

M. WERTHEIMER.

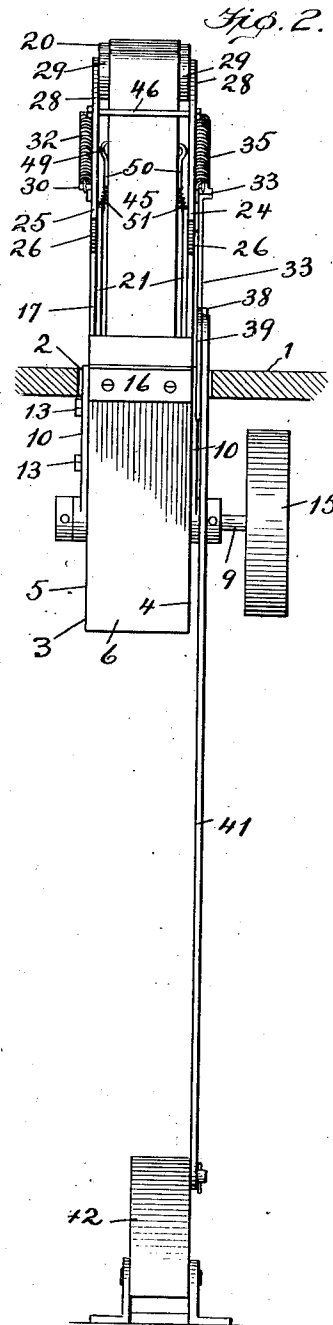
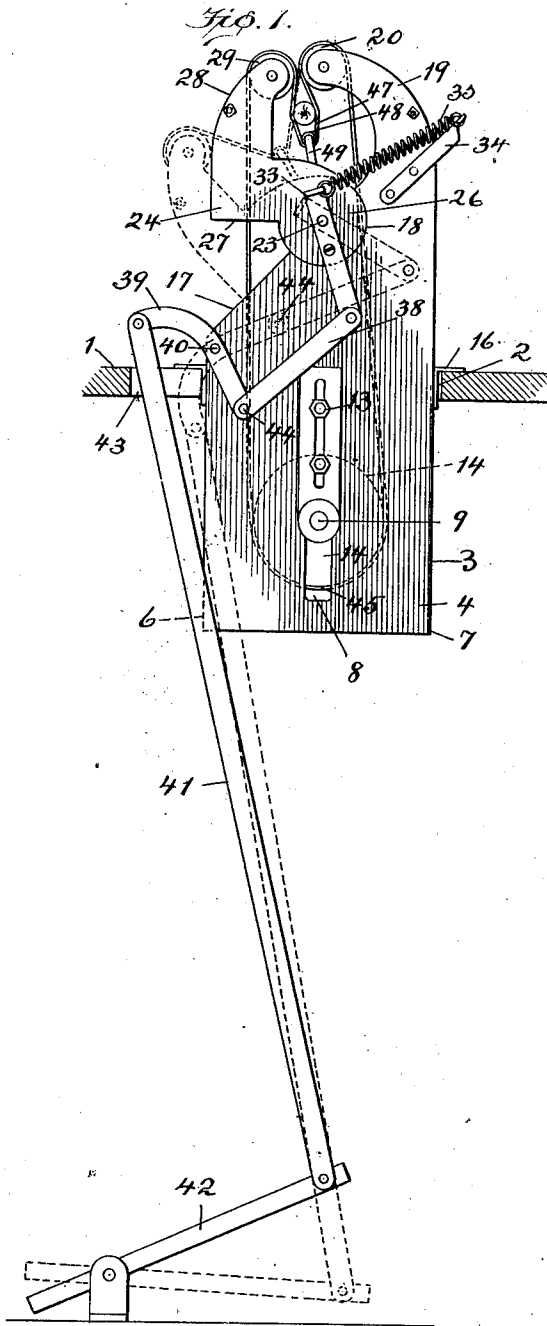
MACHINE FOR ROTATING WRAPPED ARTICLES TO ENABLE THE WRAPPER ENDS TO BE TWISTED.

APPLICATION FILED MAY 29, 1912.

1,057,194.

