Dec. 21, 1943. H. H. WHEELER 2,337,076

REROLLER AND TRIMMER FOR CIGAR ROLLING MACHINE

Filed Feb. 8, 1938 3 Sheets-Sheet 1

Fig. 2.

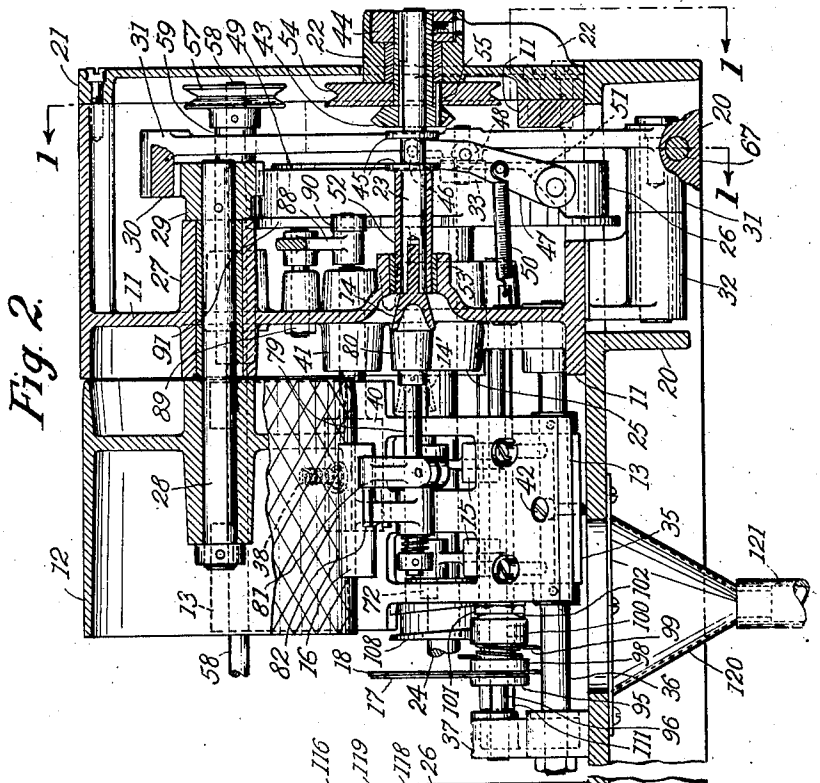
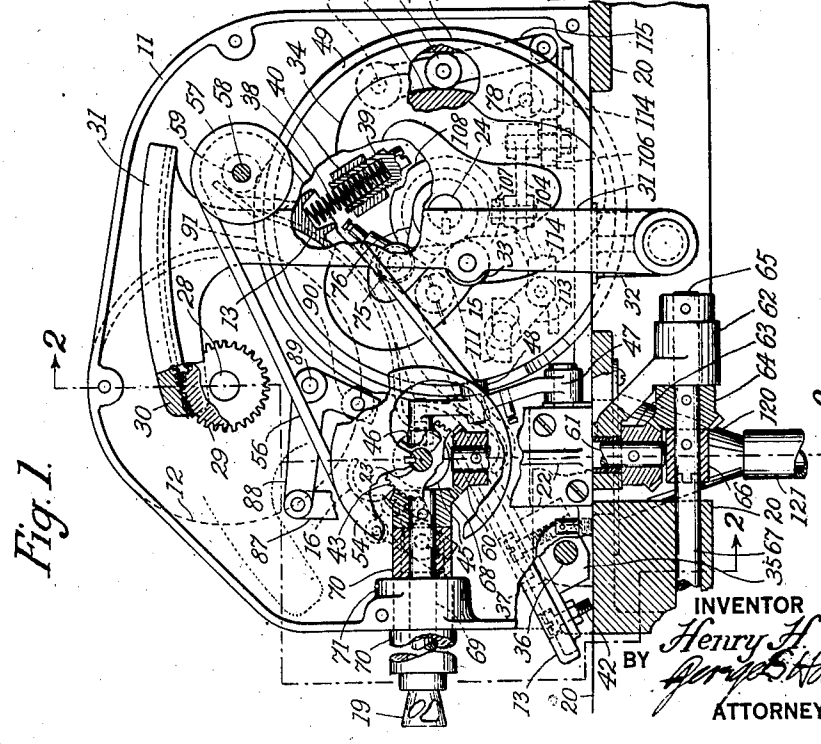


Fig. 1.



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Fig. 4.

