

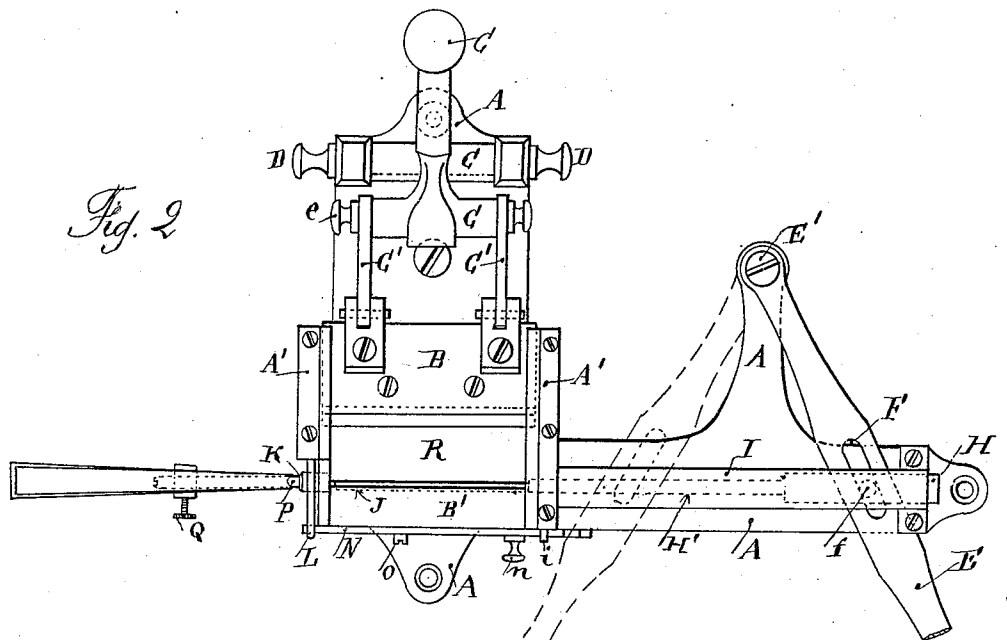
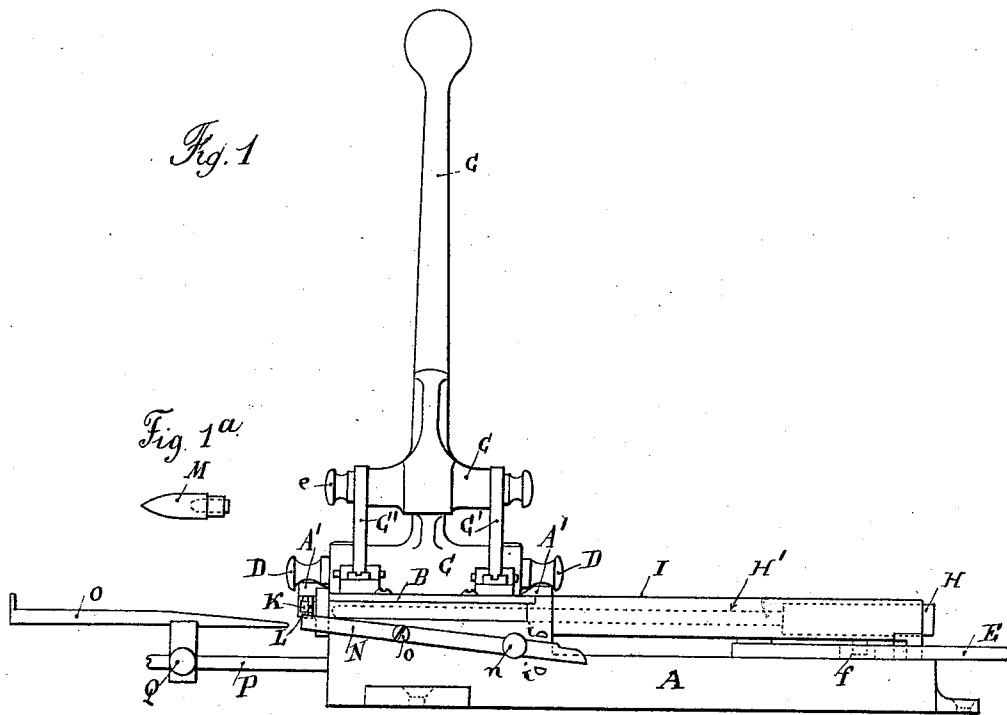
(No Model.)

