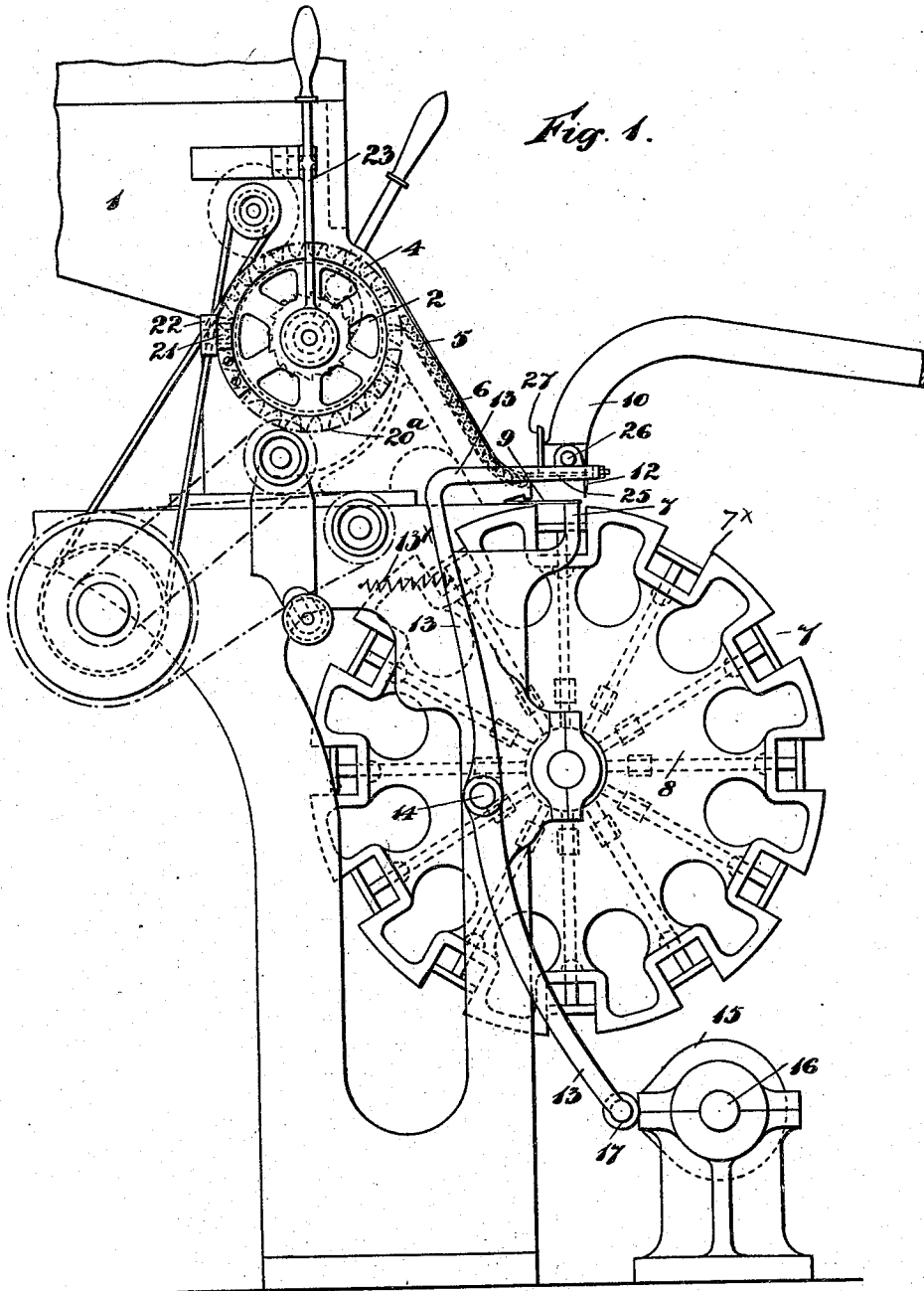


E. L. BRACY.
MACHINE FOR PACKETING CIGARETTES, &c.
APPLICATION FILED AUG. 20, 1908.

941,490.

