June 5, 1923. 1,457,724

A. CARABALLO

MACHINE FOR MAKING CIGAR BUNCHES

Filed Dec. 31, 1919 3 Sheets-Sheet 1

Fig. 1.

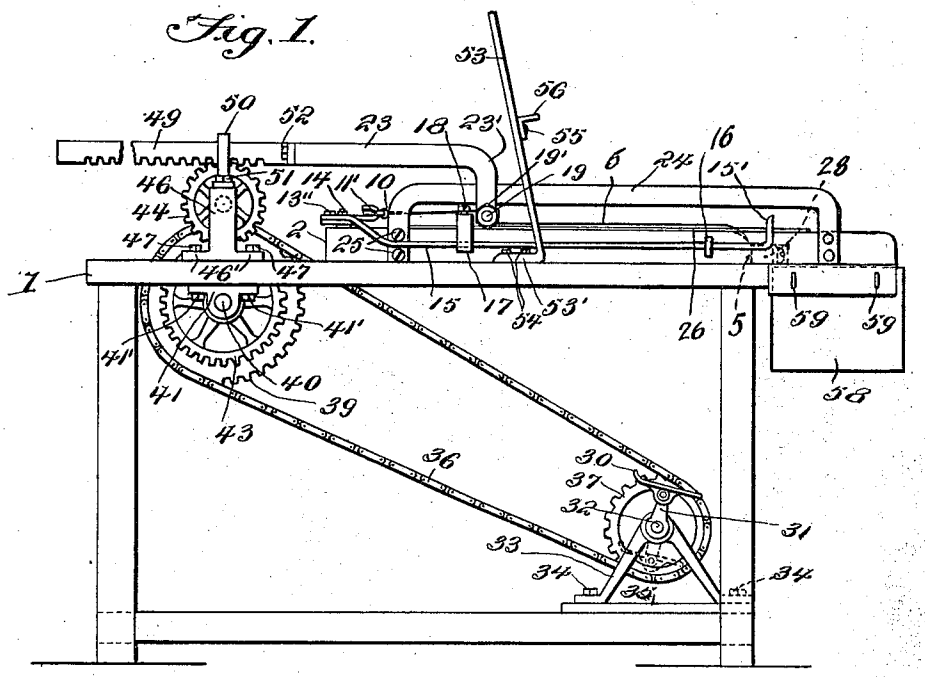
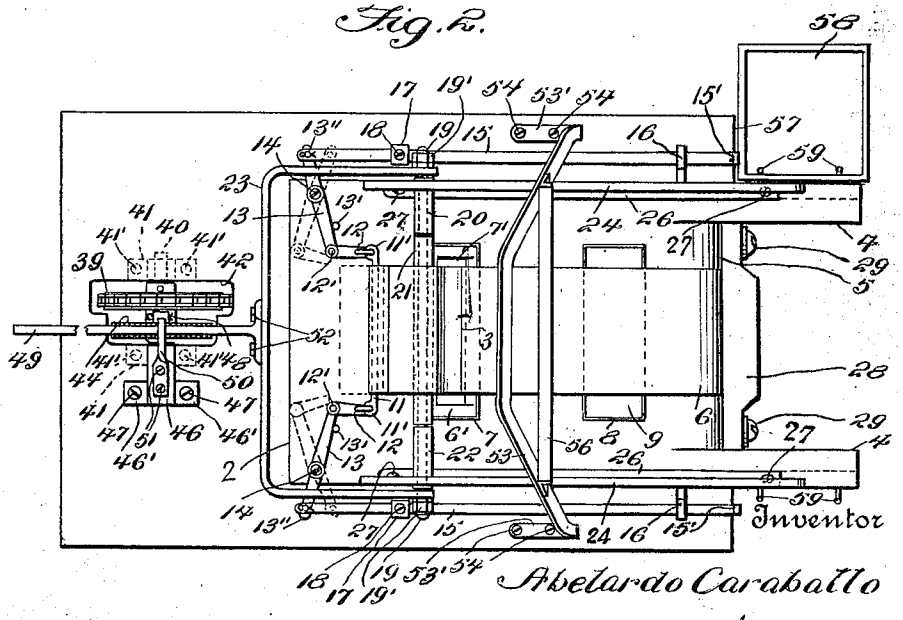


Fig. 2.



