(No Model.)

W. R. NORRISS.

Cigarette Machine.

No. 242,836. Patented June 14, 1881.

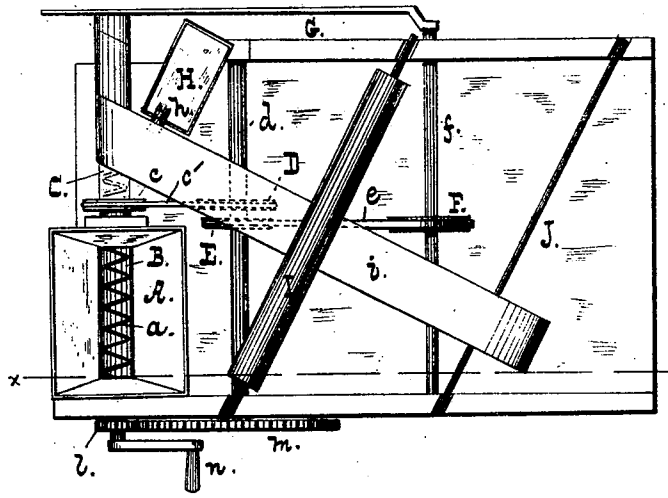


Fig. 1.

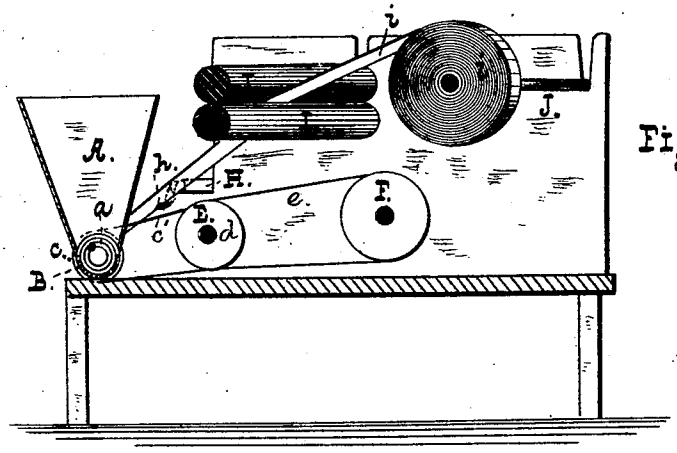


Fig. 2.

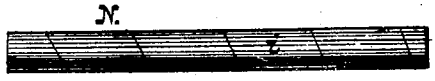


Fig. 3.

WITNESSES.

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WILLIAM R. NORRISS, OF BALTIMORE, MARYLAND.

CIGARETTE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 242,836, dated June 14, 1881.

Application filed April 11, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. NORRISS, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in the Manufacture of Cigarettes; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a top plan of the machine. Fig. 2 is a sectional view of the same on line *x x* of Fig. 1, and Fig. 3 is a plan of the product of the said invention.

My invention relates to the manufacture of cigarettes consisting of a filler of cut tobacco and a wrapper of paper; and it has for its object to produce a continuous cylinder of tobacco wrapped spirally with paper and adapted to be cut up into cigarettes of any desired length, either in the process of manufacture or subsequently.

My said invention consists, first, in certain features of construction and combinations of parts in the machine; second, in the process, hereinafter set forth, of forming the endless cylinder; and, third, in the product of the machine—the cigarette, to wit.

In the drawings, A is a hopper suitably mounted upon a support, and having a hemi-cylindrical bottom, B, the axis of which coincides with that of a revolving glass tube, C, on which latter is mounted a pulley, *c*, connected by a belt, *c'*, with a pulley, D, on the shaft *d*.

In the bottom B and tube C is mounted a screw-conveyer, *a*, driven by a crank, *n*, and on the crank-shaft is mounted a pinion, *l*, that meshes with a wheel, *m*, on the shaft *d*.

E is a pulley on the shaft *d*, which carries a belt, *e*, that is led over a pulley, F, on the shaft *f*.

