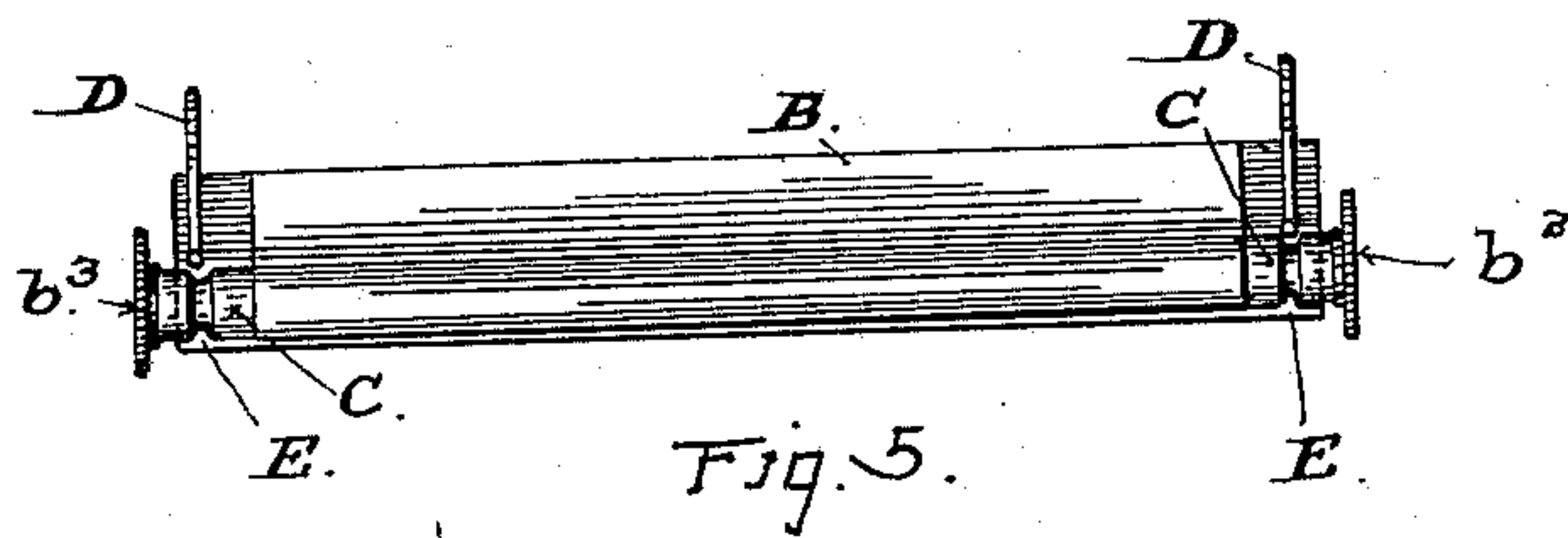
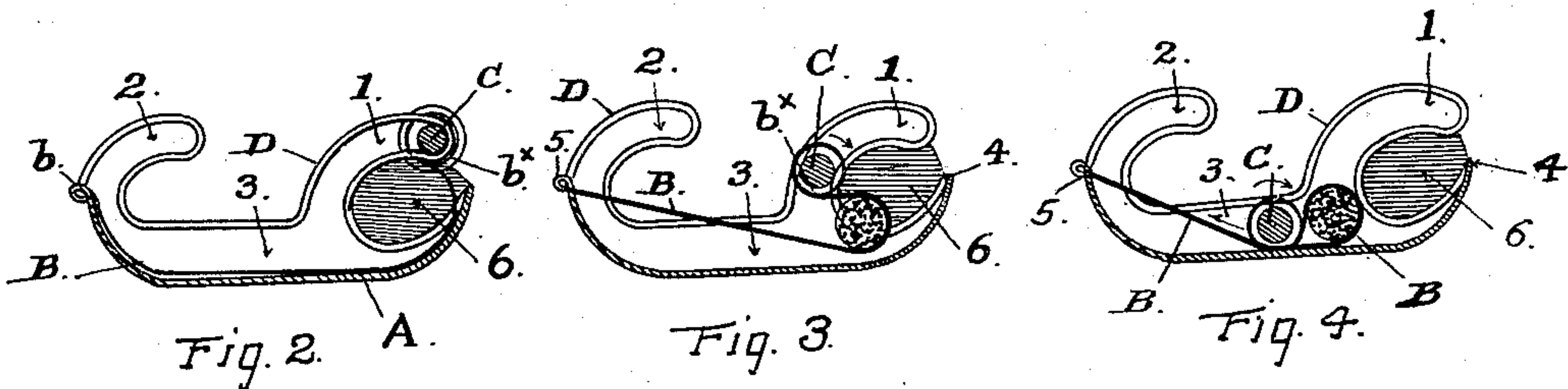
