Sept. 24, 1940. S. CLAUSEN 2,215,461

CIGAR MACHINE WRAPPER CARRIER

Filed Sept. 25, 1936 4 Sheets-Sheet 1

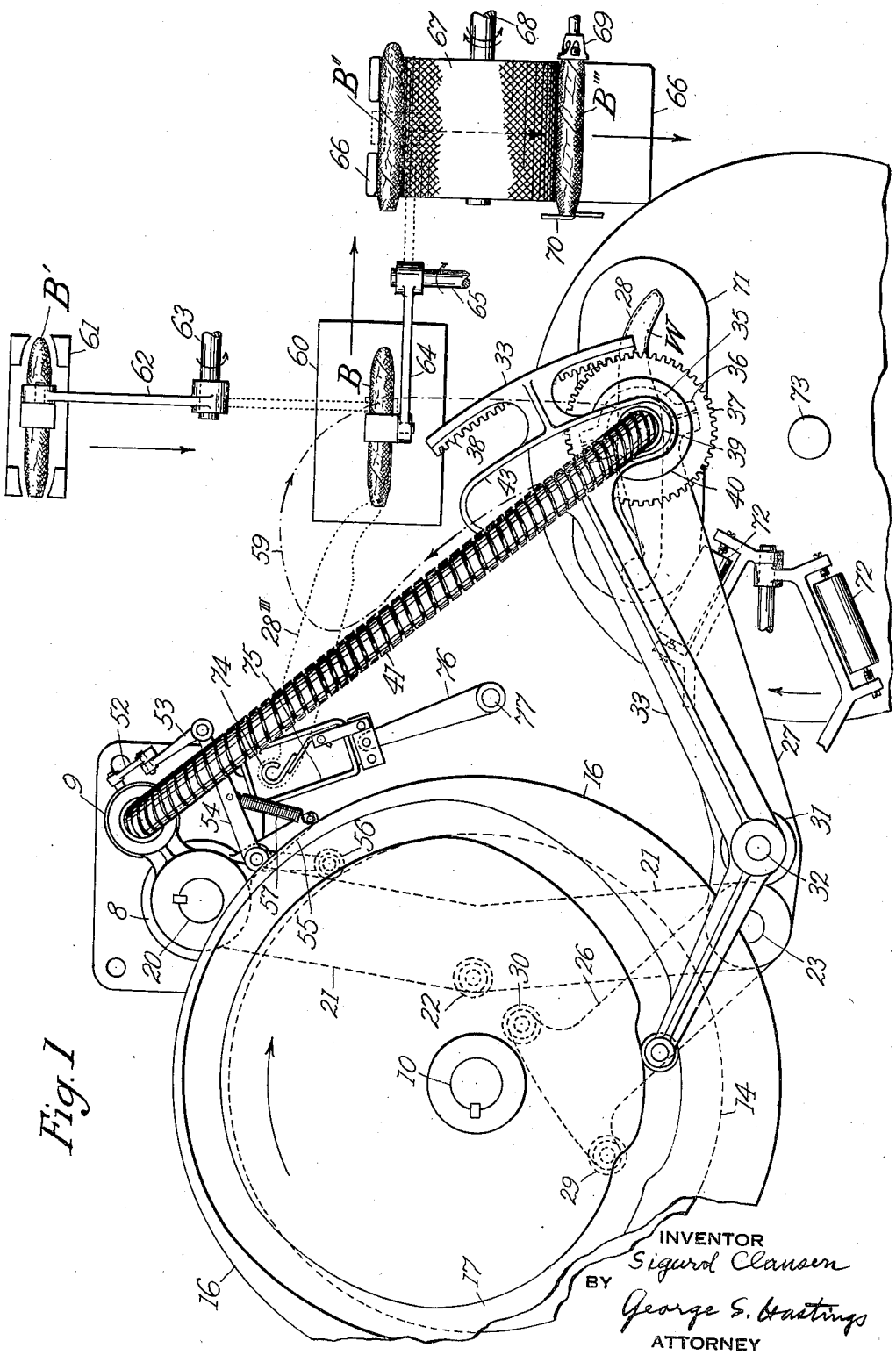


Fig. 1