3 Sheets—Sheet 1.

A. BRUANDET.
CIGARETTE MAKING MACHINE.

No. 562,213.

Patented June 16, 1896.



Witnesses:

J. C. Lebert.
O. Block.

Inventor:

Antony Bruandet,
By H. A. de Vos.
Attorney.

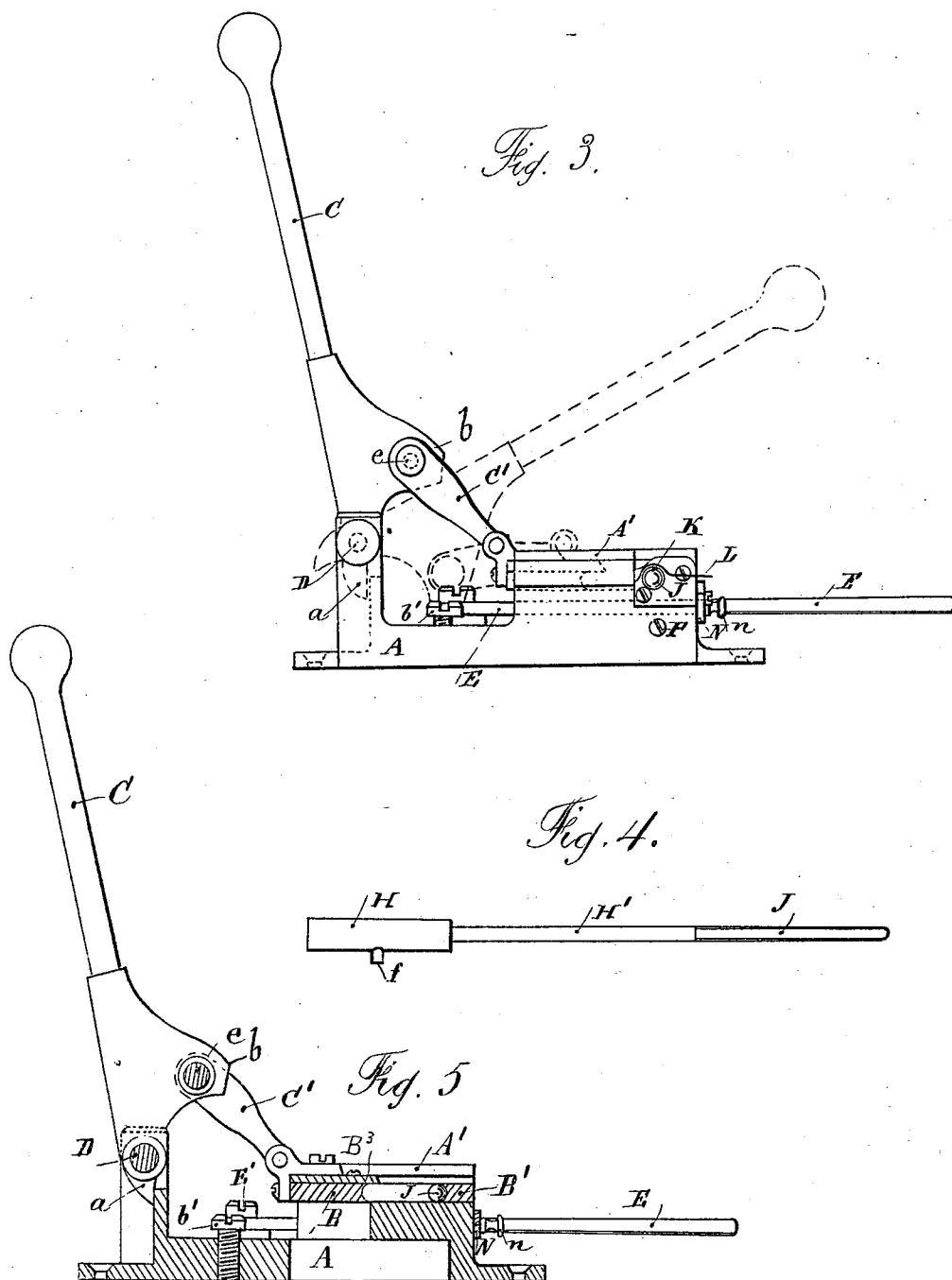
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(No Model.)

