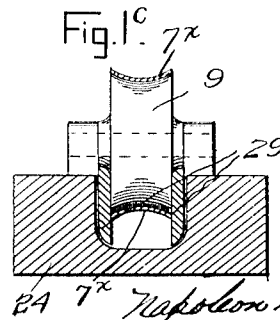
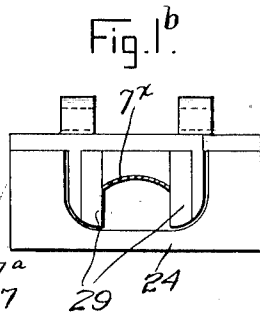
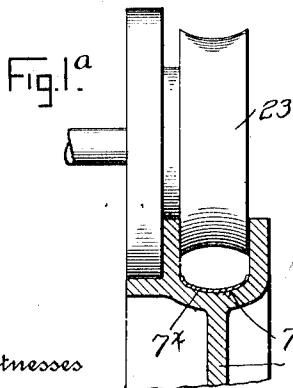
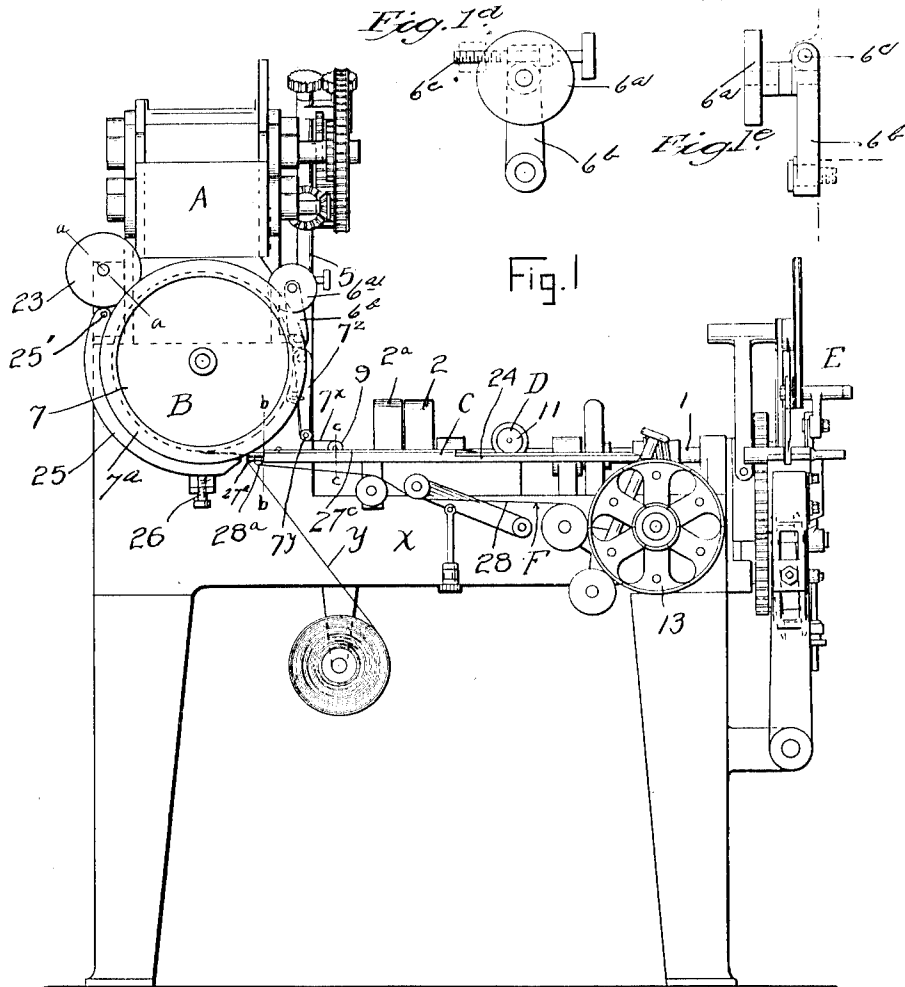


N. DU BRUL.
CONTINUOUS CIGARETTE MACHINE.
APPLICATION FILED MAY 14, 1910.

1,040,653.

Patented Oct. 8, 1912.

