

No. 768,831.

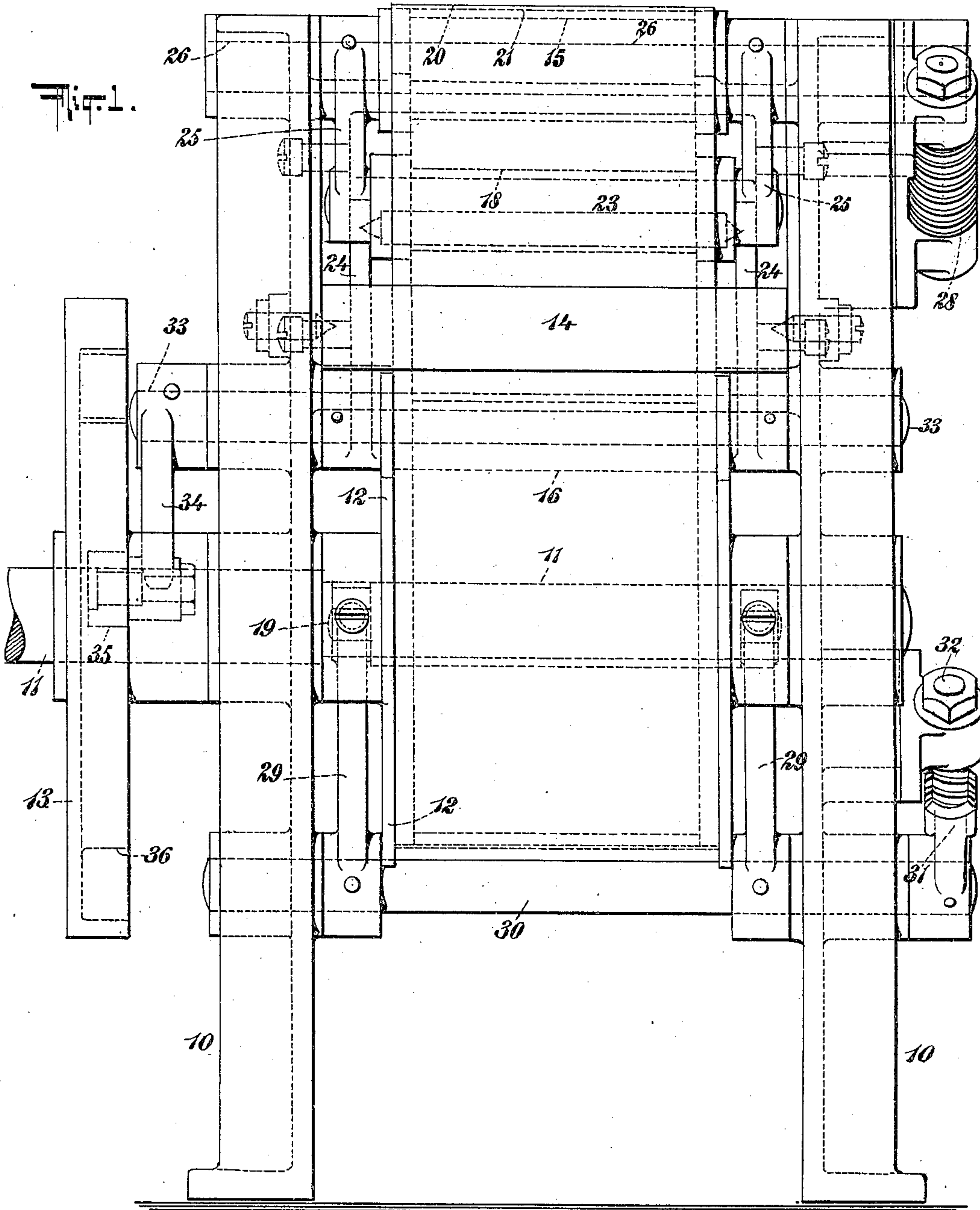
PATENTED AUG. 30, 1904.

