

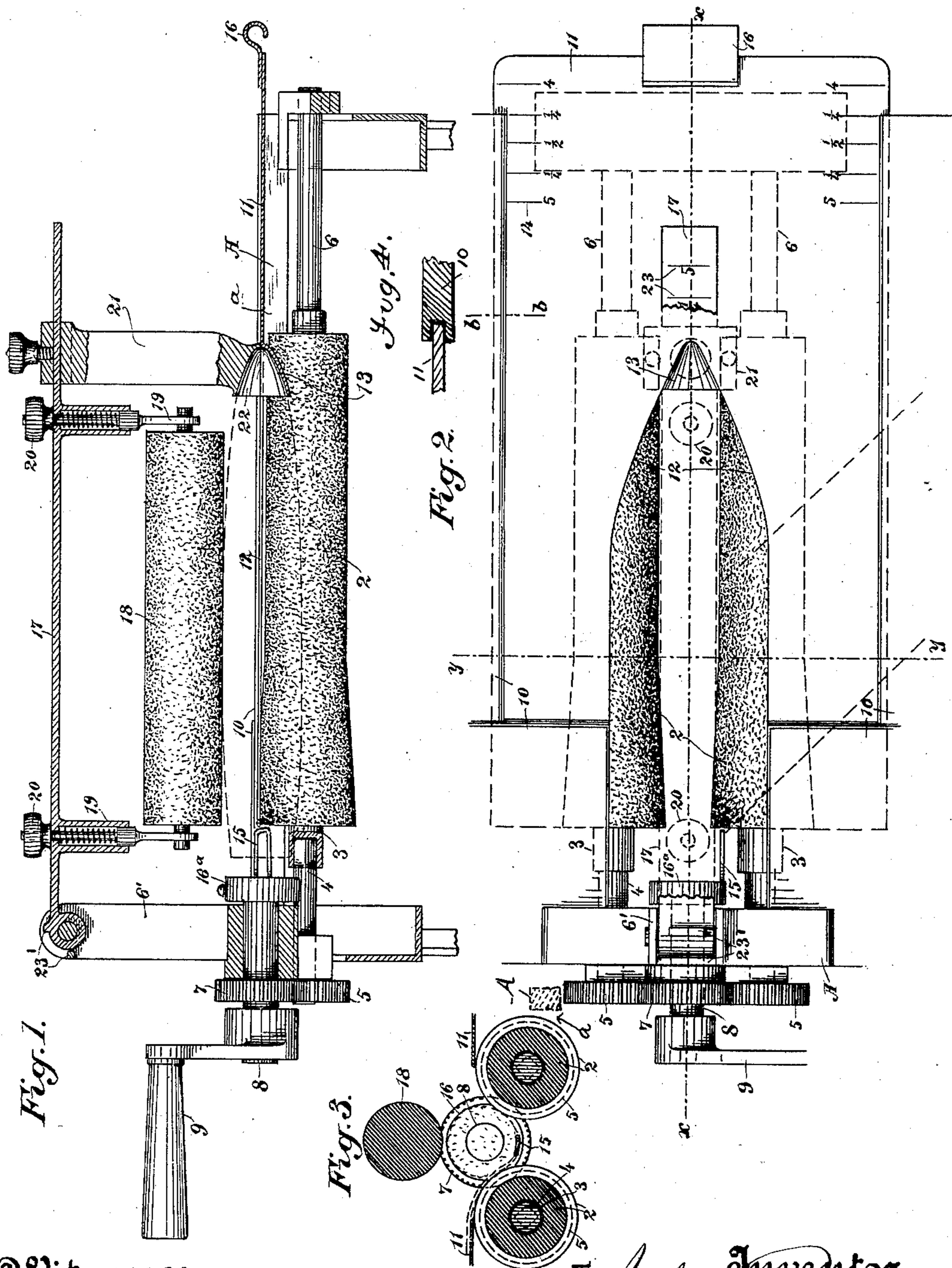
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Patented Feb. 18, 1902.

J. J. RYAN.
CIGAR WRAPPING MACHINE.

(Application filed Sept. 30, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOHN JAMES RYAN, OF SAN JOSE, CALIFORNIA.

CIGAR-WRAPPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 693,669, dated February 18, 1902.

Application filed September 30, 1901. Serial No. 77,084. (No model.)