5 SHEETS-SHEET 1.



Witnesses

C. H. Reichenbach.
H. H. Byrne

By

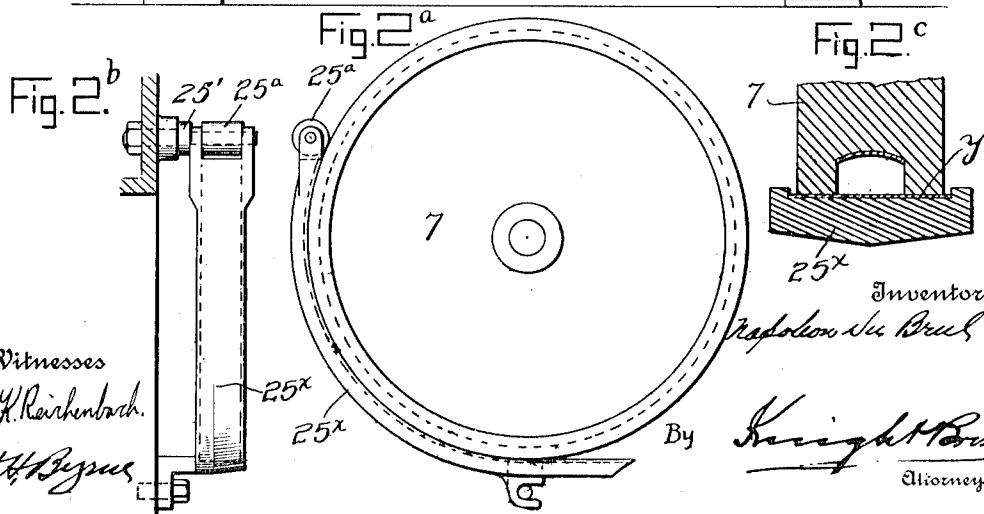
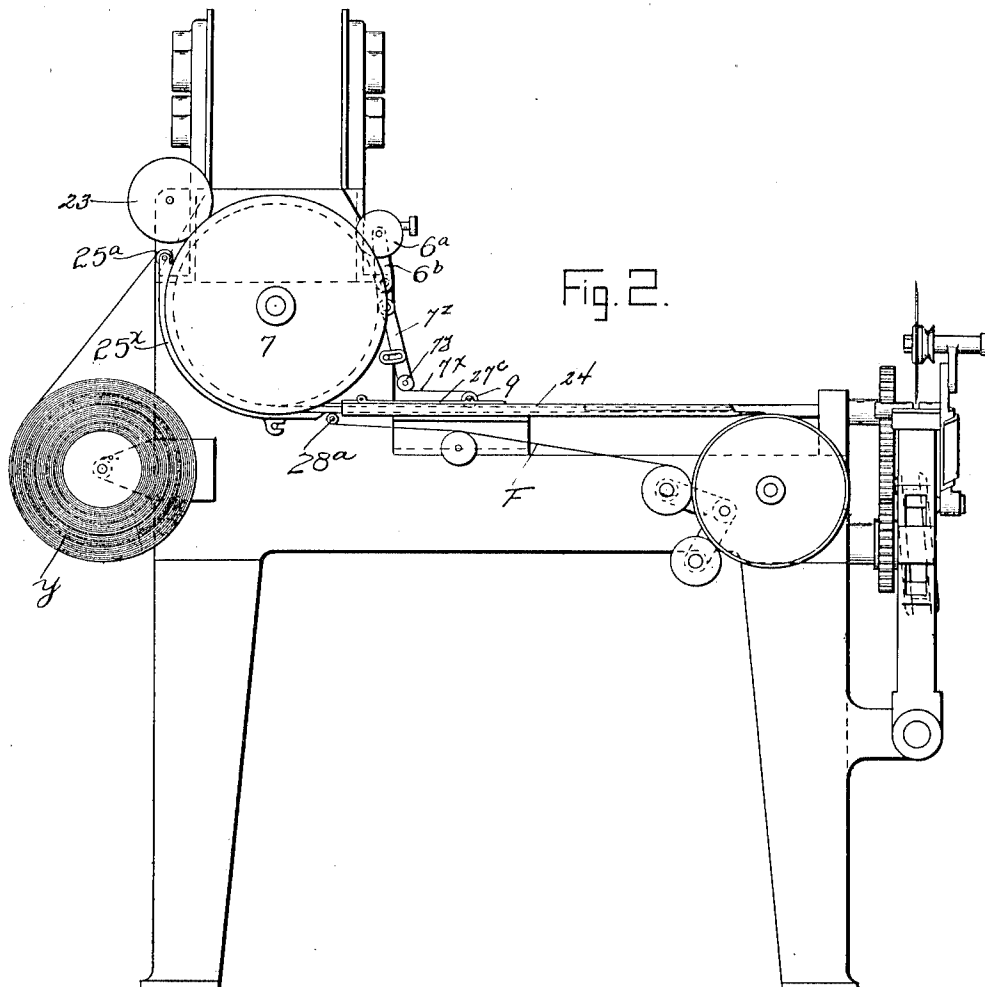
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5 SHEETS—SHEET 2.



Witnesses
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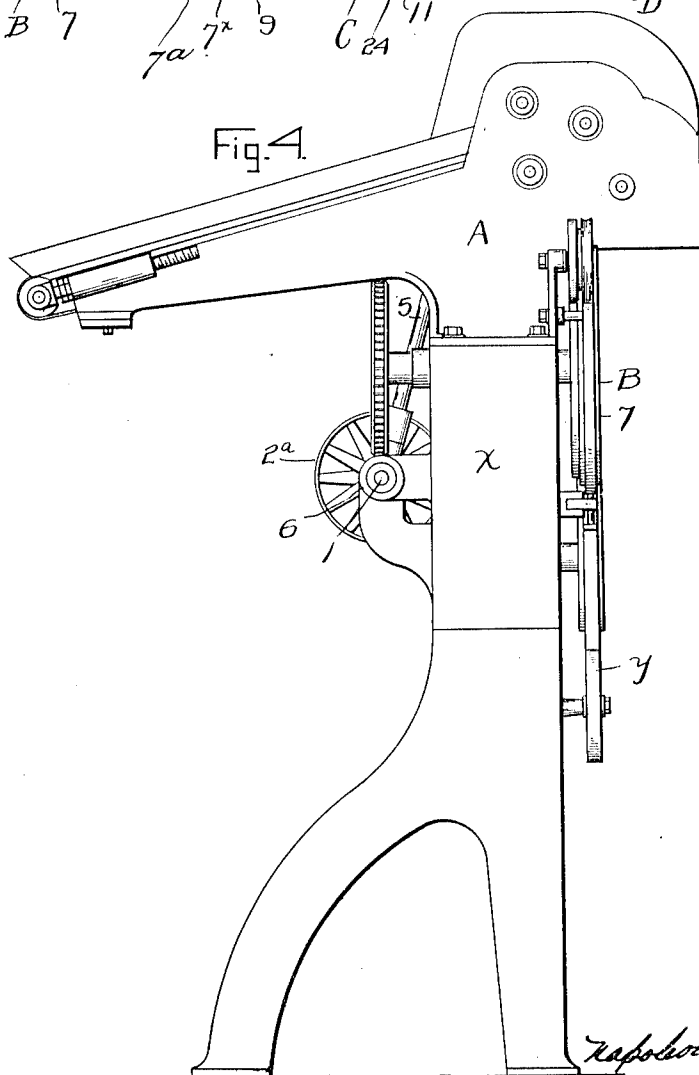
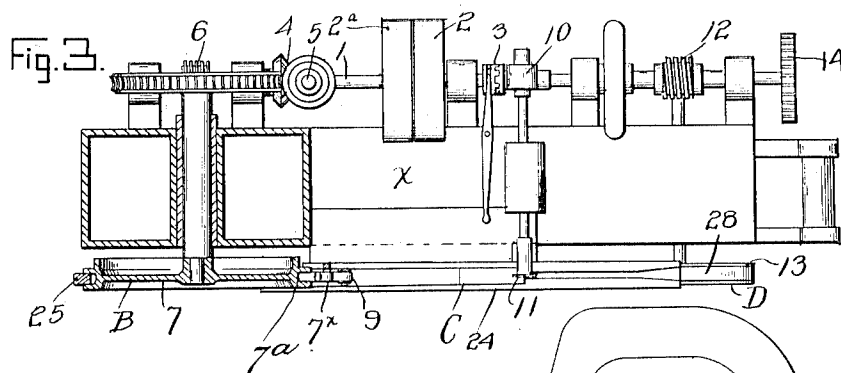
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APPLICATION FILED MAY 14, 1910.