Patented Nov. 30, 1909.
4 SHEETS—SHEET 1.



Witnesses.

W. P. Bunk
Edward L. Bracy

Inventor.

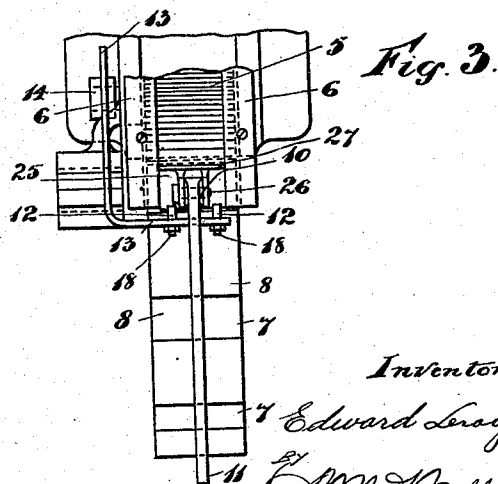
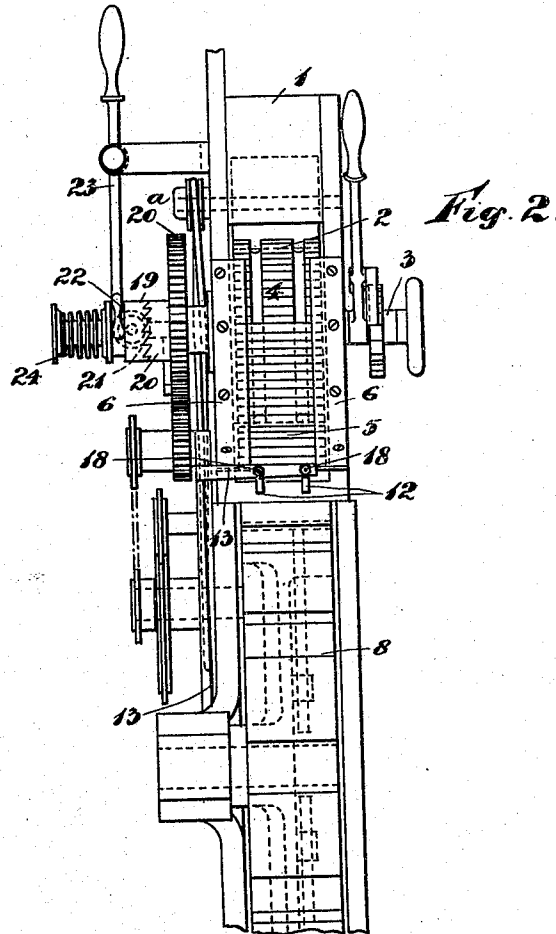
Edward Leray Bracy
M. M. McLean

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4 SHEETS—SHEET 2.



Witnesses.
W. P. Burke
Edward A. Spring.