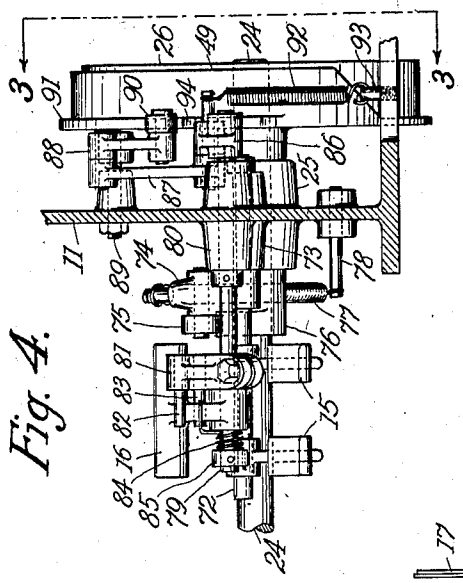


Fig. 6.

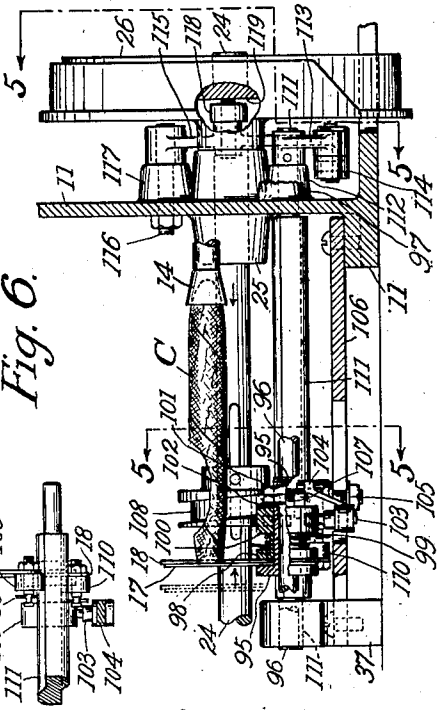


Fig. 7.

Fig. 3.

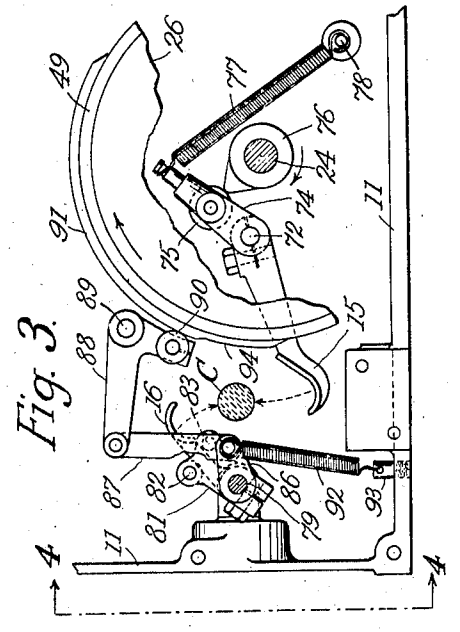
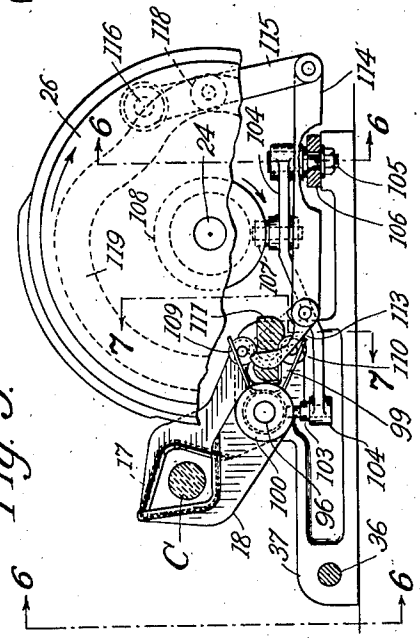


Fig. 5.



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REROLLER AND TRIMMER FOR CIGAR ROLLING MACHINE

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Fig. 8.

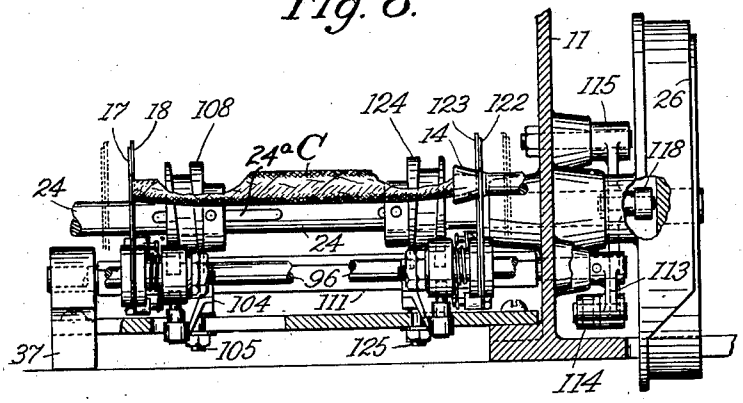


Fig. 9.

