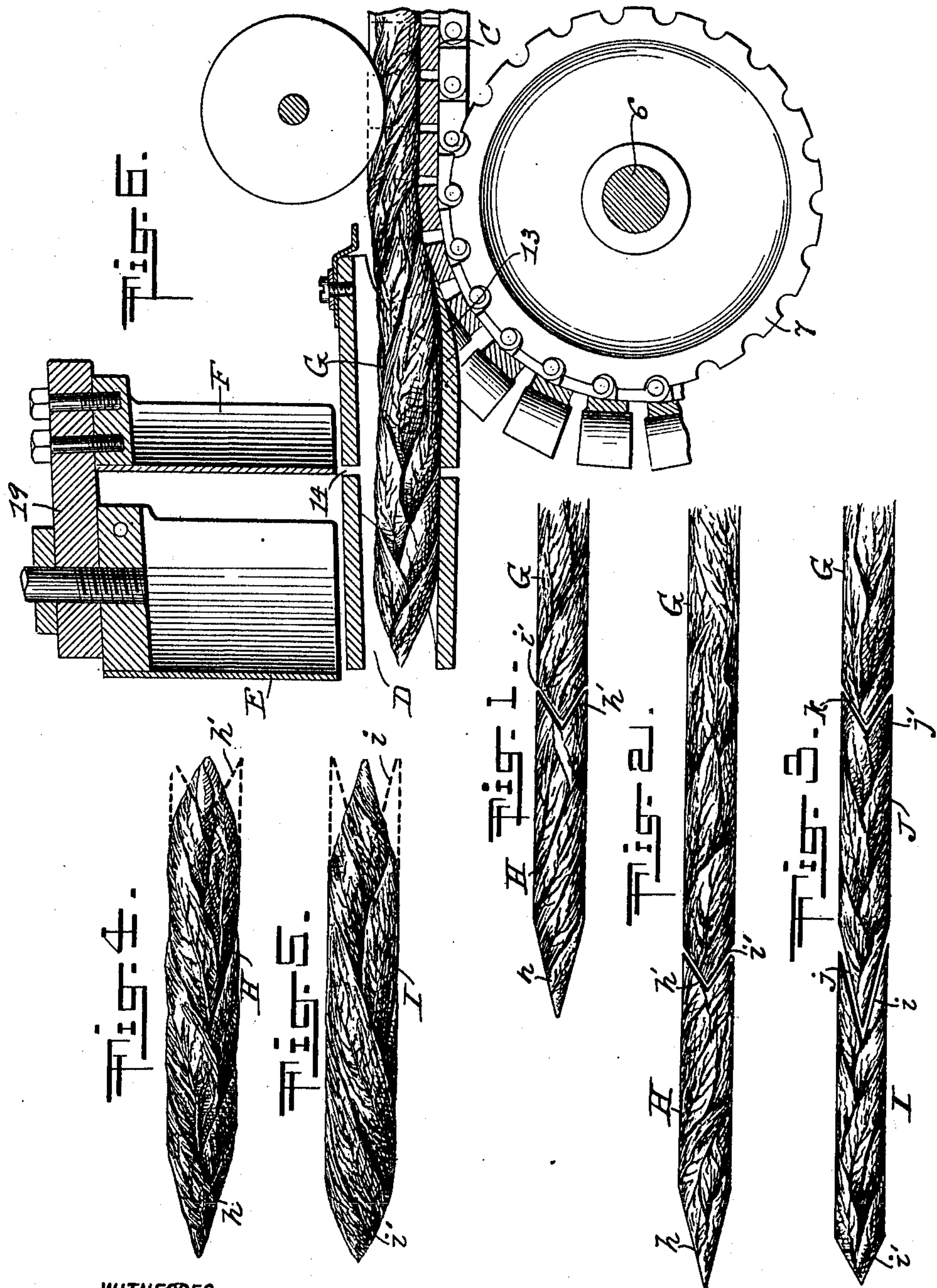


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METHOD OF MAKING CIGAR BUNCHES.
APPLICATION FILED AUG. 29, 1903. RENEWED JAN. 5, 1910.

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Specification of Letters Patent. Patented Sept. 13, 1910.

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To all whom it may concern:

Be it known that I, JAMES EDWARD SMITH, a citizen of the United States, residing at the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and useful Improvement in Methods of Making Cigar-Bunches, of which the following is a specification.

My invention relates to a method of making cigar bunches by which I seek to produce bunches capable of being wrapped right and left, each of which has a proper shape both at the head and tuck ends of the bunch, and capable of manufacture with rapidity and at a substantial saving in the cost.