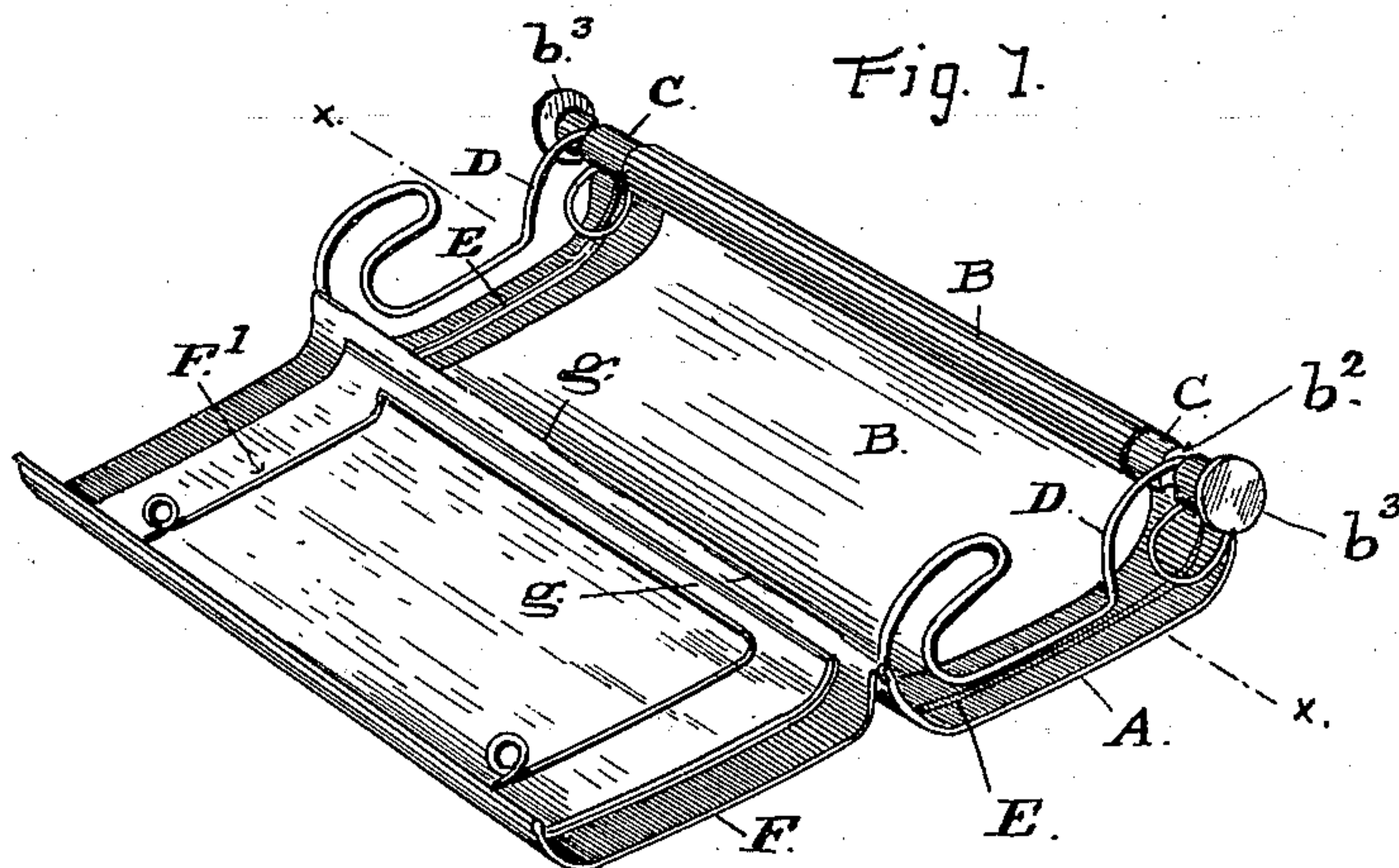