Patented Mar. 25, 1913

2 SHEETS-SHEET 1.



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Witnesses

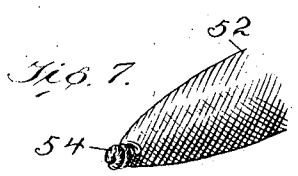
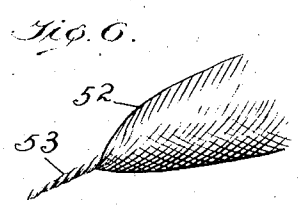
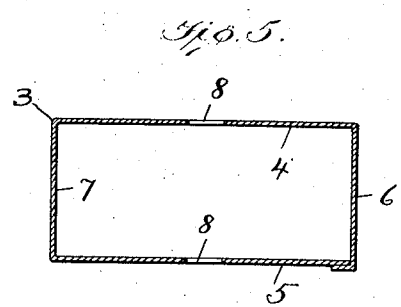
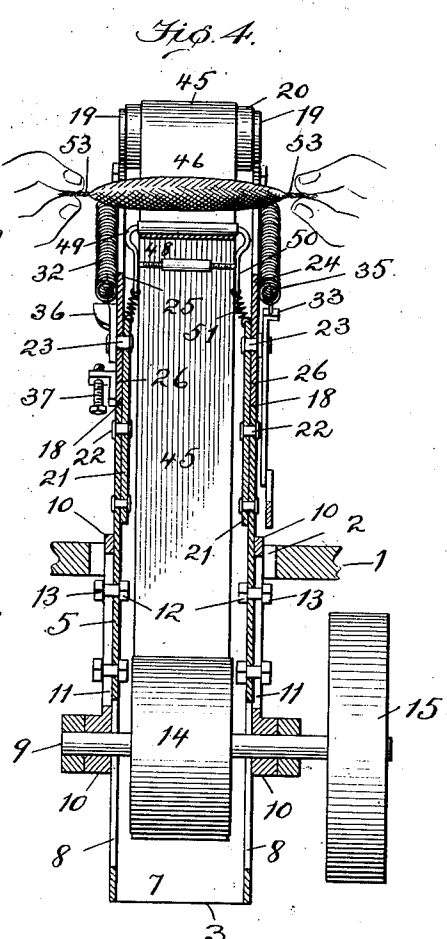
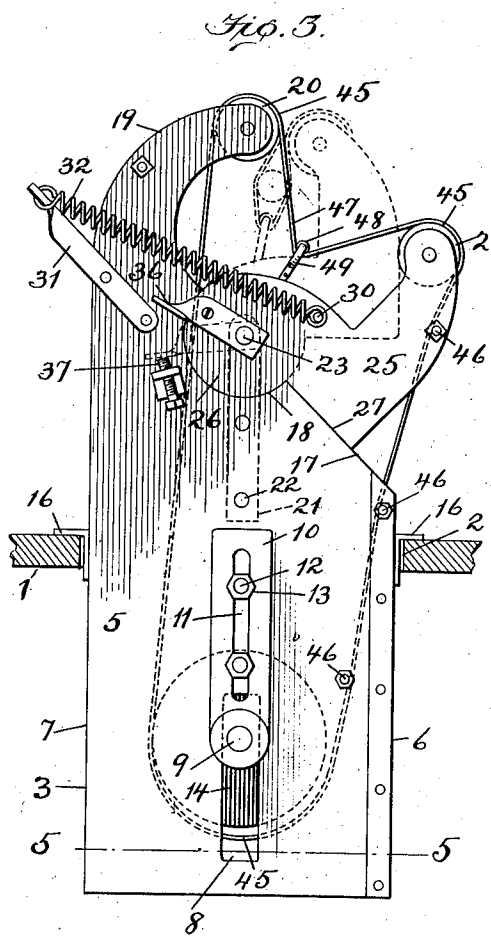
Edwin L. Bradford

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By

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UNITED STATES PATENT OFFICE.

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MACHINE FOR ROTATING WRAPPED ARTICLES TO ENABLE THE WRAPPER ENDS TO BE TWISTED.

1,057,194.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed May 29, 1912. Serial No. 700,405.