B. W. TUCKER.
CIGARETTE AND CIGAR MAKING MACHINE.

APPLICATION FILED JUNE 21, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

Gustave Dietrich.
Edwin H. Dietrich.

INVENTOR

Benjamin W. Tucker

BY

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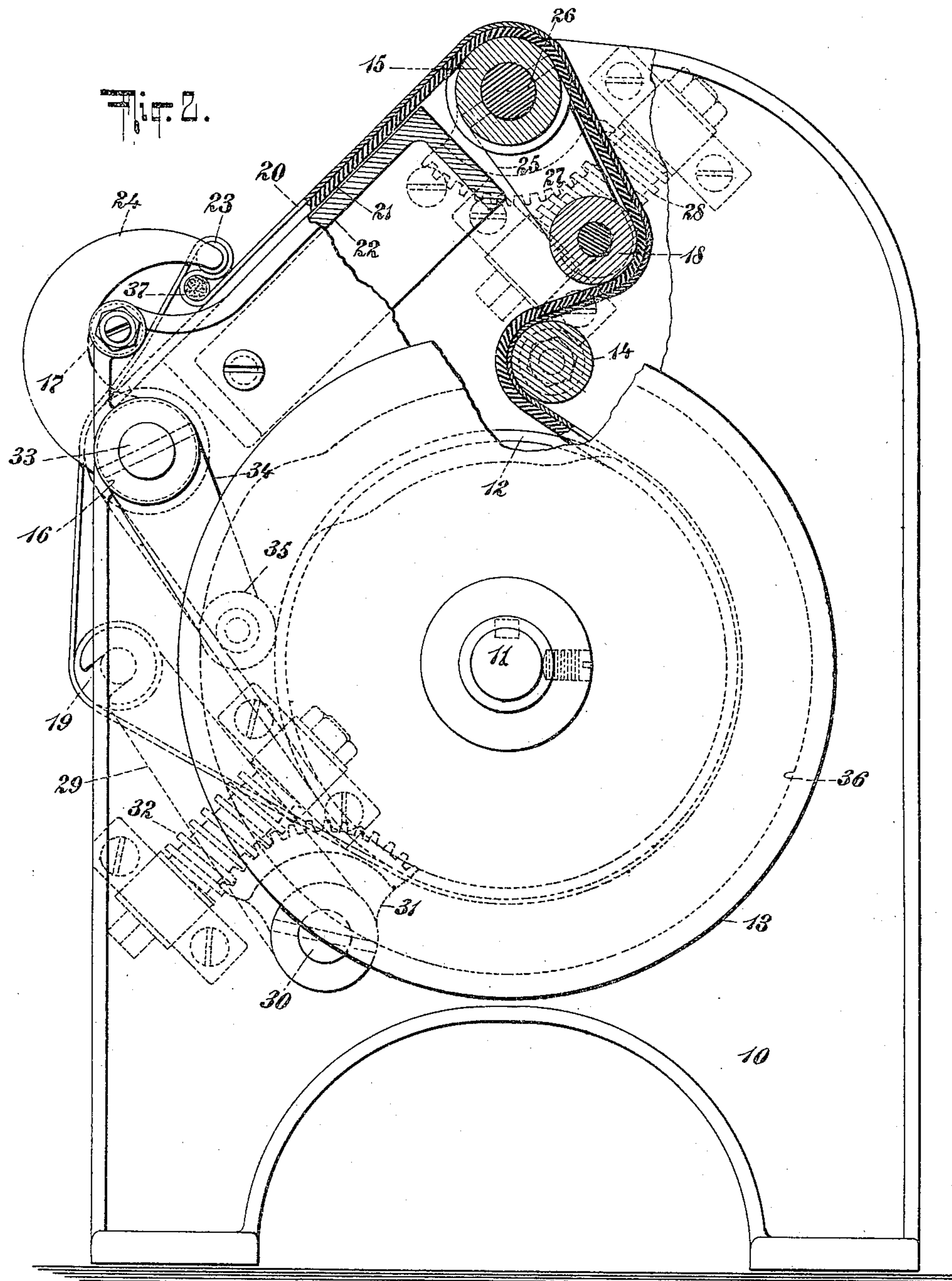
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UNITED STATES PATENT OFFICE.

