

1,027,553.

Patented May 28, 1912.

2 SHEETS—SHEET 1.

FIG. 1

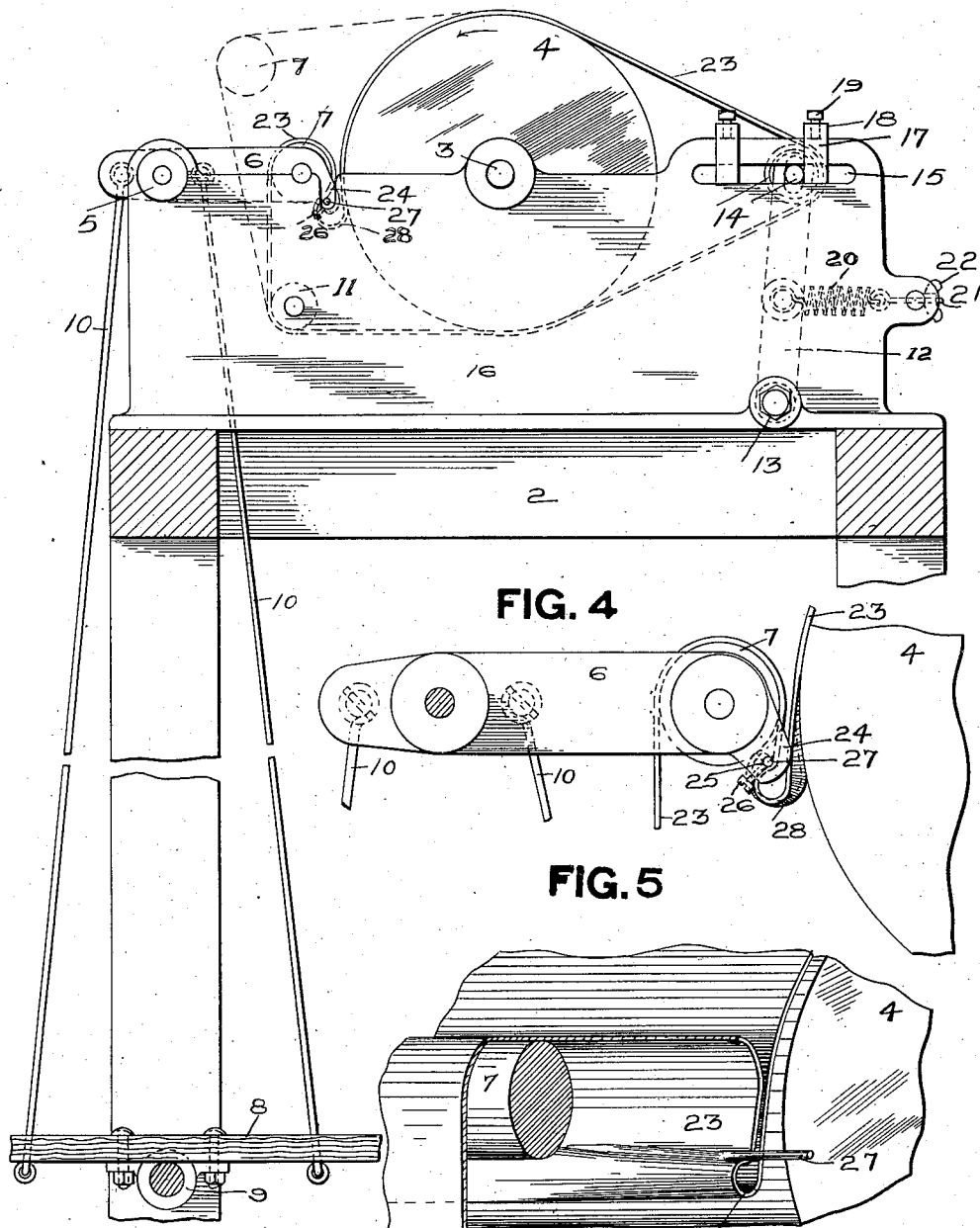


FIG. 4

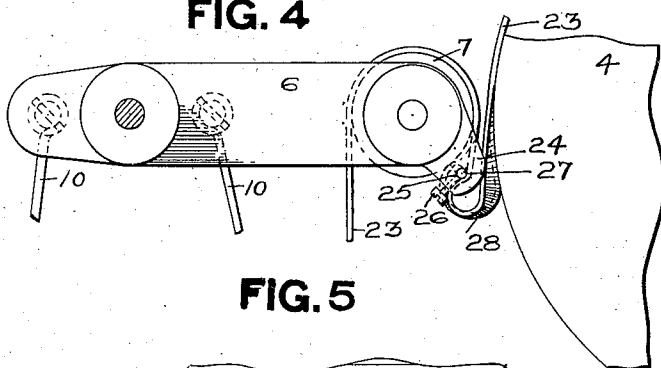
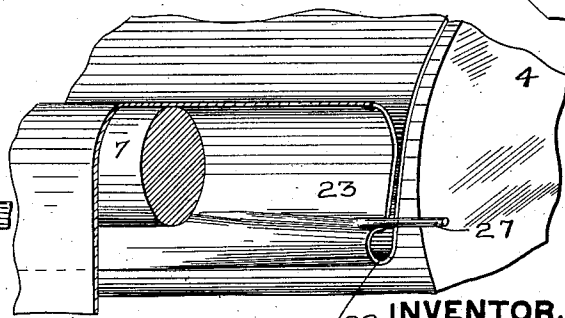


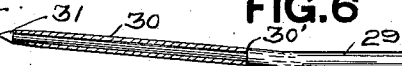
FIG. 5



WITNESSES.

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FIG. 6