To all whom it may concern:

Be it known that I, MILTON WERTHEIMER, a citizen of the United States, residing at Baltimore, in the State of Maryland, have

invented certain new and useful Improvements in Machines for Rotating Wrapped Articles to Enable the Wrapper Ends to be Twisted, of which the following is a specification.

This invention relates to improvements in machines for rotating wrapped articles to enable the twisting of the wrapper-ends to secure the same about a wrapped article.

The invention is particularly designed to handle articles whose shape is such as will permit of rotating the article such for example, as cigars, candies and similarly-shaped articles which have a substantially circular shape in cross-section.

The accompanying drawings illustrate the invention wherein,

Figure 1, shows a side elevation of the machine and the treadle device for actuating the same. Fig. 2, illustrates a front elevation of the same. Fig. 3, shows an enlarged side elevation of the machine proper,—the treadle being omitted and the machine being shown in the normal inoperative position. Fig. 4, illustrates a vertical longitudinal section through the same. Fig. 5, shows a horizontal cross-sectional detail through the machine case,—the section being taken on the line 5—5 of Fig. 3. Fig. 6, shows a perspective detail of a wrapped cigar whose wrapper end has passed through the first stage of the twisting, and Fig. 7, illustrates the wrapped cigar wherein the twisting of the end has been conducted to a point where it has been coiled.

In practice the machines are supported on a suitable bench or table, 1, which latter is provided with an opening or cut-out, 2, so that the body or casing, 3, of the machine may be suspended therein. In the present instance the body or casing, 3, is formed from stiff sheet metal and is of a substantially rectangular shape in that it has two parallel side walls, 4, and, 5, and two end walls, 6, and, 7, respectively. Each side wall, 4, and, 5, of the body or casing has a central vertical slot, 8, through which a shaft, 9, extends. On the outer side, each side wall carries a vertically-extending bearing bracket 10, by means of which the shaft, 9, is sustained. Each of these brackets has

a vertical slot, 11, so that set-bolts, 12, which are rigidly secured to the side walls may project through the bracket slot and by means of nuts, 13, will enable the brackets to be adjusted vertically so that shaft, 9, may be raised or lowered in the slots, 8, of the body or casing. A pulley, 14, is carried on the intermediate portion of shaft, 9, between the side walls of the casing, and a driving pulley, 15, is carried on the outer end of said shaft through which the shaft is revolved.

The end walls, 6, and, 7, of the casing or body are provided with angle plates, 16, which seat against the bench or table, 1, and serve to sustain the body or casing pendantly in the opening, 2, with the upper end of the casing above the table and the lower end thereof below the same, as shown in Figs. 1 to 4 in the drawings. Above the table, 1, each side wall, 4, and, 5, of the body or casing has an inclined edge, 17, which extends upwardly in a direction from the front wall, 6, toward the rear wall, 7, thus making each side wall longer adjacent to the rear wall than at the front, and each inclined edge is provided with a semi-circular notch, 18, for a purpose which will presently be explained. The longer rear edge of each side wall has a forwardly curved arm, 19, which curves over the inclined edge portion and said arms sustain a horizontal guide pulley, 20. On the inner side or surface, each side wall is provided with a vertical bar, 21, which is rigidly secured to the said walls by means of rivets, bolts or screws, 22, and the upper end of each bar, 21, projects above the semi-circular notches, 18, and at a point centrally disposed with respect to the curved wall of said notch each bar, 21, is provided with a pivot pin or bolt, 23, which extends outwardly for a purpose now to be explained.

