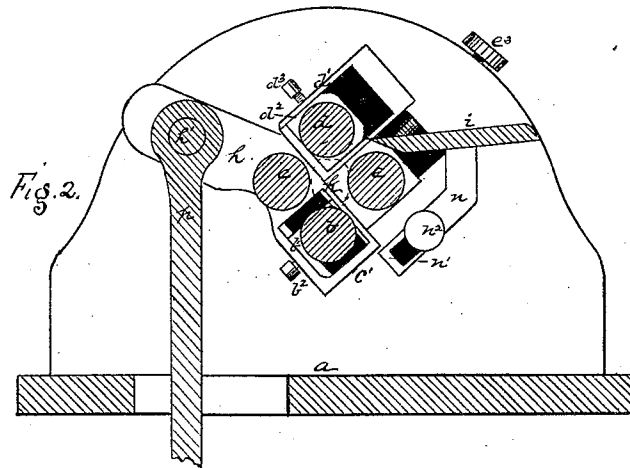
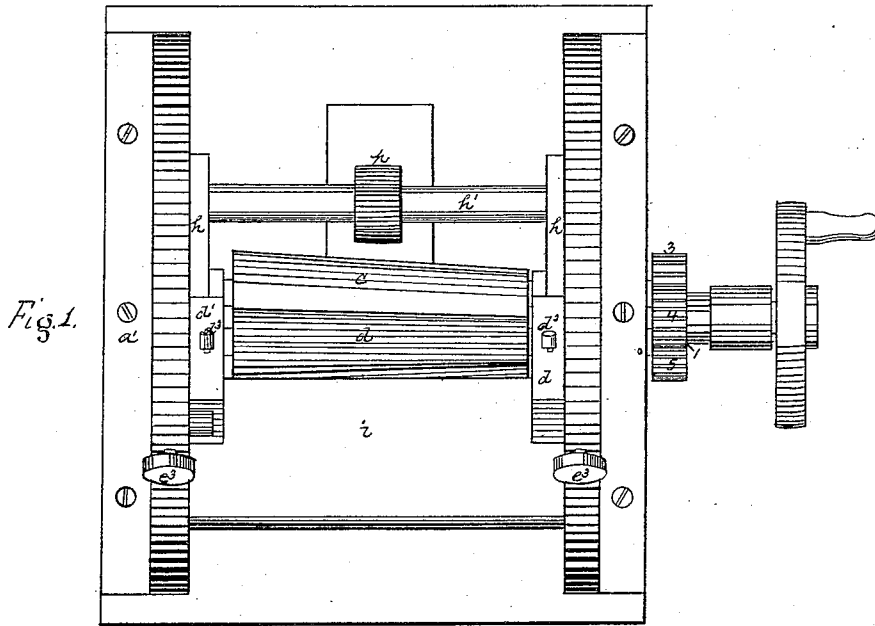


W. J. WADSWORTH.
Cigar-Machines.

No. 153,288.

Patented July 21, 1874.



