

Description

The invention relates to a method and apparatus for manufacturing a rod of tobacco or the like enclosed by a paper strip, wherein a paper strip is supported and transported by a garniture tape and tobacco is deposited on the paper strip, wherein the tobacco is compressed into a tobacco core and a channel is formed in the tobacco core and wherein the paper strip is closed with its longitudinal edges parts around the compressed tobacco core, and to a cigarette manufactured in accordance with said method.

A cigarette with a channel at the circumference of the cigarette is for example known from Dutch patent 173.017 and French patent 1.349.992. These documents only indicate that there is such a channel in the tobacco rod, wherein it is noted in said first document that the cigarette can be manufactured by an adapted cigarette machine. However, it is not indicated which adaptations are required. Further German "Offenlegungsschriften" 3.435.844 and 3.435.845 describe relatively complicated special cigarette machines for manufacturing a tobacco rod with a central core with low density.

A first object of the invention is to provide a method of the above-mentioned type for forming an open channel at the circumference of the tobacco rod in a relatively simple manner.

To this end the method of the above-mentioned type according to the invention is characterized in that the channel is formed in the circumference of the tobacco rod during the compressing, and in that the second longitudinal edge part of the paper strip is folded into the channel and the first longitudinal edge part is subsequently laid over said channel.

In this manner the desired channel is directly recessed in the circumference of the tobacco core wherein the form of the channel obtained is fixed by folding the longitudinal edge part of the paper strip into this channel. Thereby it is not necessary to use separate manufacturing steps for forming tubes or the like. Moreover it is possible to obtain a good filling with tobacco also at the location of the channel so that a uniform density along the whole cross-section can be guaranteed.

According to the invention the second longitudinal edge part is preferably brought into the shape of said channel before it is folded into said channel. By preshaping the longitudinal edge part of the paper strip any damages of the tobacco core at the location of the channel during introducing the paper into the channel, are avoided as much as possible.

According to a favourable embodiment the first longitudinal edge part of the paper strip is attached to the second longitudinal edge part at both sides of said channel, wherein a folding element protrudes in the formed channel during said attaching. In this manner a channel open along the whole length of the

tobacco rod is guaranteed, wherein a permanent shape stability is guaranteed due to the attachment of the first longitudinal edge part on both sides of the channel.

A second object of the invention is to provide an apparatus of the type according to the preamble of claim 5, by which it is possible to apply the method according to the invention by minor technical adaptations on existing cigarette machines.

An apparatus for manufacturing a rod of tobacco or the like enclosed by a strip of paper, comprising an endless garniture tape with a tape part for supporting the paper strip, a supporting body with a guiding trough for guiding said tape part of the garniture tape, said guiding trough having a mainly semi-cylindrical cross-section and an entrance end and exit end, respectively, an entrance finger located near the entrance end of the guiding trough for compressing the supplied tobacco, a first glueing means for applying a glue line on the end edge of a first longitudinal edge part of said paper strip and means for closing the paper strip around the compressed tobacco core, is characterized according to the invention in that said entrance finger is provided with a ridge for forming a channel in the circumference of the tobacco core, wherein said closing means include a folding element for folding a second longitudinal edge part of the paper strip into said channel.

Finally the invention aims to provide a cigarette manufactured by the method according to the invention.

Such a cigarette comprising a tobacco rod obtained from a tobacco rod which is manufactured according to the method of the invention, wherein a channel is provided at the circumference, is characterized according to the invention in that one longitudinal edge part of the paper strip is folded into the channel and the other longitudinal edge part extends over this channel and is attached to said one longitudinal edge part on both sides of said channel.

The invention will be further explained by reference to the drawings in which an embodiment of the apparatus according to the invention is schematically shown.

Figs. 1 and 2 schematically show an embodiment of the apparatus according to the invention in top and side views, respectively.

Fig. 3 is a cross-section of the tobacco rod according to line III-III of fig. 2.

Figs. 4-10 show different cross-sections of the apparatus of figs. 1 and 2 in a larger scale.