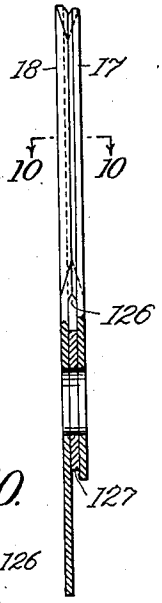


Fig. 12.

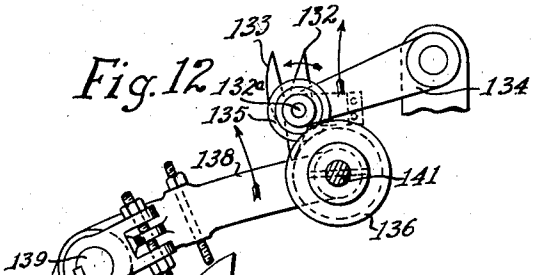


Fig. 10.

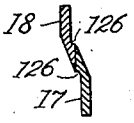
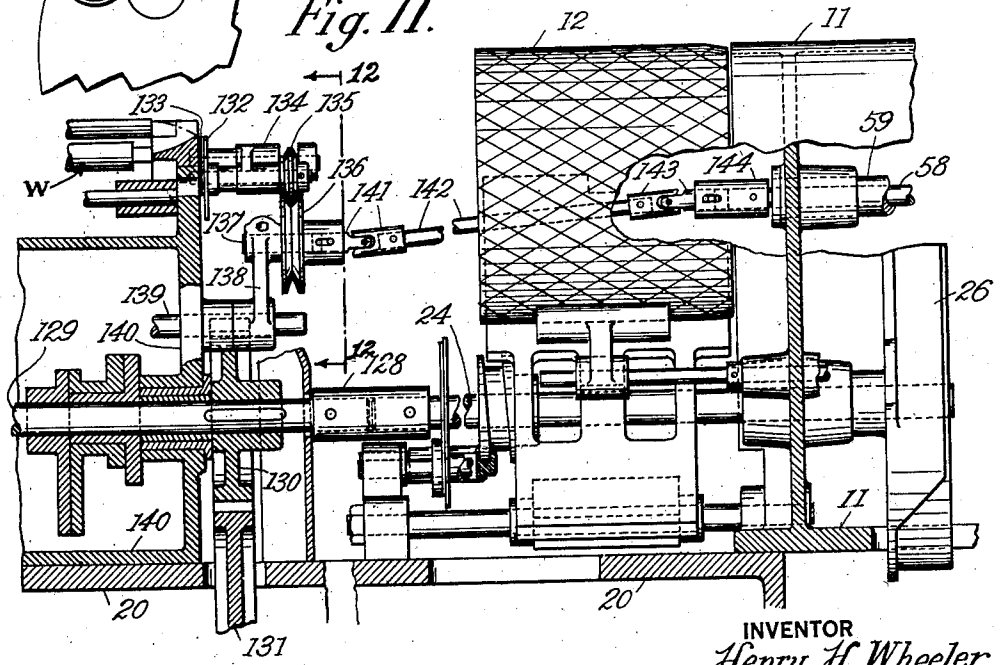


Fig. 11.



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Patented Dec. 21, 1943

2,337,076

UNITED STATES PATENT OFFICE

2,337,076

REROLLER AND TRIMMER FOR CIGAR ROLLING MACHINES

Henry H. Wheeler, Brooklyn, N. Y., assignor to International Cigar Machinery Company, a corporation of New Jersey

Application February 8, 1938, Serial No. 189,300

14 Claims. (Cl. 131—29)

This invention relates to cigar machines and more particularly to an improved re-rolling and trimming unit for cigar rolling machines. Its main object is to provide a compact device with enclosed operating mechanism for high-speed operation. This invention also proposes to provide a re-rolling unit which is wholly independent insofar as its drive and operative parts are concerned of the remainder of the cigar rolling machine, and which can, if desired or necessary, be readily removed for repairs and interchange of parts.

Due to the fact that substantially all of the operating parts of the improved re-rolling and cigar locating mechanism are enclosed, practically all dirt, tobacco dust and waste particles and abrasives, which might prove detrimental and cause excessive wear to the operative parts, are denied access thereto, and consequently the life of the entire mechanism is greatly increased.

It is a further object of the invention, therefore, to provide an improved re-rolling and locating mechanism having operative parts enclosed wherein these parts are protected from excessive wear and tear by reason of the enclosing elements.

The invention also consists in the provision of a new and improved re-rolling, trimming and knurling unit preferably provided with an independent cam shaft which may be driven by means of a suitable coupling from the cigar rolling device.

The invention further proposes the provision of individual cams and cam tracks mounted on the drive shafts for each one of the several operating parts in order to provide more time for knurling and making better cigar heads. This arrangement also gives more time to the wrapper layer when it is not necessary to use the hand knurler.

It is a further object of the invention to provide a self-contained re-rolling unit in which the operating cams, levers and racks are substantially all positioned within enclosing elements and, therefore, are made more compact, of reduced size and provide a more efficient unit.

