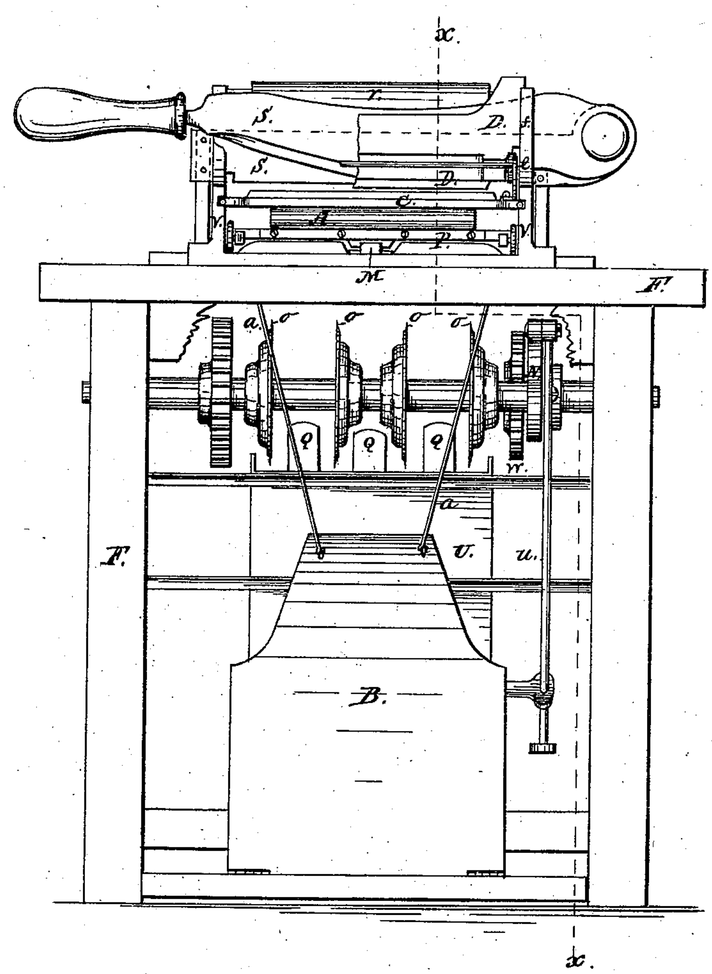
4 Sheets—Sheet 1.

L. J. BEJOTTES.

CIGARETTE MACHINE.

No. 183,483. Patented Oct. 24, 1876.

Fig. 1.



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CIGARETTE MACHINE.

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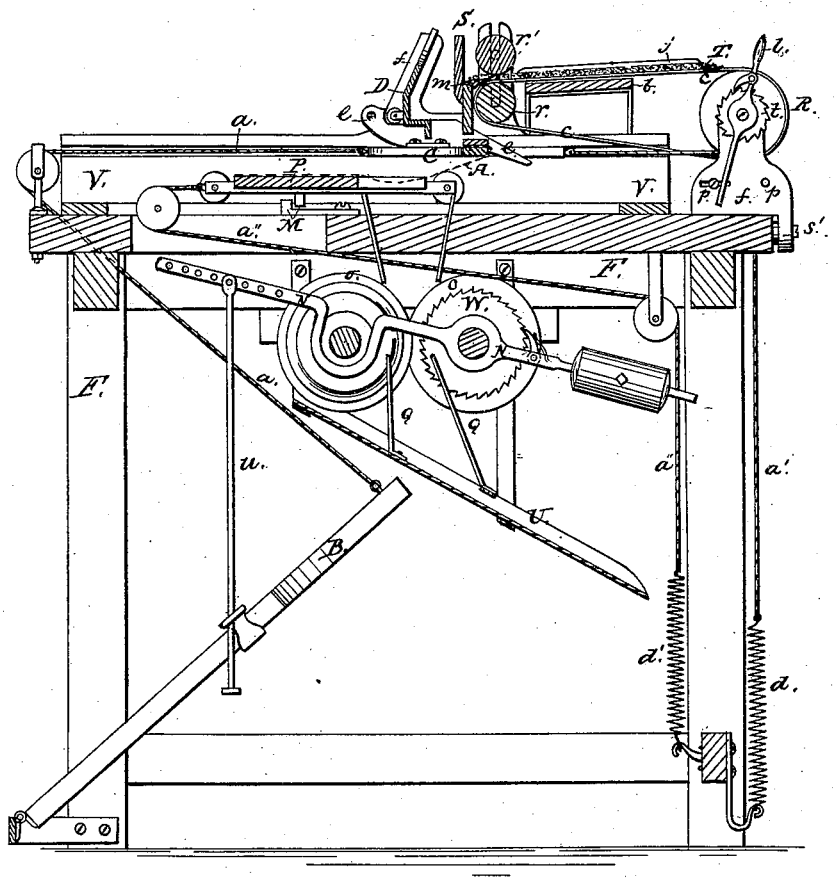
Fig. 2.