There are several important factors to be taken into consideration in the manufacture of high grade cigars, such as Cuban and Spanish cigars. The filler must have the desired shape at the head and tuck ends, it must remain in a soft or spongy condition in order that air and smoke may be drawn freely through the cigar during consumption thereof, and the cigar should burn evenly at the lighted end thereof. An important factor is the manufacture of fillers without leaving waste and scrap, and this is particularly desirable in the production of bunches which are differently shaped at the head and tuck, such as in the well known "perfecto" cigar which has a long taper at the head and a short taper at the tuck. To secure the desired shape, it is a common practice to place the bunches in molds, and this is true when cigars are made by hand or by machinery, except in the manufacture of the highest grade and expensive cigars made by hand and by the most experienced and high salaried cigar makers. Shaping the bunches by molds is not desirable, because of the delay and expense involved and the compression to which the filler is subjected, such compression tending to obstruct the free passage of air and smoke and to make the cigar burn irregularly at the lighted end thereof.

It is the aim of the present invention to manufacture cigar bunches rapidly and economically, without involving waste and scrap, and in a way to produce soft spongy bunches which have the desired shape at both the head and tuck.

Another important feature is the production of bunches which are susceptible of rolling or wrapping both right and left. A fact familiar to those skilled in cigar mak-

ing is that the leaf for choice expensive wrapper tobacco is stripped of the stem, leaving a right half and a left half of the leaf available for use. A half of the bunches produced in accordance with my invention can be wrapped toward the right hand and the remaining half toward the left hand, thus utilizing to the best advantage both halves of the leaves of expensive wrapper tobacco.

According to my invention, I first take long leaves of filler tobacco and assemble them lengthwise so as to produce a rope or strand of embryo filler tobacco having the approximate thickness of the bunches it is desired to produce. From this rope or strand of tobacco is produced without waste or scrap the lengths of tobacco filler, and to this end the strand or rope is moved endwise and lengths of filler are severed or cut therefrom. A peculiarity of this transverse division of the tobacco strand or rope into filler lengths consists in shaping of the fillers both at head and tuck, and in producing the filler bunches in reversed order to enable them to be rolled right and left, that is to say, the first filler has a long taper head end and a short incision in the tuck end, while the second filler has a short taper tuck end and a long incision in the head, and the third filler is the same shape as the first filler, and so on throughout the series of fillers produced by transversely dividing the endwise movable strand or rope of filler tobacco. The filler lengths of the divided tobacco strand or rope are subsequently separated one from the other, and they are individually rolled into a binder of leaf tobacco. The step of rolling the first filler in the binder to produce the first bunch closes the tapering incision in the tuck end, while the similar treatment accorded to the second filler closes the tapering incision in the head thereof, whereby the fillers of adjacent bunches are produced in reversed order and they may thereafter be rolled in wrappers right and left.

The described steps in the treatment of tobacco enables me to produce soft spongy bunches rapidly and without waste, said bunches having any desired shape, and being susceptible of rolling in wrappers produced from the right and left halves of wrapper-tobacco leaves.

It is obvious that I can prepare the lengths of filler in any desired shape, that

is, the head can be given more or less taper, the tuck can likewise be given a sharper or an acute taper or it may be left without any taper, as is desired in some bunches, or the
 5 general contour of the bunch may be changed by suitably preparing the fillers, all of the bunches being characterized by a soft spongy feeling in the hand and being produced without any compression or
 10 molding whatsoever, so that the bunches may be at once completed into cigars by the application of wrappers thereto, or such wrappers may be applied at any period subsequently to the completion of the bunches.

15 To enable others to understand my invention, I have illustrated the several steps of my method diagrammatically and shown one type of mechanism by which the fillers may be prepared in the accompanying drawings, forming a part of this specification, in which:—

Figures 1, 2 and 3 are diagrammatic views of the tobacco strand or rope showing the successive cuts thereon required to
 25 produce the successive lengths of cut filler for conversion into cigar bunches in accordance with my invention. Figs. 4 and 5 are views of bunches made from the first and second fillers. Fig. 6 is a sectional view
 30 of a part of a machine or apparatus for cutting the strand or rope into lengths of shaped filler without waste.

The same characters of reference denote like parts in each of the several figures of
 35 the drawings.