It has been found in the operating of re-rolling and cutting units, heretofore commonly in use, that unless special care was taken there existed the possibility that cigars ejected from the re-rolling means might vary in length. This was due to the arrangement and cooperation of the knurling, clamping and cigar trimming means, wherein the combined action of the knurling and clamping means was insufficient to offset the displacing effect of the trimming knives as they came into engagement with the tuck end of a cigar to trim the same. According to the present invention, this disadvantage has been eliminated by the provision of improved mechanism for acting upon cigars at the trimming station by providing the clamping or supporting members with controlling mechanism for imparting thereto a double clamping effect in order that the cigars can be lightly clamped while being located by the knurler, and firmly clamped when being operated upon by the trimming knives.

The invention, therefore, consists of improved mechanism for trimming cigar ends wherein cigars are first positively located and then firmly held while the trimming operation is performed.

Since it is always desirable to remove waste and scrap tobacco from the operating parts of a machine and prevent accumulations of these materials therein, this invention also consists in the provision of a suction device located adjacent the trimmers, which device catches all of the waste tobacco particles falling therefrom, and conducts them to a waste receptacle for final disposition.

The invention also includes the provision of adjustable mechanism for easily and rapidly adjusting the position of the cutting mechanism to accommodate cigars of various lengths.

It is an additional object of the invention to provide a re-rolling mechanism having associated therewith cutting devices for trimming the ends of either cigars or cheroots. When cheroots are to be trimmed to proper size, the locating device is projected axially through the open knives which form the cutting means for the head end of the cheroot, and subsequently to the retraction of the locating device from cheroot locating position, these knives, as well as the tuck end cutting knives, operate simultaneously to trim both ends to size.

It is also an object of the invention to provide improved knife operating mechanism including an elongated cam which controls the movements of both sets of knives to and from cutting position, and which is so constructed and arranged that the sets of knives may be readily adjusted to cut any size of cheroot or cigar to desired lengths.

It is an additional object of the invention to provide mechanism for continuously driving both knurling devices and also the shaft which drives the flag cutter of the rolling mechanism. This mechanism is driven from the main drive shaft of the re-rolling device and thereby eliminates

all necessity of using a separate exterior drive.

It is an additional object of the invention to provide an improved mechanism for controlling the oscillatory movement of the cigar re-rolling drum, in order that the lost motion may be kept to a minimum and that more perfect cigars may be produced because of the elimination of this undesirable feature. This is brought about by reason of the fact that the pinion which drives the re-rolling drum is in turn driven from a gear segment forming a part of a single lever driven from a cam where heretofore it has been customary to operate the driving pinion of the re-rolling drum from a rack having numerous connections which brought it into operation with a cam which effected the rotation of the drum. This arrangement also results in a sturdier construction in the re-roller drum drive.

In order to provide a simpler and more efficient drive for the re-roller the invention also consists in the provision of a drive shaft which is driven directly or through a suitable coupling from the drive shaft of the rolling mechanism. This makes possible a more unified re-rolling structure than has existed heretofore.

The invention also consists in the provision of means for driving the flag cutter of a cigar rolling machine directly from the operating means of the re-rolling unit wherein the flag cutter and the knurlers of the re-rolling mechanism are continuously operated.

With these and other objects not specifically mentioned in view, the invention consists in certain constructions and combinations which will be hereinafter fully described and then set forth in the claims hereunto appended.

In the accompanying drawings which form a part of this specification and in which like characters of reference indicate the same or like parts:

Fig. 1 is an end elevation of the improved re-rolling and trimming unit, partly in cross-section;

Fig. 2 is a sectional side elevation of the same on line 2—2 of Fig. 1;

Fig. 3 is an end elevation of the cigar gripping device of the improved unit;

Fig. 4 is a side elevation of the same seen from line 4—4 of Fig. 3;

Fig. 5 is an end elevation of the cigar trimming device of the unit;

Fig. 6 is a side elevation thereof on lines 6—6 of Fig. 5;

Fig. 7 is a rear elevation of the cutters on line 7—7 of Fig. 5;

Fig. 8 is a side elevation similar to Fig. 6, showing a trimming device with two sets of knives for trimming both ends of a cheroot;

Fig. 9 is an end elevation of a set of trimming knives in enlarged scale;

Fig. 10 is a cross-section on line 10—10 of Fig. 9;

Fig. 11 is a sectional side elevation of the improved re-rolling unit showing its drive relation with another unit of the cigar rolling machine; and

Figure 12 is a partial side elevation taken on line 12—12 of Figure 11 showing the construction of the flag cutter mechanism.

Referring to Figs. 1 and 2, the improved unit consists of a housing 11, an oscillating re-rolling drum 12, a resiliently supported concave 13, a cigar locating knurler 14, cigar grippers 15 and 16, trimmers 17, 18, and an independently driven finishing knurler 19.

