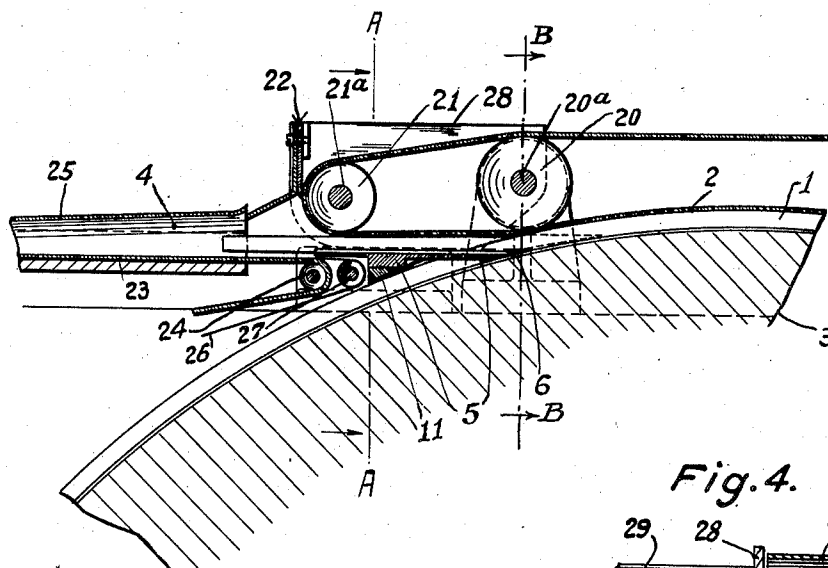


Fig. 4.

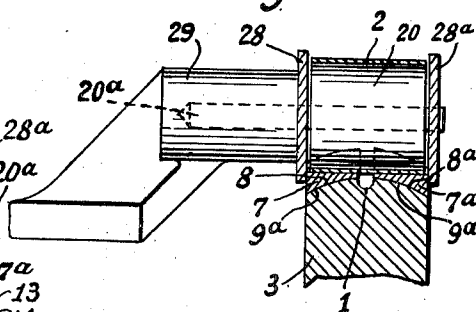


Fig. 2.

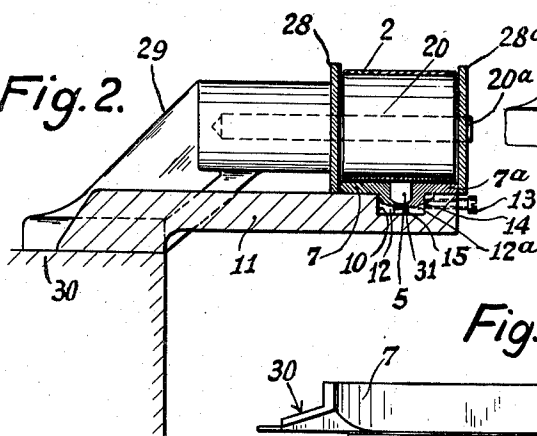
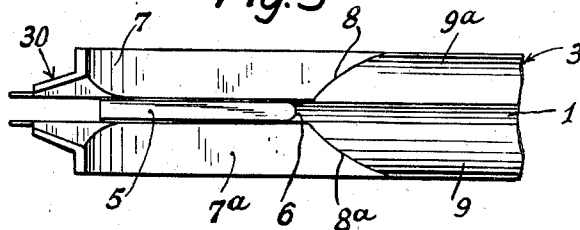


Fig. 3



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2,206,699

DEVICE FOR THE FORMATION OF A
CIGARETTE ROD

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Application November 20, 1939, Serial No. 305,215
In Germany October 12, 1938

1 Claim. (Cl. 131—66)

This invention relates to cigarette making machines, and more particularly to those in which a rotating disc or wheel is provided with a circumferential groove, which, along part of the circumference, is covered by a moving band or apron.

The invention has for its object to provide an improved bridge between the rotating grooved wheel and the known cigarette former.

In devices of this kind it is important that all the tobacco or particles thereof, in the groove of the wheel, or upon the peripheral surfaces of the wheel adjacent the groove, be entirely removed therefrom so as to form part of the cigarette rod as it enters the enveloping paper.

For this purpose, the invention consists of a bridge composed of a central member entering the groove and two other members, one at each side of the central member, which are shaped to scrape off the tobacco adhering to the peripheral surfaces of the wheel adjacent the groove, and so constructing these members that they are adjustable in respect to each other to compensate for the unequal wear of the central member in relation to the adjacent members. These parts must serve first as an efficient bridge, and then also as efficient tobacco removers and yet be movably adjustable in respect to each other.

The invention will be more fully described hereinafter, an embodiment thereof shown in the drawing, and will be finally claimed.

