May 26, 1925. 1,539,274

R. E. RUNDELL

CIGAR WRAPPER DELIVERING MEANS

Filed June 26, 1924

Fig. 1.

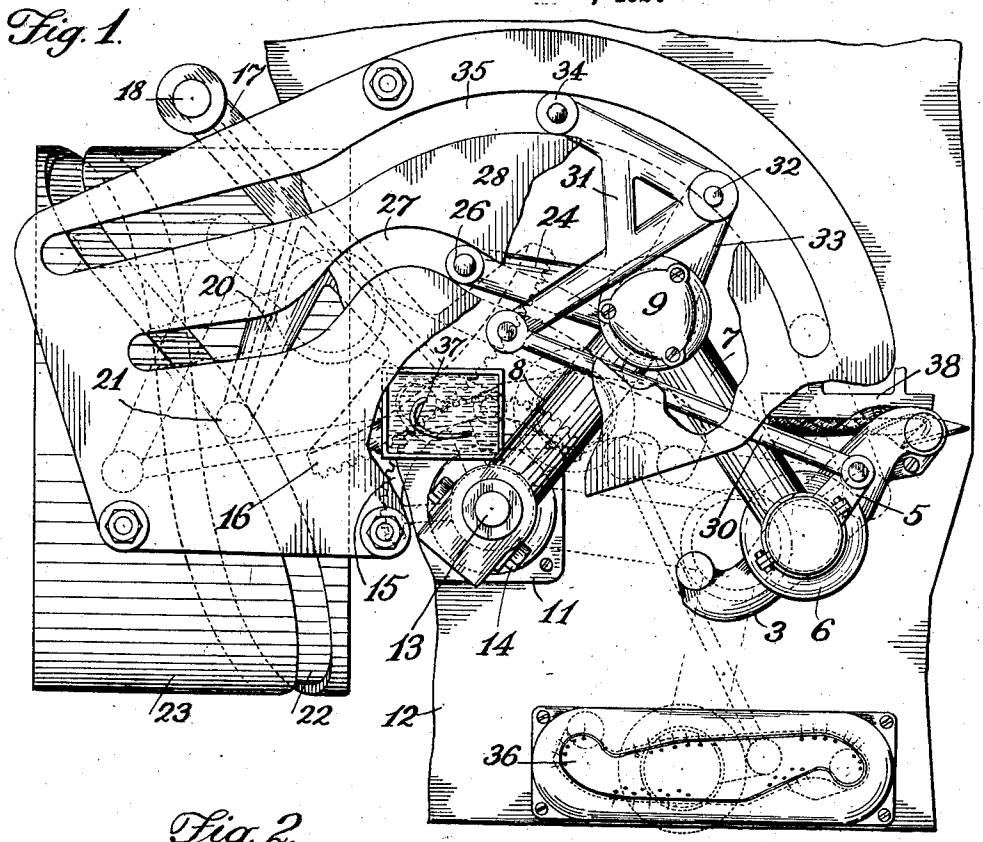
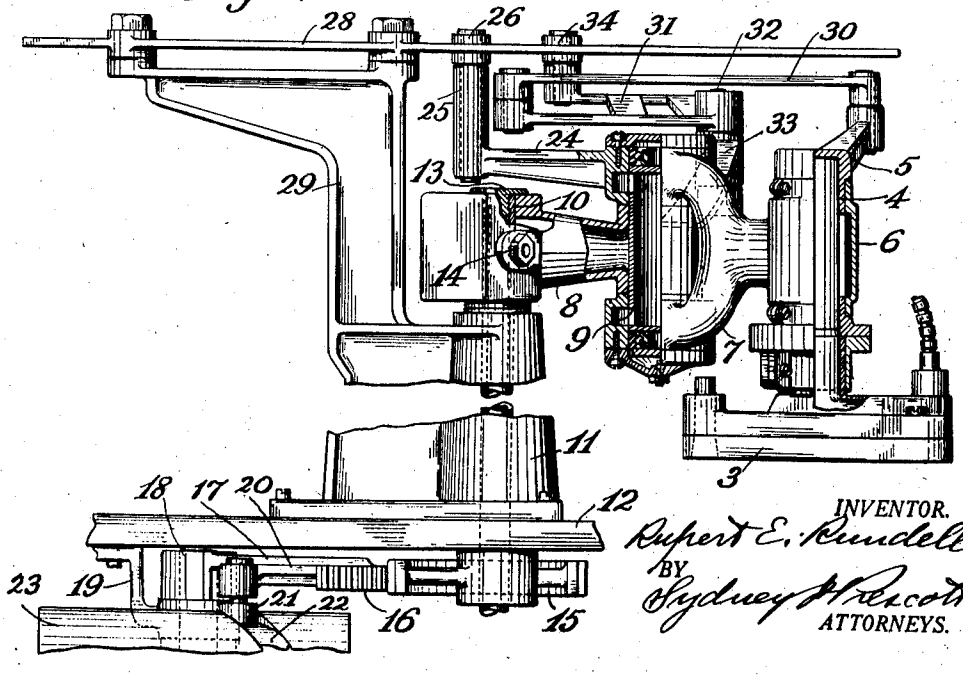


Fig. 2.