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5 SHEETS—SHEET 3.



Witnesses

C. R. Reichenbach
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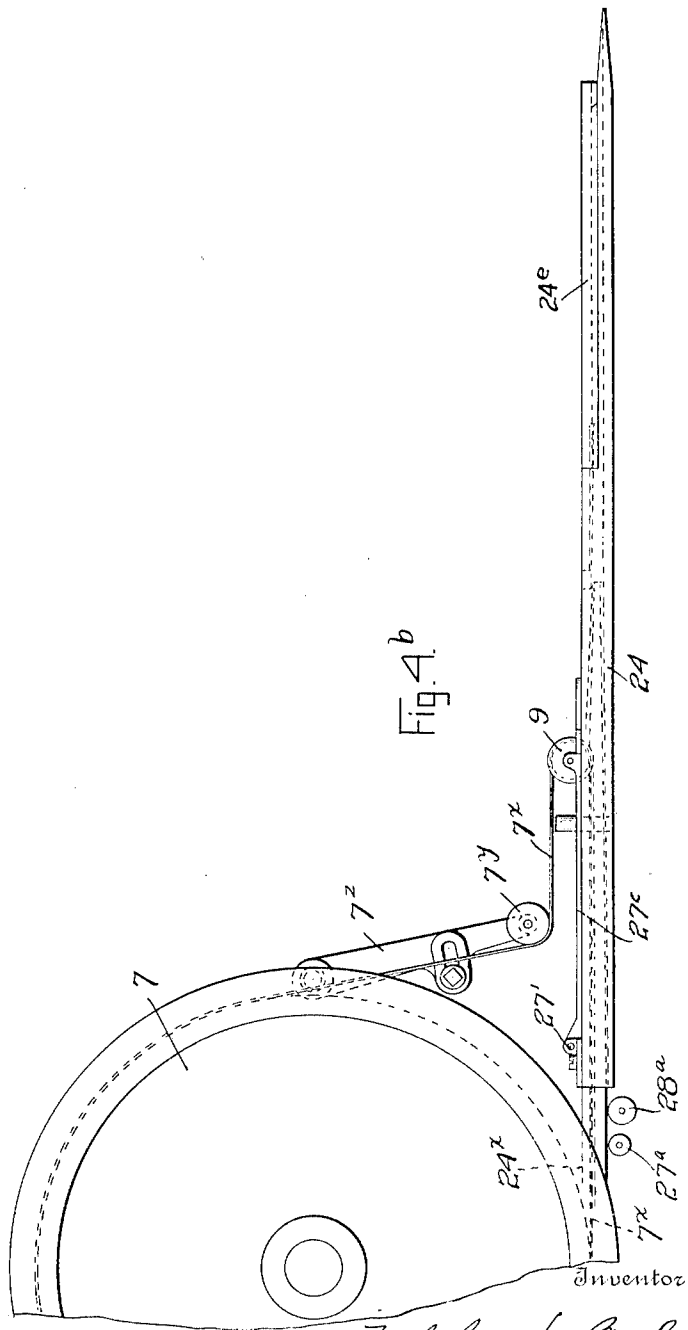
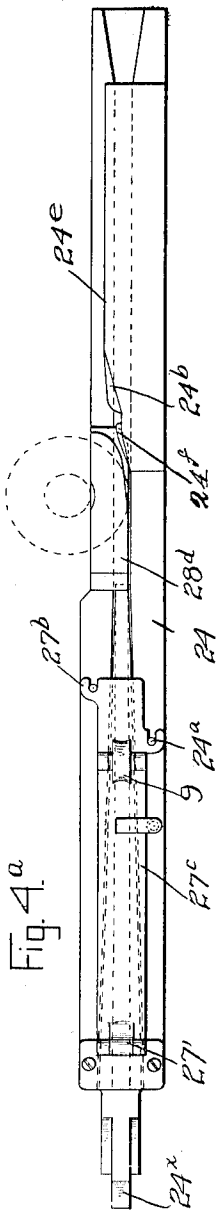
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N. DU BRUL.
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APPLICATION FILED MAY 14, 1910.

1,040,653.

Patented Oct. 8, 1912.