In the accompanying drawing:

Figure 1 is a partial side view partly in section, of a wheel groove cigarette forming machine and a cigarette former, and the improved bridge therebetween;

Figure 2 is a vertical section of Figure 1 taken on line A—A of Figure 1; and

Figure 3 is a plan view of the bridge.

Figure 4 is an enlarged vertical section of Figure 1 taken on line B—B of Figure 1.

Similar characters of reference indicate corresponding parts throughout the various views.

Referring to the drawing, the known wheel or drum 3 is provided with a circumferential groove 1, which, along a part of its circumference, is covered by a belt or band or apron 2. This band 2 is pressed by the roller 20 against the peripheral surface of the drum 3, so as to cover the groove 1, to form in the groove 1 the cigarette rod. The band 2 then passes over the end roller 21, and returns over the drum to another roller (not shown). An adjustable scraper device 22 acts upon the band 2 when it passes over the roller 21, and any particles of tobacco adhering to the band drop upon the tobacco rod or upon the belt

23, passing over the roller 24 which conveys the tobacco rod to the cigarette former 25, which is supplied with paper 26 passing over and fed by the roller 27. The shafts 20a and 21a are supported by vertical plates 28 and 28a, in turn supported by the extension 29 of the frame 30 of the machine. By this mechanism the tobacco rod formed in the groove 1 of the drum 3 by the band 2, is enveloped by the paper to form the cigarette rod. The parts described are old.

Bridges to convey the tobacco rod from the drum to the cigarette rod former are also old.

The improved bridge comprises in part two members 7 and 7a which form the side walls of a tobacco rod channel which is in effect a continuation of the groove 1 of drum 3. The ends 8 and 8a of these channel members 7 and 7a which contact the peripheral surfaces 9 and 9a of the drum 3 on either side of the groove 1 are shaped to conform to the configuration of the peripheral surfaces 9 and 9a.

The contact of the bridge including members 7 and 7a with the wheel 3 while not actually tangential is such that the moving cigarette rod as it leaves the groove 1 of wheel 3 must make only a very slight change in direction as shown in Figure 1. The other ends of these members 7 and 7a are shaped into a nozzle form 30, which is known and is not the invention of this case.

Disposed between the two members 7 and 7a, which are spaced from each other a distance about equal to the width of the groove 1 in the drum 3, is a central member 5 which has its end 6 so shaped as to enter the groove 1, and form approximately tangential contact therewith. The ends 8, 8a and 6 are so arranged and shaped in order to remove all adhering tobacco particles from the surfaces of the groove and adjacent peripheral surfaces of the drum, and to guide them so as to enable them to be moved with the tobacco rod to the cigarette rod former 25.

These ends wear out unequally, and to overcome this, the members 7 and 7a are provided with downwardly extending lugs 12 and 12a having their exterior surfaces facing interior shoulder surfaces on a supporting extension 11 of the frame 30. The cut out 31 has two parallel vertical walls 10 which act as guide surfaces for the adjacent sides of the lugs 12 and 12a. The central member 5 has a depending lug 15 disposed between the lugs 12 and 12a. The bottom surface of the extension support 11 is inclined, as shown in Figure 1, to permit the passage of the drum 3.

When the central member 5, with its adjacent members 7 and 7a, have been placed in proper

position to have the ends 6 and 8 and 8a contact properly with the drum periphery and groove, then a set screw 13 is rotated in order to clamp the lugs 12, 15 and 12a to the guide surface 10.

5 When, however, the ends 6 and 8 and 8a wear unequally, then the set screw 13 is unloosened, and the members 5, 7 and 7a are longitudinally adjusted in respect to each other, so that the contact again takes place, and the set screw is again fastened to clamp the lugs 12, 12a and 15
10 tightly in position.

The improvement consists in making the central part 5 and adjacent parts 7 and 7a separate from each other to enable them to be separately
15 moved relative to the drum surface, and to be longitudinally adjusted and fastened in position. By the contact of the members 7 and 7a with the drum 3, the tobacco particles are removed from the surfaces of the drum.

20 I have described an embodiment of my invention, but it will be clear that changes may be made within the principle of the invention described,

without departing from the scope of the subjoined claim.

What I claim is:

In a device for forming cigarette rods, having a grooved drum tobacco rod former and a cigarette rod former, an improved bridge disposed between the tobacco rod former and the cigarette rod former, which consists of a central member for entering the groove of the drum of the tobacco rod former, and contacting with the walls of said groove, two adjacent members for contacting with the peripheral surfaces of the drum adjacent said groove, lugs on the bottom of said members, means for supporting said members having a cut out for the said lugs, and a fastening member carried by said supporting means and clamping the lugs of the members in the cut out, to enable longitudinal adjustment of the members in respect to each other, when any of them become worn.

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