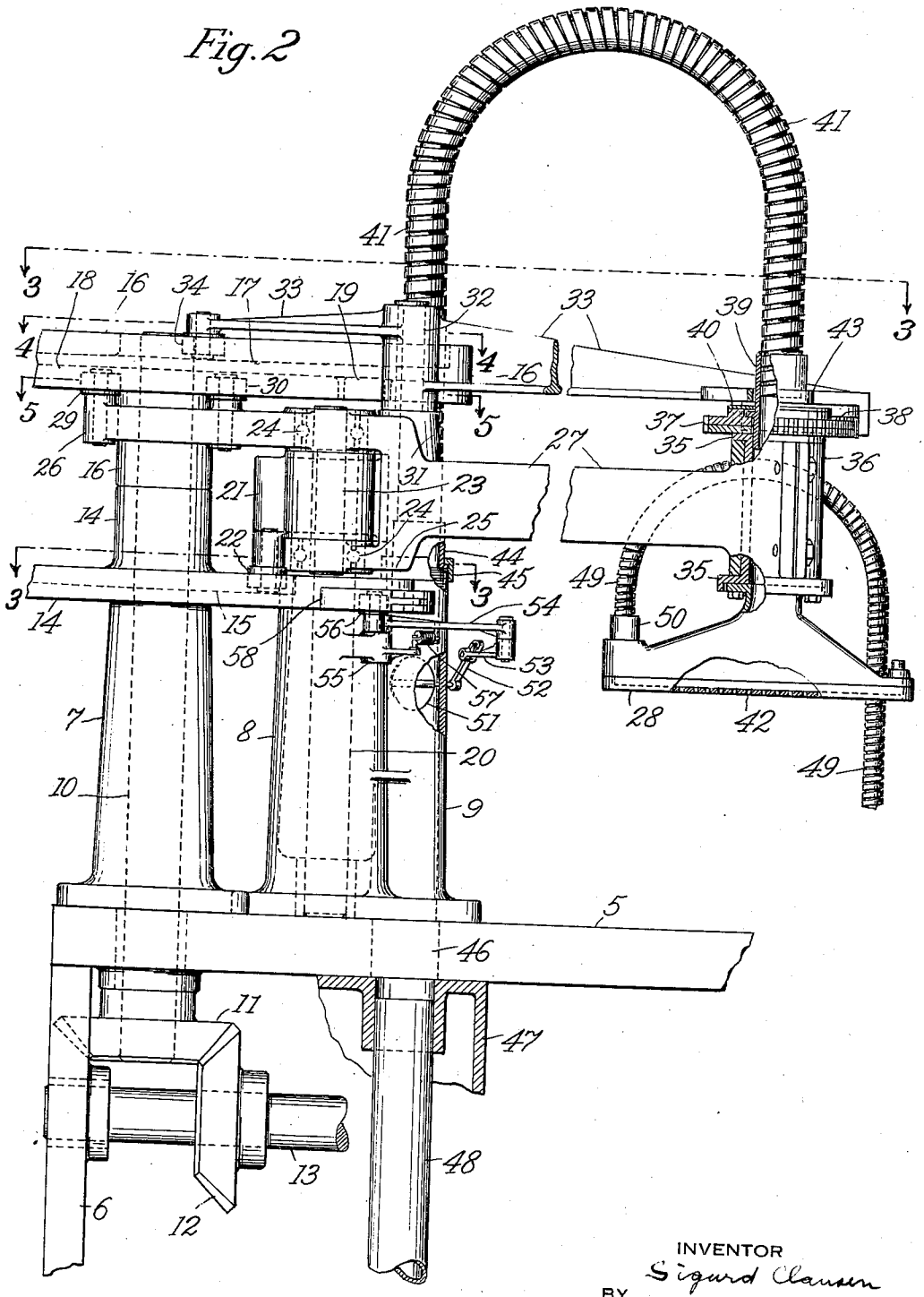
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Fig. 2



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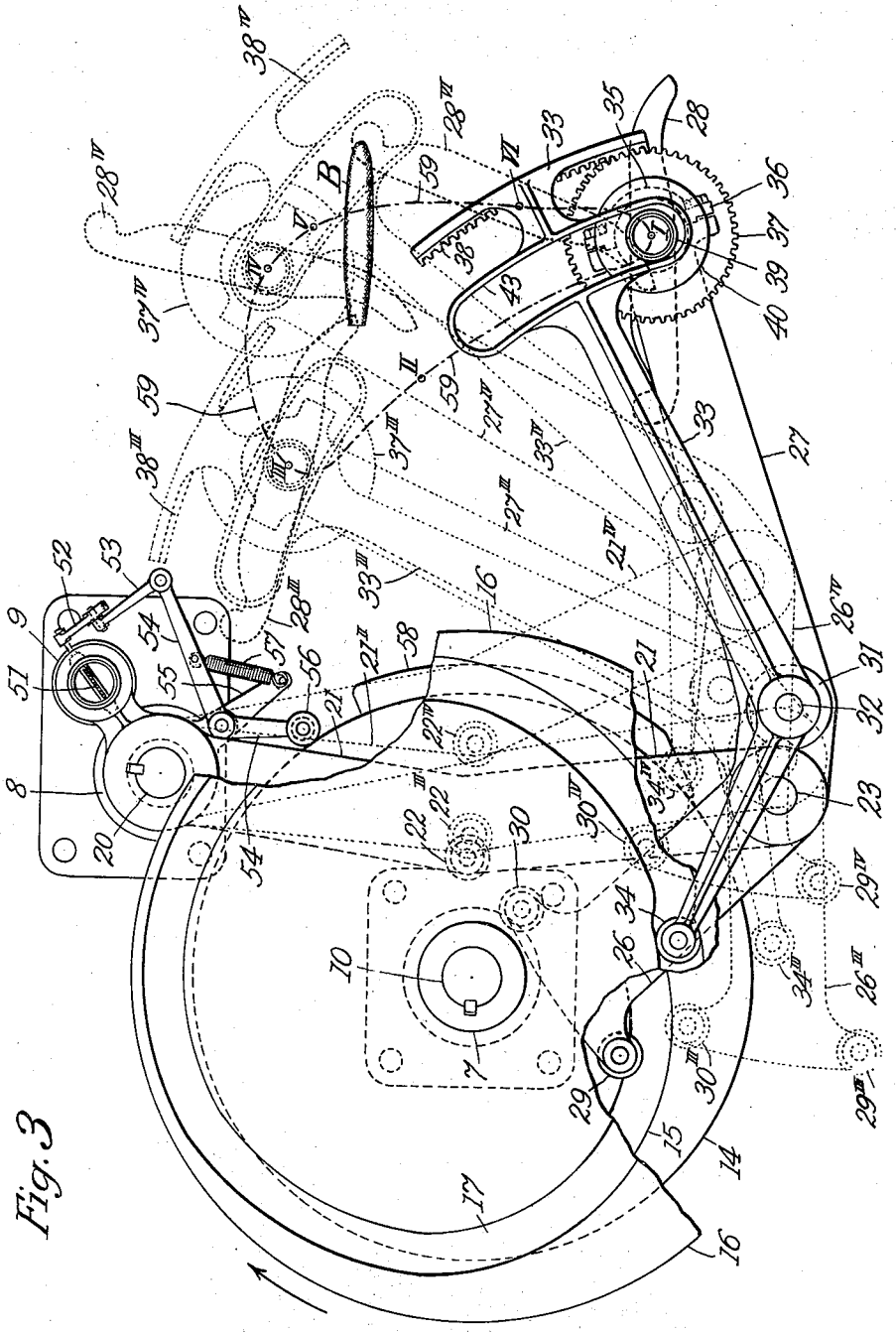