Figs. 1 and 2 very schematically show an embodiment of the apparatus according to the invention as the same can be included in a conventional cigarette machine. The apparatus shown is provided with an endless garniture tape 1, of which only an upper horizontal tape part 2 is indicated by a dashed line in figs. 1 and 2. This tape part 2 extends between two

return rollers 3 and 4 located at an entrance end 5 and an exit end 6, respectively, of a guiding trough 7 having a mainly semi-cylindrical cross-section, said guiding trough 7 being formed in a support body 8 (see figs. 4-10). The guiding trough guides and supports the tape part 2 of the garniture tape 1.

The tape part 2 of the garniture tape 1 supports and transports a paper strip 9 in the usual manner, which paper strip comes from a reel of cigarette paper not shown. Ahead of the entrance end 5 of the guiding trough 7 tobacco is deposited on the paper strip 9 as indicated by arrow 10 in fig. 2.

The tobacco 10 is transported through the apparatus together with the paper strip 9, wherein the tobacco is compressed and enclosed by the paper strip 9, so that finally a tobacco rod 11 is delivered at the exit end 6 of the guiding trough 7. As shown in the section of fig. 3, a first longitudinal edge part 12 is laid over a second longitudinal edge part 13 of the paper strip 9, wherein this second longitudinal edge part 13 is folded into a channel 14 formed in the circumference of the tobacco core 10. The first longitudinal edge part 12 is attached to the longitudinal edge part 13 on both sides of the channel 14 so that a permanent shape stability of the channel 14 is guaranteed.

As particularly shown in the section according to line IV-IV of fig. 4, the entrance end 5 of the guiding trough 7 is followed by an entrance finger 15 which is mounted on a carrier 16 at a certain distance above the bottom of the guiding trough 7. The entrance finger 15 compresses the supplied tobacco 10. The entrance finger 15 is provided with a ridge 17 at its side facing the guiding trough 7, which ridge 17 has a substantially semi-cylindrical cross-section for forming the channel 14 in the circumference of the tobacco core 10. Because of the fact that the channel 14 is formed by the entrance finger 15 during compressing the tobacco 10, a uniform density of tobacco is guaranteed along the whole cross-section also directly adjacent the channel 14. At the end of the entrance finger 15 opposite of the entrance end 5 there is further provided a recess 18 corresponding with the ridge 17, said recess 18 cooperating with a folding element 19 by which the second longitudinal edge part 13 of the paper strip 9 is folded into the channel 14. This folding element 19 is carried by a rear guiding wall element 20 extending substantially from the beginning of the entrance finger 15 upto beyond a first glueing means 21. The guiding wall element 20 has a guiding wall 22 for gradually folding the second longitudinal edge part 13 of the paper strip 9 first over the entrance finger 15 and subsequently over the tobacco core 10.

In order to prevent damages to the channel 14 formed by the ridge 17 directly in the tobacco 10 during folding the longitudinal edge part 13 into this channel, the folding element 19 in cooperation with the recess 18 starts to bring the longitudinal edge

part 13 in the shape of the channel, as indicated in section V-V in fig. 5, whereafter the folding element 19 presses the preshaped longitudinal edge part 13 into the channel 14 when leaving the entrance finger 15, as appears from section VI-VI of fig. 6.

In fig. 6 there is also shown a second glueing means 23 which applies a glue line on the first longitudinal edge part 12 at a certain distance of its end edge. Substantially at the location of the second glueing means 23 a front guiding wall element or cover chamber 24 starts, said guiding wall element 24 being adapted to fold the first longitudinal edge part 12 of the paper strip 9 over the second longitudinal edge part 23. To this end the guiding wall element 24 has a first guiding wall 25 which presses the glue line applied by the second glueing means on the end edge of the second longitudinal edge part 13 at one side of the channel 14 as indicated in section VII-VII of fig. 7.

Thereafter the first glueing means 21 applies a glue line on the end edge of this longitudinal edge part 12 (see fig. 8). The first glueing means 21 is followed by a second guiding wall 26 of the guiding wall element 24, which second guiding wall presses the glue line applied by the first glueing means on the longitudinal edge part 13 at the other side of the channel 14. During this step the end of the folding element 19 extends below the second guiding wall 26. Thereby deformation of the channel during closing the paper strip 9 is prevented. Moreover the second guiding wall 26 is provided with a recess 27 so that at the location of the channel 14 there is some space available below the guiding wall 26 and the channel will not be deformed.