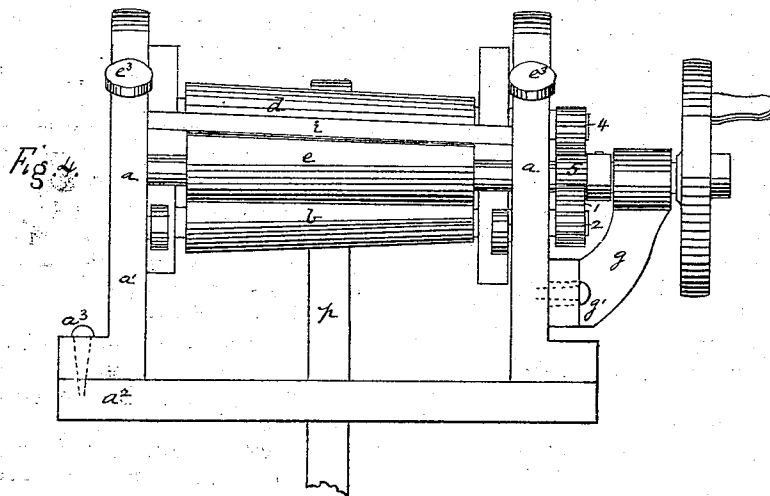
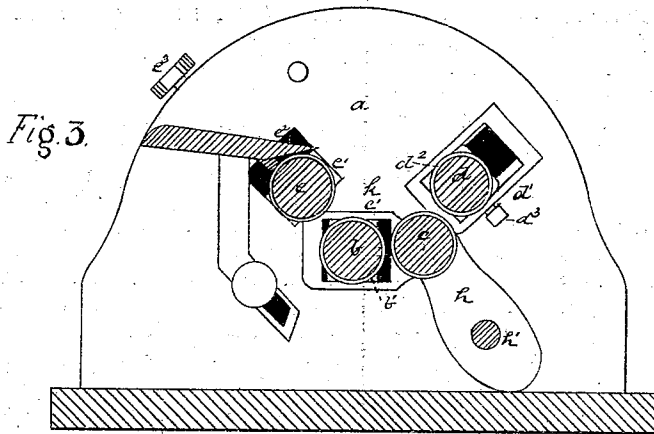
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WILLIAM J. WADSWORTH, OF ALLEGHENY, PENNSYLVANIA.

IMPROVEMENT IN CIGAR-MACHINES.

Specification forming part of Letters Patent No. **153,288**, dated July 21, 1874; application filed February 24, 1874.

To all whom it may concern:

Be it known that I, WILLIAM J. WADSWORTH, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Cigar-Machine; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a plan view of my improved cigar-machine. Fig. 2 is a section through Fig. 1. Fig. 3 is a section when the rolls are opened, and Fig. 4 is a front elevation.

Like letters of reference indicate like parts in each.

My invention consists in the construction of an improved cigar-machine of the class known to the trade as filler-breakers, such machines being designed for the manufacture of the fillers or insides of cigars.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and mode of operation.

a a represent the housings, which may be of any suitable form that will support the operative devices. *b* is a roll, the trunnions of which pass through the housings, and upon one end of which is a pinion, 1. Roll *b* is also provided with boxes adjustable in the housings, so that the position of the roll may be varied. *c, d, and e* are three rolls of a similar character, each provided with adjustable boxes *c', d', and e'*, similar to the adjustable boxes of the main roll *b*, but not seated in the housing *a*. The several adjustable boxes of the rolls *c, d, and e* are connected to each other by pivoting in the following manner: The box of *d* is pivoted to the box of roll *c*, and that in turn pivoted to the box of roll *b*, the whole being controlled by arms *h* projecting from the box of roll *c*, and operated through the lever *p* of a treadle. By this construction the single roll *b* is limited in its movement, while the remaining rolls have a chain-like connection, which enables them to be brought around to form the cavity *k*, as represented in Fig. 2 of the drawings, and said cavity *k* can be enlarged or decreased by changing the position of the rolls by means of the adjustable bearing-boxes, the hinged connection of the several boxes form-

ing a pivoted or movable housing. Upon the outer end of each of the rolls is a pinion similar to the one on roll *b*. These pinions are numbered 2, 3, 4, and 5, and when the rolls are in position, as shown in Fig. 2—that is, when brought forward for operation by the treadle—these pinions encircle and mesh into the center pinion 1, which is operated by a fly-wheel, crank, or other suitable powercommunicating device. The power-pinion 1 is mounted on the end of the fly-wheel shaft, which is supported in the adjustable bracket *g*, the position of which may be varied by the screw *g'*, passing through a slotted portion of bracket *g*. In front of the roll *e* is placed a bench or table, *i*, supported by bent slotted slides *n*, secured to the housing by the set-screw *n'*. This enables the table to be raised or lowered to bring it into the proper position relatively to the roll *e*. Upon this bench or table *i* the material is placed prior to being fed into the machine, and from this table is fed the leaf or binder. The rolls *b, c, d, and e* are each formed in two parts, the center or shaft having its trunnions in the adjustable boxes, the movement and position of which are controlled by the set-screws *d³, b², &c.*, a set-screw for each adjustable box, so as to permit of regulating the distance between the several rolls. On said central shaft the outer roll is slipped and secured by a feather, or by the irregular shape of the shaft itself.