G is a knife mounted on the shaft *f*, at the side of the machine, and adapted to sever the cigarette cylinder into lengths.

H is a vessel for holding paste or gum, and *h* is a wick or brush for feeding the paste to the edge of the cigarette-wrapper.

The paper is mounted in the form of a roll, *i*, on a shaft, J, and is led between guide-rollers I I, as shown, to the tube C.

Such is the construction of the machine.

In operation, the hopper being filled with tobacco, the crank *n* is turned, communicating motion to the shafts *d* and *f*, the conveyer *a*, and tube C. The fillet *i*, being wound on the latter, is drawn forward by the motion of the tube and the tobacco is forced through the latter through the medium of the screw *a*. The tobacco forces the portion of the fillet which is wrapped on the tube C gradually off the latter, and the knife G, at each revolution, severs the cylinder into lengths. The edge of the fillet is pasted as it passes the wick or brush *h*, securing the wrapper as it is wound on the tube C.

In starting the machine it is necessary, after the tube is filled with tobacco to its mouth, to wrap upon it the fillet of paper and fold it over the mouth of the tube, so as to give the tobacco a point of resistance to start the wrapper off the tube. Once started, the machine produces a continuous cigarette, drawing the wrapper off the tube by reason of the greater friction of the tobacco in its wrapper than of the latter on the tube. This tube is, by preference, of glass, as it is perfectly smooth inside and out and facilitates the feed of the tobacco and the delivery of the wrapper; besides, its transparency admits of the operation of the screw being observed.

The product of the machine—the cigarette N—is shown in Fig. 3, and it possesses certain advantages over the usual straight-seam cigarette which may well be set forth.

The method of manufacture insures perfect uniformity of filling throughout, and the spiral seam is of paramount importance.

It is well known that the usual straight-seam cigarette burns slower at the seam than elsewhere, by reason of the double thickness of paper and the presence of the paste, and as a result the paper burns away on the opposite side, allowing the sparks and ashes to fall on the clothing of the smoker. By making a spiral seam this defect is practically obviated. The fire encounters the seam at an obtuse angle and burns across it, and the wrapper is uniformly consumed. Furthermore, the burning of the wrapper is retarded by the extent of the seam, and the tendency of the paper to burn away in advance of the ignited tobacco is diminished.

What I claim is—

1. The method herein described of forming

cigarettes, consisting in forcing a continuous charge of tobacco through a tube and into a continuous spiral wrapper wound upon the said tube, as set forth.

2. In a cigarette-machine, a tube constituting the former, in combination with mechanism for wrapping spirally thereon a fillet of paper and for forcing into the wrapper a charge of tobacco, as set forth.

3. In a cigarette-machine, a revolving tube or former and mechanism for forcing therethrough a continuous charge of tobacco, and for wrapping upon the said tube a fillet of paper, as set forth.

4. In a cigarette-machine, a tube containing a screw-conveyer, and mechanism for feeding to the said tube a fillet of paper, and for revolving the tube and conveyer, as set forth.

5. In a cigarette-machine, a tube or former, a screw-conveyer, mechanism for delivering to the tube a fillet of paper and for revolving the tube and conveyer, and a pasting mechanism, combined and operating as set forth.

6. In a cigarette-machine, and in combination with a tobacco-feeding device, the glass tube C and mechanism for wrapping spirally upon the said tube a fillet of paper, as set forth.

7. In combination with the hopper and conveyer, the tube C and shaft J, inclined, as shown, to the axis of the tube, and mechanism for revolving the tube and forcing therethrough a charge of tobacco, as set forth.

8. In combination with the hopper, conveyer, and tube C, the knife G and mechanism for revolving the tube and forcing therethrough a charge of tobacco, as set forth.

9. In combination with the hopper, conveyer, and revolving tube C, the pulleys E F, belts *c' e*, and knife G, as set forth.

10. A cigarette having a spiral paper wrapper gummed at the edge, as set forth.

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Witnesses:
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