In the apparatus shown by Fig. 6, the strand or rope G of tobacco formed by the operator assembling or laying leaves of tobacco lengthwise and in overlapping order,
 40 is placed in an endless trough, C, to which motion is imparted by any suitable form of driving mechanism in a way to feed the trough and the strand or rope of filler tobacco in an endwise direction at proper intervals, or in an intermittent manner. This
 45 trough, C, has an end portion fitted on a suitable driving member, 7, on a shaft, 6, and the trough delivers the advancing end portion of the tobacco strand or rope G into
 50 a die box, D, the latter being in alinement with the longitudinal cavity in the upper side of the trough. The die-box, D, has, at its bottom, a pick-up tongue, 13, which extends into the trough at the point where the
 55 latter passes around the driving member, 7, to lift the tobacco strand from the bottom of the trough and guide it into the die-box. The delivery end of the die-box, D, is shaped, viewed in plan, to conform to the contour
 60 of the head end of the bunch-filler, and said box is provided with a slot, 14, which conforms to the shape it is desired to give to the tuck of the bunch-filler. With this die-box, D, coöperates a cutter device consisting
 65 of the head knife, E, and a tuck knife,

F, and a cutter head, 19, said knives being fastened to said cutter-head and the latter being operated with a vertical reciprocating motion. The knife, E, is shaped in cross section to the contour of the head of the
 70 bunch, and it coöperates with the shaped delivery end of the die box so as to secure a draw or shear cut on the tobacco. The tuck knife, F, conforms in shape to the contour of the cigar tuck, and said knife plays
 75 in the slot, 14, of the die-box, D. These parts are similar to the die box and the cutter mechanism employed in a machine for making cigar bunches which form the subject-matter of my United States Letters Pat-
 80 ent, dated September 8, 1903, No. 738,636, said machine constituting one of the many mechanical contrivances which may be employed in carrying out my invention in whole or in part. As disclosed by said
 85 patent, the endless trough, C, is moved intermittently with alternate long and short periods of motion by a suitable form of ratchet feed mechanism, whereas the cutter mechanism is reciprocated once to every two
 90 periods of motion of the trough, and in the intervals of rest of the latter.

I have not considered it necessary in this application to disclose the means for actuating the trough and the cutter devices, be-
 95 cause they will be readily understood by reference to my aforesaid patent.

In practicing the process, the operator assembles long leaves of filler tobacco in the hands and places them in the trough, C, so
 100 as to produce a tobacco strand or rope, G, having the desired width and thickness according to the desired size of the bunches to be produced. The leaves selected and placed successively by the operator in the trough
 105 must be laid in overlapping order so as to produce the tobacco strand G continuously. With the cutter devices in a raised position, the strand, G, is advanced by the trough with a short period of motion, and the end
 110 portion of said strand is moved into the die-box, D, below the cutter knives. The trough now stops, and the cutter devices descend, the knives E, F, cutting through the strand, G, so as to sever the first length of
 115 filler H therefrom, as shown by Fig. 1, said filler having a long taper, *h*, and a short incision, *h'*, given to the head and the tuck, respectively, by the knives, E, F. This leaves a short taper, *i'*, at the end of the to-
 120 bacco strand, G, as shown by Fig. 1. The cutter is now lifted, and the trough, C, is moved with a long period of motion so that the filler strand, G, is again moved endwise, as shown by Fig. 2, the advancing end, *i'*, of
 125 the filler strand shoving the first filler, H, out of the die-box. When the filler strand is moved by the trough, the end, *i'*, passes into the die-box, and the trough now stops, while the cutter devices remain at rest. This
 130