6 SHEETS—SHEET 4.



Witnesses
C. K. Reichinbach.
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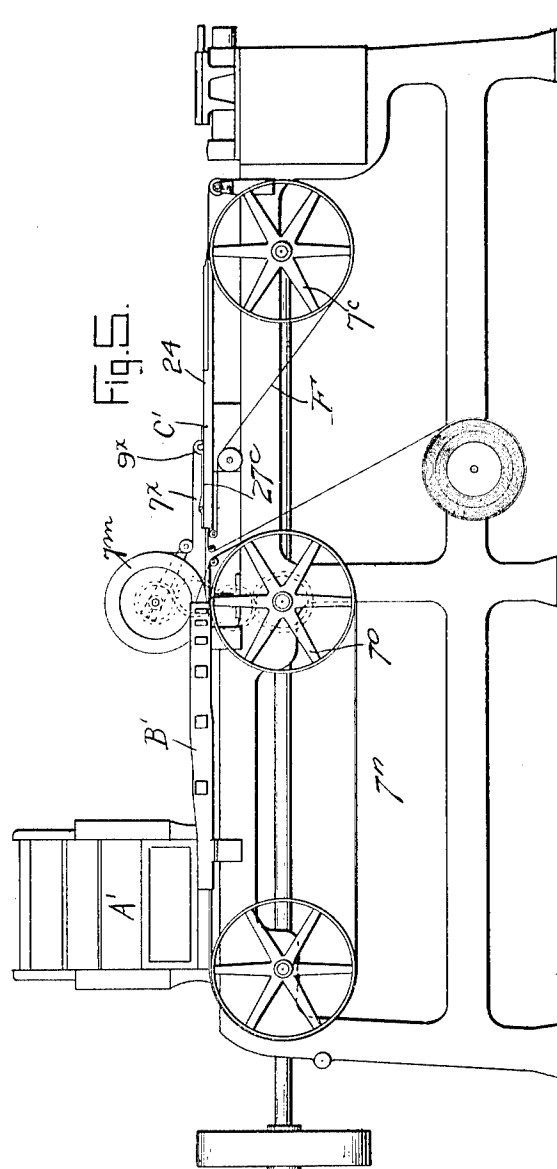
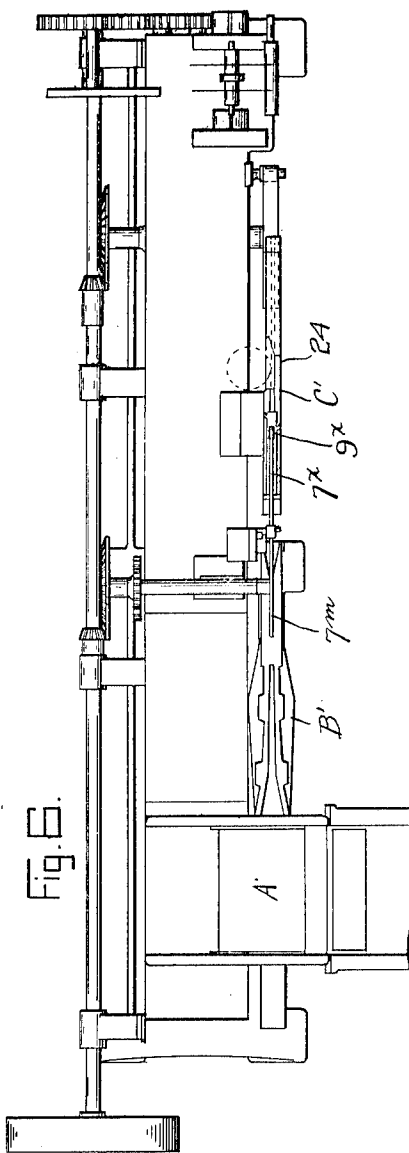
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APPLICATION FILED MAY 14, 1910.

1,040,653.

Patented Oct. 8, 1912.

5 SHEETS—SHEET 5.



Witnesses

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UNITED STATES PATENT OFFICE.

NAPOLEON DU BRUL, OF CINCINNATI, OHIO.

CONTINUOUS CIGARETTE-MACHINE.

1,040,653.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed May 14, 1910. Serial No. 551,508.

To all whom it may concern:

Be it known that I, NAPOLEON DU BRUL, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Continuous Cigarette-Machines, of which the following is a specification.

My invention relates particularly to means for feeding the filler tobacco in continuous cigarette machines.

It has always been more or less difficult to obtain a satisfactory feed of tobacco through troughs, passages or tubes in which it is more or less closely confined, and in which it develops considerable friction. It is also difficult to introduce the tobacco rope into such parts of the mechanism without buckling, swelling, or disintegrating, after the tobacco rope has passed an open space (as between the rope-forming mechanism and the wrapping tube) where compression is temporarily released. It is also difficult to release the tobacco from a trough, when it has been tightly packed therein, as in forming the rope. These several difficulties are overcome, according to my present invention by providing the trough, tube or other passageway in which the tobacco travels or is conveyed, with a belt, in such relation that it constitutes a moving surface running with the tobacco so as to prevent the friction and drag thereon within the trough or tube, and so as to confine the tobacco while passing from one part of the machine to another, as for instance, in going from the rope-forming mechanism to the wrapping mechanism; also by having the belt running in the trough or other part, such for instance as the rotary trough of a rope-forming device, as far as the point of discharge, and there digressing therefrom or changing its course relatively thereto, so as to strip the tobacco from the trough without impairing the rope.

In carrying out the invention, the wrapper-paper is preferably made to cooperate with the belt, to a greater or less extent, in confining the tobacco, as for instance, just before entering the wrapping tube, or, if desired, paralleling the belt around a portion of the periphery of the rotary trough for the purposes of providing a moving surface to close the open side of the trough and

coöperate with the belt in causing the rope to leave the trough in a tangential direction, without bending, conducting it without previous excessive condensing, and in light spongy condition, across the space between the rope-forming trough and the wrapping tube, and conducting it into the wrapping tube without buckling or swelling.

