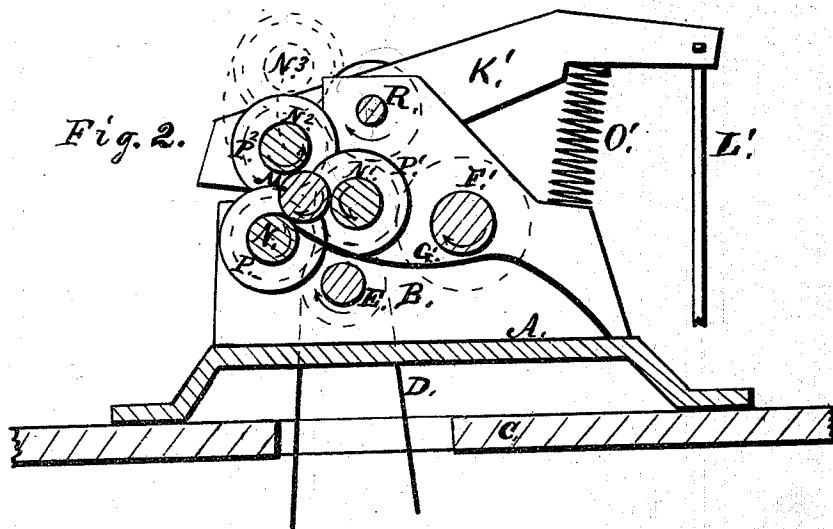
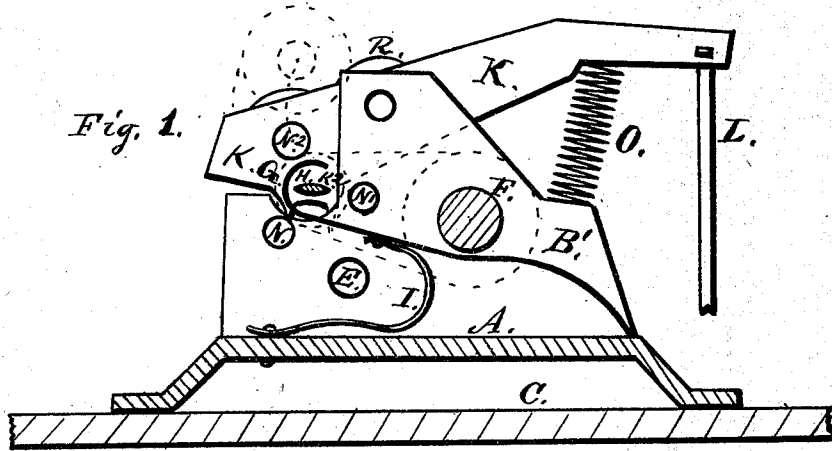


H. E. TYLANDER.
Cigar Machines.

No. 139,280.

Patented May 27, 1873.



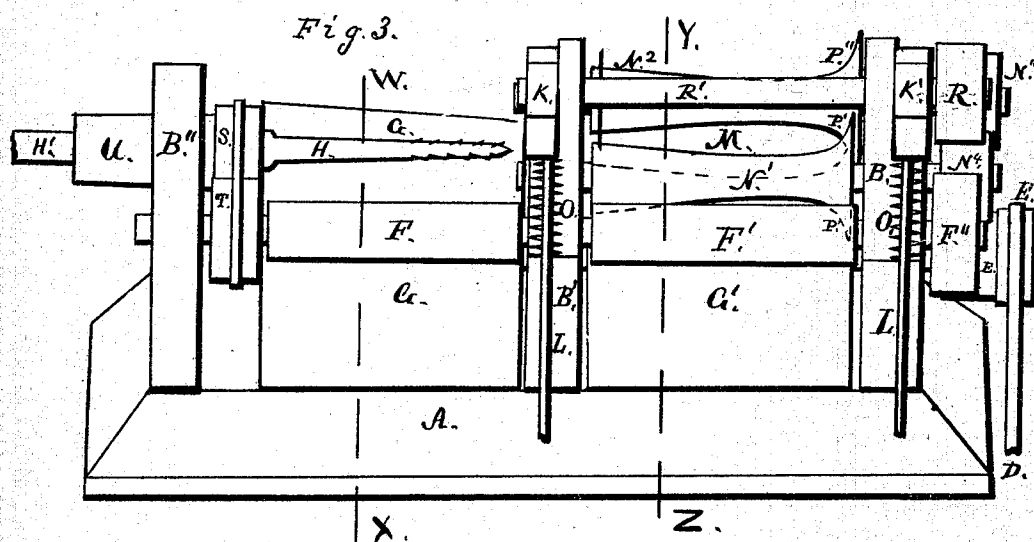
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Inventor: Hans Emmanuel Tylander.
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UNITED STATES PATENT OFFICE.

HANS E. TYLANDER, OF KEOKUK, IOWA.

IMPROVEMENT IN CIGAR-MACHINES.

Specification forming part of Letters Patent No. **139,280**, dated May 27, 1873; application filed February 12, 1873.