INVENTOR.
Rupert E. Rundell
BY
Sydney H. Prescott
ATTORNEYS.

Patented May 26, 1925. 1,539,274

UNITED STATES PATENT OFFICE.

RUPERT E. RUNDELL, OF ROCKVILLE CENTER, NEW YORK, ASSIGNOR TO INTERNATIONAL CIGAR MACHINERY COMPANY, A CORPORATION OF NEW JERSEY.

CIGAR-WRAPPER-DELIVERING MEANS.

Application filed June 26, 1924. Serial No. 722,592.

To all whom it may concern:

Be it known that I, RUPERT E. RUNDELL, a citizen of the United States, residing at Rockville Center, county of Nassau, and State of New York, have invented a new and useful Improvement in Cigar-Wrapper-Delivering Means, of which the following is a specification.

This invention relates to an improvement in cigar wrapper delivering means for cigar machines.

Cigar wrapper delivering means for cigar machines which have heretofore been in commercial use included a flying wrapper carrier which received a wrapper from a wrapper cutting die and transported it to a distant position wherein paste was applied to the wrapper, and then carried it to a wrapping machanism which took the wrapper from the carrier and wound it about a cigar bunch. In such mechanisms, the flying wrapper carrier was supported on a short arm hinged to a long arm which oscillated about an anchorage. The flying wrapper carrier had a very complex movement, and long connections were necessary in order to effect this movement. The complex movement of the carrier was of such a character that rapid stops, starts, and changes of relative positions of the various parts, were necessary. Although the work done was extremely light, the parts were of necessity rather heavy; and as a result of their inertia, and of the long and many-jointed connections which had to be employed, excessive wear occurred, and this interfered with the accurate emplacement of the wrapper on the cigar bunch in the wrapping mechanism. It has been found that these difficulties can be overcome to a large extent by articulating the carrier supporting means approximately at its centre, which permits the flying wrapper carrier to be brought nearer to its anchorage to reduce the inertia effect; and this permits the wrapper cutting die, the paste applying mechanism, and the actuating cam, to be brought very much closer to the anchorage, thus reducing the size, the weight, and the cost of the entire machine. The main object of the present invention is the production of cigar wrapper delivering means which effects this most desirable result. With this and other objects not specifically mentioned in view, the invention consists in certain constructions and combinations of elements 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 plan view, partly broken away, of a device constructed in accordance with the invention; and Fig. 2 is a side elevation, partly broken away, of the structure shown in Fig. 1.

In carrying the invention into effect, there is provided a cigar wrapper delivering means, comprising a flying wrapper carrier movable from wrapper receiving position over a wrapper cutting die to a position where paste is applied to the wrapper on the carrier, thence to wrapper delivering position over a wrapping mechanism, and then back to the initial position over the wrapper cutting die; the carrier supporting means being articulated approximately at its centre and attached to an anchorage about which it is moved so that the wrapper cutting die, the paste applying mechanism, the wrapping mechanism, and the movement controlling cams, are all brought nearer the anchorage for the carrier supporting means, in order to produce a more compact, lighter, cheaper, and more accurately operating machine. In the best constructions, the carrier is pivotally mounted in the free end of the carrier supporting means; the carrier and the means are hollow to permit the use of suction for holding a wrapper on the carrier; and the movement controlling device for the carrier is mounted directly over the carrier supporting means in order to permit the use of short and simple connections to minimize backlash due to wear. All of the foregoing parts may be widely varied in construction within the scope of the claims, for the particular structure selected to illustrate the invention is but one of many possible concrete embodiments of the same. The invention therefore is not to be restricted to the precise details of the structure shown and described.