(No Model.)

T. S. FITCH.  
POCKET CIGARETTE MACHINE.

No. 604,208.

Patented May 17, 1898.



Witnesses:

E. Salomon  
J. Regner

Inventor:

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# UNITED STATES PATENT OFFICE.

THADDEUS S. FITCH, OF OAKLAND, CALIFORNIA.

## POCKET CIGARETTE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 604,208, dated May 17, 1898.

Application filed September 22, 1897. Serial No. 652,596. (No model.)

*To all whom it may concern:*

Be it known that I, THADDEUS S. FITCH, a citizen of the United States, residing in the city of Oakland, county of Alameda, and State of California, have invented certain new and useful Improvements in Pocket Cigarette-Machines, of which the following is a specification.

My invention relates to improvements made in that class or description of hand cigarette-making machines or devices in which the paper wrapper and the tobacco filling are all confined in the fold of an apron that is fastened at one end to the body of the machine and is attached at the other end to a traveling roller, the rotation of which has the effect to apply the wrapper and form the cigarette.

My present improvements have for their object to produce a simple and effectively-working machine or device of this class and one in which the cigarette is brought to a true cylindrical form, while the degree or condition of closeness or compactness in the filling is readily controlled by the operator.

To these ends and object the said invention consists in the described construction and combination of parts producing an improved machine of the kind or description mentioned at a low cost.

The following description explains the nature of the said improvements and the manner in which I proceed to construct and produce the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a view in perspective of my improved cigarette-making device with the parts in position ready to receive the paper wrapper and tobacco. Fig. 2 is an end view, in vertical cross-section, with the apron and roller in position before the paper and tobacco are placed on the apron. Figs. 3 and 4 are similar views showing different positions assumed by the roller and the cigarette in the rolling operation. Fig. 5 is a vertical longitudinal section taken about on the line  $xy$ , Fig. 1.

A indicates the bed or body of the machine, B the apron, and C the roller.

D D are curved guides, and E E are fixed rails at the ends of the bed that act together

to control and guide the roller in its movements over and upon the apron.

F is a cover attached by hinges  $g g$  to the bed and forming a cover to that part and also serving as a holder for the paper wrappers.

The body A is best formed of thin sheet metal. It is bent up at the sides, as shown in Fig. 1, and the edges of the turned-up portions are strengthened by forming a bead on them.

The apron B is formed of some soft flexible but inelastic material, such as silk, and it is fastened at one end  $b$  to the turned-up edge along one side of the bed, and at the other end  $b^x$  it is attached to the roller C. The body of the apron between these two ends is unattached to the bed and lies loosely thereon.

The guides D D are formed of stiff wire, bent to shape, as shown in the drawings, to produce the curved slots 1 2 and the straight connecting-slot 3, and they are attached at the ends 4 5 to the upwardly-turned sides of the bed. Stiff wire, having some degree of elasticity or springing quality, will be found to answer well for these guides, although the shape into which the wire is bent will give the desired resilience or spring to the guides to hold the roller with a more or less yielding action during its movements along the guide-slots. The roller B has a groove  $b^2$  around its circumference near each end to take the guide-wires, and it is furnished also with a milled head  $b^3$ , of somewhat larger diameter than the body, for manipulating the roller.