Fig. 3

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Fig. 5

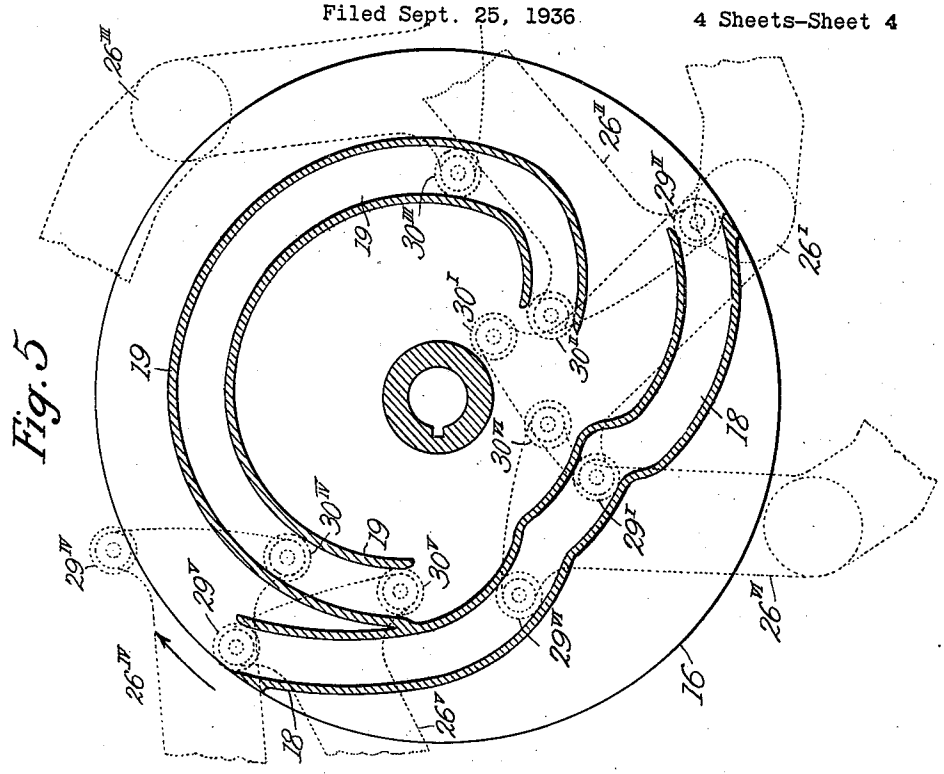
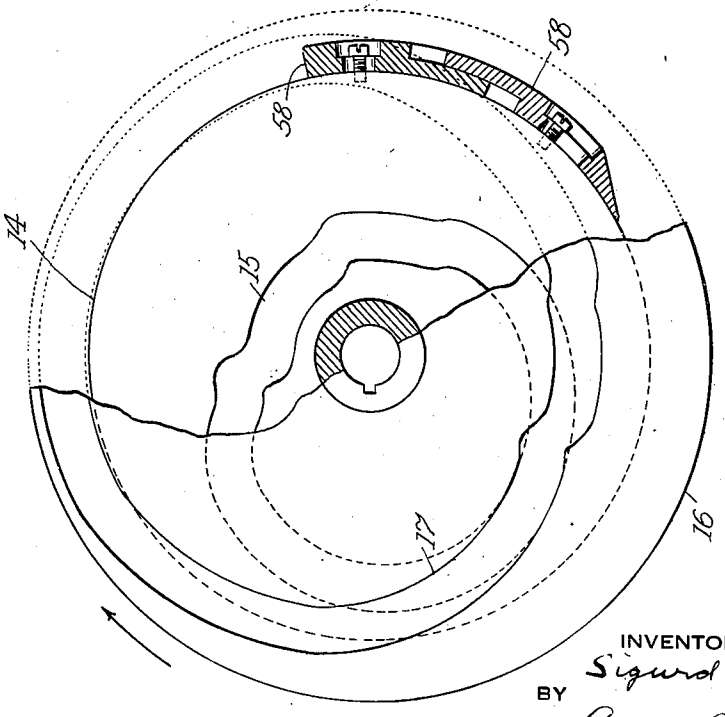


Fig. 4



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UNITED STATES PATENT OFFICE

2,215,461

CIGAR MACHINE WRAPPER CARRIER

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Application September 25, 1936, Serial No. 102,455

38 Claims. (Cl. 131—105)

This invention relates to cigar machines, and more particularly to transfer mechanisms for cigar machines which remove wrappers from a cutting die, carry them to a wrapping station, and deliver them for wrapping around a bunch.

