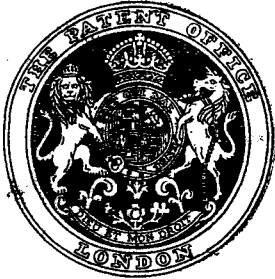


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## PATENT SPECIFICATION

624,076



Application Date: Oct. 17, 1945.

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### PROVISIONAL SPECIFICATION

#### Improved Apparatus for Making Cigarettes

I, SYDNEY WALLACE PAINTER, a British subject, of 2a, Transmere Road, Petts Wood, Orpington, Kent, do hereby declare the nature of this invention to be as follows:—

This invention relates to a cigarette making machine of the type including a rolling ribbon fixed to the one portion (the lid portion) of the case, and a rod-like member which upon the closing of the lid is guided by guide members to form a travelling pocket in the ribbon and so roll the tobacco and form the cigarette. The rolled cigarette is discharged through an opening in the lid upon the complete closing thereof, and the case serves as a container for tobacco.

It is the primary object of this invention to provide a machine wherein the tightness of the roll of tobacco can be adjusted to suit individual requirements, whilst another object is to provide a machine having a housing for the cigarette papers.

The invention is an improvement in or modification of that set forth in prior British Patent No. 533,120.

The invention provides improvements whereby the effective length of the ribbon can be adjusted to alter the tightness of the roll of tobacco, and to this end one end of the ribbon is brought through a slot in the lid and the anchoring of the said end is adjustable. By varying the length of the band, the tightness of a roll can be varied.

To describe a preferred embodiment of the invention, the machine consists of a shallow container portion to one end of which the lid portion is hinged; the container and lid may be of synthetic plastic and may be suitably shaped and curved. The lid is provided with a partition having a discharge slot therein said partition at its end adjacent the hinge, sloping upwardly towards the outer surface of the lid. The said lid

may have a cover thereon so that the space between the partition and cover forms a cigarette case, the said cover hingeing or, and preferably being mounted in slideways so that it will slide relatively to the lid. Further, a smaller compartment may be provided in the lid at its end opposite the hinge, which smaller compartment serves to contain a package of cigarette papers. The partition may be slotted within this compartment and the exposed cigarette paper extracted from inside the lid. This smaller compartment also is preferably covered by a slide on lid.

The guideways comprise at each side of the lid a fixed guide plate and a hinged guide plate, the said plates being adjacent and projecting inwardly, i.e., upstanding from the inner surface of the lid. The guides extend from the discharge slot which is below the paper compartment to a point immediately above the hinge between the lid and container. Each fixed plate has a shaped projecting edge from the discharge slot downwardly, first inwardly towards the lid, then outwardly so that the said plates upstand more at the end adjacent the hinge. Pivoted to the outer surface of each fixed plate at the end adjacent the discharge slot and parallel therewith and adjacent is the hinged guide. The slot in this guide conforms approximately with the curved edge of the fixed plate but the narrowing is less pronounced. The roller is mounted at each end in the slot in one curved guide so that the said roller at each side will ride on the curved edge of the fixed plate. Each end of the roller pin is pivotally connected to one end of a link the other end of which is pivoted on the inside of the side wall of the container at an appropriate point. When the lid is fully open and at substantially a right angle with respect to the container and the roller at the bottom of the guides, the

[Price 2/-]

links act as stays. A shell is provided within the container which shell serves to provide a pair of marginal channels to receive the links and guides when the machine is closed, the tobacco being contained within the shell. The sides of the shell may be cut away if necessary to accommodate the roller in the closed position. The band or ribbon is fixed to the lid in any suitable manner preferably as later described.

Assuming the lid is open, the roller pin at each side rests on the curved lower ends of the fixed guide plates, the hinged plates maintaining the rollers in this position. The roller is spaced sufficiently from the lid to enable the tobacco to be inserted in the pocket by the fingers. Upon the closing of the lid the roller moves upwardly in the guides, and rides on the curved edges of the fixed plates, the hinged plates swinging inwardly. When the lid is almost closed, the rollers ride on the wider upper extremities of the guides round curved upper ends (the slots in the hinged plates being similarly shaped) so that finally the roller is accommodated within the lid. The partition in the lid may slope at its end adjacent the lid still further reducing the height it is necessary for the guides to project whilst ensuring an adequate pocket.