The cigar, after having its wrapper applied, is by a suitable transfer deposited on the concave 13 whereon it is rolled back and forth a number of times by the drum 12, thereby re-distributing hard spots in the filler and softening the same. The cigar is then pressed by the grippers 15, 16, first lightly so that each cigar can be moved axially without damage to its fragile wrapper until the locating knurler 14 has engaged and displaced the head of the cigar into a predetermined axial position, and then firmly to hold the cigar fixedly, while the trimmers 17, 18 are moved into cutting position and closed upon the tuck end of the cigar. This mechanism makes it substantially impossible for the knives to move the positioned cigar, with the net result that all are cut to a fixed length. The grippers then open, allowing the cigar to roll down the concave 13 on to the table 20 of the machine, to be picked up by the wrapper die attendant who stacks it in a tray provided for this purpose.

In the event that a cigar head has a wrapper improperly applied thereto and it is necessary that it be unwound and repaired manually, a finishing knurler 19 is available to the operator and the head of the repaired cigar may be finished in this knurler after which the cigar is placed in the tray referred to.

The operating mechanism for the rolling drum, locating knurler, grippers and trimmers is located in the housing 11, which is closed by a cover 21, this housing carrying a bearing bracket 22 for the shaft 23 of the locating knurler 14. The main drive shaft 24, which may be a part of the existing drive of the cigar rolling device projects through and is supported by a bearing 25 of housing 11 and carries a cam 26 at its inner end. A bearing 27 of the housing supports a shaft 28 on which the re-rolling drum 12 and its operating gear 29 are fastened, the latter gear meshing with and being oscillated by a gear segment 30 on an arm 31 pivoted in a lug 32 of housing 11 and supporting a follower 33 in engagement with a cam track 34 of plate cam 26.

At its lower end the concave 13 is fastened to a block 35 mounted on a rocker-shaft 36 supported in housing 11 and a bearing block 37 resting on table 20, while its upper end bears against a compression spring 38 carried in an adjustable socket 39 threaded into a block 40 extending from a bearing 41 of housing 11. A set screw 42 adjustably mounted in the lower end of concave 13 engages table 20 and limits the movement of concave 13 towards drum 12 under the action of spring 38. In this manner concave 13 is maintained in any desired adjusted position relative to drum 12 for admission of cigars delivered by the cigar transfer from the wrapping machine.

The cigar locator 14 is carried at the end of shaft 23, which is driven by a bevel gear 43 held against axial displacement by a collar 44 bearing against an internal shoulder in bracket 22, the hub of gear 43 having a long keyway connecting it to and permitting axial movement of shaft 23. Between flanges 45 on shaft 23 is fitted a roller 46 carried by a lever 47 pivoted in housing 11 and having a follower 48 held against the face of a cylindrical track 49 on barrel cam 26 by a tension spring 50. When the roller 48 engages with the axial depression 51 of cam track 49, the shaft-roller 46 causes an axial movement of shaft 23, which has a bushing 52 slidable in a bearing 53 of housing 11, thereby bringing the locator 14 into the dotted position 14' where it engages and locates a cigar in its proper trimming position. On the hub of bevel gear 43 is mounted a pulley

54 attached thereto by a pin 55 and over which runs a belt 56 driving a pulley 57 on a shaft 58 supported by a sleeve 59 mounted in housing 11. The shaft 58 drives the rotating part of the nearby flag cutter unit of the rolling machine as shown in Fig. 11.

The bevel gear 43 is driven by a bevel gear 60 on a vertical shaft 61 supported in a bearing bracket 62, the shaft 61 having a bevel gear 63 in mesh with a bevel gear 64 on a horizontal shaft 65 in bracket 62 which shaft is attached by a coupling 66 to a continuously driven shaft 67 of the rolling machine. The gear 43 also drives a bevel gear 68 on a shaft 69 supported in a bushing 70 held in a bearing 71 of housing 11, the shaft 69 being connected by a universal joint to the shaft of finishing knurler 19, as shown in co-pending application 101,563, filed September 19, 1936, by S. Clausen, now Patent No. 2,151,898, granted March 28, 1939.

The cigar grippers are arranged to grip the cigar lightly while it is being axially located by the knurler 14, and then firmly while it is being trimmed to size by the cutters 17, 18. The lower grippers 15 (Figs. 3 and 4) are fixedly mounted on a shaft 72 supported in a bearing 73 of housing 11. The shaft 72 carries an arm 74 having a follower 75 held against a cam 76 on shaft 24 by a spring 77 anchored to a post 78 in housing 11. As the roller 75 rides off the lobe of cam 76, the spring 77 pulls the grippers 15 into their up-position against the cigar C, openings being provided in the concave 13 for their passage thereto.