In the accompanying drawings, Figure 1 is a side elevation of a complete machine showing one embodiment of the invention; Figs. 1^a, 1^b and 1^c are sections taken respectively on the lines *a-a*, *b-b*, and *c-c*, of Fig. 1, Figs. 1^b and 1^c being on an enlarged scale; Figs. 1^d and 1^e are detailed views of the pressure wheel on an enlarged scale; Fig. 2 is a view similar to Fig. 1, showing a different embodiment of the invention; Figs. 2^a, 2^b and 2^c are enlarged detail views of parts of Fig. 2; Fig. 3 is a plan view of Fig. 1, partly in section and with parts removed; Fig. 4 is a front end view of Fig. 1; Fig. 4^a is a top plan view of the wrapping tube, shown in Fig. 1; Fig. 4^b is an enlarged detail view of Fig. 1, showing the tube in elevation; and Figs. 5 and 6 are, respectively, a side elevation and a partial plan view of a different type of cigarette machine having some of the features of my invention applied thereto.

For purposes of illustration, my invention is shown embodied in a continuous cigarette machine such as disclosed in my application filed March 7th, 1910, Serial No. 547,807, the general arrangement of which comprises a suitable frame X, a tobacco feeding and carding mechanism A, a rope-forming mechanism B, a wrapping mechanism C, the crimping mechanism D, (which may be replaced by a suitable pasting mechanism if desired), the severing mechanism E, and the tape mechanism F; all of these mechanisms being driven by a main shaft 1, extending along one side of the machine, driven and released at will (for instance), by fast and loose pulleys 2, 2^a; said shaft being preferably divided and having its parts connected by separable clutch 3, to permit independent adjustments of the two ends of the machine. The said shaft has suitable mechanical driving connections with the several mechanisms of the machine, there being provided in the particular embodiment selected for illustration, the bevel gear

4 for driving the upwardly extending shaft
5 for the feeding and carding mechanism; a
worm gear 6 that is adapted to drive the ro-
tary forming and conveying trough or wheel
7 of the rope-forming mechanism; an angle
5 gear 10 which drives the crimp-wheel 11 or
the substitute paster; a worm gear 12 which
drives the tape wheel 13, and a gear 14
which drives the severing mechanism.

10 Referring more particularly to the parts
of the machine with which my present in-
vention is concerned, the rope forming
mechanism comprises the wheel 7, con-
stantly rotated through the gear 6 as al-
15 ready described, having a peripheral con-
veying trough 7^a, which receives the to-
bacco from the tobacco feeding and carding
mechanism, and in which it is subjected to
the packing and forming pressure of the
20 wheel 23 which causes the tobacco to travel
with the trough till it reaches the point of
discharge. At said point of discharge, the
formed rope leaves the trough in a tangen-
25 tial direction and therefore without bend-
ing, buckling or other disturbing influences,
and in line with the wrapping tube 24 which
it immediately enters.

In order to properly separate the tobacco
rope from the rope-forming trough, in
30 which it is tightly packed, without impair-
ing the rope, I have provided a belt 7^x that
extends around the bottom of and is driven
by the rotary trough, like a belt upon a
driving pulley, and this belt constitutes the
35 contact surface of the bottom of the trough
and runs with the tobacco therein, until it
reaches the point of discharge of the to-
bacco rope, when the paths of the trough
and belt digress, the belt being deflected
40 tangentially to the rotary trough and in the
line of the wrapping tube which the belt en-
ters with the tobacco rope. By this dispo-
sition of the belt and relation of the belt
to the trough, the tobacco rope is stripped
45 from the trough, given its direction toward
the wrapping tube, prevented from deflect-
ing or expanding while traversing the space
between the trough and the tube, and as-
sisted in entering the tube to such an extent
50 as to overcome any tendency to buckle or
swell. This feature of my invention ren-
ders it unnecessary to apply excessive com-
pression to the tobacco rope in advance of
the wrapping tube, which was heretofore re-
55 sorted to, to insure passage into the wrap-
ping tube and leave the tobacco rope in good
spongy condition.

A pressure wheel 6^a contacts with the belt
7^x within the trough of the wheel 7 and in
60 so doing prevents slipping of the belt in
the trough. Said wheel 6^a is journaled
within an arm 6^b that is swingingly mount-
ed on the machine frame, and by means of
an adjusting screw 6^c the pressure of the
65 wheel on the belt 7^x may be regulated.

In the wrapping tube, which is a fixed
element, and in which the tobacco rope has
heretofore developed considerable friction,
the belt constitutes the upper inner surface
with which the tobacco rope contacts, and 70
since this surface travels with the tobacco,
it largely eliminates friction within the
tube, and causes the tobacco rope to feed
without drag.

The belt 7^x traverses the tube only as far 75
as the roll 9, beyond which the paper begins
to close around the filler rope, and around
this roll the belt is guided in passing out of
the tube. The pressure of the roll 9 upon
the tobacco rope is thus imposed through 80
the medium of the belt which is traveling
with the tobacco beneath the roll and a bet-
ter result is attained. The shape of the sur-
face provided by the belt as it passes
through the tube and beneath the roll 9 may 85
be flat or of any other shape but preferably
as shown in Figs. 1^b and 1^c.

From the roll 9, the belt 7^x passes be-
neath a tightening idler 7^y, mounted in the
adjustable hanger 7^z, and thence back to the 90
trough wheel 7 where its relation has been
described. The paper γ from the usual roll
is guided over the extreme forward end of
the wrapping tube and is immediately there-
after supported by the endless tape 28 95
which passes over the guide roller 27^a. In
this manner, the paper and tape support the
tobacco and coöperate with the belt 7^x to
provide a pair of spaced surfaces which con-
fine and travel with the tobacco as it passes 100
from the rope forming trough to the fold-
ing tube and assist it to enter the folding
tube.