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CIGAR MACHINE.
APPLICATION FILED AUG. 6, 1906.

1,027,553.

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2 SHEETS-SHEET 2.

FIG. 2

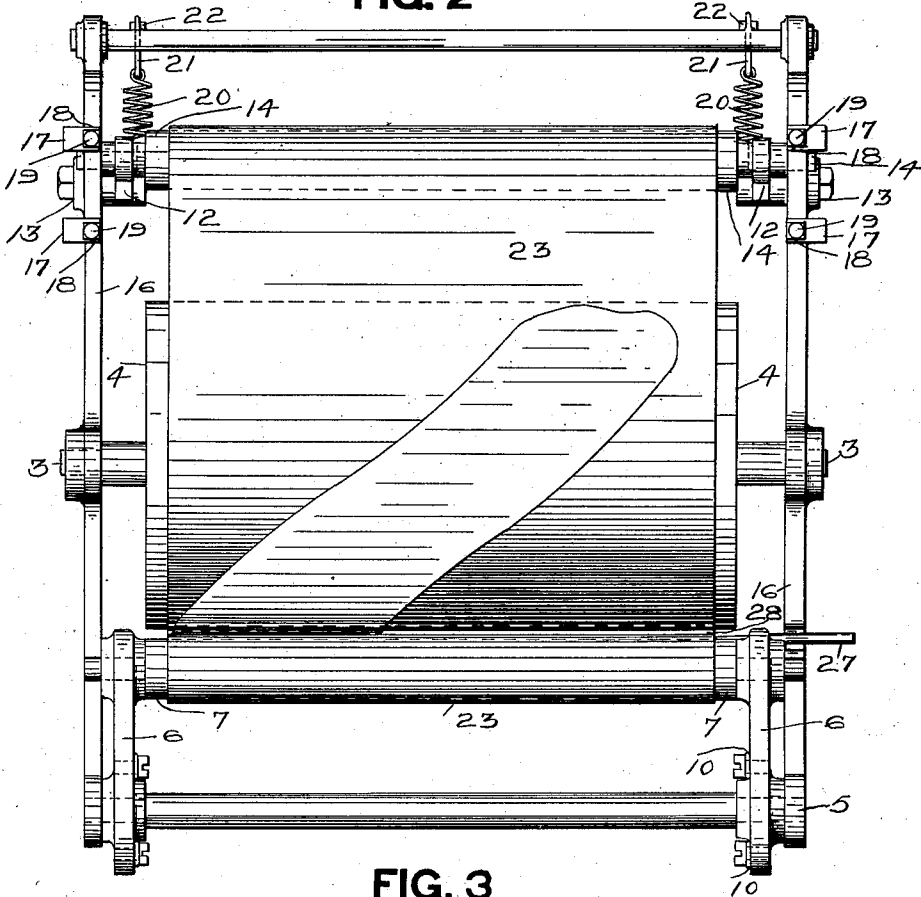
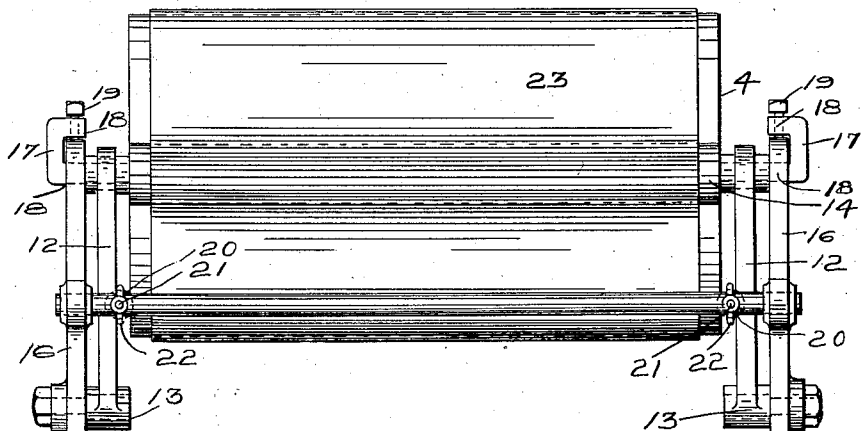


FIG. 3



WITNESSES.