The upper gripper 16 is loosely mounted on a shaft 79 supported in a bearing 80 of housing 11. On shaft 79 is fixedly mounted an arm 81 carrying two horizontal pins 82 and 83, the former extending above, and the latter below, the gripper 16. A coil spring 84 on shaft 79 has one end inserted into a fixed collar 85 while its other end presses down on gripper 16 thus holding the latter against the lower pin 83 of arm 81. On the end of shaft 79 within the housing is fastened a crank arm 86 which is connected by a link 87 to a bell-crank lever 88 fulcrumed on a stud 89 affixed to housing 11. The lever 88 carries a follower 90 held in engagement with the peripheral track 91 of cam 26 by a spring 92 attached to arm 86 and anchored to a post 93 in housing 11. As the depression 94 of track 91 engages with roller 90, the arm 81 causes the gripper 16 to move towards the cigar C and grip the same lightly by the pressure of the weak spring 84 while the arm 15 is likewise actuated toward the cigar, thereby permitting axial location of the cigar without injury to its wrapper. As the roller 90 then runs off depression 94 on to the periphery of track 49, the strong spring 92 pulls the upper pin 82 of arm 81 down upon the gripper, causing the latter to press firmly against the cigar, thus preventing axial movement during the trimming operation. It will be seen therefore that as the knurler 14 moves forward to locate a cigar, clamp arm 16 bears lightly thereon as the cigar is being moved axially to located position. Upon the conclusion of this operation, arm 16 is moved to clamp the cigar so that it is rigidly held when knives 17, 18 are operating. This arrangement insures against cigars of varying lengths because of the firm grip applied during cutting operations.

The trimmers are normally held some distance away from the end of rolling drum 12, but after the cigar has been axially located, they are moved towards the drum into cutting position and then close upon and sever the tuck end of the located cigar. The trimming knives 17, 18 (Figs. 5, 6 and 7), are mounted on a flanged sleeve 95 loose on a shaft 96 supported in bearing block 37 and in a bearing 97 of housing 11. On sleeve 95 are also mounted a flanged collar 98 carrying a coil spring 99 and a collar 100, the members 17, 18, 95 and 98 being clamped together by nuts 101 screwed against a spring-washer 102 on sleeve 95. The collar 100 in the bottom of its periphery has a radial hole into which loosely fits a pin 103 carried at the end of an arm 104 pivoted on a stud 105 adjustable in the slot of a bar 106 fastened to block 37 and housing 11. The arm 104 has a follower 107 engaging with a drum-cam 108 on shaft 24, the cam 108 being axially adjustable on a long key 24a in the said shaft. When the heavy portion of the flange of cam 108 engages the roller 107, as shown in Fig. 6, the arm 104 moves the trimmers from the dotted to the full-line position or cutting position. The position of the knives 17, 18 can be varied to suit the length of the particular cigar either by adjusting the fulcrum of lever 104 in bar 106 or by changing the axial location of cam 108. If much adjusting has to be made then both lever 104 and cam 108 must be varied to properly position them. The stud 105 and the cam 108 are so adjusted that this latter position corresponds to the exact length of the finished cigar wanted. In the illustrated embodiment the knives 17, 18 lie in vertical planes and sleeve 95 and collar 98 which support them are moved axially into and out of operative position.

Each of the trimming knives 17 and 18 is provided with a rear extension upon which are mounted followers 109 and 110 respectively, the upper, 109, of which is held to the top, and the lower, 110, to the bottom of an oblong cam bar 111 by the ends of the coil spring 99 which bear on the studs of said followers, as shown in Fig. 7. The bar 111 is pivoted in bearing block 37 and in a bearing 112 of housing 11 and on its housing end carries a crank arm 113 connected by a link 114 to a cam lever 115 pivoted on a stud 116 held in a bearing 117 of housing 11. The lever 115 has a follower 118 in engagement with a track 119 in the rear face of cam 26, whereby the bar 111 is turned into an upright position at the proper moment, causing the followers 109 and 110 to separate, and thereby close the trimming knives 17 and 18 upon one another, thus cutting the cigar C to the proper length.

Below the cutting position of the trimmers, an opening is provided in the table plate 20 of the machine, and a funnel-shaped chute 120 is attached to plate 20 (Figs. 1 and 2), the chute 120 terminating into a pipe 121 connecting with the suction system of the machine, so that all scrap resulting from trimming the cigars is immediately removed and the adjoining parts of the machine are kept clean.