Inventor

Abelardo Caraballo

By B. Singer,

Attorney

June 5, 1923. 1,457,724

A. CARABALLO

MACHINE FOR MAKING CIGAR BUNCHES

Filed Dec. 31, 1919 3 Sheets-Sheet 2

Fig. 3.

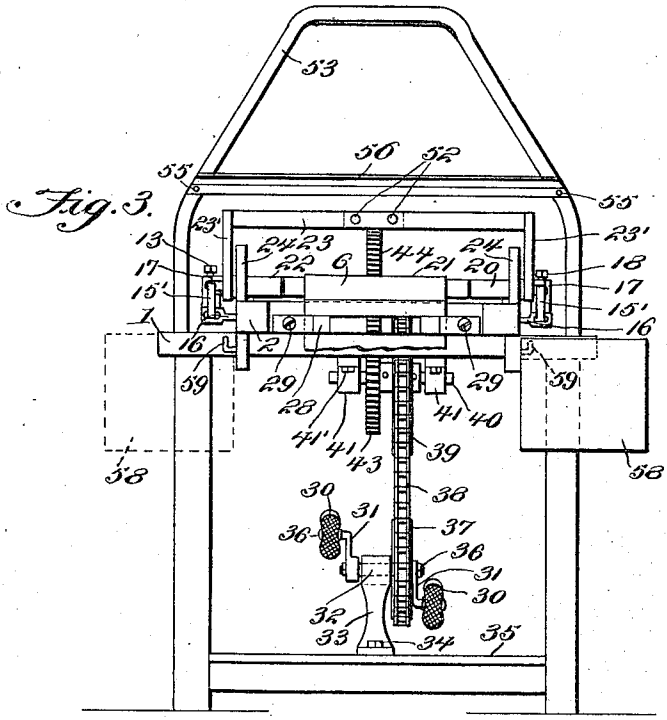
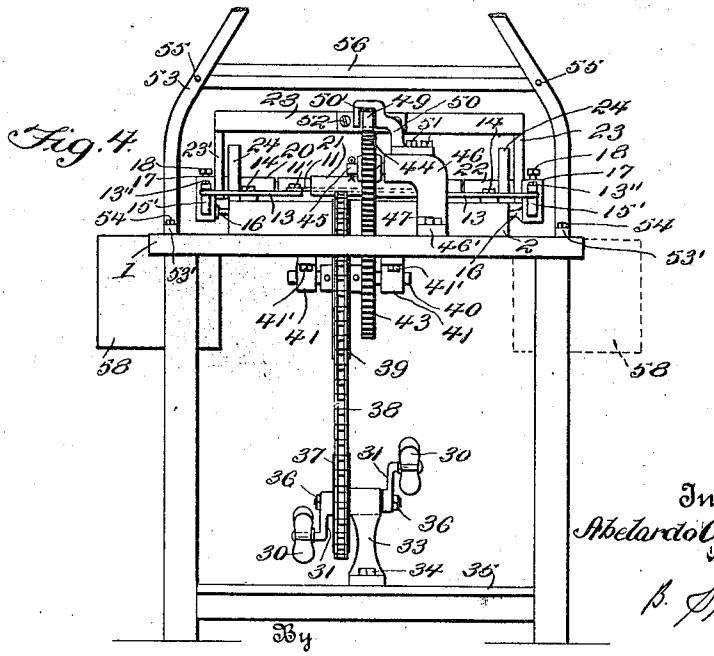


Fig. 4.