To properly feed the wrapper to a bunch, the wrapper carrier must travel along a path at a proper speed in order to hold a wrapper without undue strain as it is wrapped about the bunch. During its travel the major axis of the wrapper carrier must at all times be held at the correct angle to the bunch so that the wrapper is laid on smoothly without the formation of wrinkles or hollows. Therefore, the carrier head must not only be accurately advanced in a given path, but must also be turned independently to the necessary applying angle while advancing through each portion of the path. Since the carrier head has been provided with independent turning mechanism so that it can be turned to bring the wrapper to any predetermined position during the application of the wrapper to a bunch, with little or no forward movement of the head itself, this has eliminated the large bumps now necessary on the trailer cams used on existing machines, and accounts for the smooth path generated by the rotary cams of this invention. It is, therefore, an object of this inventiton to provide mechanism for achieving these results with a minimum of moving parts and with an improved arrangement of said parts.

Heretofore on cigar machines it has usually been customary to provide wrapper carrying devices which had a reciprocatory movement. That is, the wrappers have been removed from the cutting bed, transferred to a wrapping unit, and upon the complete delivery of the wrapper about the bunch at that unit, the carrier has been returned to its starting point over the same path. Obviously, since this track is more or less bumpy, in order to perform the necessary carrying and wrapping movements, the carrier on being returned to the wrapping position at greater speed after acquiring another wrapper causes a jarring of the machine. Also, heretofore, it has been necessary to prevent the return of the carrier head to wrapper applying position until the transfers for conveying bunches to the wrapper unit and cigars therefrom had completed their operations. By means of my novel structure it is now possible to return the carrier head to the wrapping position in a smoother path and with a regular motion, thus eliminating all shock and jar to the machine, and also to allow bunches and cigars to be transferred to and from the wrapping mechanism without interfering with the carrier head or without loss of time incident to the movement of the carrier head to the wrapping position, so that there is a marked increase of time available for wrapping operations and much less likelihood of wrappers being torn.

It is, therefore, a further object of this invention to provide a wrapper carrying mechanism which will move in a closed or orbital path to and from the wrapper forming mechanism.

It is an additional object of the invention to provide a cigar machine having mechanism for transferring wrappers to and from cutting position without interfering with the rapid transfer of bunches and cigars to and from the wrapping station, and in which the driving means therefor causes the transfer mechanism to pause only at the wrapper receiving and pasting positions.

It is a further object to provide a cigar machine having thereon a carrier so constructed that it can be turned independently of its advancing movement and operate in an orbital, circuital or rotationally unidirectional path to deliver wrappers to a wrapping position, and move back to said position without interfering with or delaying the operation of the transfer mechanism of the machine.

It is an added object to provide a system of rotating cams for moving a wrapper carrier head of a cigar machine in a closed curvilinear path to and from wrapper applying position.

It is also an object of the invention to provide a cigar machine with a carrier mechanism which will make possible more efficient transfer of wrappers to the wrapping station by providing means for returning the carrier head to the wrapping position over a different path than that over which it moves during the application of the wrapper.

An additional object of the invention is to provide means for guiding the wrapper carrier from the wrapper die to the wrapping device by a rotary instead of a reciprocatory driving mechanism, thereby not only improving the construction of the machine, but also allowing more time for the wrapper applying operations and hence greatly increasing the efficiency of the machine.

It is a further object of the invention to provide rotary cam mechanism for moving the wrapper transfer mechanism of a cigar machine in a closed path to and from wrapper receiving and wrapper applying stations without jarring the machine at any time in its cycle of operations, and in which the carrier head assumes a series of predetermined positions during the movement thereof.

It is a further object of the invention to provide a plurality of rotating cams which will actuate the wrapper transfer mechanism of a cigar machine, and move it in a closed path to and from wrapper receiving and applying positions with a smooth and regular motion instead of a rapid return movement of said transfer to the wrapping position with an accompanying jar to the machine structure.

In the particular embodiment of the invention as shown in the attached drawings, the wrapper transfer is provided with three pivoted arms controlled by two co-axial rotating cams. A swinging main arm guided by a cam roller carries a shaft which is articulated to a second cam-controlled arm carrying the wrapper carrier head. The combined action of these two arms compel the head to travel in the path prescribed by the cams for the particular cigar shape to be wrapped by the machine. On a stud supported by the last mentioned arm is a pivoted cam actuated arm having a gear sector which meshes with a gear on the carrier head for turning the latter to the required angle in each position. As the wrapper is held to the head by suction, an automatic valve is included in the improved mechanism to turn the suction on or off when the wrapper is being received or delivered from the head.