If the improved re-rolling unit is to be used in a machine for making cheroots, it is provided with two sets of trimming knives, as shown in Fig. 8, a second set of knives, 122, 123, being placed at the head end. The added knives are equipped with duplicates of the parts 98 to 105 and 107 to 110 so that they are operated in unison with the tuck-end knives 17 and 18. The locating knurler 14 in this case passes through the head knives while the latter are open and returns to its rest position before the cutting operation is performed by the action of cam lever 115. The

cam 124 for the head knives which is a duplicate of part 108, and the stud 125 which is a duplicate of part 105, are not adjustably fastened to shaft 24 and bar 106, respectively, since the length of the cigar C only affects the position of the tuck knives and makes it unnecessary to mount the head knives adjustably. When the two sets of knives 17, 18 and 122, 123, are used, the suction waste removing system is so constructed and arranged that it is located beneath both sets of knives in order to carry off all waste and scrap falling from these knives.

In Figs. 9 and 10, an enlarged elevation and cross-section of the knives 17 and 18 (or 122 and 123) are given, showing offsets 126 at their cutting edges to readily shed accumulated gum oozing from the cigars when being trimmed. The space between the knife shanks occasioned by these offsets is taken up by a washer 127 placed between them at their joint.

The cam shaft 24 of the re-rolling unit is attached by a coupling 128, Fig. 11, to the cam shaft 129 of the wrapping device of the cigar machine designated generally W, which may be of the type shown in copending application No. 107,792, filed by J. P. Durning, October 27, 1936, now Patent No. 2,290,171, granted July 21, 1942, which has a gear 130 driven by a gear 131 from the main shaft of the machine. This improved drive has a decided effect in simplifying the re-rolling mechanism drive, makes it possible to form a more compact unit which is wholly independent insofar as its drive and operative parts are concerned of the remainder of the cigar machine, thereby allowing it to be readily removed for repair or interchange of parts, eliminates the necessity of using large cams on the main cam shaft, cuts down to a marked extent the size of levers used and in general adds to the overall efficiency of the re-rolling mechanism in the production of more uniform cigars and cheroots. The shaft 58, supported by the sleeve 59 and driven by the belt 56 from the continuously rotating knurler shaft 23, is made use of, as heretofore mentioned, to drive the flag cutter of the wrapping device. The latter consists of a rotating double-pointed knife 132 mounted on shaft 132*a* co-acting with a ledger plate 133, which are raised into operating position once in every cycle of the machine. For this purpose, the flag cutter is supported on a cam operated swinging arm 134 and driven by a friction wheel 135 engaging with a pulley 136 carried on a stud 137 by a cam-operated arm 138 swinging on a shaft 139 supported by the frame 140 of the wrapping device. The hub of pulley 136 is connected by a universal joint 141 to a shaft 142 which in turn is attached by a universal joint 143 to a coupling 144 on shaft 58.

The mechanism above described may be varied in construction within the scope of the claims, for the particular device selected to illustrate the invention is but one of many possible concrete embodiments of the same. The invention is not, therefore, to be restricted to the precise details of the structure shown and described.

What is claimed is:

1. In a cigar machine having a re-rolling device and a cigar holding concave located in spaced relation thereto, a pair of gripping members located adjacent the discharge end of said concave and arranged to receive and support cigars, a locator adapted to move cigars axially in said members to position a cigar therein, means for operating said members to apply a slight pressure to a cigar being located, means for subsequently operating said members to apply a firm gripping pressure to said members to securely hold a positioned cigar therein, knives for trimming an end of a cigar while so held, means for operating said knives to trim said end of said firmly held cigar, including a cam having a long operating surface, cam followers carried by said knives engaging said cam, and means for adjusting the position of said knives along said cam in accordance with the size of cigars to be trimmed.

2. In a cigar machine, the combination with cigar supporting devices, of cigar end trimming knives associated with said devices for trimming cigars located thereon to size, a knurler arranged to be moved into and out of the range of operation of said knives for positioning cigars in said supports and knurling cigar heads while said knives are inoperative, and means operative subsequent to the movements of said knurler for operating said trimming knives.

3. In a cigar machine provided with a re-rolling device and a cigar holding concave held in spaced relation therefrom, cigar supports, sets of trimming members located adjacent the ends of said supports and arranged to engage and trim the ends of cigars held on said supports, a knurler and means for projecting and retracting said knurler through one of said sets to position a cigar on said supports and knurl the same prior to the trimming of a cigar, and means for operating said trimming members.

4. In a cigar machine, the combination with spaced sets of cigar trimming devices, of supports for cigars, means for locating cigars on said supports for trimming, means for moving said devices into position to trim the ends of said located cigars, and a single common cam rotatably mounted in a fixed position simultaneously engaging both of said sets of devices for actuating them to trim a cigar positioned on said supports.

5. In a cigar machine, the combination with cigar supports, of means for holding cigars positioned on said supports, a device for trimming an end of a cigar to bring said cigar to size, including trimmer knives, a support for said knives, means for adjusting said knives axially on said knife support to position them for trimming cigars to any desired length, and a cam rotatably mounted in a fixed position having a common continuous operating surface arranged to cooperate with and actuate said knives at any adjusted position.