Further it is shown in the section of fig. 9 that the folding element 19 of the embodiment shown is provided with a groove 28 substantially at the location of the second guiding wall 26, which groove is connected in a manner not shown to a source of compressed air so that an additional shaping of the longitudinal edge part 13 into the desired channel 14 occurs.

Between the front guiding wall element 24 and the exit end 6 of the guiding trough 7 a heating element (not shown in figs. 1 and 2) for the glue lines is provided, a heating beam 29 of which is partially shown in section X-X of fig. 10. This heating beam 29 has a contact surface 30 which is made concave with a radius which is greater than the radius of the shaped tobacco rod 11, preferably at least 10% greater. Thereby it is achieved that the longitudinal edges of the heating beam 29 will not cause any damage to the paper strip due to the exerted pressure.

As schematically indicated in fig. 2 there are provided exhaust openings 31 in the rear guiding wall element 20 at the location of the entrance finger 15 for exhausting of tobacco particles and the like which could be above the entrance finger. Such tobacco particles would otherwise interfere the accurate

shaping of the longitudinal edge part 13 of the paper strip 9.

Claims

1. Method for manufacturing a rod of tobacco or the like enclosed by a paper strip, wherein a paper strip is supported and transported by a garniture tape and tobacco is deposited on the paper strip, wherein the tobacco is compressed into a tobacco core and a channel is formed in the tobacco core and wherein the paper strip is closed with its longitudinal edges parts around the compressed tobacco core, characterized in that the channel is formed in the circumference of the tobacco rod during the compressing, and in that the second longitudinal edge part of the paper strip is folded into the channel and the first longitudinal edge part is subsequently laid over said channel.
2. Method according to claim 1, characterized in that the second longitudinal edge part is brought into the shape of said channel before it is folded into said channel.
3. Method according to claim 1 or 2, characterized in that the first longitudinal edge part of the paper strip is attached to the second longitudinal edge part at both sides of said channel, wherein a folding element protrudes in the formed channel during said attaching.
4. Method according to claim 3, characterized in that compressed air is blown into the channel through said folding element.
5. Apparatus for manufacturing a rod of tobacco or the like enclosed by a paper strip, comprising an endless garniture tape with a tape part for supporting the paper strip, a supporting body with a guiding trough for guiding said tape part of the garniture tape, said guiding trough having a mainly semi-cylindrical cross-section and an entrance end and exit end, respectively, an entrance finger located near the entrance end of the guiding trough for compressing the supplied tobacco, a first glueing means for applying a glue line on the end edge of a first longitudinal edge part of said paper strip and means for closing the paper strip around the compressed tobacco core, characterized in that said entrance finger is provided with a ridge for forming a channel in the circumference of the tobacco core, wherein said closing means include a folding element for folding a second longitudinal edge part of the paper strip into said channel.

6. Apparatus according to claim 5, wherein the closing means includes a rear guiding wall element extending from the beginning of the entrance finger upto beyond the first glueing means for folding the second longitudinal edge part of the paper strip over the entrance finger and the tobacco core, characterized in that the entrance finger has a recess corresponding with said ridge, at its end opposite of the entrance end of the guiding trough, wherein the folding element carried by said rear guiding wall element projects into said recess and extends from said recess upto beyond the entrance finger in such a manner that the longitudinal edge part of the paper strip folded in said recess is forced into said channel.
7. Apparatus according to claim 6, characterized in that a second glueing means is located between the first glueing means and the entrance finger for applying a glue line at a predetermined distance from the end edge of the first longitudinal edge part on this edge part of the paper strip.
8. Apparatus according to claim 7, wherein the closing means includes a front guiding wall element for folding the first longitudinal edge part of the paper strip over the second longitudinal edge part, characterized in that said front guiding wall element has a first guiding wall which presses the glue line applied by the second glueing means on the second longitudinal edge part at one side of the channel, and a second guiding wall which follows the first guiding wall and which presses the glue line applied by the first glueing means on the second longitudinal edge part at the other side of the channel, wherein the folding element extends with a freely projecting end upto below the second guiding wall.
9. Apparatus according to claim 8, characterized in that the folding element, substantially at its end lying below the second guiding wall, is provided with an open groove connectable to a source of compressed air.
10. Apparatus according to claim 8 or 9, characterized in that a recess is provided in the second guiding wall at the location of the channel.
11. Apparatus according to anyone of claims 6-10, characterized in that exhaust openings are provided in the rear guiding wall above the end of the entrance finger provided with said recess.
12. Apparatus according to anyone of claims 8-11, wherein a heating element for the glue lines is provided in the direction of movement of the garniture tape past the first guiding wall element,

shaping of the longitudinal edge part 13 of the paper strip 9.