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UNITED STATES PATENT OFFICE.

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CIGAR-MACHINE.

1,027,553.

Specification of Letters Patent.

Patented May 28, 1912.

Application filed August 6, 1906. Serial No. 329,364.

To all whom it may concern:

Be it known that I, RALPH H. LOGAN, a resident of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Cigar-Machines; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to cigar machines.

In an application filed by me on the 30th day of January, 1906, Serial No. 298,685, there is illustrated and described a machine of this character, one of the principal features of which is the self conforming pocket which is adapted when the rolling of the cigar takes place to yield or give as may be necessary in the course of rolling so as to subject the different parts of the cigar to different pressures in order that a cigar of substantially uniform density throughout its length may be obtained and one which will draw easily. The great difficulty in machines of this character, prior to my invention, has been to obtain those variations in pressure which are required to roll a cigar and which have been possible heretofore only through the sensitive and skilled touch of workmen rolling by hand, who unconsciously increase or decrease the pressure by the feel of the cigar as it rolls back and forth under their fingers.

One of the objects of the present invention is to provide other means for giving this variation of pressure in rolling to give a cigar of substantially uniform density throughout.

Another object of my invention is to provide a simple means of obtaining a tapering pocket to give the proper taper to the cigar.

To these ends my invention comprises, generally stated, a roll, a second roll in such position with reference to said first roll that the belt or apron which passes around said rolls may be looped between said rolls to form the pocket for the filler, said second roll being immovable with reference to said first roll during the rolling operation, and a yielding tension device which holds the belt taut in rolling and at the same time yields sufficiently when called upon to provide for any inequalities in the filler in rolling, whereby a substantially uniform density is obtained in the finished cigar.

My invention further comprises certain novel features in the formation of a taper-

ing pocket, all as fully hereinafter set forth and claimed.

In the drawings Figure 1 is a side elevation partly in section, of my improved machine; Fig. 2 is a plan view; Fig. 3 is a rear elevation; Fig. 4 is an enlarged side view showing rocking pawl and of the pocket forming device; Fig. 5 is a perspective view partly in section showing formation of tapering pocket; and Fig. 6 is a modified form of finger.

My invention may be used in connection with any suitable frame or stand, the stand here shown being designated by the numeral 2 which may be formed of wood or metal as desired. Mounted in suitable bearings in the frame is the shaft 3 carrying the drum or roller 4, said shaft being free to rotate in its bearings. The roll 4 may be rotated by hand or other power as desired. Pivoted in the standards 5 on the frame is the rocking frame 6. A roll or guide 7 is mounted in the rocking-frame 6 contiguous to the roll or drum 4. The rocking-frame 6 is operated by means of the treadle 8 fulcrumed at 9 in the bottom of the frame 2. Rods 10 connect the treadle 8 with the rocking-frame 6 at opposite sides of its pivotal point, so that by applying pressure to the treadle on opposite sides of its fulcrum the rocking-frame 6 may be raised or lowered and with it the roll or guide 7. Below the roll 7 is the guide-roll 11. A swinging frame 12 is pivoted at 13 to the frame. Journaled in this swinging-frame 12 is the tension roll 14. The ends of the roll 14 fit in the slots 15 in the frame 16 and said roll is adapted to move in said slots. Stops 17 are provided for the roll 14 in the slots 15, said stops having inwardly projecting lugs 18 one of which fits in the slot and the other engages the frame above said slot. Set-screws 19 secure the stops in any desired position in the slots to regulate the movement of the swinging frame 12 and the roll 14 carried thereby. A spring 20 is connected to the swinging frame 12 and to an eye-bolt 21 in the frame 16. A thumb-nut 22 engages the end of the bolt 21 and by turning said nut the tension of the spring 20 may be increased or diminished as desired. An apron or belt 23 of canvas or other suitable material engages the rolls 4, 7, 11 and 14 in the manner indicated. The rocking frame 6 has the lug or projection 24 with the opening 25 there-

in and the set-screw 26. When it is desired to form a taper in the cigar a finger 27 of brass, or other material may be inserted in the opening 25 and held therein by the set screw 26, all as fully hereinafter set forth.