To confine the rope in the conveying
trough without disturbing its texture, I may 105
employ a tongue 25 curved concentrically
with and adapted to fit the trough 7^a, piv-
oted at 25' at its receiving end and, at its
discharge end forced into the trough by the
screw 26 the desired distance to restrict the 110
rope to the proper dimensions prior to en-
tering the wrapping tube, all as described in
my pending application referred to. And
such an arrangement will coöperate satis-
factorily with the trough stripping belt 7^x. 115
But another feature of my present invention
consists in utilizing the wrapper paper to
confine the tobacco rope within the trough,
and in so doing to provide the fixed member
around the trough (the paper guide 25^x sub- 120
stituted for the tongue 25) with a surface
moving with the tobacco within the trough.
To these ends, (see Figs. 2, 2^a, 2^b, and 2^c)
the paper roll γ is located at the forward 125
end of the machine and the paper web is led
therefrom to and around a guide roller 25^a
at the upper pivotal end of a flanged paper
guide 25^x; and thence within the paper
guide, by which the paper is held in position 130
to close the open side of the trough and pro-

vide the aforesaid surface moving with the tobacco within the trough. This relation of the belt and paper to the rotary trough provides a pair of surfaces (preferably parallel) confining and traveling with the tobacco rope and producing results superior to old arrangements wherein the tobacco drags over fixed surfaces.

The paper is deflected tangentially from the roll 7 at the roll 28^a where the tobacco rope leaves and preferably parallel with the belt 7^x, so as to continue the traveling surfaces in confining relation to the tobacco rope across the space between the trough and the wrapping tube, and into said tube, thereby attaining the results already referred to in connection with the coöperation of the paper and belt, in advance of and within the tube.

According to Figs. 5 and 6, the advantages of the invention may be largely realized by applying the feeding and friction reducing belt to a cigarette machine having an entirely different, though well-known, type of tobacco-feeding and carding mechanism A', and rope-forming mechanism B'. In this case, the belt 7^x and the conveyer belt F travel in the folding tube 24, said belt 7^x being guided around the presser wheel 7^m, which enters a trough formed by a belt 7^a immediately above a belt guiding and driving wheel 7^c; the feeding belt 7^x being made to travel through the wrapping tube precisely as heretofore described until it is guided outward around a wheel 9^x. By this arrangement, the belt 7^x exercises the same protecting, guiding and feeding influence over the tobacco rope in advance of, and when it enters the wrapper tube, as hereinbefore described.

The former and folder.—This part of the arrangement (Figs. 4^a and 4^b) wherein the tobacco meets the paper borne in by the endless tape comprises the trough 24 forming the bottom of the wrapping, forming, and folding tube; and the cover 27^c which is hinged thereon at 27', and on which the tape guiding roller 9 is journaled. Said upper section is provided with ears 27^b which engage with pins 24^a and hold the part against lateral movement. A tongue 24^x formed integrally with the portion 24 extends within and tangentially of the trough of the wheel 7 and in this relation thereto serves to guide the belt 7^x and the tobacco rope into the tube former and folder. From the point at which the tobacco enters the tube, the bore thereof is gradually tapered until at the point of the roll 9 where it is abruptly enlarged to permit of the compressed tobacco rope to expand within the wrapper. The overlying blade 28^a effects to fold over one side of the paper and immediately thereafter the inner surface of the other side is gummed and

there itself folded by the blade 24^f, and finally sealed by the blade 24^e. Again, the wrapping tube 24 has downwardly extending flanges 29 as shown in Figs. 1^b and 1^c between which flanges and the side walls of said tube is formed a clearance for the upturned edges of the paper. By this means, the belt 7^x is kept from contact with the paper.

I claim:—

1. A cigarette machine having a traveling conveying trough for tobacco, a wrapping mechanism, a belt constituting the bottom surface of said trough forming a bridging wall between said trough and said wrapping mechanism and comprising a tongue extending tangentially from said rope forming mechanism.

2. A cigarette machine having a traveling conveying trough for tobacco and a belt constituting the bottom surface of said trough, and moving with the tobacco therein and stripping the tobacco therefrom, a wrapper paper feeding means and a paper guide adapted to hold wrapper paper in position constituting a closure for the trough and moving with the tobacco therein.

3. In a cigarette machine, a rotary conveying trough receiving tobacco and forming it into a rope, a wrapping mechanism and a belt constituting the bottom surface of said trough and extending from the trough in the direction of the tobacco's movement to strip the tobacco tangentially from the trough and forming a bridging wall between said trough and said wrapping mechanism.

4. In a cigarette machine, a rotary conveying trough, a paper guide conforming thereto, means feeding tobacco thereto, a belt forming the bottom surface of said trough and extending therefrom tangentially at the point of departure of the tobacco and a packing and driving wheel entering the trough and condensing the tobacco therein.

5. In a cigarette machine, a tube through which the tobacco passes having a belt forming a top surface therein traveling with the tobacco and a paper guide supporting a paper in position to provide a counterpart surface in said tube, likewise traveling with the tobacco.

6. In a cigarette machine, a tube through which the tobacco passes, constructed to apply a wrapper to the tobacco, a belt forming an upper moving surface in said tube and traveling with the tobacco therein, and a tape traveling through said tube upon the bottom of said tube adapted to support a wrapper paper in position to provide a bottom surface traveling with the tobacco.

7. In a cigarette machine, a tube through which the tobacco passes, constructed to apply a wrapper to the tobacco, a belt form-

ing an upper moving surface in said tube and traveling with the tobacco therein, and a tape traveling through said tube upon the bottom of said tube adapted to support a wrapper paper in position to provide a bottom surface traveling with the tobacco; said tube being constructed with partition walls separating the edges of the paper from the belt.