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Fig. 6.

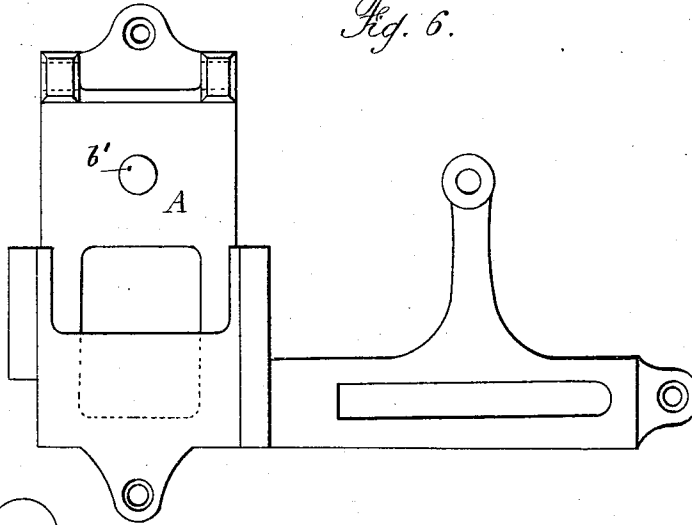


Fig. 7.

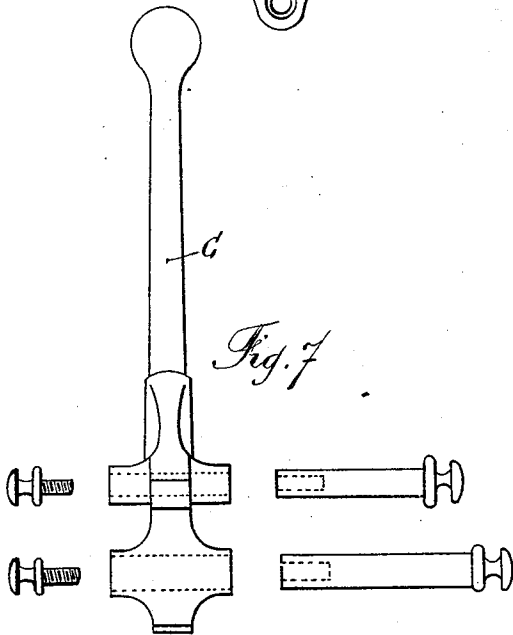
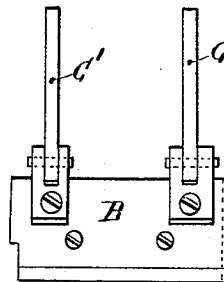


Fig. 8.



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UNITED STATES PATENT OFFICE.

ANTONY BRUANDET, OF PARIS, FRANCE.

CIGARETTE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 562,213, dated June 16, 1896.

Application filed December 8, 1894. Serial No. 531,263. (No model.) Patented in France July 4, 1894, No. 226,660; in Luxemburg November 12, 1894, No. 2,163; in Spain November 15, 1894, No. 16,563; in Switzerland November 15, 1894, No. 9,366; in Germany November 16, 1894, No. 86,008; in Belgium November 19, 1894, No. 112,819; in Hungary November 19, 1894, No. 1,791; in Portugal November 19, 1894, No. 1,948; in Italy November 21, 1894, No. 37,669; in Tunis November 22, 1894, No. 130; in Turkey December 13, 1894, No. 427; in South Australia July 15, 1895, No. 2,985; in Victoria July 17, 1895, No. 12,338; in New South Wales July 18, 1895, No. 5,909; in Argentine Republic October 26, 1895, No. 1,693; in India November 27, 1895, No. 315, and in Mexico February 4, 1896, No. 815.

To all whom it may concern:

Be it known that I, ANTONY BRUANDET, a citizen of the French Republic, residing at Paris, France, have invented certain new and useful Improvements in Cigarette-Making Machines, (for which I have obtained Letters Patent in France, No. 226,660, dated July 4, 1894; in Belgium, No. 112,819, dated November 19, 1894; in Hungary, No. 1,791, dated November 19, 1894; in Italy, No. 37,669/17, dated November 21, 1894; in Luxemburg, No. 2,163, dated November 12, 1894; in Spain, No. 16,563, dated November 15, 1894; in Portugal, No. 1,948, dated November 19, 1894; in Switzerland, No. 9,366, dated November 15, 1894; in Tunis, No. 130, dated November 22, 1894; in Turkey, No. 427, dated December 13, 1894; in Germany, No. 86,008, dated November 16, 1894; in Argentine Republic, No. 1,693, dated October 26, 1895; in India, No. 315, dated November 27, 1895; in South Australia, No. 2,985, dated July 15, 1895; in New South Wales, No. 5,909, dated July 18, 1895; in Victoria, No. 12,338, dated July 17, 1895, and in Mexico, No. 815, dated February 4, 1896,) of which the following is a specification, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a cigarette-making machine, and especially aims to provide a machine possessing a very simple construction and manipulation. The arrangement and proportion of the parts are also such as produce a very strong and solid machine, all weak parts being eliminated.

The invention also particularly relates to the blade or carrier, by means of which, in connection with a suitable pressure-plate, the roll of tobacco is formed, and after being formed is carried into the paper tube.

My said machine also possesses the great advantage of being readily used with fresh and fat tobacco.

In order to better explain my improved machine and its parts, I have illustrated the same in the annexed drawings, forming a

part of this specification, and wherein similar parts are designated by similar letters of reference throughout the several figures.

Figure 1 is a front elevation of the apparatus when open. Fig. 1^a is a detail of a tool for arranging the cigarette-paper in position. Fig. 2 is a plan view of the apparatus when open. Fig. 3 is an elevation of the left side of the machine, the receptacle being removed. Fig. 4 is a rear view of the stuffing-piston and blade. Fig. 5 is a transverse section on the axis of the pressure-lever in elevation. Fig. 6 is a plan view of the frame. Fig. 7 is an elevation of the pressure-lever and its axes. Fig. 8 is a plan view of the pressure-plate and of the links connecting it with the pressure-lever.

The manipulation is effected in two principal movements: First, when the tobacco is placed in the space adapted for the purpose, I depress the pressure-lever C, Fig. 3. The tube of paper being arranged around the opening through which is discharged the roll of tobacco, I next move from right to the left the lever E acting upon the stuffing-piston, Fig. 2.

The machine is composed of a frame A, provided with horizontal guides A' A'. In this guide-frame moves laterally the compression and cutting plate B, which coöperates with the stationary plate B'. Each of said plates B B' has a concave inner edge, as shown, and said plate B carries a top piece B³ with an inclined edge, which serves, in combination with the upper edge of plate B', to shear the tobacco in the manner hereinafter described. Said plate B is toggled to the short arm of the lever C by the parallel links C'. This said lever C is fulcrumed to the frame by an axle D, and is equipped at its lower end with two stops, the one, *a*, to limit its motion in the raised position and the other, *b*, in the lower position, Fig. 3. The stop *a* abuts in the raised position against a part of the frame, and the stop *b* in the lower position against an adjustable screw *b'*.

The relation of the lever C, links C', and

plate B is such that when the lever C begins to be lowered from its highest position it causes the plate B to move toward the plate B', thereby diminishing the width of the open space R and compressing the tobacco in that space and into the concavity of the blade J, thereby forming the tobacco into a roll. As the lever C continues to descend the plate B continues to approach the plate B' until the tobacco is fully compressed and cut. Then the lever C still continuing to move in the same direction a little farther to its lowest position, the plate B withdraws a little, relieving the pressure on the tobacco. Thus a single motion of the lever C produces a reciprocation of the plate B. For, as will be seen in Fig. 3, as long as the pivot *e* of the links C' has not passed the horizontal line passing through D the plate B will move toward the plate B', and as soon as the pivot *e* has passed the horizontal line the plate B will retract, relieving the pressure, and the roll of tobacco formed by the motion of the plate B will obtain a certain release for the purpose of being discharged from the machine into the paper tube, in the manner hereinafter described. The said roll of tobacco is moved or transmitted, as heretofore said, by a motion from right to the left of the lever E, fulcrumed at E' to a support provided on the frame A. This lever is provided with a slot F, wherein is engaged a stud *f*, attached to a piston or rod H, which piston or rod H snugly fits in a guide I, fixed to the frame A. The said piston or rod is composed of a part H, equipped with an extension H' of a smaller diameter and which is provided at its end with a concave blade J, which I call "carrier" or "transmitter," and which has its edges turned toward the plate B. The compression of the tobacco when the lever C is lowered is effected against this blade, and the blade penetrates with the roll of tobacco into the paper cigarette-tube, which is arranged in the line of the motion of the blade J, as hereinafter described.