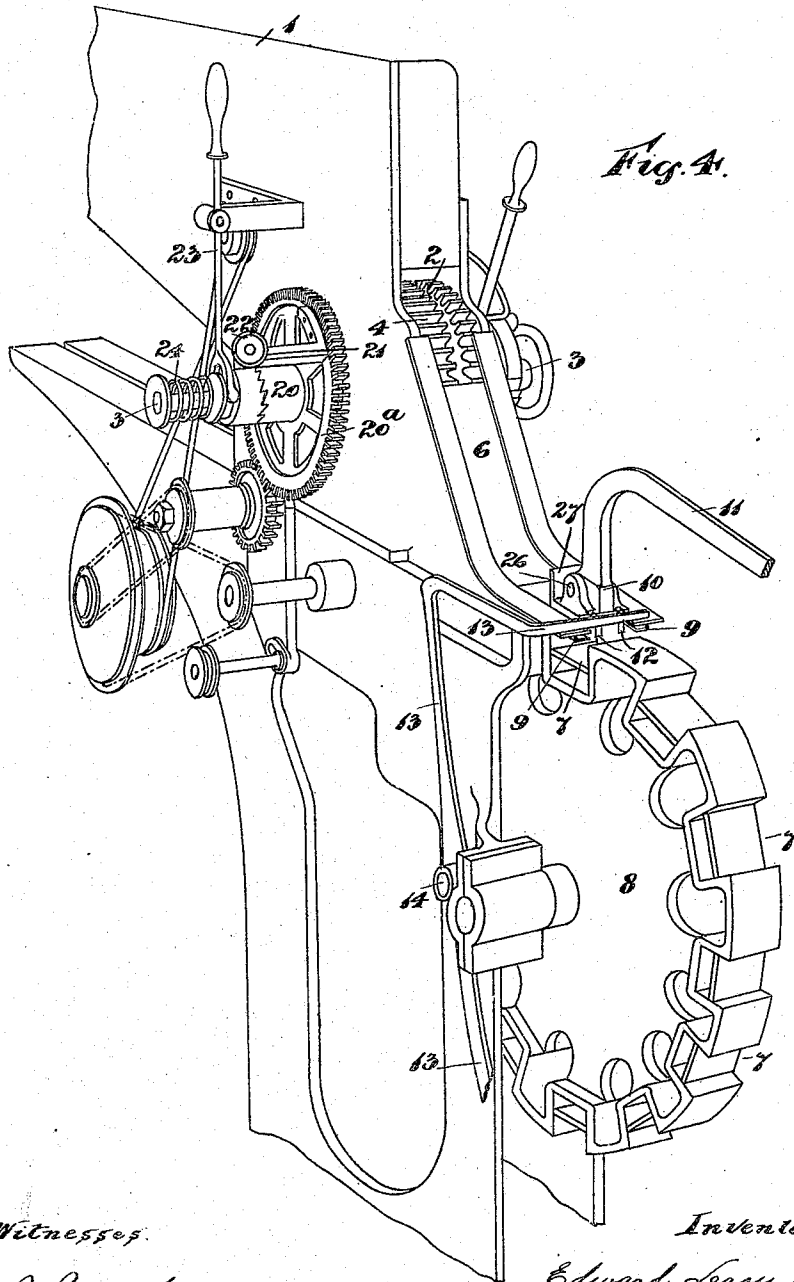
Inventor.
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4 SHEETS—SHEET 3.



Witnesses.
W. P. Burke
Edward D. Spring.