6. In a cigar machine, the combination with cigar supports, of means for holding cigars positioned on said supports, a device for trimming an end of a cigar to bring it to size, including trimmer knives, a support for said knives, means for adjusting said knives on said support to position them for trimming cigars to any desired length, a knife actuating cam having a common continuous operating surface arranged to operate said knives at any adjusted position, means for moving said knives axially on said knife support to position said knives for trimming the end of a cigar, said means comprising a cam, and additional means for adjusting the position of said knives along said knife actuating cam so that cigars may be trimmed to desired length.

7. In a cigar machine, the combination with cigar supports, of means for holding cigars positioned on said supports, a device for trimming an end of a cigar to bring said cigar to size, including vertical trimmer knives, a movable support for said knives, means on said support for main-

taining said knives fixed in substantially vertical planes, a mount for said support, means for moving said support with straight line motion along said mount into position to trim an end of a positioned cigar, a cam rotatably mounted in a fixed position for operating said knives, and means for moving said cam when said knives have been thus positioned for operating said knives to trim said cigar.

8. In a cigar machine, the combination with cigar supports, of means for holding cigars positioned on said supports, a device for trimming an end of a cigar to bring said cigar to size, including vertical trimmer knives, a movable support for said knives, means on said support for maintaining said knives fixed in substantially vertical planes, a mount for said support, means for moving said support with straight line motion along said mount into position to trim an end of a positioned cigar, means for adjusting the amount of movement on said mount, and means operative when said knives have been thus positioned for operating said knives to trim said cigar.

9. In a cigar machine, the combination with cigar supports, of means for holding cigars positioned on said supports, a device for trimming an end of a cigar to bring said cigar to size, including trimmer knives, a movable support for said knives, a mount for said support, means for moving said support with straight line motion along said mount into position to trim an end of a positioned cigar, means operative when said knives have been thus positioned for operating said knives to trim said cigar, said last-named means comprising an elongated cam extending substantially parallel to said mount, and means for adjusting said support on said mount relative to said cam to trim cigars to any desired length.

10. In a cigar machine, the combination with cigar supports, of means for holding cigars positioned on said supports, a device for trimming an end of a cigar to bring said cigar to size, including trimmer knives, a movable support for said knives, a mount for said support, means for moving said support with straight line motion along said mount into position to trim an end of a positioned cigar, means for adjusting the amount of movement on said mount, means operative when said knives have been thus positioned for operating said knives to trim said cigar, said last-named means comprising an elongated cam extending substantially parallel to said mount, and means for adjusting said support on said mount relative to said cam to trim cigars to any desired length.

11. In a cigar machine having a support for a cigar to be trimmed, spaced sets of trimming devices located at the ends of said support, means for locating a cigar on said support for trimming, means mounting said devices for movement relative to each other for trimming the ends of said cigars, a single long cam having continuous operating faces positioned to coact with said devices, and means for adjusting said devices relative to one another along said cam for trimming cigars to any desired length.

12. In a cigar machine provided with a rerolling mechanism, and supports arranged at the discharge end of said mechanism to receive cigars ejected therefrom; means for positioning cigars on said supports, means for effecting light gripping of cigars to hold said cigars lightly on said supports during said positioning, end trimming mechanism including substantially vertical, pivoted knives for trimming each positioned cigar to size, means mounting said knives for movement in fixed parallel planes, means for operating said trimming mechanism comprising a cam, cam followers on said knives engaging said cam, and means for effecting firm gripping of each positioned cigar to hold said cigars firmly on said supports during the operation of said trimming mechanism.

13. In a cigar machine, the combination with members arranged to receive and hold cigars, of a locator, means for operating said members to apply relatively light pressure to a cigar to be located, means for moving said locator into engagement with a cigar while so held to displace it axially in said members and thereby position said cigar for a further operation, means for operating said members subsequent to said locating operation to apply a firm gripping pressure to the located cigar to hold it securely against axial displacement in said members, spaced sets of cigar trimmers for trimming both ends of a located cigar, means for moving one of said sets of trimmers relative to the other to position said set of trimmers for trimming one of the ends of said located cigar, and means operative after said first-named set of trimmers has been moved into trimming position, and while said cigar is held firmly in said members for operating both sets of trimmers to trim both ends of said firmly held positioned cigar.

14. In a cigar machine, the combination with cigar supporting devices, of cigar end trimming knives cooperatively arranged with respect to said devices for trimming cigars, a movable support for said knives, means normally holding said knives apart, a locator for locating cigars on said devices, means for moving said locator between said open knives into engagement with the head end of a cigar to locate said cigar on said supporting devices and then withdrawing said locator from between said knives, means for moving said support to shift said knives into position to trim a located cigar, and means operative subsequent to the location of a cigar and movement of said knives into trimming position for causing said knives to trim cigars to size.

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