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CIGARETTE MACHINE.

No. 183,483. Patented Oct. 24, 1876.

Fig. 4.

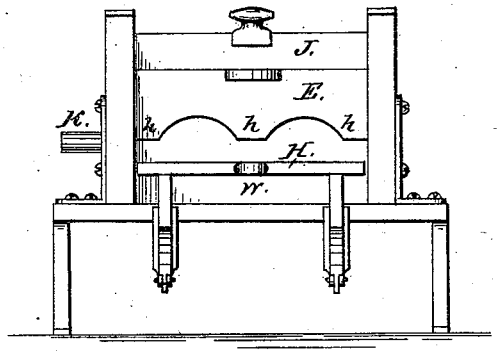


Fig. 5.

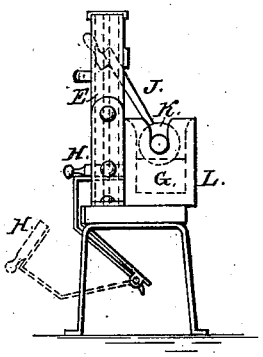


Fig. 6.

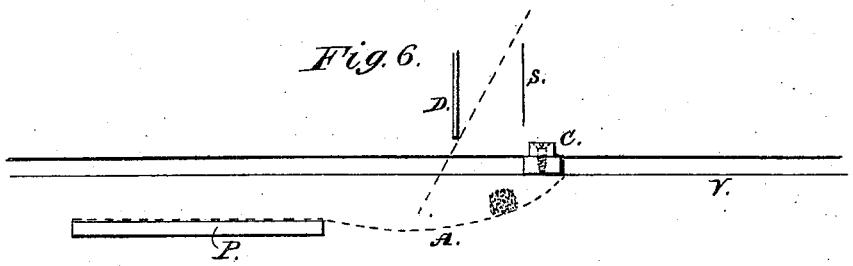


Fig. 7.

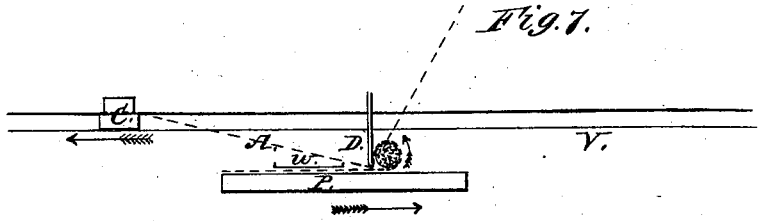
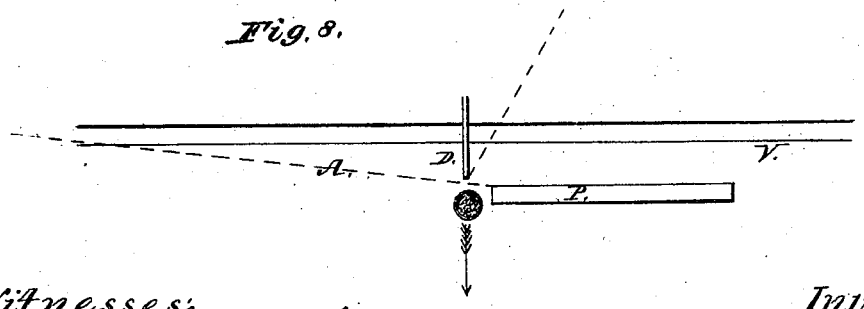


Fig. 8.