Claims

1. Method for manufacturing a rod of tobacco or the like enclosed by a paper strip, wherein a paper strip is supported and transported by a garniture tape and tobacco is deposited on the paper strip, wherein the tobacco is compressed into a tobacco core and a channel is formed in the tobacco core and wherein the paper strip is closed with its longitudinal edges parts around the compressed tobacco core, characterized in that the channel is formed in the circumference of the tobacco rod during the compressing, and in that the second longitudinal edge part of the paper strip is folded into the channel and the first longitudinal edge part is subsequently laid over said channel.
2. Method according to claim 1, characterized in that the second longitudinal edge part is brought into the shape of said channel before it is folded into said channel.
3. Method according to claim 1 or 2, characterized in that the first longitudinal edge part of the paper strip is attached to the second longitudinal edge part at both sides of said channel, wherein a folding element protrudes in the formed channel during said attaching.
4. Method according to claim 3, characterized in that compressed air is blown into the channel through said folding element.
5. Apparatus for manufacturing a rod of tobacco or the like enclosed by a paper strip, comprising an endless garniture tape with a tape part for supporting the paper strip, a supporting body with a guiding trough for guiding said tape part of the garniture tape, said guiding trough having a mainly semi-cylindrical cross-section and an entrance end and exit end, respectively, an entrance finger located near the entrance end of the guiding trough for compressing the supplied tobacco, a first glueing means for applying a glue line on the end edge of a first longitudinal edge part of said paper strip and means for closing the paper strip around the compressed tobacco core, characterized in that said entrance finger is provided with a ridge for forming a channel in the circumference of the tobacco core, wherein said closing means include a folding element for folding a second longitudinal edge part of the paper strip into said channel.

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6. Apparatus according to claim 5, wherein the closing means includes a rear guiding wall element extending from the beginning of the entrance finger upto beyond the first glueing means for folding the second longitudinal edge part of the paper strip over the entrance finger and the tobacco core, characterized in that the entrance finger has a recess corresponding with said ridge, at its end opposite of the entrance end of the guiding trough, wherein the folding element carried by said rear guiding wall element projects into said recess and extends from said recess upto beyond the entrance finger in such a manner that the longitudinal edge part of the paper strip folded in said recess is forced into said channel.
7. Apparatus according to claim 6, characterized in that a second glueing means is located between the first glueing means and the entrance finger for applying a glue line at a predetermined distance from the end edge of the first longitudinal edge part on this edge part of the paper strip.
8. Apparatus according to claim 7, wherein the closing means includes a front guiding wall element for folding the first longitudinal edge part of the paper strip over the second longitudinal edge part, characterized in that said front guiding wall element has a first guiding wall which presses the glue line applied by the second glueing means on the second longitudinal edge part at one side of the channel, and a second guiding wall which follows the first guiding wall and which presses the glue line applied by the first glueing means on the second longitudinal edge part at the other side of the channel, wherein the folding element extends with a freely projecting end upto below the second guiding wall.
9. Apparatus according to claim 8, characterized in that the folding element, substantially at its end lying below the second guiding wall, is provided with an open groove connectable to a source of compressed air.
10. Apparatus according to claim 8 or 9, characterized in that a recess is provided in the second guiding wall at the location of the channel.
11. Apparatus according to anyone of claims 6-10, characterized in that exhaust openings are provided in the rear guiding wall above the end of the entrance finger provided with said recess.
12. Apparatus according to anyone of claims 8-11, wherein a heating element for the glue lines is provided in the direction of movement of the garniture tape past the first guiding wall element,

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characterized in that the contact surface of the heating element is made concave with a radius which is at least 10% longer than the radius of the tobacco rod.