While this transfer is especially adapted to a cigar machine employing a duplex or multiplex cutting mechanism, it also finds ready adaptability for use on a cigar machine using but a single cutting die. Either adaptation requires but a change of the shape of the moving cams which control the path of movement of the carrier head.

With these and other objects not specifically mentioned in view, the invention consists of the combinations and constructions which will be hereinafter fully described, and then specifically 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 a top view showing the relative position of the improved wrapper carrier to other units of the cigar machine;

Fig. 2 is an elevation of the wrapper transfer;

Fig. 3 is a top view of the same on line 3—3 of Fig. 2;

Fig. 4 is a top view on lines 4—4 of Fig. 2, showing the cam-tracks for guiding the swinging main arm and the carrier turning arm, also the cam piece controlling the suction valve; and

Fig. 5 is a top view on line 5—5 of Fig. 2, showing the cam-tracks for guiding the swinging carrier arm.

Referring to Figs. 1 and 2, the base plate 5 of the cigar machine which is supported by a frame 6 carries a single pedestal 7 and a double pedestal consisting of two vertical columns 8 and 9. The pedestal 7 supports a vertical shaft 10 which passes through the base plate 5 and on its lower end carries a bevel gear 11 driven by a bevel gear 12 fixed on a shaft 13 supported by the frame 6. On shaft 10 are mounted a horizontal cam 14 having a track 15 in its upper face, and a horizontal cam 16 having a track 17 in its upper face, and tracks 18 and 19 in its lower face.

In column 8 is journaled a vertical shaft 20 having attached thereto a horizontal arm 21 provided with a roller 22 engaging a track 15 of cam 14. The free end of arm 21 carries a vertical stud 23 which, by means of suitable bearings supports the forked ends of a horizontal arm 27 for pivotal movement thereon. The wrapper carrier head 28 is rotatably mounted on the free outward end of arm 27. The upper fork end 26 of arm 27 is extended inwardly and carries two rollers 29 and 30 engaging the tracks 18 and 19 of cam 16. A boss 31 on arm 27 supports a stud 32 on which is pivoted a horizontal arm 33 having a roller 34 in engagement with track 17 of cam 16.

Carrier 28 is attached to the lower end of a flanged sleeve 35 turnably held in the free end of arm 27 by a cap 36, while to the upper flange end of sleeve 35 is affixed a gear 37 meshing with a gear sector 38 carried by the free end of arm 33. The gear 37 is preferably made in two co-axial relatively turnable adjustable narrow parts in order to take up the slack of the meshing teeth. Into sleeve 35 is loosely inserted a flanged sleeve 39 provided with a flange held therein by a disk 40 attached to gear 37 and overlapping the flange portion of the sleeve which forms the delivery end of a flexible tube 41 carrying the suction to the suction holes 42 of the carrier head 28. Sleeve 39 passes through an aperture 43 provided in arm 33, this aperture being of the proper lateral extent to permit the required angular movement of arm 33. The other end of tube 41 is attached by a flanged coupling member 44 and screw cap 45 to the top end of column 9, the latter communicating through a port 46 in baseplate 5 with a chamber 47 into which terminates a pipe 48 connected to the suction source of the machine. A flexible tube 49 connected to a suitable compressed air source is attached to the flag end 50 of the carrier head for the purpose of delivering a puff of air for ejecting the flag end of the wrapper after the suction in tube 41 has been shut off.

The suction in tube 41 is controlled by a valve 51 provided in column 9, this valve by means of levers 52 and 53 being actuated by a cam lever 54 pivoted on a bracket 55 of column 8 and provided with a roller 56 held against the periphery of cam 14 by spring 57. At the proper point, a cam piece 58 is attached to the circumference of cam 14, which cam piece is made in two interlapping parts, as shown in cross-section in Fig. 4, so that its position on cam 14 and its effective length may be adjusted to the proper timing of the valve 51.

In Fig. 3, the path described by the carrier head 28 in moving from wrapper receiving position, to wrapping position and back in order to properly wrap the bunch B in the wrapping device and the relative positions of the supporting arms are shown by the dot-dash line 59. The die position of the wrapper transfer, at point I of this path, is shown partly in full lines. The point designated II is an intermediate position occupied by the carrier head in its undirectional movement. Dotted lines show the paster position III in which the flag end of the wrapper is supplied with a daub of paste and the tuck end is placed upon the cigar bunch B by the tuck needle; the position IV in which the main arm 21 is in its outermost position 21^{IV}; and the blow-off position VI in which the flag end of the wrapper is ejected from the carrier by a puff from compressed-air pipe 49.