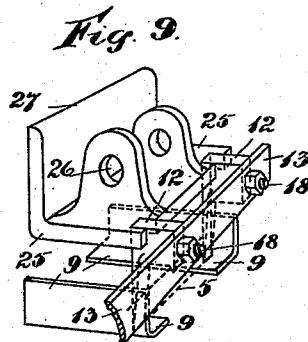
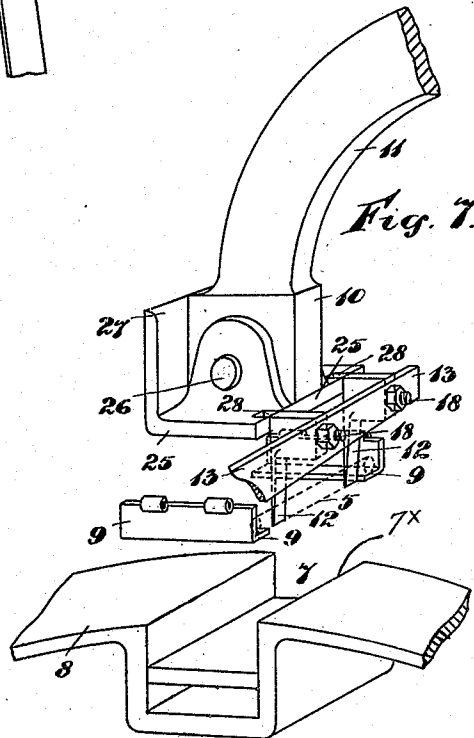
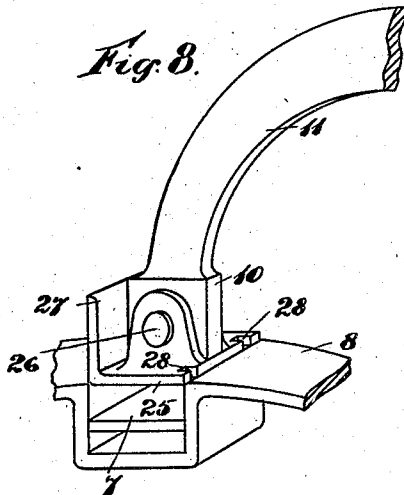
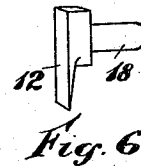
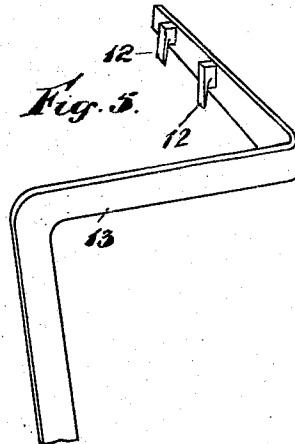
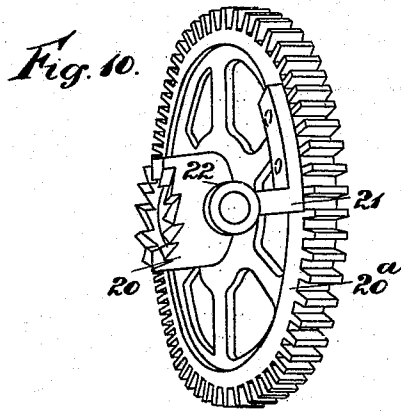
Inventor.
Edward Leroy Bracy
By *Am. M. Co.* *Thib.*
ATTY.

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Patented Nov. 30, 1909.

4 SHEETS—SHEET 4.



Witnesses.
W. P. Brink
Edward O. Spring

Inventor.
Edward Leroy Bracy
BY *M. Miller* ATT'Y.

UNITED STATES PATENT OFFICE.

EDWARD LEROY BRACY, OF SCOTLAND NECK, NORTH CAROLINA.

MACHINE FOR PACKETING CIGARETTES, &c.

941,490.

Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed August 20, 1908. Serial No. 449,467.

To all whom it may concern:

Be it known that I, EDWARD LEROY BRACY, a citizen of the United States of America, residing at Scotland Neck, North Carolina, United States of America, have invented new and useful Improvements in Machines for Packeting Cigarettes and other Like Articles, of which the following is a specification.

This invention relates to improvements in machines for packeting cigarettes and other like articles especially in respect of the apparatus for feeding and conveying the articles into such packeting machines, and more especially to that class of feeding apparatus in which the cigarettes, for example, are fed in bulk into a feeding hopper with an inclined bottom, the lowermost corner of which is intersected by a portion of a drum mounted in suitable bearings, and having grooves across its periphery to receive the cigarettes, rotatory motion being imparted to the said drum, by means of chain or other gearing, from the main shaft of the packeting machine to which the feeding apparatus is applied; the rotation being so timed as to convey the required number of cigarettes from the hopper into an inclined guideway, each groove in the drum taking one cigarette; and the number of said grooves passing a given point in the hopper corresponding to the number of cigarettes required to be inclosed in the packet.

The object of my improvements is to provide means whereby the number of cigarettes to be placed in either of the layers in a packet may be varied, for example four in the lower and five in the upper layer.