13. Cigarette comprising a tobacco rod obtained from a tobacco rod manufactured according to the method of anyone of claims 1-4, wherein a channel is provided at the circumference, characterized in that one longitudinal edge part of the paper strip is folded into the channel and the other longitudinal edge part extends over this channel and is attached to said one longitudinal edge part on both sides of said channel.

Patentansprüche

1. Verfahren zur Herstellung eines von einem Papierstreifen umschlossenen Stabs aus Tabak oder dergleichen, worin ein Papierstreifen von einem Besatzband gehalten und transportiert und Tabak auf dem Papierstreifen abgelegt werden, worin der Tabak in einen Tabakkern gepreßt und ein Kanal im Tabakkern gebildet werden, und worin der Papierstreifen mit seinen Längskantenteilen um den gepreßten Tabakkern geschlossen wird, dadurch gekennzeichnet, daß der Kanal während der Zusammenpressung im Umfang des Tabakstabs geformt wird, und dadurch, daß der zweite Längskantenteil des Papierstreifens in den Kanal gefaltet und der erste Längskantenteil danach über den besagten Kanal gelegt werden.
2. Verfahren nach Anspruch 1, dadurch gekennzeichnet, daß der zweite Längskantenteil in die Form des besagten Kanals gebracht wird, bevor er in den besagten Kanal gefaltet wird.
3. Verfahren nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß der erste Längskantenteil des Papierstreifens am zweiten Längskantenteil auf beiden Seiten des besagten Kanals befestigt wird, wobei ein Faltelement im geformten Kanal während der besagten Befestigung hervorsteht.
4. Verfahren nach Anspruch 3, dadurch gekennzeichnet, daß Druckluft in den Kanal durch besagtes Faltelement geblasen wird.
5. Vorrichtung zur Herstellung eines von einem Papierstreifen umschlossenen Stabs aus Tabak oder dergleichen, enthaltend ein endloses Besatzband mit einem Bandteil zur Halterung des Papierstreifens, einen Halterungskörper mit einer Führungsmulde zur Führung des besagten Bandteils des Besatzbandes, wobei die besagte Führungsmulde einen hauptsächlich halbzylin-

drischen Querschnitt und ein Einführungs- bzw. ein Abführungseende, einen neben dem Einführungseende der Führungsmulde angeordneten Zuführungsfinger für die Pressung des zugeführten Tabaks, eine erste Klebevorrichtung für die Aufbringung einer Klebestelle auf die Endkante eines ersten Längskantenteils des besagten Papierstreifens, und Mittel zum Verschließen des Papierstreifens um den gepreßten Tabakkern besitzt, dadurch gekennzeichnet, daß der besagte Zuführungsfinger mit einem Steg für die Formung eines Kanals im Umfang des Tabakkerns versehen ist, worin die besagten Verschleißmittel ein Faltelement für die Faltung eines zweiten Längskantenteils des Papierstreifens in den besagten Kanal enthalten.

6. Vorrichtung nach Anspruch 5, worin die Verschleißmittel ein hinteres Führungswandelement enthalten, das sich vom Anfang des Zuführungsfingers bis über die erste Klebevorrichtung hinaus zur Faltung des zweiten Längskantenteils des Papierstreifens über den Zuführungsfinger und den Tabakkern erstreckt, dadurch gekennzeichnet, daß der Zuführungsfinger eine dem besagtem Steg entsprechende Ausnehmung besitzt, worin das von dem besagten hinteren Führungswandelement gehaltene Faltelement in die besagte Ausnehmung hineinreicht und sich von der besagten Ausnehmung bis über den Zuführungsfinger so erstreckt, daß der Längskantenteil des in der besagten Ausnehmung gefalteten Papierstreifens in den besagten Kanal gedrückt wird.
7. Vorrichtung nach Anspruch 6, dadurch gekennzeichnet, daß zwischen der ersten Klebevorrichtung und dem Zuführungsfinger eine zweite Klebevorrichtung für die Aufbringung einer Klebestelle in einem vorbestimmten bestand von der Endkante des ersten Längskantenteils auf diesen Kantenteil des Papierstreifens angeordnet ist.
8. Vorrichtung nach Anspruch 7, worin die Verschleißmittel ein vorderes Führungswandelement für die Faltung des ersten Längskantenteils des Papierstreifens über den zweiten Längskantenteil enthalten, dadurch gekennzeichnet, daß das besagte vordere Führungswandelement eine erste Führungswand, welche die von der zweiten Klebevorrichtung auf den zweiten Längskantenteil aufgebrachte Klebestelle auf einer Seite des Kanals preßt, und eine zweite Führungswand, die der ersten Führungswand folgt und die von der ersten Klebevorrichtung auf den zweiten Längskantenteil aufgebrachte Klebestelle auf der anderen Seite des Kanals preßt, besitzt, worin sich das Faltelement mit einem frei hervorstehen-