Referring to the drawings, 3 indicates a hollow flying wrapper carrier of the usual construction, having a hollow stem 4 pivotally mounted in the free end of carrier supporting means, and provided at its upper end with an arm 5 by means of which

it is rocked in a boss 6 formed on the free end of the carrier supporting means. The carrier supporting means consists of two hollow interconnected sections 7 and 8 which are articulated at 9 approximately at the centre of said means. The end of the carrier supporting means opposite the boss 6 is secured to the upper end of a vertical pipe 10 journaled in a standard 11 rising from the bed-plate 12 of the machine in connection with which the device is used. The lower end of the pipe 10 is connected by a tube, not shown, with suitable suction producing means of a well known character. The upper end of the pipe is closed by a cap 13, and the interior of the pipe is in open communication with the interior of the section 8 of the carrier supporting means. The section 8 is secured to the upper end of the pipe 10 by means of a clamping bolt 14. The pipe 10 not only serves as a part of the suction apparatus for holding a wrapper on the carrier 3, but it also serves as a rockshaft by means of which the carrier supporting means is moved about the anchorage. With this end in view, a segmental gear 15 is secured upon the pipe 10 below the bed-plate 12 before referred to. The segmental gear 15 is in mesh with a segmental gear 16 formed on an arm 17 fulcrumed at 18 to a bracket 19 underlying the bed-plate 12. The arm 17 carries a branch arm 20, which in turn carries a cam bowl 21 tracking in a cam groove 22 formed on the perimeter of a cam drum 23 which is mounted on one of the cam shafts, not shown, of the machine proper. The mechanism just described oscillates the section 8 about the anchorage for the flying wrapper carrier.

Means are provided for controlling the relative movement of the sections 7 and 8, which controls the movement of the axis of the flying wrapper carrier and, as shown, this means has a direct connection with the movement controlling device for the carrier. With this end in view, the section 7 of the carrier supporting means is provided with a horn 24, upon the free end of which is an integral upright 25 carrying a cam bowl 26 tracking in a cam slot 27 formed in a cam plate 28 supported by a bracket 29 rising from the standard 11 before referred to. As the section 8 is swung about the anchorage, the engagement of the cam bowl 26 with the cam slot 27 alters the relative positions of the sections 7 and 8 and controls the path of movement of the axis of the flying wrapper carrier.

The flying wrapper carrier is also given a rocking movement on its axis. This is accomplished in the following manner: The arm 5 before referred to is pivoted to one end of a connecting rod 30, the other end of said rod being pivoted to a bell-crank 31. This bell-crank is fulcrumed at 32 to a horn 33 projecting from the section 8 beyond its point of articulation with the section 7. The bell-crank 31 carries a cam bowl 34 tracking in a cam groove 35 formed in the cam plate 28 before referred to. By means of the mechanism just described, as the section 8 is moved about the anchorage, the engagement of the cam bowl 34 with the cam slot 35 changes the relative angular positions of the section 7 and the flying wrapper carrier.

36 indicates a wrapper cutting die of the usual type, and 37 indicates a paste applying mechanism also of the usual type. In Fig. 1, the various parts are shown in full lines in the position they occupy when the greater part of a wrapper has been applied to a bunch in the wrapping mechanism which is diagrammatically indicated at 38, and the position of some of the parts is indicated in said figure by dotted lines in the two extreme positions of the flying wrapper carrier; that is, a position over the wrapper cutting die 36 at the forward end of the movement of the wrapper carrier, and at a position over the paste applying mechanism 37.

The operation of the device will be readily understood by those skilled in the art without a detailed description of the same. The new construction results in a more compact, lighter, cheaper, more efficient and more durable machine, and this advantage applies not only to the cigar wrapper delivering means, but to the entire cigar machine of which the cigar wrapper delivering means may be said to be the heart.

What is claimed is:

1. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier.

2. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier, said carrier being pivotally mounted in the free end of said means.

3. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier, said means having a direct connection with said device.

4. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier

supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier, said carrier and said means being hollow to permit the use of suction for holding a wrapper on said carrier.

5. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier, said means having a section in direct connection with said device and pivotally supporting said carrier.

6. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier, said anchorage including a rockshaft to which one end of said means is secured.

7. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier, said mechanism being cam-controlled.

8. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier, said mechanism including cam-controlled segmental gearing.

9. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier, said anchorage including a rockshaft to which one end of said means is secured, and said mechanism including cam-controlled segmental gearing for operating said rockshaft.

10. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier, said device including a stationary cam controlling the relative movement of the articulated parts of said means.

11. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier, said device including a stationary cam controlling the angular movement of said carrier in said means.

12. Cigar wrapper delivering means, comprising a flying wrapper carrier, carrier supporting means articulated approximately at its centre, an anchorage for said means, mechanism for moving said means about said anchorage, and a movement controlling device for said carrier, said device including a stationary cam, and linkage between said cam and said carrier for controlling the angular position of said carrier in said means.

In testimony whereof, I have signed my name to this specification.

RUPERT E. RUNDELL.