I will now proceed to describe my present invention with the aid of the accompanying drawings in which—

Figure 1 is a side elevation of a feeding apparatus for a cigarette packeting machine with my invention applied thereto, only so much of the packeting machine, to which the apparatus is to be applied, being shown, as is necessary to elucidate my invention; Fig. 2 is an elevation looking from right to left in Fig. 1; Fig. 3 is a partial plan; Fig. 4 is a perspective view of the upper part of Fig. 1, and Figs. 5, 6, 7, 8, 9, and 10 are perspective

detail views to larger scales of parts to be hereinafter described.

Similar reference numerals relate to like parts in all the figures of the drawings.

1 is the hopper into which the cigarettes are fed in bulk, and which has an inclined bottom as shown in Figs. 1 and 4. The lowermost corner of this hopper 1 is intersected by a portion of the drum 2 mounted on a shaft 3 turning in suitable bearings, the said drum having grooves 4 across its periphery to receive the cigarettes 5. Rotatory motion is imparted to the drum 2, as above stated, by means of chain or other gearing from the main shaft of the packeting machine, and is suitably timed to convey the required number of cigarettes from the hopper 1 into the inclined guideway 6, each groove 4 in the drum 2 taking one cigarette, and the number of grooves 4 passing a given point in the hopper 1 corresponding to the number of cigarettes required to be inclosed in the packet.

The lower end of the inclined guideway 6 terminates over one of the mold boxes 7 of the mold wheel 8 of the packeting machine, and a yielding piece 9 is provided on each side of the end of the guideway 6, about the width of the mold box 7, to prevent the cigarettes 5 falling into the said box until pressed down therein by a plunger 10. This plunger 10 at the end of an arm 11 operated by a cam on the main or other shaft of the packing machine (not shown) presses upon the cigarettes, the yielding pieces 9 give way, and a layer of cigarettes is placed in the mold box 7. Should two layers of cigarettes be required for each packet, the plunger 10 recedes and allows another layer of cigarettes to pass on to the yielding pieces 9 under the said plunger, which is then again operated by the aforesaid cam, and the second layer of cigarettes is pressed down upon the layer previously placed in the mold box 7. A blank end in the guideway 6 has heretofore been provided immediately over the forward edge of the mold box 7 to prevent the foremost cigarette from going beyond the required position. Should it be required to vary the number of cigarettes in either of the layers, for example four in

the lower and five in the upper layer, this may be accomplished by the improvements which form the subject of my present invention and which I will now proceed to describe.

In place of the beforementioned blank end of the guideway 6 I provide a pair of movable stops 12 occupying a space equal to that which would be occupied by one cigarette and attached to an arm or lever 13 mounted on a gudgeon or spindle 14, and operated by a cam 15 on the shaft 16, the said cam 15 acting upon the roller or bowl 17 on the lower end of the arm or lever 13 which is kept in contact with the cam 15 by the spring 13^x acting upon the upper part of the lever 13.

The action of the movable stops 12 is as follows:— While the bowl 17 is bearing against the concentric part of the cam 15 the stops 12 on the lever 13 are in the position shown in Fig. 9, in which position they permit only four cigarettes to pass on to the yielding pieces 9, the plunger 10 then presses these four cigarettes into the mold box 7 (see Fig. 8) and then returns into the position shown in Fig. 7. In the meantime the projecting part of the cam 15 will have pushed the lower end of the lever 13 into the position shown in Fig. 1 and the upper end into the position shown in Figs. 1 and 7 so as to draw the stops 12 into a position in line with the edge 7^x of the mold box 7, thereby allowing five cigarettes to pass on to the yielding pieces 9. The plunger 10 then descends again and presses the said layer of five cigarettes upon the layer of four which was already in the mold box 7. The movable stops 12 are preferably mounted upon the lever 13 as shown in Figs. 5 and 6, the stems 18 passing through holes in the lever 13 and being clamped thereto by set-screws, screw-nuts or other convenient means.

