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M. KLEIN

ROTARY CIGARETTE ROD SEALER

Filed June 25, 1924

Fig. 1.

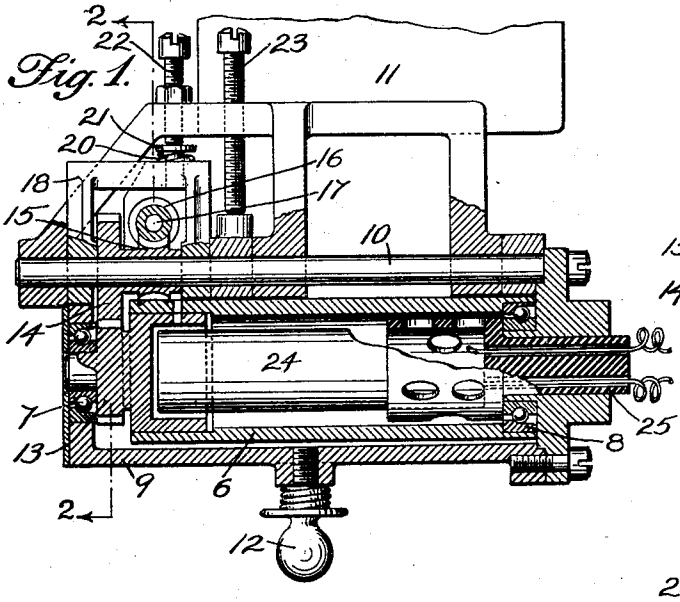


Fig. 2.

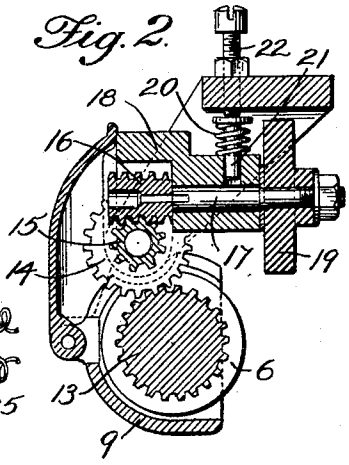
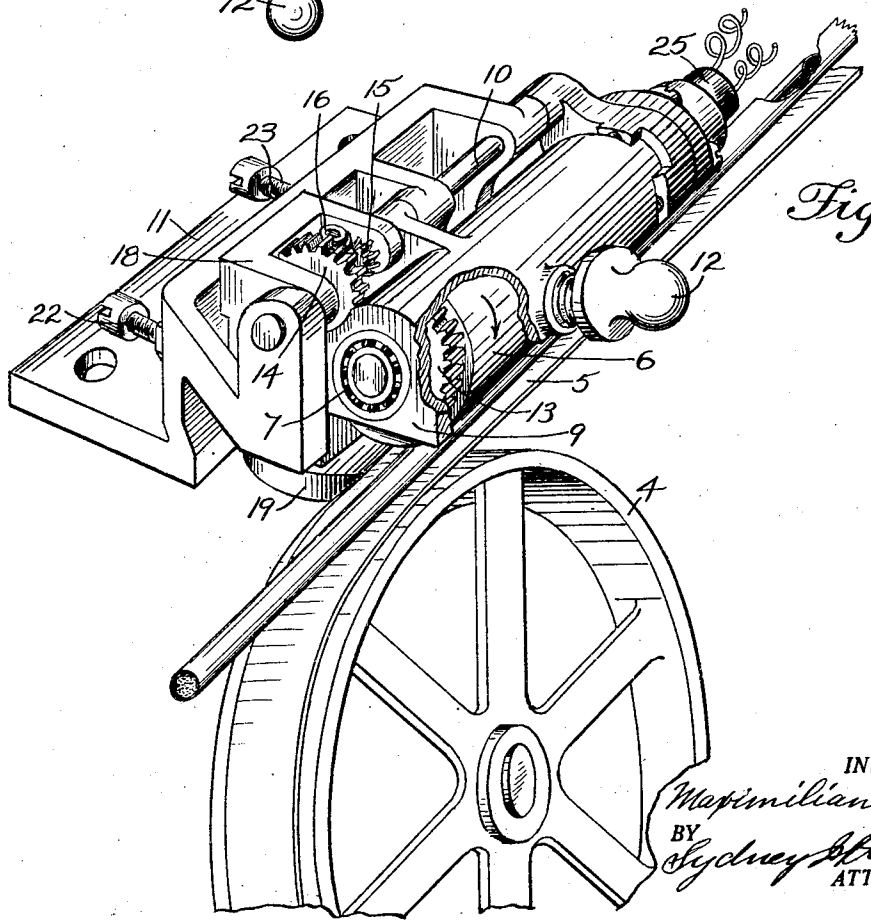