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4 Sheets—Sheet 4.

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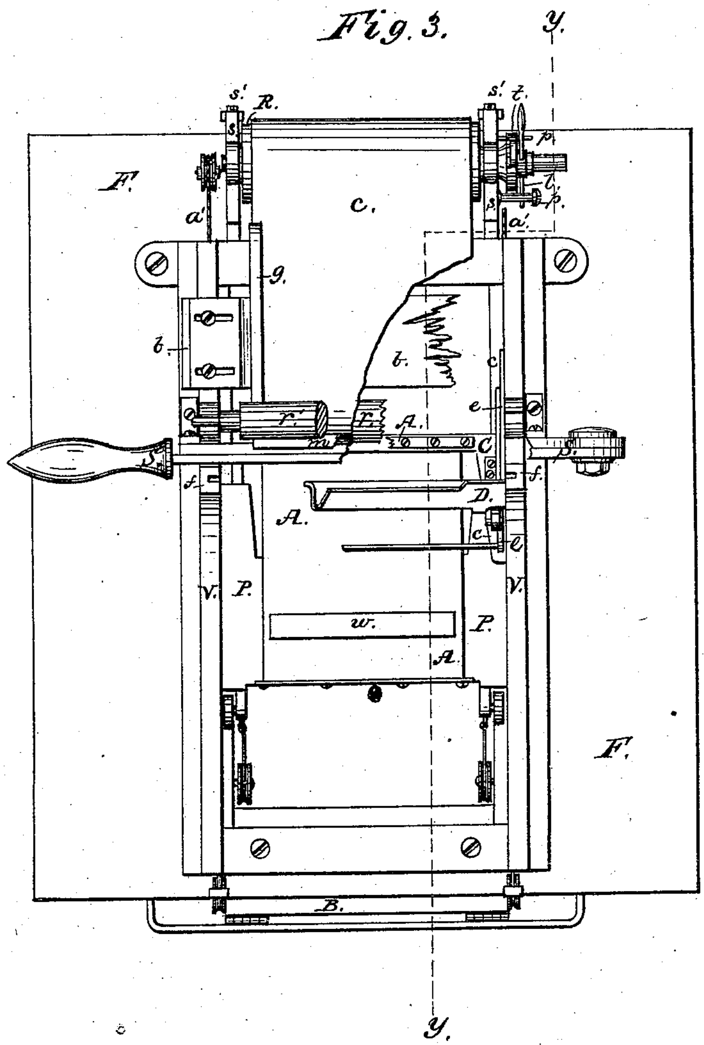
CIGARETTE MACHINE.

No. 183,483. Patented Oct. 24, 1876.

Fig. 3.



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UNITED STATES PATENT OFFICE.

LÉON J. BÉJOTTES, OF NEW YORK, N. Y.

IMPROVEMENT IN CIGARETTE-MACHINES.

Specification forming part of Letters Patent No. **183,483**, dated October 24, 1876; application filed April 27, 1876.

To all whom it may concern:

Be it known that I, LÉON J. BÉJOTTES, of New York city, in the State of New York, have invented a new and Improved Machine for Making Cigarettes, of which the following is a specification:

My invention relates to placing a sheet of cut tobacco upon an endless conductor, which feeds the tobacco to a pair of shears, which cuts from the sheet the proper quantity, which falls on an apron, there to be rolled, in the manner hereafter specified, folded into a strip of paper, left to drop between rotary cutters, where the stick is cut to suitable lengths, and discharged into a receiver.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of the specification.