In order to regulate the number of cigarettes carried by the grooved drum 2 from the hopper 1 to the inclined guideway 6 I provide a clutch 19 of suitable construction mounted upon and rotating with the drum shaft 3 the teeth of which clutch 19 are normally held in engagement with corresponding teeth on the face of the boss 20 of the drum driving wheel 20^a loose on the shaft 3 of the said drum. An arm 21 projecting from the wheel 20^a carries a bowl or roller 22 (see Figs. 1, 2, 4 and 10) by which the engagement with the teeth on the clutch 19 is periodically interrupted by the said bowl or roller 22 coming in contact with the lever 23, and pushing its lower end to the left in Figs. 2 and 4, so as to take the clutch 19 out of gear with the boss 20 thereby permitting one or more teeth to pass so as to allow the desired number of cigarettes to be delivered by the grooved drum 2 from the hopper 1

to the guideway 6, and compensating for the alternate feed of different numbers of cigarettes. When the bowl or roller 22 has passed the lever 23 the spring 24 moves the lever 23 and clutch 19 back so that the latter gears again with the boss 20. It will be understood that by suitably adjusting the movable stops 12 the clutch 19 and throw-out gear 21, 22, 23 layers of any desired number of cigarettes may be packed in the mold-boxes 7.

The plunger 10 is provided with a slotted pad 25, which is shown to a larger scale in Figs. 7, 8, 9 than in Figs. 1, 3 and 4. This pad 25 is removably attached at 26 to the acting end of the plunger arm 11; the palm or flange 27 extending upward, as shown, forms a stop against which the cigarettes in the inclined guideway 6 rest while the plunger 10 is in the lowered position, Fig. 8. The slots 28 allow the pad 25 to descend and carry the cigarettes into the mold boxes 7 whether the movable stops 12 are in the forward or backward position. When the machine is to deliver the full normal number of cigarettes per packet the bracket 21 and bowl 22 are not employed and the drum 2 is arranged to deliver the full normal number to the guideway 6. But if, peradventure, a surplusage should occur by reason, for example, of a failure of the packaging devices to act properly, the attendant would move the lever 23 by hand so as to throw the clutch 19 out of gear and thus stop the drum until the surplusage had cleared itself. When, however, less than the full normal number of cigarettes is to be delivered per packet the bracket 21 and bowl 22 are fixed to the wheel 20^a and the drum 2 is thereby stopped automatically for a short time at each revolution of the wheel 20^a so as to prevent the accumulation of a surplusage. But if it so happens that by reason of these automatic stoppages of the drum not being long enough to prevent a surplusage, or if a surplusage occurs through any other reason, the attendant, moves the lever 23 by hand, as in the first case and stops the drum 2 until the surplusage has cleared itself.

Claims.

1. A machine for packing cigarettes comprising a mold wheel, means for feeding the cigarettes to a position above a mold in said wheel, a plunger for forcing the cigarettes down into the mold, and a reciprocating lever having adjustable stops thereon for varying the number of cigarettes in each layer.

2. In a machine for packaging cigarettes and the like, a feeding hopper 1, a grooved drum 2, an inclined guideway 6, a mold-wheel 8, a plunger 10 and clutch devices, in combination with a slotted pad 25, movable stops 12 on a lever 13, means for imparting

a reciprocating movement to the said lever, and means for intermittently disengaging the said clutch devices, substantially as described.

- 5 3. A machine for packing cigarettes comprising a mold wheel, an inclined guide way for feeding the cigarettes in position above a mold in said wheel, a plunger for forcing the cigarettes into the mold, a flange on said
10 plunger for preventing the feed of the cigarettes while the mold is in its lowered posi-

tion, and a reciprocating lever having adjustable stops thereon for varying the number of cigarettes in each successive layer.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD LEROY BRACY.

Witnesses:

RICHARD P. APPLETON,
WALTER P. BURKE.