8. In a cigarette machine, a tube through which the tobacco passes, a belt constituting a moving surface therein and traveling with the tobacco; said tube having a guide for said belt, a hinging section carrying said guide and adapted to raise the belt to permit inspection of the tobacco beneath it, and a paper guide conforming to the shape of the belt.

9. In a cigarette machine, a channel through which the tobacco passes, an auxiliary pressure wheel beneath which the tobacco passes, a belt guided by said auxiliary pressure wheel and constituting a moving surface traveling with and confining the tobacco, a paper guide conforming to the belt and having at one end a guiding roller over which a paper passes.

10. In a cigarette machine, a tube through which the tobacco passes having a belt forming a top surface therein traveling with the tobacco and a paper guide supporting a paper in position to provide a counter-part surface in said tube; likewise traveling with the tobacco; said tube being provided with a wheel beneath which the belt passes and in position to press the tobacco through the medium of said belt.

11. In a cigarette machine, a tube through which the tobacco passes having a wrapper section followed by a seaming section, a top belt moving with the tobacco in the tube and forming the upper surface of the tube with which the tobacco contacts, means supporting a wrapper paper in the counter-part position in said tube, and means deflecting the top belt away from the tobacco, in advance of the seaming section.

12. In a cigarette machine, a wrapper tube through which the tobacco passes in receiving the wrapper, a belt constituting an upper moving surface within said tube and traveling with the tobacco, a tape traveling with the belt adjacent to the exit of the tobacco from the tube.

13. In a cigarette machine, a tube through which the tobacco passes having a wrapper section followed by a seaming section, a top belt moving with the tobacco in the tube and forming the upper surface of the tube with which the tobacco contacts, means supporting a wrapper paper in the counter-part position in said tube, and means deflecting the top belt away from the tobacco, in advance of the seaming section; said deflecting means comprising a roller in position to

sustain the belt above the tobacco and impose pressure upon the tobacco through the medium of the belt.

14. In a cigarette machine, a tube through which the tobacco passes, a belt constituting a moving surface with the tube traveling with the tobacco therein and a wheel extending through the wall of the tube and compressing the tobacco therein through the medium of the moving belt and means supporting a wrapper paper in relation to said belt to constitute a moving surface and traveling with the tobacco therein.

15. In a cigarette machine, a wrapping tube having a channel for tobacco and lateral partition walls projecting downwardly and forming channels for the sides of the wrapper paper extending upwardly from the bottom of the wrapping tube, a top belt traveling in said wrapping tube, constituting an upper surface moving with the tobacco therein and having its edges deflected downwardly by said partitions, and a wrapper paper moving in said wrapping tube, providing a lower surface moving with the tobacco therein and having its edges extending upwardly but separated from the top belt by said partition walls.

16. In a cigarette machine, a tube through which the tobacco rope is passed and a belt forming a moving surface within said tube entering the tube with the tobacco from a point in advance of the tube and in line of the tobacco rope feed, a wrapper paper feeding means, and a paper guide constructed to hold a paper in position to constitute a closure for the open side of the trough.

17. In a cigarette machine, a tube through which the tobacco rope passes, suitable supports for the tobacco rope in advance of the tube, a belt confining the tobacco rope upon said supports passing with the tobacco in the tube and constituting a moving surface therein and means supporting a wrapper paper in relation to said trough and traveling with the tobacco therein.

18. In a cigarette machine, a wrapping tube adapted to receive the tobacco and form a tobacco rope, suitable supports for the rope in advance of the wrapping tube and entering the tube with the tobacco, a belt above the tobacco rope confining the tobacco within the tube entering the tube with the tobacco and traveling therein.

19. In a cigarette machine, a rope forming means, a wrapping means and a belt traveling through both of said means providing in each a moving surface with which the tobacco contacts, a wrapper paper feeding means and a paper guide adapted to hold a wrapper paper in position conforming to the shape of the tobacco rope.

20. In a cigarette machine, a rope forming means, a wrapper paper feeding means and a paper guide, a belt traveling above the to-

bacco rope and providing a moving surface with which the tobacco contacts, a wrapper paper feeding means and a paper guide adapted to hold a wrapper paper in position conforming to the shape of the tobacco rope.

21. In a cigarette machine, a rope forming means, a wrapping means and a belt traveling through both of said means providing in each a moving surface with which the tobacco contacts and providing a bridging confining surface between them, means being provided to support the tobacco rope on the side opposite said bridge confining surface comprising a tongue confining the tobacco in the rope forming mechanism.

22. In a cigarette machine, a rotary rope-forming mechanism, a wrapping mechanism, a belt traveling through said rotary rope-forming mechanism, stripping the tobacco rope therefrom, traveling through said wrapping mechanism, and forming a confining bridging wall between said mechanisms, and means for supporting the tobacco rope on the side opposite the said confining bridging wall, comprising a tongue confining the tobacco in the rope-forming mechanism and extending tangentially therefrom at the point of departure of the tobacco rope.

23. In a cigarette machine, a rotary rope forming mechanism, a wrapping mechanism, a belt traveling through said rotary rope forming mechanism stripping the tobacco rope therefrom, traveling through said mechanism and forming a confining bridging wall through said mechanisms and means for supporting the tobacco rope on the side opposite said confining bridging wall comprising a tongue confining the tobacco in the rope forming mechanism and extending tangentially therefrom at the point of departure of the tobacco rope.

24. In a cigarette machine, a tobacco conveying trough and belt constituting the bottom of said trough extending with said trough to the point of discharge and there stripping the tobacco from the trough by digression of the paths of the troughs and belt, a wrapper paper feeding means and a paper guide constructed to hold a wrapper paper in position to constitute a closure for the open side of the trough.