Figure 1 is a front elevation, with some parts broken away and other parts suppressed to simplify the drawing and make it more intelligible. Fig. 2 is a vertical section on the irregular lines *x x* of Fig. 1 and *y y* of Fig. 3. Fig. 3 is a plan view with some of the upper parts broken away. Fig. 4 is a front elevation of the gumming device. Fig. 5 is a side view of the same. Figs. 6, 7, and 8 illustrate the successive and relative positions of the parts used in rolling the tobacco.

Similar letters of reference indicate like parts in all the figures.

F represents the table or frame, to which all the parts are attached. *r r'* are two rollers, around which passes an endless conductor, *c*, of canvas, leather, or any suitable material. The roller *r* is supported on two stands, *s s*, fastened to the table F. By pushing the lever *l*, the ratchet *t* will be made to turn and carry rollers *r r'* and conductor *c* in the same motion. If a sheet of cut tobacco, T, be spread by hand or otherwise practically even, it will be carried forward toward the shear S, and after passing under the iron roller *r'*, which presses it thinner, and gives it a more solid body, it is presented to the shear, which, in closing, will cut a strip off the sheet and drop it on the apron A. The screws *s' s'* regulate the tension of the conductor. The pins *p p* regulate the length of movement given to lever *l*, and consequently the amount of tobacco fed to the shear. This said amount, combined with the thickness of the sheet, will regulate the quantity of tobacco dropped on apron A, and consequently the thickness of the cigarette-stick.

The wooden bridge *b*, that passes across under the conductor and the guides, and the metallic strip that lies between roller *r* and the lower half of shear S, are intended to facilitate the placing and travel of the tobacco.

In the gumming implement connected with the machine is a pack of paper of suitable dimensions, intended to be the wrappers of the cigarettes.

When a wrapper, *w*, is to be used in the machine, the operator lowers the sliding bar E, which is lined on its lower face with three pieces of some sort of sticking-plaster, *h*, that will adhere to the uppermost wrapper, and carry it along till it reaches its upper position; then the seat H is interposed between that wrapper and the pack below. The gumming-plate J is then brought down to the gumming-roller K, in the position shown in Fig. 5. From that position it is brought to the vertical position again, carrying with it all along its lower edge that was in contact with the gumming-roller K a quantity of liquid gum or paste, intended to be deposited on the edge of the wrapper *w*. By bringing it down in its vertical position and carrying the bar E along in its way down, the two will come down to the seat H, where plate J will slightly press on the edge of the paper and deposit the paste. Then every part is allowed to go back where the springs or their gravity calls them, the wrapper remaining stuck to the bar E, from where the operator detaches it and places it on the apron A, with the pasted edge turned toward the front of the machine, in the positions shown in Figs. 3 and 7. The box L is lined with sheet-zinc or other suitable material, and filled with liquid gum, G, or paste, at a level sufficiently high for the roller K to partly immerse in it. By giving, from time to time, a turn to the roller K, it will carry on its upper surface a sufficient quantity of paste to be delivered to the edge

of plate J when it comes in contact with roller K. The operator may have his gummer anywhere by him, within easy reach, on the table or directly on top of the machine; or, if he finds it convenient, he may place it across and above the machine, and connect, by a string, the gumming-roller to roller R, by which the gumming-roller will receive its intermittent rotary motion.

The rolling apparatus consists of apron A, platform P, carriage C, check-plate D, and treadle B, strings *a a* connecting from the carriage C to the treadle, and strings *a' a'* attached to springs *d d*.