The rails E are fixed on the bed and directly under and in line with the curved guide, and they stand up from the bottom of the bed with sufficient projection to take into the grooves  $b^2$  of the roller and keep the same in working line and position in the wire guides without binding or sticking fast in the slots.

The wires D D are secured at the ends to the bed A, but are unattached at all other points. The circular spaces 6 at the ends are usually closed up by a thin metal disk secured to the wire of the guide, as seen in Figs. 2, 3, and 4, to prevent the tobacco from escaping from the ends of the pocket formed by the turned-up side of the bed when the charge of tobacco is first laid in place in the fold of the apron. This construction is recom-



mended for granulated tobacco; but for long-cut it will not be necessary, and the ends may be left open, as represented in Fig. 1 of the drawings.

5 The cover F forms no part of the cigarette-forming device proper, and it can be omitted in the cheaper forms or styles of the machine. It will be found serviceable, however, as a receptacle for wrappers, for which purpose  
10 it is provided with a spring-clamp F' to retain the wrappers in place. It will also preserve the apron and other parts on the bed from being bent and soiled or worn, and it will dispense with the necessity of providing  
15 a case or receptacle to carry the machine in the pocket.

As thus constructed and combined the device or machine is operated as follows: With the apron B lying loosely and smoothly on  
20 the bed A and the roller resting in the ends of the curved guides 1 1 across the front side of the machine, which is the long side, nearest the operator, when the bed is held horizontally with the head  $d^x$  of the roller, or the  
25 right-hand side, the portion of the apron lying under the roller and upon the curved side of the bed will form a pocket B<sup>x</sup>. Then a quantity of tobacco sufficient to make the cigarette is spread evenly in this pocket after  
30 the paper wrapper is laid in position flat upon the apron. Then a movement forward in the curved guides is given to the roller and also a rotary motion by turning the head  $b^3$  while the roller is pressed forward or away from  
35 the operator, so as to cause it to move from the position shown in Fig. 2 in a downward direction or toward the apron, the result of which is to close the fold of the apron around the tobacco and the paper, as seen in Fig. 4.  
40 Afterward while confined in the guides the roller travels along the straight portions of the guide-slots and upon the apron lying flat on the bed, and at the same time the apron is taken up and drawn tightly around the  
45 partly-formed cigarette by the rotary movement of the roller. This movement is pro-

duced in a direction opposed to the traveling movement, as indicated by the arrow  $x$  in Figs. 2, 3, and 4, so that the portion of the apron surrounding the tobacco and the wrap-  
50 per is drawn into a cylindrical form and closely up against the roller while that part moves along over the bed. By pressing the roller at such time with more or less force against the bed while rotating it the tension  
55 will be increased and the tobacco will be compressed to a greater or less degree, or by holding back the roller in the straight portions of the guides and continuing to rotate it the  
60 filling can be rolled to any required degree of compression. At the end of its travel in the guide-slots the roller runs into the curved guide 2, and the finished cigarette is discharged from the machine in an automatic  
65 manner by the winding up of the apron on the roller. In such position just before its discharge the overlapped edge of the wrapper is readily moistened and pressed down to close the seam and present the cigarette  
70 ready for use.

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

In a pocket cigarette-machine, the combination of the bed having upwardly-curved  
75 sides, a loose apron attached at one end to the side of the bed, the spring-guides having curved slots 1 2 at the ends and a connecting straight slot, fixed rails on the bed beneath and in the same plane with the guides, a  
80 roller adapted to travel along and to rotate in said guides and provided with circumferential grooves for the guides and a head on the end for rotating it, the end of the apron being attached to said roller.  
85

In testimony that I claim the foregoing I have hereunto set my hand and seal.

THADDEUS S. FITCH. [L. S.]

Witnesses:

C. W. M. SMITH,  
CHAS. E. KELLY.