In rolling a cigar with my improved machine the operator collects together sufficient of the scrap or filler to form a cigar of the desired thickness, a suitable measuring device being employed if desired. With the foot on the treadle 8 he lowers said treadle to rock the frame 6 and raise the roll 7 to the position indicated in dotted lines Fig. 1. This takes up the slack in the belt 23 and he then arranges the filler in proper position on said belt. The opposite end of the treadle is lowered, drawing the rocking frame 6 down. As the rocking frame descends the operator holds the filler in place and pushes it down as the belt begins to sag and said filler is carried down into the pocket formed in the belt between the rolls 4 and 7, and said pocket is substantially closed so that the filler is held securely therein. The take-up or tension roll having been previously adjusted, holds the belt taut on the several rolls. The operator by hand or otherwise rotates the roll 4 toward him or in the direction of the arrow Fig. 1. The turning of the roll 4 in this manner acts through the belt 23 to rotate the roll 7 in the same direction and the said belt being held taut by the tension roll 14 the filler is rolled in the opposite direction while held within the pocket in an even accurate manner, there being no uneven turning at any point of the filler, and as a consequence no twisting of the same or displacement of one portion with reference to another. This is due to the fact that any variation in the size of the bunch is provided for by the tension roll which allows the belt to yield where necessary or draws on said belt to take up any slack where a tightening of the belt is required to maintain the proper pressure. Just as the hand of the operator in rolling a bunch by hand yields or increases the pressure as he rolls and can tell by the feel where to apply more pressure and where to relieve, so the tension-roll automatically varies the pressure where necessary to prevent twisting and obtain a filler of substantially uniform density. As the tension roll is freely adjustable the amount of its movement may be regulated according to the size of the filler being rolled and the corresponding slack to be given to the belt. When the bunch has been formed in this manner and it is desired to apply a binder or wrapper, the leaf is cut to the proper form and then arranged spirally on the roll 4 with one end entering the pocket. With one hand resting lightly on the drum in order to guide it properly the operator with the other hand rotates the roll 4 as before.

The rotation of the rolls 4 and 7 in this way draws the wrapper into the pocket and owing to its diagonal or spiral position with reference to the roll 4 the wrapper is wrapped spirally around the bunch formed in the pocket. It will be found that after the tension roll 14 has once been adjusted so as to give the proper size to the pocket and the proper amount of filler is employed, the wrapper will be applied with the proper tension so as to be wrapped with the proper degree of tightness and yet not so tight as to in any way interfere with the draft of the finished cigar. This is due to the action of the spring actuated tension roll which will yield sufficiently under pressure to make the pocket self-conforming so that the cigar is not wrapped tighter at one point than another but substantially uniform throughout its length. The sensitivity of the roll 14 is such that it yields to the slightest resistance offered by the belt and gives the same effect in rolling as obtained in hand rolling.

Where it is desired to roll a cigar with a tapering end I employ the pin or finger 27 which is inserted in the opening 25 in the rocking-frame 6. The set-screw 26 is employed to hold said finger securely in place. The finger 27 is below the roll 7 and extends inwardly, bearing against the outer face of the belt for a portion of the width of said belt. The finger may be adjusted by means of the set-screw to provide for tapers of different length. When said finger is adjusted it will take the position indicated in Fig. 5, thereby acting to reduce the size of the pocket at its end by bearing against the belt at the top of the pocket and taking up a portion of said belt in the form of a loop 28. As the finger extends diagonally of the axial line of the roll a gradual taper will be given to the pocket so that a cigar rolled therein will conform to such taper. It is apparent that where a taper is to be given to both ends of the cigar a second finger may be employed extending in from the opposite side of the belt. The finger may be in the form of a roll if desired, as indicated in Fig. 6. In this case the finger 29 has the sleeve or roll 30 held between the shoulder 30 and the head 31. The finger is then free to rotate when moving in contact with the belt. When the cigar has been wrapped in the manner above set forth, the operator with his foot on treadle 8 rocks the frame 6 and lifts the roll 7. By this movement of the roll 7 the cigar is lifted from the pocket in position to be grasped by the operator. The finishing to the end of the cigar is then done by hand in the ordinary manner.

What I claim is:

In a cigar machine, the combination of a rotary roll, a horizontally arranged rocking-frame in front of said roll, a second roll

of smaller diameter than said first roll mounted in said rocking frame, a spring actuated swinging-frame in the rear of said first roll, a tension-roll mounted in said
5 swinging-frame, guides within which said tension-roll moves, adjustable stops in said guides controlling the movement of said tension-roll, a belt engaging said rolls and adapted to form a pocket between said first and second rolls, a treadle, and rods extend- 10 ing from said treadle connected to opposite sides of the pivot of said rocking frame.

In testimony whereof, I, the said RALPH H. LOGAN have hereunto set my hand.

RALPH H. LOGAN.

Witnesses:

F. W. WINTER,

M. D. VOGEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