Inventor
Abelardo Caraballo
By B. Singer.
Attorney

June 5, 1923. 1,457,724

A. CARABALLO

MACHINE FOR MAKING CIGAR BUNCHES

Filed Dec. 31, 1919 3 Sheets-Sheet 3

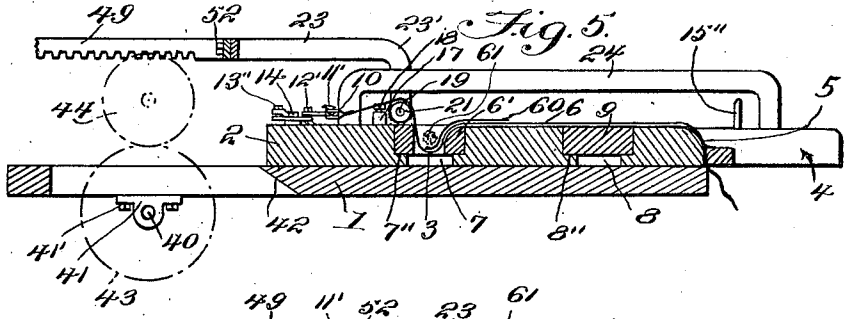


Fig. 5.

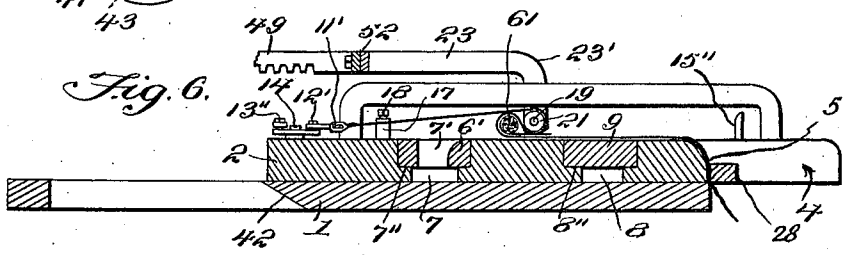


Fig. 6.

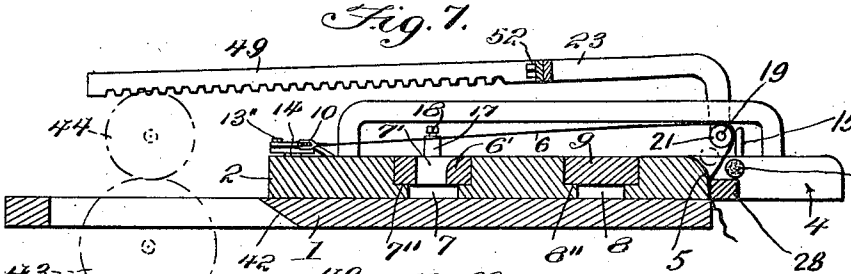


Fig. 7.

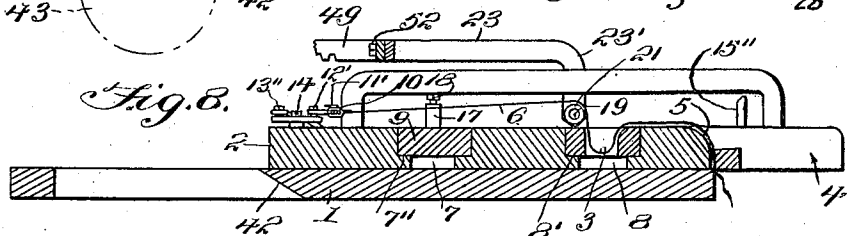


Fig. 8.

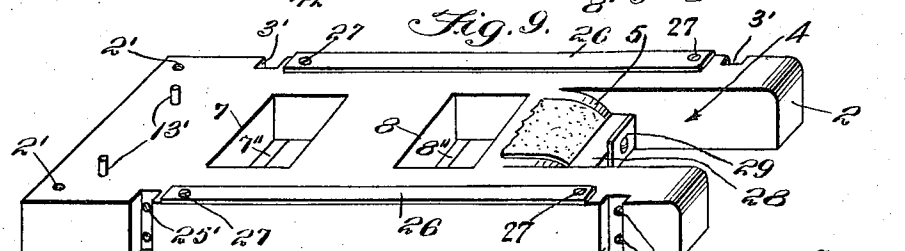


Fig. 9.