BENJAMIN W. TUCKER, OF NEWARK, NEW JERSEY.

CIGARETTE AND CIGAR MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 768,831, dated August 30, 1904.

Application filed June 21, 1902. Serial No. 112,568. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN W. TUCKER, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Cigarette and Cigar Making Machines, of which the following is a specification.

The invention relates to improvements in cigarette and cigar making machines; and it consists in the novel features and combinations of parts hereinafter described, and particularly pointed out in the claims.

The invention consists more especially in a novel rolling mechanism comprising an endless rolling-apron, forming the loop or pocket within which the rolling operation takes place, an endless traveling belt engaging the under surface of said apron, and preferably by its frictional contact therewith imparting movement to said apron, and a bed or table over which said apron and belt travel in the same direction.

The object of the invention is to produce a highly efficient and desirable rolling mechanism for cigarette and cigar making machines.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is an end view of a cigarette-making machine embodying my invention; and Fig. 2 is a side elevation, partly in section and partly broken away, of same.

In the drawings, 10 10 denote the side or supporting frames of the machine, and 11 the driving-shaft, to which power will be applied in any suitable manner, the present invention not being confined to either the frames 10 10 or to the means by which power may be applied to the shaft 11.

Upon the shaft 11 is applied a drum 12 and an actuating-cam 13, and intermediate the side frames 10 are the rollers 14, 15, 16, and 17 and also the belt-tightener rollers 18 and 19.

The endless rolling-apron is designated by the numeral 20, and the endless traveling belt engaging the same by the numeral 21, and both said apron and belt have a movement in

the same direction over the surface of the rolling table or bed 22, secured between the side frames 10. The belt 21 passes upon the drum 12 and the rollers 14, 15, 16, and 18 while the apron 20 is exterior to and throughout a part of its length in contact with the traveling belt 21 and in addition to passing over the rollers 14, 15, 16, and 18 travels over the tension or tightener roller 19 and also the rod or roller 23, carried between the ends of the oscillatory arms 24, which, as hereinafter described, are actuated from the cam 13.

The drum 12 is keyed upon and receives its rotary motion from the shaft 11, and the apron 20 and belt 21 derive their motion from said drum 12, the belt 21 contacting directly with the surface of said drum 12 and being in direct contact with the under or inner surface of the apron 20. The apron 20 is in direct contact with the belt 21 except where said apron 20 leaves the belt 21 to pass over the tightener or tension roller 19 and the pocket-forming rod or roller 23.

The tension or tightener roller 18 is carried between the lower ends of a pair of arms 25, depending from the shaft 26 for the roller 15, said arms 25 being fastened to said shaft by pins, as shown in Fig. 1, and said shaft 26 having secured to one end projecting beyond the right-hand frame 10 (looking at Fig. 1) a segment 27 in engagement with a worm 28, which is adapted to be rotated by a key for moving said segment and through the same moving the shaft 18 outward against the belt 21 or inward therefrom for regulating the tension under which the said belt shall be run. The worm 28 and segment 27 constitute simply a convenient means for setting the roller 18 in any desired position.

The roller 19 is carried at upper ends of a pair of arms 29, secured upon the shaft 30, having at its right-hand end (looking at Fig. 1) a segment 31 (shown by dotted lines in Fig. 2) in engagement with a worm 32, adapted to be rotated by means of a key for moving said segment and said arms 29, and thereby effecting the desired adjustment of the roller 19 with respect to the apron or belt 20. The roller 19 engages the apron or belt 20 at a

point where said apron is free of the belt 21, and the roller 18 primarily engages the belt 21, but does so at a point at which the apron or belt 20 contacts with the belt 21.