One end of the ribbon is anchored so that the length of the ribbon can be varied to allow for the production of cigarettes of different diameters. Thus the end of the ribbon adjacent the hinge between lid and compartment may be slotted and the ribbon pass through this slot into the space between the sliding lid and the partition. The anchoring is effected by any means allowing for adjustment. Conveniently the end of the ribbon is passed over a flat metal bar, and a U-section clip embraces the end and bar. Two ribs upstand from the partition which serve to locate the ends

of the bar projecting from the band. When the slide on lid is placed in position, the end of the ribbon is pressed on to the partition preferably on to the sloping part thereof and thus anchored. The ribbon may be marked to give an indication of the size of the cigarette to be rolled. A separate slide on lid portion is preferably provided to retain the ribbon end.

Further, the partition may be curved or inclined so that after the closing of the lid to make a cigarette, the sliding of the lid to open same will result in the rolling of the made cigarette down the curve or incline thus facilitating its discharge.

The container or lid may incorporate a damping device to moisten the gummed edge of the paper. Thus, the said device may be accommodated in a compartment in the container remote from the hinge preferably between the forward edges of the shell and the forward edge of the container. This device may consist of a felt or like pad accommodated within a space.

Instead of a curved edge to the fixed guide plates, these plates may have straight edges, i.e., substantially parallel with the sides of the lid. The curving is preferred however; as by arranging the curvature at the appropriate position in conjunction with the angle at which the guide slots in the hinged plates are set, results in the pressing of the tobacco during rolling outwardly against the inner sides of the guide plates. This produces a firm cigarette with clean ends.

Dated this 17th day of October, 1945.  
KINGS PATENT AGENCY LIMITED,  
By B. T. KING, A.I.Mech.E.,  
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## COMPLETE SPECIFICATION

### Improved Apparatus for Making Cigarettes

I, SYDNEY WALLACE PAINTER, a British subject, of 2a. Transmere Road, Petts Wood, Orpington, Kent, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a cigarette making apparatus operated by hand, and

relates particularly to a machine of the type including a rolling ribbon fixed to the one portion (the lid portion) of the case, and a rod-like member which upon the closing of the lid is guided by guide members to form a travelling pocket in the ribbon and so roll the tobacco and form the cigarette. The rolled cigarette is discharged through an opening in the lid upon the complete closing thereof,

and the case serves as a container for tobacco.

In machines of this type provision has been made for altering the effective length of the ribbon by securing the one end of the ribbon to a roller having a toothed wheel with which a spring dog engages so that when the dog is released the toothed wheel can be turned to increase or decrease the length of the ribbon, which is then held at the adjusted length by re-engagement of the dog.

The present invention consists in improvements in or modifications of the invention claimed in the Specification of my prior Patent No. 533,120. According to my said prior specification, there is provided a cigarette making apparatus which is characterised in that the lid portion is provided with a false base or division, the said division having the cigarette discharge slot therein, and that the top consists of or includes a lift-up flap whereby the compartment between the division and flap forms a container or case for made cigarettes.

The present invention has for its object to provide a machine which will roll cigarettes of a firmness and size desired by the user, with firm ends substantially free from hanging shreds.

Another object is to provide a compact machine, which will serve to house tobacco, papers, and also made cigarettes, and further is provided with a moistener or damper, so that the gummed edge of the paper can be damped prior to rolling.

According to the present invention, a cigarette making apparatus constituting an improvement in or modification of the invention claimed in the Specification of my prior Patent No. 533,120 is provided, characterised in that the false base forming the division of the lid with the lift-up flap includes means for detachably mounting thereon a ribbon securing bar which when detached from its mounting permits adjustment of the effective length of said rolling ribbon.

As distinct from a releasable roller the present invention provides a compact construction which enables the ribbon adjustment to be applied to the arrangement of the present case without material increase in over-all size.

It will be understood that the size of the made cigarette should be capable of variation so that it can suit individual taste, as also, should the tightness. These properties cannot be determined entirely by the amount of tobacco shreds placed in the pocket, as too little tobacco may result in a very loose cigarette, instead of a cigarette of a small diameter,

whilst too much tobacco might cause the jamming of the machine unless the band length is adjusted properly.

The adjustment is conveniently effected at the end of the ribbon adjacent the discharge slot, the ribbon securing bar being secured parallel with the transverse edge of said slot, which bar or strip can be clipped in or unclipped from its position, or otherwise made detachable, the mounting of the end being such that the length adjustment can be effected when the strip is unclipped.