den Ende bis unter die zweite Führungswand erstreckt.

9. Vorrichtung nach Anspruch 8, dadurch gekennzeichnet, daß das an seinem Ende im wesentlichen unter der zweiten Führungswand liegende Faltelement mit einer offenen Nut versehen ist, die an eine Druckluftquelle angeschlossen werden kann.
10. Vorrichtung nach Anspruch 8 oder 9, dadurch gekennzeichnet, daß in der zweiten Führungswand an der Stelle des Kanals eine Ausnehmung vorgesehen ist.
11. Vorrichtung nach einem der Ansprüche 6-10, dadurch gekennzeichnet, daß in der hinteren Führungswand über dem Ende des mit besagter Ausnehmung versehenen Zuführungsfingers Auslaßöffnungen vorgesehen sind.
12. Vorrichtung nach einem der Ansprüche 9-11, worin ein Heizelement für die Klebestellen in Bewegungsrichtung des Besatzbandes hinter dem ersten Führungswandelement vorgesehen ist, dadurch gekennzeichnet, daß die Kontaktfläche des Heizelements konkav mit einem Radius ausgebildet ist, der mindestens 10% länger ist als der Radius des Tabakstabs.
13. Aus einem Tabakstab bestehende Zigarette, die aus einem Tabakstab geformt wird, der nach dem Verfahren der Ansprüche 1-4 hergestellt ist, worin ein Kanal am Umfang vorgesehen ist, dadurch gekennzeichnet, daß ein Längskantenteil des Papierstreifens in den Kanal gefaltet wird, und sich der andere Längskantenteil über diesen Kanal erstreckt und an besagtem einen Längskantenteil auf beiden Seiten des besagten Kanals befestigt wird.

Revendications

1. Procédé de fabrication d'un boudin de tabac ou analogue entouré d'une bande de papier, dans lequel une bande de papier est supportée et transportée par un ruban-cigarettes et du tabac est déposé sur la bande de papier, dans lequel le tabac est comprimé en un cordon de tabac et une rainure est formée dans le cordon de tabac, et dans lequel la bande de papier est fermée avec ses parties de bords longitudinaux autour du cordon de tabac comprimé, caractérisé en ce que la rainure est formée dans la circonférence du boudin de tabac pendant la compression, et en ce que la seconde partie de bord longitudinal de la bande de papier est pliée dans la rainure et la première

partie de bord longitudinal est ensuite appliquée au-dessus de ladite rainure.