Fig. 3.



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ROTARY CIGARETTE-ROD SEALER.

Application filed June 25, 1924. Serial No. 722,209.

This invention relates to a rotary cigarette-rod sealer for cigarette machines.

In continuous rod cigarette machines, a narrow strip of paper travels longitudinally at high speed through the cigarette-rod former which curls the strip of paper up around the filler deposited therein. As the strip of paper is curled up over the filler tobacco, paste is applied to one of its edges, this edge is folded down over the other, and then the pasted seam usually passes under a rod sealer, in some cases consisting of a belt traveling with the sealer, and in some cases consisting of a heated metal plate slightly pressing the pasted seam. In the latter case, more or less superfluous paste is squeezed out from the overlapped edges of the paper and is deposited upon the paper rod, marring the appearance of the finished cigarette, gumming up the cutter which separates the rod into individual cigarettes, and causing other troubles. The main object of the present invention is to overcome this difficulty by using a heated rotating cylinder mounted in parallelism with and engaging the seam of a cigarette-rod produced by the cigarette-rod former, so that the surface of the cylinder will wipe the pasted seam transversely instead of longitudinally, with the result that any superfluous paste is deposited upon the surface of the rotating cylinder, the heating of which causes it to dry up and drop off before the cylinder has made a complete revolution and therefore before the paste would again reach the cigarette-rod. With this and other objects not specifically mentioned, 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, which form a part of this specification and in which like characters of reference indicate the same or like parts, Fig. 1 is a horizontal sectional view of a device constructed in accordance with the invention; Fig. 2 is a cross-sectional view taken on the line 2—2 in Fig. 1; and Fig. 3 is a perspective view, partly broken away, of the device shown in Figs. 1 and 2, as it is mounted in connection with the cigarette-rod former of a continuous rod cigarette machine.

In carrying the invention into effect, there is provided a cigarette-rod former, a cylinder mounted in parallelism with and engaging the seam of a cigarette-rod produced by said former, means for heating said cylinder, and mechanism for rotating said cylinder to cause its surface to have a transverse wiping action on the cigarette-rod. In the best constructions, there is further provided a mount for the cylinder which permits it to be moved in and out of operative position to enable the machine operator to more conveniently lead the wrapper material through the former when about to start up the machine. In the best constructions also, the heating means is enclosed within the cylinder and the mechanism for rotating the said cylinder derives its motion from the cigarette-rod former. The foregoing parts may be widely varied in construction within the scope of the claims, for the particular device selected to illustrate the invention is but one of many possible concrete embodiments of the same. The invention therefore is not to be restricted to the precise details of the structure shown and described.

Referring to the drawings, 4 indicates the drive pulley and 5 the tape of a cigarette-rod former of well known construction and operation. The major portion of the cigarette former is not shown in the drawings.

At a point adjacent the delivery end of the cigarette-rod former, a sealer for the cigarette-rod seam is located and, as shown, this sealer includes a cylinder 6 mounted on ball bearings 7 and 8 carried by a frame 9 which is hinged on a pintle 10 carried by a support 11. This support is mounted on the bed plate of the cigarette machine in connection with which the device is used. For the purpose of moving the cylinder 6 in and out of operative position in contact with the pasted seam of the cigarette-rod C—R, the frame 9 is provided with a handle 12 and is hinged to the support 11 by means of the pintle 10, so that it can be swung up over the top of said support when the machine operator wants to lead a wrapper through the former in starting up the machine. By an inspection of Fig. 3, it will be seen that the cylinder 6 is mounted in parallelism and in engagement with the seam of the cigarette-rod C—R. To effect a wiping action on the pasted seam, the cylinder is given a rotating movement by a mechanism in engagement therewith. With this end in view, the cylinder is provided with an integral gear 13 which is in

