T. THORPE.

MACHINE FOR MAKING CIGARS.

No. 26,382. **Patented Dec. 6, 1859.**

Fig. 3

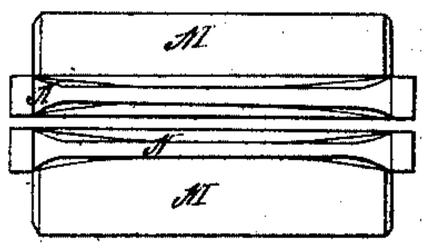


Fig. 2.

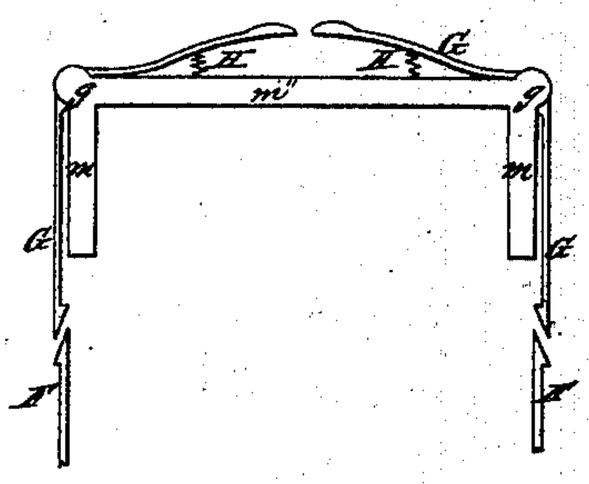
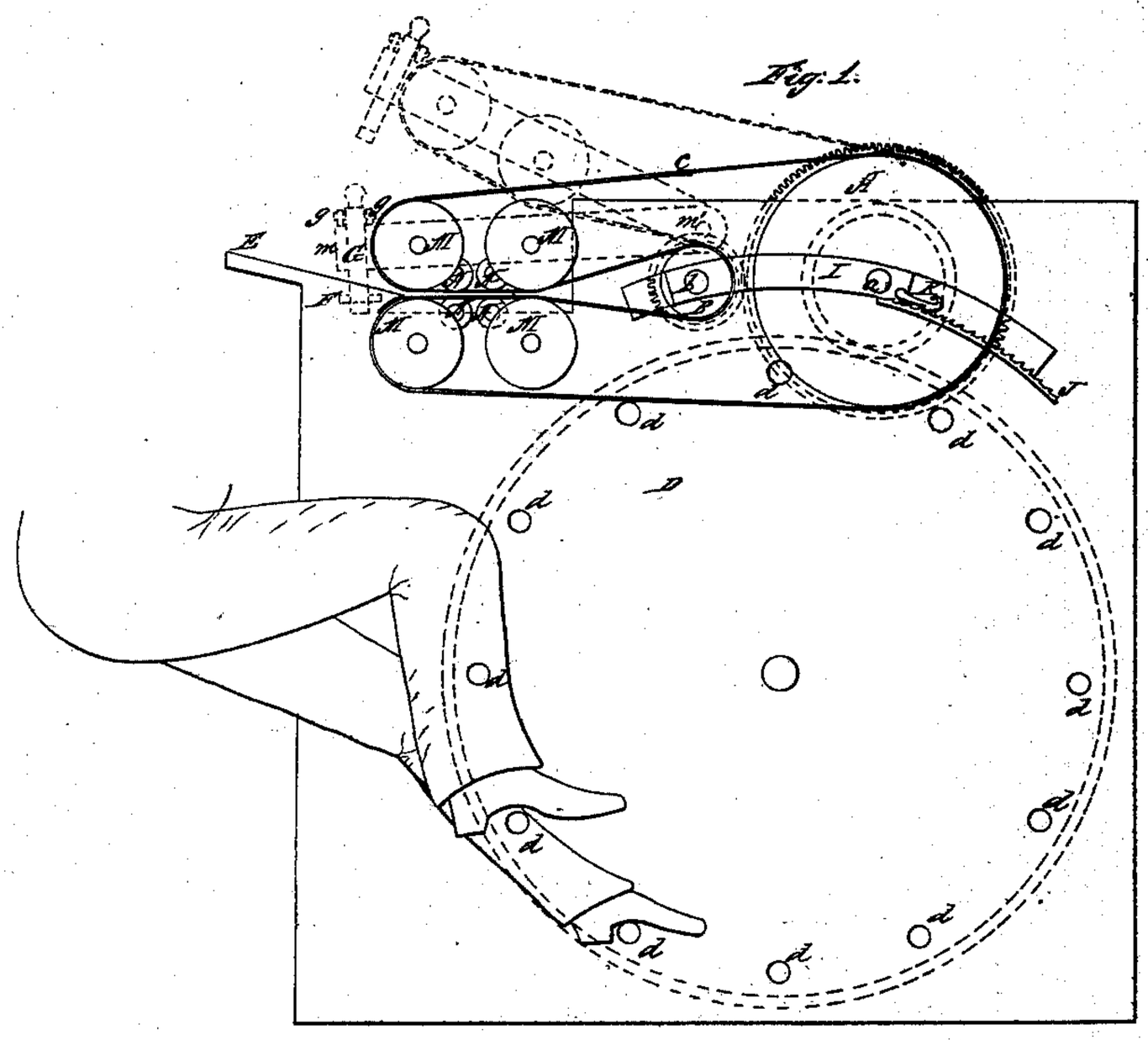


Fig. 1.



Witnesses:

Wm Hoope

Chas Barker

Inventor:

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UNITED STATES PATENT OFFICE.

THOMAS THORP, OF NEW YORK, N. Y.

MACHINE FOR MAKING CIGARS.