To all whom it may concern:

Be it known that I, HANS EMANUEL TYLANDER, of Keokuk, Iowa, have made a new and useful Improvement in Cigar-Making Machine, of which the following is a specification:

This invention consists of a machine for making cigars; and it is made as set forth hereinafter, referring to the accompanying drawings, in which—

Figures 1 and 2 are vertical cross-sections of the machine in parallel planes, showing two parts as in use. Fig. 3 is a side elevation, as seen from the position of the operator, a little elevated, and showing lines *w x* and *y z*, on which the sections shown in Figs. 1 and 2 are taken.

The machine consists of a general frame, A B, which may be of iron, and may be mounted on a table, C, like the tables of sewing-machines. This table has a treadle and fly-wheel similar to those of sewing-machines, or other means of operating the driving-band D, which passes over wheel E, shown in dotted lines, and from this actuates the several parts of the machine driven therefrom. A suitable sheet of tobacco is placed with its edge under the wheel F, which turns and feeds the leaf into the machine, as shown in Fig. 1. The leaf follows the guide-apron G, on which it rests, up and around spindle H. This spindle is made somewhat flat, and with teeth serrated on its two edges, and is turned rapidly. This catches the leaf and rolls or winds it around itself as the leaf is fed in. As this winds up, suitable filling to form the cigar is placed on the leaf so as to be wrapped into the cigar around the spindle. As this goes on, the guide-apron G presses against the mass on the spindle, keeping it smooth and compact. A spring, I, holds guide-apron G to the spindle, and allows it to give backward as the cigar increases in size. When the cigar has reached the proper size, and the leaf or leaves are wound upon the spindle, the spring-levers K K¹ are raised by means of connecting-rods L L¹ reaching down to a treadle or by other means. This opens a space at the end of the spindle sufficient for the cigar to pass endwise; then the spindle with the cigar is driven lengthwise by means of the hand on the end of a long shaft of the spindle, or by other means. In this way the

spindle with the cigar enters the part shown in Fig. 2, where the cigar is represented at M resting on two rollers, N N¹; then the spring-levers K K¹ are released, and bring the roller N² from the position shown in dotted lines at N³ onto the cigar, as shown in full lines, holding the cigar between the three rollers. This brings the part K² at the end of the cigar to prevent its being drawn back with the spindle as it is returned to its first position; then the three rollers N N¹ N² are turned rapidly all in one direction, as shown by the arrows, and roll the cigar between them, closing up the central space left by the spindle, and giving a regular looseness with compactness throughout the cigar, the springs O O¹ keeping the wheel N² against the cigar with a suitable pressure, and allowing for variation in size. The rollers N N¹ N² are formed with such a longitudinal outline as to give the cigar the suitable shape between them. The end next to the part shown in Fig. 1 is intended to form the fire-end of the cigar, and to be rather more closely pressed together so as to press the cigar against the other end to form the tip. The tip end of the cigar is drawn to a conical point by the enlarged and suitably-arranged ends of the rollers at P P¹ P², fitting down behind each other one after the other, as shown, and with sufficient sharpness not to interfere, and to give the proper curved cone to the end of the cigar. The wrapper-point is introduced under the feed-roller F', which feeds it forward on the guide-apron G' till the point reaches the tip end of the cigar and is wound around it, the wrapper being rolled up in a way like that usual by hand over the whole cigar. There is a cam-shaped circular cutter on the end of roller N², which cuts off the cigar and wrapper at the end, as in the usual manner. When the cigar is finished the spring-lever K K¹ with roller N² are raised and the cigar thrown out, leaving this part ready to receive another. The forming and finishing can both go on at once on two cigars, or one can be made alone. The driving-shaft E has a gear or friction wheel on its end, shown in Fig. 2 by dotted lines, and in Fig. 3. This wheel E turns the two wheels on the ends of rollers N N¹. The wheel on N¹ turns the wheel on the end of roller F F', and turns also wheel

R, which turns the wheel on the end of roller N². The spring-levers K K¹, which bear roller N², are pivoted on the shaft of wheel R so that the wheel on the end of that roller is always in gear with wheel R as it is raised and lowered.

Instead of direct contact of all these gearing-wheels, little belts may be used, the belt for roller N² in such case being suitably elastic. The shaft of rollers F F' at the end opposite that shown in Fig. 2 bears a wheel, from which a band drives one, through the axis of which the shaft of the spindle H passes. This shaft is round where it passes through this wheel so that the wheel will not turn it; but there is a part made square at the point which just passes into this wheel when the spindle is in place for winding up the cigar. There is a seat in the axis of the wheel, made to receive this square part and fit it so as to turn the spindle to wrap the cigar around it.

While this is taking place the other end of the spindle may rest against part K² as an end bearing. The teeth on the spindle are cut with their inclinations toward the point so as to carry the cigar forward with it, and not catch when the spindle is withdrawn. The spindle may be tapered somewhat to facilitate the withdrawal.

Various modifications of the parts may be made, and other features may be added, if desired.

I claim—

1. The wrapping-spindle H and guide-apron G in a cigar-machine, substantially as set forth.
2. The combination of wrapping-spindle H and forming-rollers N N¹ N² in a cigar-machine, as set forth.

HANS EMANUEL TYLANDER.

Witnesses:

SAML. J. WALLACE,
R. M. MARSHALL.