The track 15 of cam 14 which guides the roller 22 of arm 21, and the track 17 of cam 16 which guides the roller 34 of arm 33 in order to turn head 28 to the proper angle in each position, are shown in Fig. 3, and the tracks 18 and 19 of cam 16 which guide the rollers 29 and 30 of arm 27 are shown in Fig. 4, the roller 29 engaging with track 18 and the roller 30 with track 19. In the die position 26^{I} of the fork end of carrier arm 27, corresponding to point I of path 59, the rollers 29^{I} is in engagement with track 18, Fig. 4, and the roller 30^{I} is near the beginning of track 19 into which it enters at 30^{II} in arm position 26^{II} corresponding to point II of path 59, the roller 29 then having arrived in position 29^{II} in

which it is leaving track 18. In the paster position 26^{III} of arm end 26, corresponding to point III of path 59, the roller 30 is at 30^{III} in track 19 and the roller 29 travels free on the outside of cam 16. In position 26^{IV} corresponding to the outermost position 28^{IV} of the carrier, in point IV of path 59, the guide rollers are in the positions 29^{IV} and 30^{IV}, the arm 27 being guided by roller 30. At point V of path 59, the guiding fork of arm 27 is in position 26^{V} in which the inner roller 30^{V} leaves track 19 and the outer roller 29^{V} enters track 18. In the blow-off positions 26^{VI}, at point VI of path 59, the guide rollers are in the positions 29^{VI} and 30^{VI}, the track 18 guiding the arm 27 by means of roller 29.

The cams 14 and 16 being actuated simultaneously by the drive shaft 13 of the machine, the movements of arms 21, 27 and 33 are synchronized so as to accurately guide the carrier 28 in the predetermined path 59, with its axis at the proper angle for perfect wrapping in every position.

In Fig. 1, the relation of the wrapper carrier to other units of the cigar machine is shown. The bunch B is delivered to the wrapping device 60 from position B' in the crimper 61 of the bunch machine in which the ends of the bunch are shaped, by a transfer 62 mounted on a shaft 63. When wrapped, the bunch B, now a cigar, is carried by a transfer 64 fixed on a shaft 65, into position B'' on the cradle 66 of the reroller 67, a knurled drum oscillating on a shaft 68. In delivery position B''' on the cradle 66, the finished cigar engages with a knurler 69 at its head end while its tuck end is trimmed to size by a trimmer 70. While the bunch B is being wrapped in the wrapping device 60, the wrapper W for the next following bunch is being cut on the die 71 by cutting rollers 72, relative circular motion between the said rollers and the die taking place around a shaft 73. The wrapper carrier head 28 picks up the wrapper W and carries it along the closed and irregularly curved path 59, the cams 14 and 16, and the transfers 62 and 64 being so timed that no interference takes place during the operation of the wrapper carrier as it moves from the die with a wrapper back to the wrapping position. As the carrier moves the wrapper to the wrapping position it is held stationary for a short period of time at the paster position thereof, designated 28^{III} on the drawings, while a dauber 74 of known construction is raised from a paste pot 75 into contact with the flag end of the wrapper through an arm 76 actuated by a cam operated vertical rod 77. Following the application of paste the carrier moves on through its predetermined path in the wrapping position and the wrapper is completely applied to a bunch.

It will be understood that various changes in the details of construction and arrangement can be made within the scope of the invention as set forth in the appended claims. The invention is not, therefore, to be limited to the particular embodiment shown and described herein.

What is claimed is:

1. In a cigar machine wrapper transfer mechanism, the combination with a movable support, of a plurality of levers carried by said support, a suction wrapper carrier located upon one of said levers, means upon another of said levers for positioning said carrier for wrapper applying movement, and rotary cams cooperating with mechanism carried by said levers for moving said carrier in a closed and irregularly curved path to apply said wrapper.

2. In a wrapper transfer for cigar machines, the combination with a support, of a plurality of levers carried by said support, a wrapper carrier located upon one of said levers, means upon another of said levers for positioning said carrier for wrapper carrying movement, cooperating mechanism carried by one of said levers for rotating said carrier as the wrapper is being applied, and movable cam means for moving said levers relative one to the other to describe a closed path for said carrier.

3. In a cigar machine wrapper transfer device, a support, a plurality of relatively movable arms mounted upon said support, a wrapper carrier secured to one of said arms, and means for imparting relative movement to said arms whereby to move said carrier edgewise in a closed and irregularly curved path to and from wrapper applying position, said means being constructed and arranged to move said head along said path during each cycle of said machine.

4. A cigar machine wrapper transfer mechanism comprising a support, a suction wrapper carrier head rotatably mounted on a vertical axis on said support, means for moving said carrier head in a closed and irregularly curved path to and from wrapper receiving and applying positions during each cycle of the machine, and means to rotate said carrier about said axis during said movement.

5. In a cigar machine, the combination with a wrapper cutting device and a wrapping mechanism, of means for transferring wrappers from said device to said mechanism, said means comprising a suction carrier head, and means for intermittently moving said head edgewise in a closed and irregularly curved path and in a single plane to said mechanism and back to said device during each machine cycle.

6. In a cigar machine, a wrapper transfer carrier, a wrapping device, a pasting station, means for removing cigars from said device, and transferring bunches to said device, and mechanism for moving said carrier from a wrapper receiving position to said station for pasting the wrapper prior to its application to a bunch, said means operating to remove a cigar from and transfer a bunch to said wrapping device during the movement of said carrier to said station.

7. In a cigar machine wrapper transfer mechanism, a suction wrapper carrier mounted for movement in a horizontal plane, a support for said carrier, means on said support for rotating said carrier in said plane about a vertical axis and relative to said support, and means for moving said carrier along one path to wrapper delivering position and along a different path from said position back to wrapper receiving position once during each machine cycle.