The tobacco platform and carriage being in the position as shown in Fig. 6, the operator presses with his foot on treadle B, and causes the carriage C to slide toward him, the apron to double itself up, inclosing the tobacco in its fold, relieving the check-plate D from its elevated position, where it was kept by spurs *e e*, allowing it to come down by its own weight along its slides *f f*, resting squarely on the apron, and causing it to yield under its weight, isolating the tobacco behind it in the fold of the apron, as shown in Fig. 7. The effect of the pulling on the carriage, and consequently on the apron, is to make the tobacco revolve and the platform to recede toward the back of the machine, as shown by the arrows. In continuing the forward motion of the carriage, and the consequent rolling of the tobacco, the wrapper *w* will reach between the two folds of the apron and under the tobacco, participating in its rotary motion, and enveloping the whole body of tobacco until the pasted edge reaches over the other edge and closes the wrapper. A moment later the apron will become stretched flat, as shown in Fig. 8, and as a consequence the cigarette-stick will escape from the forward edge of the platform and fall through an opening of the table into the cutting device. It will be sufficiently guided to make it fall with certainty between the blades of two sets of rotary cutters, *o o o*, each cutter of one set having its match on the other set, and the pair forming a shear, upon which the cigarette-stick rests by its own weight. The diameters of the cutters are calculated to be large enough in order to "bite" on the cigarette when caused to turn. As soon as the platform P has let the cigarette down it is free to yield to the weights or springs *d d'*, that solicit it forward through strings *a a'*, and it goes rapidly in that direction up to the center of the machine, to the stop M, ready to repeat the same action. While the operator is pressing on the treadle he will occasion, through rod *u*, the lever N on the cutting-machine to operate on the ratchet-wheel W, and consequently on the cutters *o o o*, and the cigarette-stick will be cut into several stumps or short pieces to the desired length given by the spacing of the shears, which are adjustable along their shafts. As they are cut they are received on slides or inclines U into boxes or recipients, and the waste ends received separately, to be used over again, if deemed expedient. In case it should happen that some of the cigarettes should stick between two cutters, and be carried around without dropping, the cutting device is provided with clearers Q, standing in the way and forcing the cigarettes out from between the cutters.

By this description it is seen that two operators will be needed—one to attend the feed of tobacco and the other the rolling; but it is obvious, and I desire it to be considered as a part of my invention, that the various parts comprising the actual *ensemble* of the machine can easily be connected together by mechanical devices, and made to operate automatically and at the proper time, such as in the case of a job-printing press, the action of the foot on the treadle being simply the original and continuous motive power, which would from there be distributed through the various parts of the machine by means of shafts, cranks, and cams, and so timed as to cause every part to perform its operations properly.

It may be well to connect with the feeding apparatus an adjustable and self-feeding tobacco-cutter, that would discharge its product directly on the conductor *c*, and their relative speed would by their combination determine the volume of tobacco deposited on apron A. It will be well to make the rotary cutters *o o o* to act with more rapidity, so as to make a neater cut on the cigarette. This can easily be accomplished by an addition of geared wheels, 2 to 1, or 3 to 1, between the ratchet W and one of the arbors of the cutters.

It may be found advisable, especially in an automatic machine, to replace the ordinary hand-shear S by a pair of parallel blades, as in the case of the mechanical paper-cutters. The more or less tension given to springs *d d'* will evidently regulate the density or hardness of the cigarette, as it will occasion a stronger resistance on the part of the platform P to obey the impulse of the carriage C through the apron A. It will be well to perforate the inclined plane U, in order to let the waste particles of tobacco through, so as to receive the cigarettes clean in the receiver.

As seen by this description, my object is to make cigarettes open at both ends. These cigarettes have heretofore been made by hand, or, with a piece of parchment, put up in a very crude manner. It was a slow and tedious process, and the work was very imperfect. This machine will do with one or two operators the work of many hands, and if put up automatically and operated by power, as aforesaid, it will do still much more.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of carriage C, platform P, apron A, springs *d d'*, cords *a a' a''*, check-plate D, and cutters *o*, as and for the purpose set forth.

2. The gumming device, consisting of the sliding bar E, having faces *h*, vibrating seat H, gumming-plate J, roller K, and box L, combined and arranged as described.

3. The combination of sliding platform P, lever N, ratchet W, cord *a''*, spring *d'*, treadle B, cutters *o*, and rod *u*, as and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 25th day of April, 1876, in the presence of two subscribing witnesses.

LÉON J. BÉJOTTES.

Witnesses:

JOHN J. MCKNIGHT,

E. FORDEUX.