The object of this construction is to enable me to use a larger roll or a smaller roll, as I may see fit, or the necessities of the work require. It is, of course, evident from the construction described that if the boxes be moved so as to carry the shaft farther from the center, the size of the openings *k* will be proportionately increased, and the filler made therein will, of course, be larger; but it is desirable, when such is the case, that a larger roll also may be used and, for this purpose the outer roll is made to slip off or on the shaft, so that when the shafts are carried farther from the center, the smaller roll may be removed therefrom and larger rolls made to take their position; or when they are made to approach each other, reducing the size of the space *k*, and consequent size of the filler made, the larger roll may be replaced by a

smaller roll slipped upon the shaft. The rolls are made tapering in order to make a taper-filler, thereby forming a gradual taper from end to end; and the roll *d* is made slightly smaller than the others so that it shall press more directly on the tobacco to give it a rolling motion, its larger end being provided with a greater taper to give the head of cigar a slightly-contracted shape. The workman's seat is placed in front of the adjustable table *i*, and the treadle from lever *p* extends within easy reach of his foot.

In forming a filler, the operation of these devices is as follows: The operator releases the treadle, which allows the rolls to fall apart, opening the cavity *k*, as shown in Fig. 3 of the drawing. When broken tobacco is used it is thrown into this space and the end of the binder inserted; the rolls are then closed as shown in Fig. 2 by placing the foot on the treadle, and are rotated by means of the crank-wheel to roll the loose tobacco into a compact roll of the shape of the cavity in which it is placed and to press the binder, which is the inner wrap of the cigar, around it. When unbroken tobacco is used, it is first reduced to shape by giving to it a few preliminary turns in the roll before the binder is inserted; after which the rolls are allowed to separate, the binder inserted, and the operation conducted as before specified. The side *a*¹, of the housing is made removable, being fastened to the bed *a*² by the screws *a*³. The side being removed, the boxes and rolls may be taken off and other rolls put on. The removable side *a*¹ may be hinged to the bed *a*², if desired, and when the size of the cavity *k* is varied by adjusting the boxes, the driving-pinion must be changed to suit the relations of the pinions of the several rolls.

I am aware that rolls have been supported in adjustable boxes connected with the main housing, and I am also aware that the roll has

been made detachable from its shaft; the object of both of such constructions being to vary the size of the cavity *k*, the first, by causing the rolls to approach or recede from each other, according to the size of the cavity required; and the second, by changing the roll so as to increase or decrease the size of the cavity. In the first form the same size of roll is necessarily used with the several sizes of filler; and in the second instance a small roll is necessarily used when a large filler is made, and a large roll when the small filler is made, which is the reverse of what is required. But the object of my invention, which embraces the pivoted housing and adjustable boxes and removable rolls, is, that I may be enabled to use a large roll at the same time that a large filler is made and a small roll with a small filler, the size of the opening *k* being controlled by the adjustable pivoted boxes, and the size of roll used by making the rolls changeable upon their shafts.

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

1. The rolls *c* and *d*, mounted in a series of pivoted boxes and operated by a treadle, substantially as and for the purpose specified.

2. In combination, the rolls *b*, *c*, *d*, and *e*, the rolls *c* and *d* having adjustable boxes pivoted to the box of roll *b*, substantially as and for the purpose specified.

3. In combination, the rolls *b*, *c*, *d*, and *e*, the rolls *c* and *d* provided with the adjustable pivoted boxes, all said rolls separable from their shafts, substantially as and for the purpose specified.

In testimony whereof I, the said WILLIAM J. WADSWORTH, have hereunto set my hand.

WILLIAM J. WADSWORTH.

Witnesses:

T. B. KERR,
JAMES I. KAY.