8. In a cigar machine, the combination with a wrapper cutting device, a wrapping mechanism, and means for feeding bunches thereto to be wrapped, of a carrier for delivering wrappers edgewise in a single plane from said device to said mechanism, and means for moving said carrier completely through a closed and irregularly curved path once during each cycle of said machine as it moves to deliver a wrapper, and as it returns to said device, said means being so constructed and arranged that it moves said carrier to a position adjacent said mechanism while said bunch feeding means is transferring a bunch to said mechanism.

9. In a cigar machine, the combination with a cigar wrapping device, and means for forming bunches to be wrapped, of a plurality of transfer

means, mechanism including a suction carrier head moving along one portion of an irregular closed path for feeding wrappers to said device edgewise in a single plane, and means for operating said mechanism so constructed and arranged that said transfer means may operate to remove a cigar from and position a bunch in said device while said head is returning along a different portion of said path with another wrapper to said device.

10. A wrapper transfer mechanism for cigar machines, comprising a carrier head provided with a flat suction leaf engaging surface movable only in a horizontal plane, and rotary cams for moving said head along different portions of a closed path to and from wrapper applying position.

11. A wrapper transfer mechanism for a cigar machine, comprising, a carrier head provided with a flat leaf engaging surface movable in a horizontal plane only, rotary cams for moving said head in a closed and irregularly curved path to and from wrapper applying position, and means for rotating said head about its vertical axis during said movement.

12. In a cigar machine, mechanism for transferring wrappers from a cutting die to a wrapping station, said mechanism comprising a movable wrapper carrier head, and means for moving said head to transport a wrapper edgewise in a single plane and along a closed and irregularly curved path between said die and station, said means being constructed and arranged to move said head through said path at least once during each machine cycle.

13. In a cigar machine wrapper transfer mechanism, the combination with a wrapper transfer head, of a plurality of rotary cams, and connections between said cams and head for moving said head in a closed and irregularly curved path to and from a source of supply of wrappers and wrapper applying position.

14. In a cigar machine, a wrapper transfer mechanism, said mechanism comprising, a wrapper transfer head, a plurality of rotary driving members for operating said head, and means including connections between said members and head for moving the latter to and from a source of supply of wrappers and a wrapper applying position, at least once during each machine cycle, and for applying said wrapper.

15. In a cigar machine, the combination with a leaf cutting die, of a transfer mechanism for transferring leaf sections from said die to a wrapping station and for returning to said die to transfer additional sections therefrom, and a plurality of rotary cams for moving said mechanism to and from said device.

16. In a cigar machine, the combination with means for supporting leaf sections, of mechanism for transferring sections from said means to a wrapping station and for returning to said means for feeding additional sections therefrom, said mechanism comprising a pivoted carrier head adapted to carry said sections, and a plurality of rotary cams adapted to move said mechanism to and from said means, and for rotating said head.

17. In a cigar machine, the combination with a support for leaf sections, of mechanism for transferring sections from said means to a wrapping station, and for returning to said means for feeding additional sections therefrom, said mechanism comprising a plurality of articulated members, a carrier head supported upon said members, and rotary cam means adapted to move said members and said head to and from said support and wrapping station.

18. In a cigar machine, the combination with a support for cigar wrappers, of a wrapper carrier head, and means for moving said head from said support to a wrapping station, and for returning the same to feed additional wrappers therefrom, said means comprising articulated members mounting said head for translational and rotary movement, and rotary cam means for moving said members and head between their operative positions for feeding and applying said wrappers.

19. In a wrapper handling device for cigar machines, a wrapper carrier, a support for said carrier, said support comprising an oscillatable lever, a plurality of superposed levers pivotally mounted thereon, and connections between said levers and carrier for moving the latter in a closed and irregularly curved path to and from wrapper receiving and wrapping position.

20. In a wrapper transfer for cigar machines, a wrapper carrier, means for moving said carrier in a closed and irregularly curved path to and from wrapper receiving and wrapping position, and mechanism acting concurrently therewith for moving said carrier during the application of said wrapper, said means comprising a plurality of levers, one of which supports said carrier, and connections between said carrier and levers for imparting relative movement to said levers to cause said carrier to apply said wrapper.

21. In a cigar machine wrapper transfer, a wrapper carrier, a rotary cam for moving said carrier in a closed path to and from wrapper receiving and wrapping position during each revolution thereof, and mechanism acting concurrently therewith for moving said carrier during the application of said wrapper, said mechanism comprising an arm supporting said carrier for rotary movement about a vertical shaft, and a means associated with said arm for imparting said movement.

22. In a cigar machine, a leaf transfer, and means for moving said transfer from a cutting die to a delivery position over one portion of a closed path, and returning said transfer to said die over a different portion of said path, said means including levers supporting said transfer, cam followers carried on said levers, and rotary cams cooperating with said followers for imparting translatory motion to move said levers and said transfer to describe said path.

23. In a cigar machine wrapper transfer mechanism, the combination with a cigar wrapping device and means for transferring bunches to said device, of a support for said mechanism, a pivoted lever mounted upon said support, a second lever pivotally mounted on said first lever, a pair of separated cam followers located on one end of said second lever, a wrapper carrier pivotally supported on the other end of said second lever, a gear carried by said carrier, a third lever pivotally located upon said second lever, a cam follower carried upon one end thereof, and a gear segment at the other, said end also having an elongated slot, and cams cooperating with said levers to impart relative movement thereto for moving said carrier in a closed path to and from said wrapping device to deliver said wrapper.