To all whom it may concern:

Be it known that I, JOHN JAMES RYAN, a citizen of the United States, residing at San Jose, county of Santa Clara, State of California, have invented an Improvement in Cigar-Wrapping Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements in machines for applying the wrappers to cigar-bunches.

Its object is to provide a device of simple construction which may be operated with ease and rapidity and afford uniformity in results and which is adjustable for cigars of any desired form or length.

It consists of a table or support having a central opening, bunch-supporting rollers in said opening, a slotted and slidable gage-plate above said rollers and in the plane of the surface of the table, said gage adjustable for cigars of different length, a pivoted arm carrying a spring-pressed guide-roller and movable in relation to the bunch-supporting rollers, so as to rest upon the bunch and hold it in position, a tip-former carried by said arm and adjustable in relation to said gage-plate to the different lengths of cigars, a revoluble tucker, and means for operating the tucker and rollers in unison.

It also comprises details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a vertical section of the machine on line *xx* of Fig. 2. Fig. 2 is a top view of the same. Fig. 3 is a cross-section on line *yy* of Fig. 2. Fig. 4 is a cross-section on the line *bb* of Fig. 2.

A represents a table or suitable support having a central opening *a*. In this opening are journaled the rollers 2, (see Fig. 3,) upon which the bunch is supported and turned. The tops of these rollers are approximately tangential to the surface of the table. These rollers are concaved to suit the shape of the cigar being wrapped. The rollers may be removed and others of different shape substituted whenever desired. In order to permit of this interchange, the shaft 3 of each roller is chambered at one end to receive a poly-

gonally-sided short shaft 4, journaled in the frame of the table and secured to the gear 5. The other end of each roller is adapted to be engaged by an adjustable bearing-pin 6 of well-known construction. Meshing with each of the gears 5 is a pinion 7 upon the shaft 8. This shaft together with the gears and rollers are driven by means of a crank 9, or any other suitable source of power may be utilized. Upon the surface of the table are thin flat metal guide-plates 10, and in these guides the gage-plate 11 is slidable. This plate has a longitudinal central cigar-shaped opening 12, and on the under side of the plate and beneath the narrowed portion of the opening is attached the tip-former 13. The cavity of this former corresponds to a segment of a cigar-tip. The lateral edges of the plate are graduated, as at 14, corresponding to standard cigar lengths. For example, for a four-inch cigar the plate would be pushed in to shorten the distance between the tip-former and the tucker 15. For cigars of greater length the plate would be drawn outward, the edge of the table offering a suitable guide to the markings on the plate. As the rollers extend practically across the table, the length of the cigar and the position of the gage-plate are immaterial as far as the rollers are concerned. A suitable projection or handle 16 on the plate allows a ready engagement by the fingers. The tucker 15 referred to is a projecting pin or loop upon a disk 16^a, fast to the drive-shaft 8, and this tucker is so disposed in relation to the rollers 2 that the arc of its revolution will be essentially tangential to those rollers.

Upon a standard 6', secured to the table-frame, is pivoted an arm 17, carrying a guide or pressure roller 18. This roller is disposed above, between, and parallel to the rollers 2, and its trunnions are resiliently supported in the bracket-arms 19. Each of these arms consists of a cylinder in which a spring-pressed stem operates. The lower end of the stem carries a roller-trunnion, and the upper end is threaded and extends above the pivoted arm 17. A nut 20 fits this threaded portion, whereby the length of the brackets may be regulated, while the springs allow the pressure-roller to adapt itself to the bunch upon

which it rests. On the outer end of the arm is a movable member 21, which carries at its lower end a former 22, which, like the former 13 in the plate 11, corresponds to a segment of a cigar-tip. The arm 17 is graduated, as at 23, to standard cigar lengths similarly as the plate 11, and the member 21 is moved on the arm correspondingly with said plate, so that the two tip-formers 13 and 22 will be opposite each other and in analogous relation to the cigar contained between them. Stops 23' limit the backward movement of the pivoted arm 17.