The bracket plates, 24, and, 25, respectively, of substantially like construction and one for each side wall are utilized. Each plate has a circular portion, 26, whose edge conforms in shape to the semi-circular notch, 18, in said side walls and fits into said notch,—the pin or bolt, 23, on bar, 21, projecting outwardly through the said circular portion and pivotally sustaining the same in register with the notch. Each plate also has a shoulder, 27, which extends laterally from one end of the circular body so as to rest upon the

inclined edge, 17, of the side wall when the bracket plate is in the normal open position, as shown in Fig. 3, and each plate is further provided with an upwardly-extending arm, 28. A guide roller, 29, is sustained between the upper ends of arms, 28, and is movable with said arms in a direction toward or from the roller, 20, on the stationary arms, 19, as will presently appear. The plate, 25, has a pin, 30, and the side wall, 5, sustains an arm, 31, while a spiral or coiled spring, 32, is stretched between said pin and arm to apply a constant pull on the plate in a direction that would draw roller, 29, toward roller, 20. In like manner plate, 24, has a lever, 33, which is rigid therewith while wall, 4, has the arm, 34, so that a spring, 35, may be stretched between said lever and arm to exert the pull.

By referring to Fig. 3 it will be seen that the circular portion, 26, of bracket plate, 25, carries a stop plate, 36, while said wall, 5, is provided with an adjustable stop screw, 37, which the plate may strike when the portion, 26, turns and thereby limit the rotation of said circular portion. To actuate the bracket plates, 24, and, 25, there is provided a link, 38, which has one end pivotally connected to the end of lever, 33,—the other end being pivotally engaged with a short lever, 39, which latter is pivoted at, 40, to the side wall, 4, as shown in Fig. 1. A treadle bar, 41, extends upwardly from a treadle, 42, and has its upper end extending through a slot, 43, in the table whereby said end may be pivotally connected to the end of lever, 39. The arrangement of these levers and links are such that to hold the bracket plates, 24, and, 25, and roller, 29, away from the roller, 20, the treadle, 42, will be depressed as shown in broken lines in Fig. 1. This operation will throw the pivot, 44, of lever, 39, and link, 38, to the position also shown in broken lines in said Fig. 1,—the lever and link thus being in a straight line at this time and consequently the springs, 32, and, 35, cannot move the plates, 24, and, 25, together. By moving the treadle, 42, sufficiently to move the pivot, 44, slightly to one side and thus get lever, 39, and link, 38, out of line, whereupon the springs, 32, and, 35, will act on the plates, 24, and, 25, and move them and roller, 29, toward the roller, 20, as shown in full lines in Fig. 1, and by broken lines in Fig. 3.

An endless belt, 45, extends around the pulley, 14, then passes up between the walls of the body or casing, being directed in its travel by suitable cross pins or bars, 46, then extends around guide pulley, 29. After leaving guide pulley, 29, a loop, 47, is formed in the pulley by means of a swinging or floating roller, 48, which is carried on a yoke-frame, 49, whose ends, 50, are yieldingly sustained by means of springs, 51, to

the upper ends of the plates, 21, on the inner side of the side walls, 4, and, 5, as shown in Figs. 2 and 4 of the drawings. From the floating roller, 48, the belt passes up and over guide pulley, 20, and from the latter returns to pulley, 14.

The operation is as follows:—The wrapper, 52, either paper or tin foil or both is first rolled about the article or cigar, either by hand or by means of a machine, and the projecting ends of the wrapper may be either loose or partially twisted as shown at, 53, in Fig. 6. An example of a machine by which the wrapper is applied to the article and twisted, is shown in copending application, executed and filed on even dates with the present application. The cigar or other article with the wrapper thereon is placed in the looped portion, 47, of the belt, 45, while the same is in the position shown in Fig. 3, of the drawing. At this time it will be noted that the belt, 45, while extending about the pulley, 14, is not in driving contact with the same. The pulley, 14, however is revolved continuously but does not drive the belt when the roller, 29, is swung down by the plates, 24, and, 25, which produces the slack in the belt that allows the latter to simply drop around the pulley, 14. When the cigar is placed in the loop of the belt, the two twisted ends, 53, are held by the fingers of the two hands of the operator, substantially as shown in Fig. 4. The treadle, 42, will then be actuated so as to raise bar, 41, and the springs, 32, and, 35, will immediately draw the plates, 24, and, 25, toward arms, 19, thereby moving roller, 29, toward roller, 20, so as to inclose the cigar in the loop of the belt, as shown in Fig. 1. This movement of the plates, 24, and, 25, draws the belt, 45, into close contact with pulley, 14, and the belt immediately begins traveling so as to effect a revolution of the cigar. By simply holding the ends of the wrapper while the cigar is revolved the said ends will twist and form a coil,—the ends gradually shortening as the coiling progresses, and when the ends are coiled closely against the ends of the package as shown at, 54, in Fig. 7, the operator will depress treadle, 42, and pull down bar, 41, thus moving the lever, 39, and link, 38, so as to throw roller, 29, away from roller, 20. This movement opens the loop, 47, in the belt and the wrapped package is immediately removed, while at the same time the belt will cease to travel.