5 The oscillatory arms 24, carrying at their upper end the rod or roller 23, are at their lower end secured upon the shaft 33 for the roller 16, and the left-hand end of the shaft 33 (looking at Fig. 1) is provided with the
10 downwardly-extending crank-arm 34, carrying a roller 35 within the groove 36 of the cam 13. The shaft 33 is by means of the cam 13 and crank-arm 34 given a rocking motion for the purpose of causing the arms 24 to ele-
15 vate the roller 23 in a direction from the rolling-bed 22 and to lower said roller to its operative position (shown in Fig. 2) in close relation to said rolling-bed, and the groove 36 in said cam 33 will be so formed that at the
20 end of each rotation of the driving-shaft 11 the arm 34 will be moved to turn the rock-shaft 33 and effect the elevation of the roller 23 in a direction from the rolling-bed 22, thereby permitting of the pocket 37 in the
25 rolling apron or belt 20 to be opened up for the removal of the finished cigar or cigarette and the introduction of the proper quantity of filler-tobacco for another cigar or cigarette. Upon the starting of the machine again in
30 motion the cam 13 will restore the arms 24 and roller 23 to their lower operative position, (shown in Fig. 2,) thereby closing the pocket 37 in the apron 20 around the filler-tobacco and enabling the proper rolling of the same
35 within said pocket and the application of the wrapping thereto.

As above described, the power for operating the machine will be applied to the driving-shaft 11 in any usual manner, and the shaft 11
40 will communicate its motion to the cam 13 and drum 12 and through the latter to the traveling belt 21 and thence to the rolling belt or apron 20. The filler-tobacco will be applied upon the apron 20 prior to the shaft 11 starting in motion and while the roller 23 is in its
45 upper position, and the wrapper for the cigar or cigarette will be placed upon the belt 20 in advance of the pocket 37 thereof. Upon the starting of the machine in motion the roller
50 23 will descend to substantially close the pocket 37 and draw the belt 20 around the filler-tobacco, and the belts 21 and 20 will be set in motion from the drum 12, the belt 21 traveling over the drum 12 and rollers 14, 18, 15,
55 and 16, while the belt 20 in addition to passing over said drum and rollers will also travel over the rod or roller 23 and over the roller 19, the said belt 20 at the pocket 37, which is preserved during the travel of the apron 20, serv-

ing to roll the wrapper or binder around the 60 filler-tobacco.

It will be observed that the belt or apron 20 and belt 21 are in contact with each other upon the rolling-bed 22 and travel in the same direction toward the entrance to the pocket 37, the 65 belt 21 serving to aid the movement of the belt or apron 20 around the cigarette or cigar being rolled. The belt 21 travels with and imparts motion to the belt or apron 20, and the latter is by means of said belt 21 aided in the 70 correct rolling of the cigarette or cigar and the application of the wrapper thereto.

In the construction presented the belt or apron 20 is endless and the pocket 37 remains at a predetermined position over the rolling- 75 bed 22, which is rigidly secured, and hence stationary.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine of the character described, 80 the endless rolling belt or apron having a fold for receiving and rolling the tobacco and applying the wrapping thereto, combined with the endless traveling belt in contact with said rolling belt or apron and adapted by its fric- 85 tional contact therewith to drive the same, the stationary bed over which said belts travel in the same direction, and means for driving said traveling belt; substantially as set forth.

2. In a machine of the character described, 90 the endless rolling belt or apron having a fold for receiving and rolling the tobacco and applying the wrapping thereto, combined with the endless traveling belt, rollers upon which said endless belts are mounted, the stationary 95 bed over which said belts travel in the same direction and in contact with each other, and means for driving said belts; substantially as set forth.

3. In a machine of the character described, 100 the endless rolling belt or apron having a fold for receiving and rolling the tobacco and applying the wrapping thereto, combined with the endless traveling belt, rollers upon which said endless belts are mounted, the stationary 105 bed over which said belts travel in the same direction and in contact with each other, means for driving said belts, and means for independently adjusting the tension of said belts; substantially as set forth. 110

Signed at New York, in the county of New York and State of New York, this 19th day of June, A. D. 1902.

BENJAMIN W. TUCKER.

Witnesses:

CHAS. C. GILL,
ARTHUR MARION.