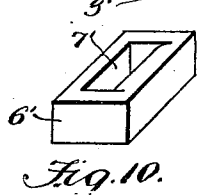


Fig. 10.

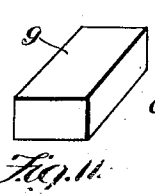


Fig. 11.

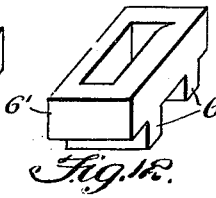


Fig. 12.

Inventor

Abelardo Caraballo

A. Smger,

Attorney

Patented June 5, 1923. 1,457,724

UNITED STATES PATENT OFFICE.

ABELARDO CARABALLO, OF HABANA, CUBA.

MACHINE FOR MAKING CIGAR BUNCHES.

Application filed December 31, 1919. Serial No. 348,648.

To all whom it may concern:

Be it known that I, ABELARDO CARABALLO, a citizen of the Republic of Cuba, and a resident of Habana, Cuba (whose post-office address is #58 Carmen Street, Habana, Cuba), have invented certain new and useful Improvements in Machines for Making Cigar Bunches, of which the following is a specification.

This invention relates to improvements in machines for making cigar bunches and its main object is to provide an improved machine which is rapid and efficient in operation, and which is adapted also to make cigars, by using instead of the usual inner wrapping leaf a leaf of the kind used as an outer wrapper for wrapping the filler.

Another object of this invention is to provide an improvement in that kind of machines whereby it is possible to make cigars of variable size or length.

The invention is described with reference to the figures of the annexed drawings, in which:

Fig. 1 is a side elevation of a machine for making cigar bunches provided with the improvements forming the subject-matter of this invention.

Fig. 2 is an upper plan view thereof.

Fig. 3 is an end elevation view of the machine.

Fig. 4 is an elevation view of said machine from the opposite end.

Fig. 5 is a longitudinal vertical section of the machine showing the pouch and the filler or cut tobacco therein in readiness to commence the elaboration of the bunch.

Fig. 6 is a similar section showing the starting of the rolling operation of the bunch.

Fig. 7 is a similar section showing the termination of the operation for elaborating the bunch.

Fig. 8 is a similar section showing a modification of the machine for elaborating a smaller or shorter bunch.

Fig. 9 is a perspective view of the machine platform, separately from the machine.

Figs. 10 and 11 are perspective detail views showing respectively the box where the pouch for holding the filler or cut tobacco is formed and the plug or obturating block which is lodged in one of the slots of the platform when such slot is not to be used.

And Fig. 12 is a detail showing in perspective a modified form of said box.

In the drawings, 1 indicates a wooden frame supporting a platform 2 which has at its rear portion a recess of rectangular shape 4, the front wall 5 of this recess being upwardly rounded. On platform 2 is extended a band 6 made of flexible material such as fabric, oil cloth, leather, etc., a portion of which is arranged to form a pouch 3 in a rectangular opening 7′ whose front edge is rounded and is formed in a rectangular removable box 6′ fitting in one of the openings or grooves 7 or 8 made at the central portion of the platform, said box bearing at its lower side inwardly projecting edges 7″ or 8″ formed at the bottoms of said grooves 7 and 8. The other groove, which is not used, is covered with a plug or obturating block 9 shown in Fig. 11 which also bears on the borders 8″ of the groove wherein it is inserted, as clearly illustrated in Figs. 5, 6, 7 and 8.

The fore end of the band 6 is rolled up on itself forming an eye 10 through which passes the rod 11 which is connected at 11′ on each end to links 12 which are in turn articulated at 12′ to an end of levers 13 vertically pivoted on screws 14 fixed in holes 2′ of platform 2, small pegs 13′ fixed thereto acting as limiting butts in the movement of said levers to the interior of said platform 2, and the other ends of said levers being articulated at 13″ to bars 15 slidably mounted out of the platform and laterally to the same in brackets 16 fixed thereto, each bar 15 terminating at its opposite end in a vertical butt 15′. Said bars 15 have mounted thereon the O-shaped butting brackets 17, which can be secured at any point of said bars by means of set screws 18 passing through holes made in the upper sides of these brackets 17.