Specification forming part of Letters Patent No. **26,382**, dated December 6, 1859.

To all whom it may concern:

Be it known that I, THOMAS THORP, of the city, county, and State of New York, have invented a certain new and Improved Machine for the Manufacture of Cigars; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a diagram showing a transverse section of the machine. Fig. 2 is a front elevation of a portion, and Fig. 3 is a plan view of a portion.

Similar letters of reference indicate like parts in all the drawings.

The object of my invention is to produce a machine which is simple in its construction, of little cost, portable, and accomplishes the purpose of manufacturing cigars at a great saving of labor and expense.

In order to enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation by the aid of the drawings, and of the letters of reference marked thereon.

A is a cylindrical or slightly barrel-shaped drum, having at one end a gear-wheel somewhat larger, as represented. It is mounted on the shaft A.

B is a similar but smaller drum geared to A, and is mounted on the shaft *b*.

C is a belt of india-rubber or other suitable elastic material, and *c* is the joint or butt where the ends are united. This belt winds around the drums A and B, and also around the rollers M M M M N N N N, arranged as represented. The upper tier of these rollers M N is mounted in a movable frame, *m*, hinged at the point *m'*, so that they may at pleasure be lifted into the position shown by the red lines.

D is a large wheel gearing into A. It is provided with rungs *d d*, allowing D to be worked by the feet of the operator. By treading alternately on the rungs a continuous motion may be imparted to D, and consequently to the wheels A and B and to the belt C, or, by giving a proper impulse at the moment of introducing the material the belt C may be moved to such distance as is necessary to complete the operation and allow it to be stopped at exactly the right moment without continuing the rolling process too long, thereby injuring the cigar. The material is supplied from the inclined table E, and the cigar is formed between the parts of the belt in the central space between the eight rollers M N.

On the exterior of the fixed frame of the machine are two suitable catches, F, and on the frame *m* are two levers, G, provided with hooks or shoulders at the lower end, and hinged at *g g*, as shown in Fig. 2. The upper ends of these levers are bent toward each other and are pressed upward by springs H. On depressing these ends in grasping the cross-bar *m''* of the frame *m* the levers G may be disengaged from F, and the frame *m*, with its attachments, may be lifted. On placing *m* again in its first position, as shown in blue, the inner ends, G G, are allowed to rise, and the hooks engage the catches F and retain their hold until again released by the hand. The bearings *a* and *b* of the drums A B are mounted in a single sliding block, I, which is fitted to move in a curve, the center of which curve is the center of the wheel D. A rack, J, is provided near the path of the block I, and by means of a pawl which catches in J the block I is retained in any desired position. The rollers N are a little longer than the rollers M, as shown in Fig. 3, and are of very small diameters, except at and near their ends. The increase of diameter toward their ends is gradual, as represented, and is accurately adapted to give the proper conoidal form to the head of the cigars. The belt C, in passing these rollers, is of course compelled to adapt itself thereto, and the cigar is accurately shaped at one end by this means. The other extremity of the cigar is shaped in a similar manner, provided a sufficient length of material is supplied; but in such case and in all cases that end is cut off by a sharp instrument after the cigar is removed from the machine. By having the ends of the rollers N similar in form, so that either can be made the head of the cigar, I am enabled to operate with advantage on both halves of a leaf by the same machine.

In operating my machine, the attendant gives motion to the wheel D by his feet, and supplies material from E by his hands, as represented. The material is rolled and compressed between the two parts of the elastic belt C. The tension of the belt and the positive pressure of the small rollers N acting thereon compresses the cigar to the precise

extent or degree required. The tension of the belt C is regulated at pleasure by moving I backward or forward by means of the rack J or the pawl K. The belt C is operated upon by the slightly-swelled surfaces both of B and A. The surfaces of each are made to travel with the same velocity, and consequently the tension on the part of the belt C above the cigar is equal to that below it in all positions of the block I. Any given position of the belt is effective on the material during only a small portion of its travel, and is consequently worn out or effected thereby, but very slowly, as it will endure much longer than if the belt be shorter. By employing a single belt C and causing it to travel around A B, and the several rollers M N, arranged as in my invention, the belt C is made to endure longer than otherwise, and it is more readily replaced, as only one joint is to be made. By the runged wheel D, made in connection therewith in the manner here explained, the motion is perfectly controlled, so that the material is introduced and manipulated to better advantage than when the motion is either rigorously uniform or in any way ungovernable.

By means of the block I and ratchet and pawl J K, the two wheels A and B are moved toward or from the rollers M N without affecting their distance from D, and the belt being thereby tightened or slackened with proper degree, the operation is caused equally to affect that part of the belt which presses on the upper side, and that which presses on the lower side of the cigar and gives any required pressure.

I do not claim as my invention the manufacture of cigars by compressing the material between one elastic belt traversing in one direction and another traversing in an opposite direction; nor do I claim supporting and grinding the belt or belts by passing it or them between rollers, except when arranged in the manner represented above by the eight rollers M N and drums A B, or with the omission of the small rollers N; but,

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

1. The arrangement of the drums or pulleys A B in connection with the rollers M and belt C, with or without the rollers N, substantially as and for the purposes herein set forth.

2. In connection with the above, the runged wheel D or its equivalent, arranged and operated in the manner and for the purposes herein set forth.

3. The means, substantially as herein described, of regulating the pressure on the cigar.

4. The arrangement of a machine, substantially as herein set forth, as an arrangement not heretofore known, for the purposes hereinbefore mentioned.

5. The peculiar steady curves or bends given to the belt C, for the purposes herein mentioned.

In witness whereof I have hereunto set my hand this 1st day of October, in ther year 1859.

THOMAS THORP.

Witnesses:

JOHN HOOPE,

GEO. BARKER.