24. In a wrapper transfer mechanism for cigar machines, a cigar wrapping device, means for transferring bunches to said device, supporting means, shafts movably mounted within said

means, an arm mounted upon one of said shafts, a carrier support pivotally mounted upon said arm, said support having at one end thereof a plurality of cam followers, and at the other end a wrapper carrier, a lever pivotally mounted on said support, and provided with a cam follower at one end and a driving sector at the other, a driven member secured to said carrier and coacting with said sector, and co-axial cams located upon another of said shafts and cooperating with said followers for imparting to said arm, support and lever relative movement whereby said carrier is moved in a closed path to and from wrapper receiving and applying positions.

25. In a cigar machine leaf transfer mechanism, a pivoted arm, a carrier head mounted upon said arm, a lever pivoted upon said arm and provided with an elongated slot and gear sector at one end, a sleeve on said head projecting through said slot, a gear mounted upon said head and cooperating with said sector for rotating said head, and means for moving said arm and lever simultaneously and relative to each other for imparting translatory and rotary motion to said carrier head.

26. In a cigar wrapper transfer mechanism, a pivoted arm, a carrier head mounted upon said arm, a lever pivoted upon said arm and provided with an elongated slot and gear sector at one end, a sleeve on said head projecting through said slot, means mounted upon said head and cooperating with said sector for rotating said head, said means comprising an adjustable gear, and means for moving said arm and lever simultaneously and relative to each other for imparting translatory and rotary motion to said carrier head.

27. In a cigar machine, the combination with a wrapper carrier, of means for moving said carrier along a closed and irregularly curved path in transporting a leaf section between a cutting die and a wrapping station, said means comprising moving cams constructed and arranged to move said carrier through said path at least once during each cycle of the machine.

28. In a cigar machine, the combination with a wrapper cutting die, and a wrapping device, of a single wrapper carrier, rotary driving means for moving said carrier in a closed and irregularly curved path to transport a leaf section between said die and device, said carrier being constrained to move through said path during each revolution of said means.

29. In a cigar machine, a wrapper transfer mechanism comprising a wrapper carrier head, a rotary cam for moving said head in a closed and irregularly curved path to and from wrapper receiving and wrapping positions, and means movable relative to said mechanism for swinging said carrier during the application of said wrapper, said means comprising an arm supporting said carrier for rotary movement in a horizontal plane about a vertical shaft, and means associated with said arm for imparting said movement.

30. A cigar machine transfer mechanism, comprising a suction wrapper carrier head, a wrapper applying device, driving mechanism mounted on a vertical axis for moving said carrier head in a single plane to and from said device, and means for rotating said head by relative movement of said mechanism about said axis during each movement of said head to and from said device.

31. A wrapper transfer mechanism for a cigar machine, comprising a carrier head provided with a flat leaf engaging surface movable to and from a wrapping device, rotary cams mounted upon a vertical shaft for moving said head in a closed and irregularly curved path to and from said station, and means for swinging said head relative to the wrapping device during the wrapper applying part of said movement.

32. In a wrapper transfer mechanism, a movable support, a wrapper carrier head mounted on said support for movement to and from a wrapping device, rotary cams mounted on a vertical axis for moving said head to and from said device, said cams being constructed and arranged to move said head in a closed and irregularly curved path to and from said device, and means for swinging said head about its vertical axis relative to said device during the application of said wrapper to a bunch in said device.

33. In a cigar machine, the combination with a leaf cutting die, of mechanism for transferring leaf sections from said die to a wrapping station, comprising a suction carrier head, rotary means for moving said head to and from said station in a closed and irregularly curved path once each cycle of said machine and a device on said means for controlling the suction in said head.

34. In a cigar machine, the combination with a leaf cutting die, of mechanism for transferring leaf sections from said die to a wrapping station, comprising a suction carrier head, rotary means for moving said head to and from said station and a cam mounted on said means for controlling the suction in said head.

35. In a wrapper handling device for cigar machines, a wrapper carrier, a support for said carrier, said support comprising a movable member, an arm pivotally mounted on said member, and means cooperating with said member and arm for moving said carrier in a closed and irregularly curved path to and from wrapper receiving and wrapping positions.

36. In a cigar machine, a wrapper transfer mechanism, comprising a wrapper carrier head, articulated carrier translating members supporting said head for movement between wrapper receiving and delivering positions, and rotary cams for moving said head between said positions.

37. In a cigar machine, a wrapper transfer device, comprising a plurality of movable carrier supports pivoted together for movement relative to one another, a wrapper carrier head mounted on one of said supports, and movable means for driving each of said supports to effect a translation of said head between wrapper receiving and wrapper applying position

38. In a wrapper transfer mechanism for a cigar machine, a wrapper applying station, a source of supply of wrappers, a support, a wrapper carrier head mounted on said support and depending downwardly therefrom for travel in a horizontal plane only, and means for moving said head in a closed path between said station and source of supply, said means including a movable cam mounted on a vertical axis.

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