2. Procédé selon la revendication 1, caractérisé en ce que la seconde partie de bord longitudinal est amenée dans la forme de ladite rainure avant d'être pliée dans ladite rainure.
3. Procédé selon la revendication 1 ou 2, caractérisé en ce que la première partie de bord longitudinal de la bande de papier est fixée à la seconde partie de bord longitudinal de part et d'autre de ladite rainure, un élément de pliage pénétrant dans la rainure formée pendant ladite fixation.
4. Procédé selon la revendication 3, caractérisé en ce que de l'air comprimé est insufflé dans la rainure à travers ledit élément de pliage.
5. Appareil de fabrication d'un boudin de tabac ou analogue entouré d'une bande de papier, comportant un ruban-cigarettes sans fin dont une partie est destinée à supporter la bande de papier, un corps de support présentant une gouttière de guidage destinée à guider ladite partie du ruban-cigarettes, ladite gouttière de guidage ayant une section transversale principalement semi-cylindrique et une extrémité d'entrée et une extrémité de sortie, respectivement, un doigt d'entrée placé à proximité de l'extrémité d'entrée de la gouttière de guidage pour comprimer le tabac amené, un premier moyen d'encollage destiné à appliquer une ligne de colle sur le bord extrême d'une première partie de bord longitudinal de ladite bande de papier et un moyen destiné à fermer la bande de papier autour du cordon de tabac comprimé, caractérisé en ce que ledit doigt d'entrée est pourvu d'une nervure destinée à former une rainure dans la circonférence du cordon de tabac, ledit moyen de fermeture comprenant un élément de pliage destiné à plier une seconde partie de bord longitudinal de la bande de papier à l'intérieur de ladite rainure.
6. Appareil selon la revendication 5, dans lequel le moyen de fermeture comprend un élément de paroi de guidage arrière s'étendant depuis le début du doigt d'entrée jusqu'au-delà du premier moyen d'encollage pour plier la seconde partie de bord longitudinal de la bande de papier au-dessus du doigt d'entrée et du cordon de tabac, caractérisé en ce que le doigt d'entrée présente un évidement correspondant à ladite nervure, à son extrémité opposée à l'extrémité d'entrée de la gouttière de guidage, dans lequel l'élément de pliage porté par ledit élément de paroi de guidage arrière fait saillie dans ledit évidement et s'étend depuis ledit évidement jusqu'au-delà du doigt



d'entrée de manière que la partie de bord longitudinal de la bande de papier pliée dans ledit évidement soit introduite à force dans ladite rainure.

7. Appareil selon la revendication 6, caractérisé en ce qu'un second moyen d'encollage est placé entre le premier moyen d'encollage et le doigt d'entrée pour appliquer une ligne de colle à une distance prédéterminée du bord extrême de la première partie de bord longitudinale sur cette partie de bord de la bande de papier. 5 10
8. Appareil selon la revendication 7, dans lequel le moyen de fermeture comprend un élément de paroi de guidage avant destiné à plier la première partie de bord longitudinal de la bande de papier sur la seconde partie de bord longitudinal, caractérisé en ce que ledit élément de paroi de guidage avant comporte une première paroi de guidage qui presse la ligne de colle appliquée par le second moyen d'encollage sur la seconde partie de bord longitudinal d'un côté de la rainure, et une seconde paroi de guidage qui suit la première paroi de guidage et qui presse la ligne de colle appliquée par le premier moyen d'encollage sur la seconde partie de bord longitudinal de l'autre côté de la rainure, l'élément de pliage s'étendant avec une extrémité faisant saillie librement jusqu'au-dessous de la seconde paroi de guidage. 15 20 25 30
9. Appareil selon la revendication 8, caractérisé en ce que l'élément de pliage, sensiblement à son extrémité s'étendant au-dessous de la seconde paroi de guidage, est pourvu d'une gorge ouverte pouvant être raccordée à une source d'air comprimé. 35
10. Appareil selon la revendication 8 ou 9, caractérisé en ce qu'un évidement est prévu dans la seconde paroi de guidage à l'emplacement de la rainure. 40
11. Appareil selon l'une quelconque des revendications 6-10, caractérisé en ce que des ouvertures d'évacuation sont prévues dans la paroi de guidage arrière au-dessus de l'extrémité du doigt d'entrée présentant ledit évidement. 45
12. Appareil selon l'une quelconque des revendications 8-11, dans lequel un élément chauffant pour les lignes de colle est placé dans la direction du mouvement du ruban-cigarettes au-delà du premier élément de paroi de guidage, caractérisé en ce que la surface de contact de l'élément chauffant est réalisée de façon à être concave avec un rayon qui est supérieur d'au moins 10 % au rayon du boudin de tabac. 50 55

13. Cigarette comprenant un boudin de tabac obtenu à partir d'un boudin de tabac fabriqué selon le procédé de l'une quelconque des revendications 1-4, dans lequel une rainure est réalisée à la circonférence, caractérisée en ce qu'une partie de bord longitudinal de la bande de papier est pliée dans la rainure et l'autre partie de bord longitudinal s'étend au-dessus de cette rainure et est fixée à la première partie de bord longitudinal de part et d'autre de ladite rainure.