The invention also provides cigarette making apparatus in accordance with the parent case, which is characterised in that between the lid top or cover and the false base a compartment is formed adjacent the discharge opening in the false base, the said compartment being arranged to receive a packet of cigarette papers, and that an opening is provided in the false base through which papers can be extracted individually. This arrangement enables the papers to be extracted one by one from the inside of the lid, when a packet of interleaved papers is placed in the compartment, with the exposed paper projecting through the slot.

Various other improvements in the parent case will appear from the following description to be read in conjunction with the accompanying drawings which illustrate a preferred construction of the invention, wherein:—

Figure 1 is a sectional side view with the box open;

Figure 2 is a front view thereof, the container being shown in section on the line II—II, Fig. 1;

Figure 3 is a fragmentary perspective view illustrating the arrangement for adjusting the band, and

Figure 4 is a perspective view of a detail, showing the arrangement for fitting the band end.

In the drawings, the box is constructed from sheet metal of suitable gauge, and comprises a container portion 1 to which is hinged by means of a pin hinge 2, the lid part 3. The lid part 3 has a trough like part 5 therein, which forms a compartment to receive a packet of papers, the rear wall of the part 5 being slotted as at 5a so that the paper next to be withdrawn projects through, conveniently situated for its removal.

The lid 3 has a division wall 6 therein, and conveniently said wall and the compartment 5 are formed from the same piece of sheet by stamping, the part so formed being retained in the substantially frame like lid part by lugs or other

known means, or merely by providing turned up marginal portions, so that the part becomes a push fit within the frame. The division wall 6 carries the guide plates 7 slotted at 8 as shown, for the reception of the roller 9, each end of which is also mounted on a link 10 pivoted at 11 to the wall of the container. Between the paper compartment 5 and the partition 6 is a slot 12, and one end of the ribbon 13 is mounted adjacent the lower edge of this slot (Fig. 1), whilst the other end of said ribbon is mounted at the bottom of the lid 3 adjacent the slot, the said apron or ribbon passing round the roller.

It will be clear that the size of the made cigarette will depend upon the size of the pocket, which also controls its tightness, and in accordance with the present invention, means are provided so that the length of the band can be altered. This enables the user to adjust the size of the cigarette to suit requirements. A strip 18 is slotted so as to leave a central rib 19, each end of the strip being cranked as shown, with the rib set back (Fig. 3) so that the end of the blind can be passed through the slots and folded over the one side of the strip 18. A U-section or channel strip 20 is arranged to fit over the folded part of the blind and the strip and so retain the blind in position.

After adjustment the band end is brought through the slot 12, and over and down the lower edge thereof, until each cranked end can engage beneath a spring blade 21 (one at each side) when the strip is pushed upwardly so that the strip finally resides in the plane of the partition 6, being held in place by the blades 21. The end of each blade is secured in place by stamping out lugs from the side walls or turned up marginal portions of the partition 6. It will be clear that the length of the band can be adjusted merely by pushing the strip down against the spring blades to release same, when the end can be passed through the slot and the clip 20 removed to free the end of the band.

At each end of the roller 9 a metal plate 22 is provided, which plates (one at each side) travel with the roller. The edge 22a of the plate is bent round the guide as shown. Each plate butts an end of the cigarette and the plates serve to ensure a firm end. The rotational movement imparted to the cigarette tends to force shreds of tobacco through the slot 8 in the plate 7, and to pull shreds out from the formed tube, and the plates act as shields and prevent this. It will be clear that upon the final closing

movement of the case, the roller travels in the correct part of the track adjacent the slot, and as the plates are capable only of sliding movement, a slot 23 is provided in each plate 22, which slot allows the roller end to travel in the curved slot in the plate 7.

The tray of the container receives a frame like part 24 therein, said frame forming a compartment 25 to receive tobacco and so leave two clear channels 26, one at each side in which are situated the links 10. The frame has forwardly extending side parts 24a which terminate inwardly projecting lugs 27. Between the side parts and spaced from the lugs is a partition 24b which thus forms with the lugs a compartment for the reception of a box like part 28 containing cotton wool or like material to serve as a damper pad. The terminal lugs 27 are engaged by lugs 29 from the end wall of the tray 1, which while holding the frame 24 in place permits it to be removed from the tray by a manual tilting movement about the rear end of said frame, which disengages a retaining tongue 30 from beneath the hinge 2. This tongue extends almost completely across the width of the part 24, and provides a chute so that any shreds or dust falling from the band will be returned to the compartment 25.