Band 6 is operated through a transverse shaft 19 arranged underneath the same, there being loosely mounted on said shaft and adjacent to one another the separating rolling sleeves 20, 21 and 22 and near the end sleeves 20 and 22 there are mounted on the same shaft 19 the vertical arms 23′ forming part of a horizontal frame 23, said arms being held on the shaft by means of nuts 19′, and said shaft 19 is slidable transversally to platform 2 along guides formed between the latter and the mountings 24 located laterally to the platform 2 and whose downwardly bent

ends fit in notches 3′ made at the sides of the platform and are secured inside thereof by means of screws 25 which are threaded in the holes 25′ of such notches. Frictional bearings to shaft 19 are formed by thin metal plates 26 fixed longitudinally to platform 2 and secured thereto by screws 27, thereby preventing the wear and tear of said platform. The band 6 leads down the platform at its rear end and is grasped between the rounded inner edge 5 of the recess 4 of the platform and the transverse lath 28 which is secured to the platform by the set screws 29. The members for imparting a reciprocating motion along the platform 2 to the shaft 19 sliding between the guides 24 and the plates 26, and which members constitute one of the improvements of this invention, consist in a pair of treadles 30 mounted on elbowed arms 31 fixed to the horizontal shaft 32 mounted on a bearing support 33 fixed by end flanges and by means of screws 34 on the board 35 arranged on two cross pieces 35′ of the wood frames, nuts 36 holding said treadles secured to shaft 32. On said shaft is securely mounted the sprocket wheel 37 connected through the endless chain 36 with the sprocket wheel 39 fixed to a horizontal transverse shaft 40 rotating in bearings 41 secured beneath the lower face of the table of the wooden frame 1 by means of screws 41′, said sprocket wheel projecting upwards through the opening 43 made in the table of said wooden frame. On shaft 40 is securely mounted the gear wheel 43 which also projects upwards through opening 42 and with which engages upwardly the pinion 44 rotating loosely on a trunnion 45 horizontally projecting from the bracket 46, the latter being secured by the wings 46′ in which it terminates on the table of the wooden frame 1 by means of screws 47, the pinion 44 being held in its position with respect to the trunnion 45 by means of the pin 48.

The pinion 44 meshes with the horizontal rack bar 49 arranged longitudinally with respect to the wooden frame 1 and which is guided through the opening 50′ of the supporting arm 50 fixed at its lower flanged end to the bracket 46 by means of screws 51. The inner end of the rack bar 49 is T-shape, and is rigidly secured by means of screws 52 to the center of the horizontal frame 23.

Transversally to the wooden frame 1 is arranged a standard 53 whose ends 53′ are bent in flanges to be firmly connected to the table of the wooden frame at the exterior of the platform 2 by means of the screws 54, there being transversally secured to this standard by means of screws 55 the angular plate 56 where is placed the board for holding the bunches made.

In the recesses 57 formed between the fore end of the frame table 1 and the sides of platform 2 boxes 56 are secured by the hooks 59, said boxes being designed to hold the tobacco material which is to be used.

In Fig. 12 is shown a modified form of box 6′ which is of less depth than that of the box shown in Fig. 10 and has two bottom projections 60 to laterally engage the band 6 and to prevent any loss of tobacco material from pouch 3.