leaves the end portion of the filler strand below the knives, while the first filler, H, is discharged; and this filler is now rolled into a tobacco binder, see Fig. 4, the application of which binder closes the incision, h' , and gives the desired shape to the tuck of the bunch, the latter being now complete. The trough, C, is moved with a short period of motion, and the end i' of the filler strand is shoved beyond the delivery end of the die-box for a distance equal to the length of the next filler; and when the trough and the filler strand stop, the cutter devices again descend so that the knives, E, F, again cut through the filler strand, as shown by Fig. 3, and thereby produce the second and third shaped fillers, I, J. The reason for having an alternative long and short period of motion in feeding the tobacco rope or strand, is that the bunch H, (Fig. 2), is longer from the apex of the projection to the apex of the incision than is the case with the bunch I (Fig. 3), hence it is necessary to move the first mentioned bunch a greater distance forward, in order to clear the supporting plate. The second filler, I, has a tapered tuck end, i' , and a long incision, i , in the head, while the third filler, J, is similar to the first filler, H, in that the head, j , has a long taper while the tuck has a short incision, j' , the end portion of the remaining filler strand G having a short taper, k . The incision, i , in the head of the second bunch, I, and the taper, j , to the head of the third bunch, J, is given by the knife, E, while the incision, j' , in the tuck of the third filler J and the short taper, k , to the end of the filler strand, G, is made by the tuck knife, F, the two knives operating simultaneously on the second down stroke. The knives are now lifted, and the second filler, I, is rolled by the application of a tobacco binder thereto as shown by Fig. 5, said operation closing the incision i , of the second filler and producing a second complete bunch. The trough, C, now moves with a long period so as to again advance the filler strand, G, and eject the third filler, J, from the die-box, thus bringing the end, k , of the strand G below the knives. The third filler, J, is now rolled into a binder which closes the incision, j' , to complete the tuck, and the operations of assembling the leaves, feeding the strand, severing the lengths of filler from said strand, and rolling the fillers individually into binders are repeated for an indefinite number of times.

It will be noted that the adjacent fillers, H, I, or I, J, are produced with shaped heads and tucks and that they are in reversed order, that is, the heads and tucks of adjacent fillers point or face in opposite directions, as for example, the heads, h , i , of the first and second fillers point in opposite directions. Furthermore, the knife, E, at one operation makes the heads of two

reversed fillers, the head of one filler having the taper and the head of the other filler having an incision, the latter being closed by pressing together the tobacco of the filler so as to give the taper to the head of the bunch. In like manner, the knife, F, makes the tuck of two bunch-fillers, one having the taper and the other an incision which is closed by pressing together the tobacco of the filler, these operations being indicated by full and dotted lines in Figs. 4 and 5 of the drawings.

By producing shaped bunches in reversed order, the bunches facing or pointing at the head in one direction may be advantageously wrapped with right hand tobacco wrappers by rolling them to the right, while the other bunches with heads pointing in the opposite direction may be finished by rolling them toward the left in left hand tobacco wrappers.

It is evident that my invention may be practiced by hand or by machinery, or by a combination of both.

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

1. The method of making cigar bunches which consists in assembling leaves of tobacco lengthwise and into a strand of filler tobacco; dividing the strand or rope transversely and producing lengths of cut filler, each filler length being incised at one end and excised at the other end, the successive lengths of cut filler being arranged reversely in relation to their head and tuck ends, and rolling the successive lengths of filler in opposite directions individually within suitable binders.

2. The method of making cigar bunches which consists in assembling leaves of tobacco lengthwise and into a continuous strand of filler tobacco, moving the filler strand endwise with intervals of rest or dwell, cutting the filler in the intervals of rest and producing therefrom reversely arranged lengths of cut filler, each filler length having an incision at one end and a taper at the other, and rolling the successive lengths of filler right and left respectively within individual binders.

3. The method of making cigars which consists in assembling leaves of tobacco lengthwise and in overlapping order to produce a strand of filler tobacco; dividing from the strand a plurality of lengths of fillers each with an incision at one end and a taper at the other, said fillers being reversely arranged in relation to their head and tuck ends; closing the incision in each filler by rolling it within a binder, and individually wrapping the successively produced bunches in opposite directions and within wrappers from the opposite halves of stemmed tobacco leaves.

4. The method of making cigars which consists in cutting successively from a mass of tobacco a plurality of fillers, each having an excision at one end and an incision at the other, the successive lengths of fillers being reversely arranged in relation to their head and tuck ends, and inclosing the individual fillers by rolling the successive lengths in opposite directions within suitable tobacco leaves.

5. The method of making cigar bunches which consists, first, in assembling leaves of tobacco to produce a mass of tobacco of approximately circular form in cross section, and then severing from the mass a short filler length by two simultaneous cuts, one cut producing a single excision and the other cut a single incision, such excision and incision cuts being at the respective ends of the short filler, the incision differing both in shape and length from the excision.

6. The method of making cigars which consists in cutting from a mass of tobacco lengths of filler which are arranged reversely in respect to their head and tuck ends, and individually wrapping the successive reversely-arranged fillers in opposite directions.

7. The method of making cigars which consists in cutting from a mass of tobacco lengths of filler which are reversely arranged in respect to their head and tuck ends; rolling each filler in a binder, and thereafter rolling the successive reversely arranged rolled-fillers in opposite directions within individual wrappers.