25. In a cigarette machine, a rotary conveying trough for the tobacco and a belt running upon the bottom of said trough as a pulley and also over a suitable guide outside of said trough whereby the belt leaves the trough tangentially, and means supporting a wrapper paper in relation to said trough to constitute a moving surface closing said trough and traveling with the tobacco therein.

26. In a cigarette machine, an open sided traveling conveyer trough for the tobacco,

and means supporting a wrapper paper in relation to said trough to constitute a moving surface closing said open side of the trough and traveling with the tobacco therein.

27. In a cigarette machine, an open sided traveling conveyer trough for the tobacco, a wrapper paper feeding means and a paper guide constructed to hold a wrapper paper in position to constitute a closure for the open side of the trough moving with the trough and the tobacco therein.

28. In a cigarette machine, an open sided traveling conveyer trough for the tobacco, a wrapper paper feeding means and a fixed paper guide constructed to hold a wrapper paper in position to constitute a closure for the open side of the trough moving with the trough and the tobacco therein.

29. In a cigarette machine, a tobacco rope-forming mechanism comprising an open sided traveling conveying trough for the tobacco, a paper guide conforming thereto, means for supplying a wrapper paper to said paper guide, in position to provide a surface closing the open side of the trough, and means causing the paper to travel with the conveyer trough and the tobacco therein.

30. In a cigarette machine, a tobacco rope-forming mechanism comprising an open sided traveling conveying trough for the tobacco, a paper guide conforming thereto and adapted to support a wrapper paper in position to provide a surface closing the open side of the trough, and means adapted to cause a wrapper paper to travel with the conveying trough and with the tobacco therein; said paper guide having lateral flanges confining the paper in line with the trough.

31. In a cigarette machine, a tobacco rope-forming mechanism comprising an open sided traveling conveying trough for the tobacco, a paper guide conforming thereto and adapted to support a wrapper paper in position to provide a surface closing the open side of the trough, and means adapted to cause a wrapper paper to travel with the conveying trough and with the tobacco therein; said paper guide having at one end a guiding roller over which the paper passes.

32. In a cigarette machine, a tobacco rope forming mechanism comprising an open sided traveling conveying trough for the tobacco, a paper guide conforming thereto and adapted to support a wrapper paper in position to provide a moving surface closing the open side of the trough and traveling with the tobacco therein, said paper guide terminating in a straight end by which the paper and the tobacco resting thereon are directed away from the trough.

33. In a cigarette machine, an open sided traveling conveying trough for the tobacco, a paper guide for closing the open side of

and confining the tobacco in said trough and adapted to support a wrapper paper in position to constitute a moving surface traveling with the tobacco within the trough, a
5 belt within the trough comprising a moving surface therein opposite to that provided by the wrapper paper and also traveling with the tobacco.

34. In a cigarette machine, an open sided
10 rotary conveyer trough for the tobacco, a wrapper paper feeding means, and a paper guide confining the paper in position to close the open side of the trough and confine the tobacco therein.

35. In a cigarette machine, an open sided
15 rotary conveyer trough for the tobacco, a wrapper paper feeding means, and a paper guide confining the paper in position to close the open side of the trough and confine the tobacco therein; the path of the paper
20 being directed away from the rotary trough tangentially whereby the tobacco may leave the trough without bending the rope.

36. In a cigarette machine, an open sided
25 rotary conveyer trough for the tobacco, a wrapper paper feeding means, and a paper guide confining the paper in position to close the open side of the trough and confine the tobacco therein, and a belt traveling around
30 the bottom of the trough, as a pulley; said belt and paper being deflected from the rotary trough in substantially parallel tangential lines and conducting the tobacco away between them.

37. In a cigarette machine, a rope forming means, including a trough, a wrapping means including a tube, and a belt running through both said trough and tube, constituting a moving surface running with the
40 tobacco in each, and having a path extending in a direction different from that of the trough, as it leaves the trough, whereby the tobacco is stripped from the trough.

38. In a cigarette machine, a rope forming mechanism including a trough and a
45 wrapping mechanism, including a tube, a belt, and a wrapper paper running through said trough and tube in relation to constitute in each, two opposed moving surfaces
50 traveling with and confining the tobacco between them; said belt and paper leaving

the trough at an angle thereto whereby they strip the tobacco from the trough and confine it till it reaches the tube.

39. In a cigarette machine, an open sided
55 rotary rope-forming trough, a wrapping tube, a belt, a wrapper paper feeding means, and a paper guide; said belt and the wrapper paper being directed within the trough and over its open side respectively, for parts of
60 its circumference, and directed thence through the wrapping tube.

40. In a cigarette machine, an open sided
65 rotary rope-forming trough, a wrapping tube lying in a line substantially tangential thereto, a belt running around a portion of the bottom of the trough and thence leaving the trough tangentially and extending through the tube, a wrapper paper feeding means, and paper guides directing the paper
70 partly around the trough in position to close its open side, and thence tangentially away from the trough, parallel with the belt as it leaves the trough, and thence through the tube.

41. In a cigarette machine, a rotary rope forming device, a folding tube to which the rope is delivered from the rope forming device, a guiding wheel adjacent to the wrapping tube, a belt passing around the rope
80 forming device and through the wrapping tube and guided away from said wrapping tube around said roller, and an adjustable pressure roller for pressing the belt against the rotary rope forming device.

42. In a cigarette machine, a rope forming device comprising a rotary trough, a wrapping tube receiving the rope from said trough, a guiding roller carried by said
90 wrapping tube, a belt tightener, an adjustable belt pressure wheel and a belt traveling around the rotary trough, through the wrapping tube, around the guiding roller, beneath the belt tightener and between the belt pressure wheel and the rotary trough.

The foregoing specification signed at Cincinnati, Ohio, this 26th day of April, 1910.

NAPOLÉON DU BRUL.

In presence of two witnesses:

D. S. DU BRUL,
H. WEYRICH.