The operation of the machine is as follows:—Assuming the various parts arranged in the form and position indicated in Fig. 5, that is, the flexible band 6 forming the pouch 3 inside the box 6′ and the operating transverse shaft 19 disposed between this pouch and the transverse rod 11 carrying the band, and the lever system having its heads articulated in the position shown with full lines in Fig. 2, there is placed on band 6 until reaching interiorly to the middle portion of the pouch 3 the leaf portion or fourth part of a tobacco leaf 60 to form the inner cover of a cigar and upon the same and inside the pouch the cut tobacco 61 which is to form the fillers for the cigar, the opening 8 which is not being used then having been previously covered with the plug 9, as shown in Figs. 5, 6 and 7. In this position, the operator seated in front of the frame 1 actuates the treadles 30 which impart movement to the sprocket wheel 37 which in turn transmits it through the endless chain 36 to the upper sprocket wheel 39. Said sprocket which is mounted on the same shaft as the gear wheel 43 meshing with pinnion 44 and the latter imparts motion to the rack bar 49 which pushes forward the piece 23 connected to the ends of shaft 19. The sleeves 20 and 22 mounted on this shaft roll on the plates 26 when the shaft 19 advances, while the central sleeve 21 slides over the pouch 3 and presses the same down in the opening 7 and by its continued forward movement then pulls the pouch up, and moves the same forwardly and imparts rolling motion thereto, thus rolling up the tobacco leaf or inner wrapper 60 on the filler 61 until the end nuts 19′ of shaft 19 strike against the butts 15′ and push same, carrying along with them the bars 15 running in the brackets 16, whereby the levers 13 turn to the position shown in dotted lines in Fig. 2 of the drawings. These levers then pull back the rod 11 carrying with it the band 6 thus putting such band under tension, whereby the pouch 3 is undone when passing beneath and raising the sleeve 21 and the band 6 is caused to let loose the bunch 62 when passing to the front of shaft 19, as shown in Fig. 7, the bunch falling in the recess 4 above the rounded edge thereof. Then it is only necessary to reverse the motion of the treadles so that all the members may return to the original position shown with full lines in Fig. 2, and repeating the operation in the same manner as above described as many

times as desired. The lath 28 which holds the band enables the latter to be adjusted to regulate the thickness of the bunch by forming a pouch more or less deep, as may be desired.

When it is desired to make a bunch of less length, it is not necessary to give so many turns to the cover of the inner wrapper with the cut tobacco inside thereof, for which reason it is required to shorten the travel of the pouch on platform 2 and for that purpose the groove 7 is covered with the plug 9 as shown in Fig. 8, the box 6' then being inserted in groove 8 for forming the pouch; the brackets 17 are moved forward along the bars 15 for limiting the backward movement of shaft 19 and they are secured in that position by means of set screws 18, the operation being performed in all other respects in the same manner as previously described.

It is obvious that the details of construction of the machine can be slightly varied without altering the spirit of the invention, which is as pointed out in the appended claims.

What I claim is:—

1. In a cigar bunching machine, a platform having a recess open at its upper side, a flexible band on said platform, and arranged to pass over and to form a pouch in said recess, said band having been secured at one end, a lever connected to the opposite end of the band to put the same under tension when said lever is operated, a roller on which said band passes, a longitudinally movable frame by which said roller is carried, means to move said frame in either direction, and means to cause said frame to operate said lever, as said frame nears the end of its movement in one direction.

2. In a cigar bunching machine, a platform having a recess open at its upper side, a flexible band on said platform and arranged to pass over and to form a pouch in said recess, said band being secured at one end, a lever connected to the opposite end of said band to put the same under tension when said lever is operated, a roller over which said band passes, a longitudinally movable frame by which said roller is carried, means to move said frame in either direction, and a longitudinally movable rod, connected to said lever and arranged for movement by said frame when the latter nears the end of its movement in one direction, to cause said rod to operate said lever.

3. In a cigar bunching machine, a platform having a recess open at its upper side, a flexible band on said platform and arranged to pass over and to form a pouch in said recess, said band being secured at one end, a lever connected to the opposite end of the band to put the same under tension when said lever is operated, a roller over which said band passes, a longitudinally movable frame by which said roller is carried, means to move said frame in either direction, and means to cause said frame to operate said lever, said frame having limited movement in either direction independently of said lever.

In witness whereof I affix my signature.

ABELARDO CARABALLO.