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

1. The combination with a casing, of a pulley; a belt; a roller engaging and forming a loop in the belt to receive the article and wrapper; means for closing the loop of the belt about the article and wrapper and

simultaneously setting the belt in motion whereby to rotate the wrapper and article.

2. The combination with a casing, of a pulley; a belt extending around but normally out of operative contact with the pulley; means for normally maintaining an open loop in the belt while the latter is at rest whereby the article and wrapper may be placed in said open loop, and means for closing the loop about the article and wrapper and setting the belt in motion.

3. The combination with a hollow vertical casing having stationary roller-supporting arms projecting therefrom, of a pulley rotatably mounted on the interior of said hollow casing below said arms; a roller carried by said arms; two bracket plates pivotally carried by the hollow casing; a roller carried by and movable with said bracket plates; a treadle; means connecting the treadle with the pivotally-sustained bracket plates whereby to move the latter and the roller carried thereby; an endless belt in the hollow casing,—said belt passing around the pulley and also around said two rollers, and a third roller engaging the outer side of the endless belt between said two rollers to form a loop in said belt.

4. The combination with a hollow vertical casing having side and end walls and having spaced-apart roller-supporting arms at the upper end, of vertically-adjustable bearing plates sustained by opposite walls of the casing; a shaft carried by said plates; a pulley carried by the shaft and on the interior of the case; a roller rotatably mounted between the said arms of the casing; another pair of roller-supporting arms pivotally carried by and movable with respect to the casing; a roller supported by said latter arms; treadle means for moving said latter arms and roller; an endless belt passing around the pulley and also around the said two rollers and means sustained between said two rollers for engaging the outer side of the endless belt to form a loop in the latter between said two rollers.

5. The combination with a casing having a side wall with an inclined edge which latter is provided with a semi-circular recess and said wall also having roller-supporting arms extending above said recess, of a guide roller carried by said arms; bracket plates having a circular portion to enter said semi-circular recess and also having a guide roller-supporting arm; a roller carried by

said latter arms; a driving pulley below said semi-circular recess; an endless belt passing around said driving pulley and also around the said two guide rollers, and means acting on the outer side of the endless belt between said roller-supporting arms to form an inwardly-extending loop in said belt.

6. The combination with a casing having a side wall with an inclined edge which latter is provided with a semi-circular recess and said wall also having roller-supporting arms extending above said recess, of a guide roller carried by said arms; bracket plates having a circular portion to enter said semi-circular recess and also having a guide roller-supporting arm; a roller carried by said latter arms; a driving pulley below said semi-circular recess; an endless belt passing around said driving pulley and also around the said two guide rollers; a floating roller extending across the outer side of said endless belt and sustained between said roller-supporting arms to form an inwardly-extending loop in said belt and means for moving the bracket plates, roller-supporting arms thereon and guide roller carried thereby toward the arms on the side wall.

7. The combination with a casing having a side wall with an inclined edge which latter is provided with a semi-circular recess and said wall also having roller-supporting arms extending above said recess, of a guide roller carried by said arms; bracket plates having a circular portion to enter said semi-circular recess and also having a guide roller-supporting arm; a roller carried by said latter arms; a driving pulley below said semi-circular recess; an endless belt passing around said driving pulley and also around the said two guide rollers; a floating roller extending across the outer side of said endless belt and sustained between said roller-supporting arms to form an inwardly-extending loop in said belt; lever means connected to a bracket plate and treadle means connected to the lever means for moving the said bracket plates.

In testimony whereof I affix my signature in presence of two witnesses.

MILTON WERTHEIMER.

Witnesses:

CHARLES B. MANN, Jr.,
G. FERD. VOGT.