8. The method of making cigars which consists in assembling bundles of tobacco leaves lengthwise to produce a strand; cutting the strand at intervals into lengths of filler which are reversely arranged in relation to their head and tuck ends; rolling the fillers into binders, and wrapping the successive rolled fillers or bunches in opposite directions, within suitable wrappers.

9. The method of making cigars which consists in assembling bundles of leaf tobacco lengthwise to produce a strand; feeding the strand endwise and cutting it at intervals to produce lengths of filler which are reversely arranged in relation to their head and tuck ends; rolling the lengths of filler into suitable binders, and wrapping the reversely arranged rolled fillers in opposite directions within suitable wrappers.

10. In the art of preparing cigar fillers, the method which consists in producing a filler for a cigar bunch by simultaneously cutting a single excision and a single incision at the respective ends of the filler, such excision and the incision differing in length and shape.

11. That improvement in the art of preparing cigar fillers which consists in cutting

at intervals from a mass of tobacco a plurality of fillers, the successive fillers being reversely arranged in relation to their head and tuck ends, each filler having a single incision at one end and a single excision at the other.

12. That improvement in the art of preparing cigar fillers which consists in assembling bundles of tobacco leaves into a strand of tobacco filler, and cutting at intervals a plurality of fillers, each having a single incision at one end and a single excision at the other, the successive lengths of filler being reversely arranged in relation to their head and tuck ends.

13. The method of making cigar bunches which consists in assembling tobacco leaves to produce a strand of filler tobacco; cutting a length of filler therefrom; feeding the strand for a distance equal to two lengths of filler; simultaneously cutting two lengths of filler from the fed strand, each cut length of filler being incised and excised at its respective ends, and the successive lengths of cut filler being reversely arranged in relation to their head and tuck ends, and rolling the fillers individually into binders.

14. The method of making cigars which consists in feeding a mass or strand of leaf tobacco endwise; cutting the strand or mass at intervals to produce cut lengths of filler, the successive lengths being reversely arranged in relation to their head and tuck ends; and wrapping the successive reversed lengths of filler in opposite directions within individual inclosures.

15. The method of making cigars which consists in feeding a mass or strand of leaf tobacco endwise; cutting the mass or strand at intervals to produce lengths of filler, the successive lengths being reversely arranged in relation to their head and tuck ends; ejecting the fillers by the advancing strand or mass of tobacco; rolling the fillers individually into binders; and finally wrapping the successive reversed rolled fillers within individual wrappers and in opposite directions.

16. A cigar filler consisting of a bunch of tobacco cut from a prepared mass to produce a bunch filler having a single incision at one end and a single excision at the other end, the incision and excision being of different shapes and lengths.

17. A cigar filler consisting of a bunch of tobacco having a single incision and a single excision at the respective ends; said single incision being of a different length and shape from the excision, the tobacco at the incised end of the filler being pressed inwardly to close said incision, leaving the excision intact at the other end of the filler.

18. A cigar filler comprising filler tobacco having an incision and an excision at

the respective ends of the filler, said incision being of a different length from the excision.

5 19. A cigar filler comprising filler tobacco cut to the required length and provided with an incision and an excision, whereby the incised end of the filler tobacco may be closed during the operation of applying a binder or wrapper to the filler.

10 20. A cigar filler comprising a mass of filler tobacco cut to the required length and provided with an incision and an excision at the respective ends, said incision being of a different shape from the excision, where-
15 by the prepared mass may be bunched to produce a cigar the head and tuck ends of which are of different shapes.

20 21. The improvement in the art of producing cigar fillers which consists in cutting from a mass of tobacco a length of filler which is provided at its ends with an incision and an excision, respectively, and subsequently wrapping said length of prepared filler.

25 22. The improvement in the art of producing cigar fillers which consists in cut-

ting from a mass of tobacco a length of filler which is provided at its ends with an incision and an excision, respectively, moving the mass of filler in the direction of its 30 length and in the intervals between the cuts, and subsequently wrapping each cut length of prepared filler.

23. The improvement in the art of producing cigar fillers which consists in suc- 35 cessively cutting from a mass of tobacco lengths of filler each of which is provided at one end with an excision and at the other end with an incision, moving the mass of filler tobacco in the direction of its length, 40 and for varying distances, in the intervals between the successive cuts, and subsequently wrapping each cut length of prepared filler.

In testimony that I claim the foregoing 45 as my own, I have hereunto signed my name in the presence of two subscribing witnesses.

JAMES EDWARD SMITH.

Witnesses:

OTIS MILLER,
STEPHEN McCORMICK.