In operation one end of the wrapper-leaf is laid upon the tucker 15, which for the time being rests in the bottom of the cavity formed in the plate 11 and between the rollers 2. The bunch is laid upon these rollers, the tuck end of the bunch resting on the tucker. The arm 17 is then lowered to bring the roller 18 down upon the top of the bunch. The pressure exerted by this roller will not be great, as it is simply intended as a guide to keep the bunch in place, the draw on the bunch and wrapper being done entirely by the supporting-rollers 2. The plate and member 21 are next adjusted to the length of the cigar. By turning the crank 9 the bunch, rollers, and tucker are revolved in unison and the wrapper is drawn downward and about the bunch in spiral form. The parts 13 and 22, corresponding, as they do, in shape to the taper of the cigar-tip, give a perfect finish to the cigar. The finished cigar wrapped by such a machine is not distinguishable from one made by hand by the most skilful workman, while the saving in time and material over such methods is notable.

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

1. A cigar-wrapping machine consisting of a table or support having a central opening, bunch-supporting rollers in said opening, a slidable and slotted wrapper-supporting gage-plate, a pivoted arm carrying a pressure-roller and movable in relation to the first-named rollers, a tip-former movable on this arm and adjustable in relation to the gage-plate, a tucker and means whereby the tucker and rollers are turned in unison.

2. In a cigar-wrapping machine, the combination of a pair of horizontal rollers, a wrapper-supporting plate above said rollers, said plate having a cigar-shaped opening, a cavity in said plate adjacent to the narrowed end of said opening, said cavity in the form of the segment of a cone, said plate and rollers disposed in relation to each other so that a bunch laid in said slot will be supported by the rollers while the tip will conform to the segmental portion of said plate, said plate adjustable to varying lengths of cigars, and means for retaining the bunch in place upon the rollers.

3. In a cigar-wrapping machine, the combi-

nation of a table or support, having an opening, a graduated slotted plate slidable in said opening, a projection on the lower side of the plate adjacent to the narrowed end of the slot in the form of the depressed segment of a cone, a pair of bunch-supporting rollers in said opening, a revoluble tucker at one end of the rollers, said tucker so disposed that the arc of its revolution is essentially tangential to the rollers, and a pressure-roller movable in relation to the bunch-supporting rollers.

4. In a cigar-wrapping machine, the combination of a table, an opening therein, bunch-supporting rollers in said opening, a slotted gage-plate slidable in said opening and above said rollers, a tip-former on said plate, a revoluble tucker, a pivoted arm carrying a pressure-roller and movable in relation to the bunch-rollers, and a tip-former movable on said arm in relation to the former on the gage-plate.

5. In a cigar-wrapping machine, the combination of a support, a pair of horizontal bunch-supporting rollers mounted in the table, a slidable gage-plate adapted to support a wrapper and having a slot or opening through which a portion of the rollers is exposed, an arm pivotally supported at one end above the rollers and provided with pendent resilient trunnion-supports, and a pressure-roller mounted in last-named supports and disposed centrally over the pair of rollers.

6. The combination in a cigar-wrapping machine of a pair of revoluble bunch-supporting rollers, a slotted wrapper-supporting gage-plate slidable thereon, a tip-former on said plate, a superposed pressure-roller, and a second superposed tip-former movable in relation to the tip-former on the plate.

7. The combination in a cigar-wrapping machine of a pair of revoluble bunch-supporting rollers, a slotted wrapper-supporting gage-plate slidable thereon, a tip-forming section on said plate, a superposed pressure-roller, a tucker revoluble in the space between said rollers, and a second tip-forming section adjustable to the position of the first forming-section.

8. The combination in a cigar-wrapping machine of a pair of horizontal revoluble bunch-supporting rollers, a graduated slidable wrapper-supporting gage-plate, a tip-former on said plate, a pivoted arm, a roller carried by said arm and adapted to hold the bunch upon the first-named rollers, a tip-former movable on said arm in the same direction as the gage-plate, and graduations upon the arm corresponding to the graduations on said plate.

9. A cigar-wrapping machine consisting in combination of a table, an opening therein, removable rollers in said opening, a slotted plate movable in said opening and in the plane of the surface of the table, whereby cigar-bunches are adapted to be received in the slot of said plate, and to be supported upon

the rollers, a tip-former on said plate, graduations on the plate whereby the latter is adjustable to varying lengths of cigars, a superposed resiliently-supported pressure-roller, a
5 tucker revoluble in the space between the rollers and an arm upon which a second tip-former is slidable in relation to the tip-former on the plate, and graduations upon this arm

corresponding to the graduations on said plate.

In witness whereof I have hereunto set my hand.

JOHN JAMES RYAN.

Witnesses:

HATTIE RYAN,
Mrs. B. P. TAYLOR.