As will be seen, the tobacco protrudes through a short tube K of slightly conical shape, upon the projecting part of which rests, with a light pressure, a suitable curved spring L, the aforesaid blade J working through the tube K into the paper cigarette-tube. In order to place in position the tube of cigarette-paper around the tube K, I use a conical piece M, Fig. 1^a, specially designed for this purpose. This operation is effected by disengaging the spring from the tube K by pushing slightly on the knob *n* of a lever N pivoted at *o*. When the paper tube is put in place, I release the lever N, which will in turn release the spring L, and said spring then clamps the paper tube in place. At the end of the stroke of the lever E, which position is indicated in dotted lines in Fig. 2, that is to say, when the roll of tobacco has nearly passed entirely out of the tube K, the lever E acts upon the beveled end of the lever N, Figs. 1 and 2, which will thus disengage the

spring L and thus release the paper tube, or, rather, the finished cigarette. The motion of the lever N is limited upward and downward by two checks *i*. In line with the blade J and the tube K is arranged a receptacle O, adjusted at the desired distance upon a rod P by means of a screw Q.

The operation of the machine is as follows: The chamber R, which is formed by the bed of the frame A and the plates B B', is filled with a proper quantity of tobacco. The lever C is then pushed down and thus the roll of tobacco is formed between the plate B and the blade J, while the excess of the tobacco is cut off by the plates B and B'.

It will be understood that while the plate B is first compressing and then cutting the tobacco the blade J is between said plates B B' with its concave side toward plate B, so that the roll of tobacco formed by the compression of said plate B is supported in the blade J. When the tobacco is cut, the further movement of lever C withdraws the plate B a little, as hereinbefore explained, whereby the pressure on the blade J is relieved and it can move more freely. When the tobacco has been cut, the conical piece M, Fig. 1^a, is placed in the tube K. A paper tube is then placed in position over the piece M, so that it reaches under the spring L, which is raised by means of lever N, and then immediately released. The lever E is then moved to the left, and immediately back to its original position. The cigarette is then finished and drops into the receptacle. The lever C is thereupon raised, retracting the plate B to its original position, and the apparatus is ready for another operation.

It is obvious that the concave blade J, which serves as carrier, may also be used in some other types of cigarette-machines, and I do not desire to limit myself to the exact form of construction as described; but

I claim as my invention—

1. The combination in a cigarette-making machine, of a fixed plate B', rectilinear guides A', a compressor-plate B arranged in said guides, a lever C adapted to actuate said plate B, and a connection to said plate B from a point out of the line of the axis of said lever, so that during one reciprocation of the lever, the plate B first advances, then recedes a little, then again advances a little and finally returns to its starting-point, substantially as described.

2. The combination in a cigarette-making machine, of a lever, a compression-plate having a concave working edge, a stationary plate also having a concave edge and coöperating with the compression-plate to cut the tobacco, a concave blade arranged between said compression and stationary plates, a lever operatively connected with said blade and adapted to move the same in a direction perpendicular to the motion of said compression-plate, whereby said blade carries the formed roll of tobacco out from between said plates, and a

holder for the cigarette-tube arranged in line with said blade, substantially as described.

3. In a cigarette-making machine, the combination of an annular holder for a cigarette-tube, plates B B' adapted to compress and cut the tobacco, a shiftable concave blade adapted to receive a roll of tobacco, and means for moving said blade longitudinally through the annular holder into the tube, substantially as described.

4. The combination of the stationary plate B', the lever C, pressure-plate B having a concave working edge, a toggling-link connecting said plate B with said lever C, a piston H adapted to reciprocate between the plates B and B', a concave blade J on the end of said piston H, normally located between the plates B and B' and adapted to carry the roll of tobacco, and a lever E operatively con-

nected with said piston H and moving in a plane perpendicular to the plane of motion of the lever C, substantially as described.

5. In a cigarette-making machine, the combination of a stationary plate, a reciprocating pressure-plate adapted to compress and cut tobacco, a concave blade normally located between the two plates and adapted to carry the roll of tobacco formed by the pressure-plate and means for moving said blade in a direction perpendicular to the motion of the pressure-plate, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of November, 1894.

ANTONY BRUANDET.

Witnesses:

VICTOR MATRAY,

CLYDE SHROPSHIRE.