engagement with and driven by a gear 14 loosely mounted on the pintle 10 before referred to. The gear 14 has a long hub and upon this hub is formed a small worm wheel 15 driven by a worm 16, the latter being formed on a short shaft 17 which is journaled in a frame 18 hinged on the pintle 10. The end of the short shaft 17 opposite the worm 16 carries a friction wheel 19 which engages and is driven by the rim of the drive pulley 4 of the cigarette-rod former. The friction wheel 19 is held against the rim of the pulley 4 by means of a spring 20 surrounding a plunger 21 working in a suitable aperture in the frame 18. The spring thrusts against the head of the plunger 21, and the side of the frame 18, and it is adjusted for position by means of an adjusting screw 22 of well known construction and operation. A stop screw 23 threaded in the support 11 engages the frame 9 when the latter is in operative position, and by means of this screw the pressure of the cylinder 6 upon the cigarette-rod may be adjusted.

For the purpose of heating the cylinder 6, there is provided an electric heater 24 located within the cylinder and carried by an insulated stem 25 projecting through one end of the frame 9.

In view of the foregoing, a detailed description of the device is deemed unnecessary and is therefore omitted in the interest of brevity.

What is claimed is:

1. The combination with a cigarette-rod former having a tape-driving pulley, of a cylinder in parallelism with and engaging the seam of a cigarette-rod produced by said former, means for heating said cylinder, and mechanism actuated by said pulley for rotating said cylinder.

2. The combination with a cigarette-rod former having a tape driving pulley, of a cylinder in parallelism with and engaging the seam of a cigarette-rod produced by said former, means for heating said cylinder, and mechanism actuated by said pulley for rotating said cylinder, said mechanism including a mount for said cylinder which permits its movement in and out of operative position.

3. The combination with a cigarette-rod former having a tape-driving pulley, of a cylinder in parallelism with and engaging the seam of a cigarette-rod produced by said former, means for heating said cylinder, and mechanism actuated by said pulley for rotating said cylinder, said mechanism including a support, and a frame hinged to said support and carrying said cylinder.

4. The combination with a cigarette-rod former having a tape-driving pulley, of a cylinder in parallelism with and engaging the seam of a cigarette-rod produced by said former, means for heating said cylinder, and mechanism actuated by said pulley for rotating said cylinder, said mechanism including a gear train connecting said cylinder with said pulley.

5. The combination with a cigarette-rod former having a tape-driving pulley, of a cylinder in parallelism with and engaging the seam of a cigarette-rod produced by said former, means for heating said cylinder, and mechanism actuated by said pulley for rotating said cylinder, said mechanism including a friction driver engaging said pulley, and gears transmitting motion from said driver to said cylinder.

6. The combination with a cigarette-rod former having a tape-driving pulley, of a cylinder in parallelism with and engaging the seam of a cigarette-rod produced by said former, means for heating said cylinder, and mechanism actuated by said pulley for rotating said cylinder, said mechanism including a friction driver engaging said pulley, worm-gearing driven by said driver, and spur-gearing driven by said worm-gearing and engaging said cylinder.

7. The combination with a cigarette-rod former having a tape-driving pulley, of a cylinder in parallelism with and engaging the seam of a cigarette-rod produced by said former, means for heating said cylinder, and mechanism actuated by said pulley for rotating said cylinder, said mechanism including a speed-reducing gear train connecting said pulley with said cylinder.

8. The combination with a cigarette-rod former having a tape-driving pulley, of a cylinder in parallelism with and engaging the seam of a cigarette-rod produced by said former, means for heating said cylinder, and mechanism actuated by said pulley for rotating said cylinder, said mechanism including a support, a frame hinged to said support and carrying said cylinder, and a speed-reducing gear train connecting said pulley with said cylinder and carried by said support and frame, and said means including a cylindrical electric heater stationarily mounted in said cylinder.

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

MAXIMILIAN KLEIN.