The cover 14 is arranged on slideways so as to slide longitudinally of the lid proper instead of to pivot as shown in the parent case. Each side of the lid is formed with an outwardly facing channel 31 in which engages a complementary guide 32 formed along the corresponding side of the sliding cover part. The lid is slid on from the end remote from the hinge and when closed, its end butts the end of a fixed part 33 formed integrally with the lid body. It will be seen that the opening movement firstly exposes the curved part of the partition so that any made cigarettes can be extracted from the case one after the other. The pack of papers can be replaced if the lid is removed completely.

It will be clear from the foregoing that a combined cigarette making machine and case is provided, which constitutes a complete container for tobacco and papers, and one wherein a satisfactorily made cigarette can be produced, the diameter of which can be adjusted to suit requirements. It will be clear that the diameter of a cigarette does not depend entirely on the amount of tobacco shreds placed in the pocket. For instance if too little tobacco is used, for a given band length, the made cigarette will be too loose, whilst if too much is

used, then the cigarette will be too tight or the machine may jam up, owing to the converging of the roller and partition.

5 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

10 1. Cigarette making apparatus constituting an improvement in or modification of the invention claimed in the Specification of my prior Patent No. 533,120 characterised in that the false base forming the division of the lid with the lift-up flap includes means for detachably mounting thereon a ribbon securing bar which when detached from its mounting permits adjustment of the effective length of said rolling ribbon.

20 2. Cigarette making apparatus as claimed in Claim 1, wherein the said detachable mounting means for the ribbon securing bar is located adjacent the discharge slot in the false base so that the bar is held parallel with the transverse edge of said slot over which a rolled cigarette is passed to the compartment.

30 3. Cigarette making appliance as claimed in Claim 1 or 2 wherein the bar is slotted longitudinally so that the ribbon end can be passed therethrough and wrapped thereover, and a channel shape clip is provided for pushing over the wrapping so as to secure the ribbon to the bar.

40 4. Cigarette making appliance as claimed in any one of the preceding claims wherein the mounting means is in the form of spring blades, one provided at each side of the compartment formed by a false base, each blade serving to hold one end of the ribbon securing bar.

50 5. Cigarette making apparatus constituting an improvement in or modification of the invention claimed in the Specification of my prior Patent No. 533,120 characterised in that between the lid top and the false base a compartment is formed adjacent the discharge opening in the false base, the said compartment being arranged to receive a packet of cigarette-papers, and that an opening is provided in the false base through which papers can be extracted individually.

55 6. Cigarette making apparatus constituting an improvement in or modifica-

tion of the invention claimed in the Specification of my prior British Patent No. 533,120 wherein the tobacco receiving container to which the compartmented lid with the lift-up flap is hinged, by means of link movements, is provided with a frame part which defines a compartment for tobacco and which has side walls parallel with adjacent walls of the container but spaced therefrom to form channels in which the respective link movements are disposed.

70 7. Cigarette making apparatus as claimed in Claim 6, wherein the frame part has an extension beyond the tobacco compartment, said extension serving to receive a paper gum moistening device.

80 8. Cigarette making apparatus constituting an improvement in or modification of the invention claimed in the Specification of my prior British Patent No. 533,120, wherein within the compartmented lid with lift-up flap and guide plates at each side for the ribbon roller there is provided adjacent and parallel to each guide plate an additional plate which is carried by one end and moves with the roller, each said plate pressing against an end of the tobacco during the rolling thereof and serving to form a firm end.

90 9. Cigarette making apparatus as claimed in Claim 8 wherein each plate is formed to engage and slide along its guide, and is slotted to allow the roller to approach the discharge slot upon final closing movement.

100 10. Cigarette making apparatus as claimed in any of the preceding claims, characterised in that the lid top, instead of being a hinged flap as set forth in the parent case, is formed as a sliding element mounted on guides formed on the side walls of the lid.

11. Cigarette making apparatus constructed substantially as herein described with reference to and as illustrated in the accompanying drawings.

Dated this 3rd day of July, 1947.

By B. T. KING, A.I.Mech.E.,

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[This Drawing is a reproduction of the Original on a reduced scale.]

