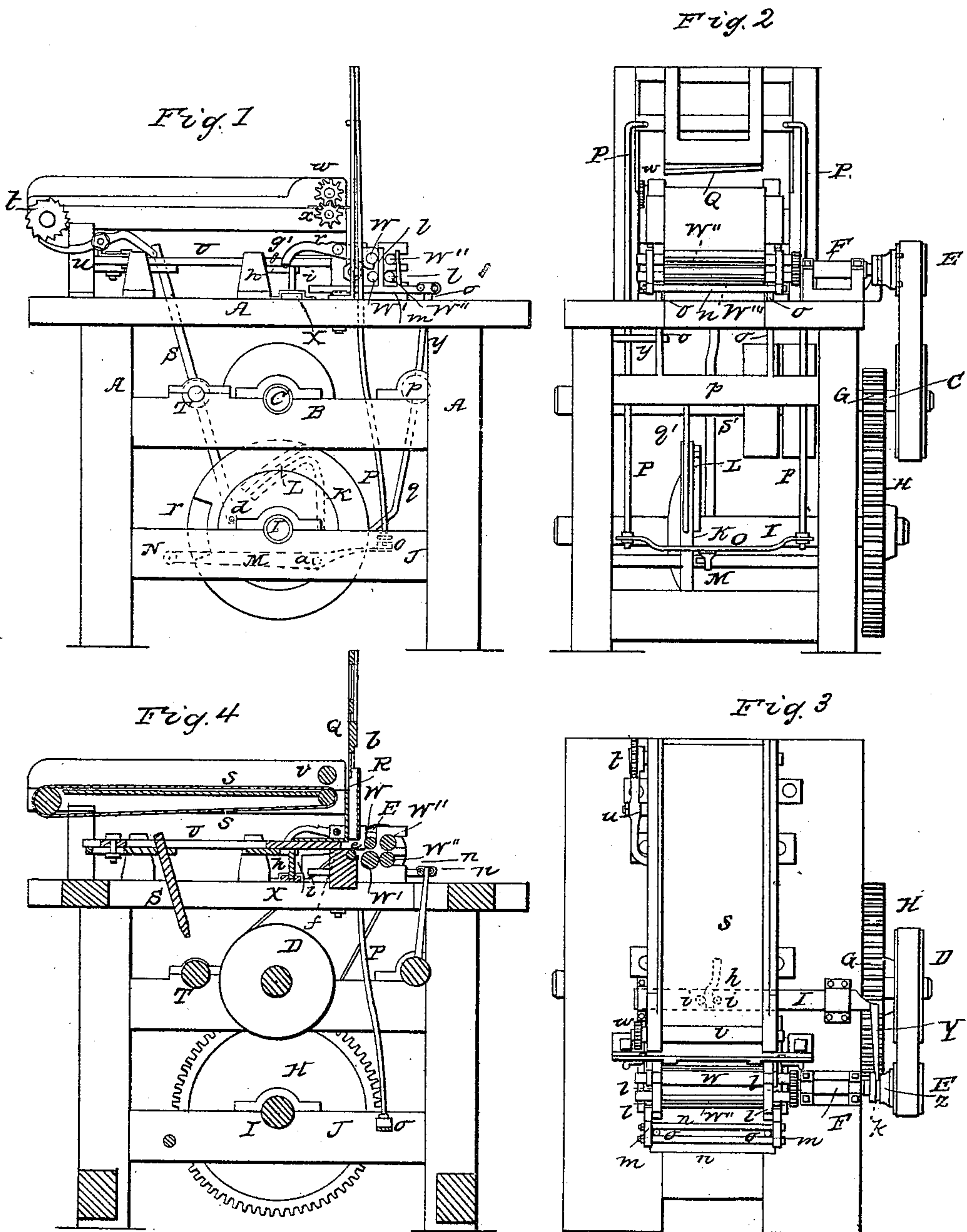


W. DAWSON.

Cigar Machine.

No. 9,016.

Patented June 15, 1852.



UNITED STATES PATENT OFFICE.

WILLIAM DAWSON, OF HUNTINGTON, CONNECTICUT.

IMPROVEMENT IN MACHINES FOR MAKING CIGARS.

Specification forming part of Letters Patent No. 9,016, dated June 15, 1852.

To all whom it may concern:

Be it known that I, WILLIAM DAWSON, of Huntington, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Machines for Making Cigars; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1 represents a view from one of the sides. Fig. 2 represents a view from one of the ends. Fig. 3 represents a top view, and Fig. 4 a vertical longitudinal section through the center of the machine.

Similar letters in all the figures represent the same parts.

The nature of my invention consists in combining with a series of cutters and followers for cutting off and feeding in the material to be formed into a cigar a set of rollers for rolling up the filler and putting on the wrapper, said rollers having the proper arrangement of parts, so as to open to receive the material, close to form it into a filler and put on the wrapper, and again open to deliver the finished article; and also in making the roller against which the wrapper is drawn when being fed into the filler of less diameter, and giving it less velocity at its periphery, for the double purpose of spreading out the wrapper and holding it sufficiently hard to draw it tightly over the filler.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

The frame A is substantially constructed of wood or metal, and upon the longitudinal pieces B thereof is placed in suitable bearings the shaft C, having on it a pulley, D, around which and a pulley, E, on the shaft F passes a band for communicating motion to the rollers, to be hereinafter described. There is also on the shaft C a spur-wheel, G, which meshes into a cog-wheel, H, on the shaft I, which shaft has its bearings resting on the longitudinal pieces J of the frame. Upon the shaft I is placed a cam-wheel, K, which has upon its face a cam, L, into which the pin *a* on the lever M catches, and by which said lever is drawn down and raised up by every

revolution of the said wheel K. One end of the lever M is hung in a rock-shaft, N, and on the other end is arranged a cross-bar, O, to each end of which are attached connecting-rods P, leading up to and catching into the frame carrying the vertical knife Q, and when the lever M is forced down by the cam L, it draws down the knife Q, which cuts off a portion of the tobacco, and a shoulder, *b*, behind said knife serves as a follower, which forces the tobacco thus cut into the box R, and when the lever is raised by the cam it throws up the knife for the next similar operation.

There is a rod, S, in the rear of the machine which is hung in or rather passes through a shaft, T, and to which it may be secured and adjusted by a set-screw, and which shaft is free to turn as the rod S vibrates. On the lower end of the rod S is a pin, *d*, which also catches into the cam L, and by it receives its vibratory motion. The upper end of the rod S is attached to a horizontal carriage, U, moving in guides or ways, and in front of said carriage is a knife, *e*, which cuts off the tobacco horizontally, and by a shoulder, *f*, in rear of said knife, it is forced or carried in between the rollers to be formed into a filler. While the tobacco is being carried in between the rollers, they (the rollers) do not operate, being thrown out of gear by a self-operating clutch, to be hereinafter described. The purpose of stopping their motion at this period of the process is to prevent the tobacco from being thrown out as one of the rollers is raised for the purpose of allowing it to be passed in. The horizontal carriage is moved alternately forward and back by the rod S, aforesaid.

There is attached to the horizontal carriage U on each side two small pins, *g g'*, one of which, *g*, when the rollers are forming the cigar, as seen in Fig. 1, holds up the end of a bent lever, V, which carries in its farther end the small roller W of the series and throws the said roller down and into gear with the others of the series; but when the carriage runs forward to cut off and carry in another charge of tobacco, the bent arm of the lever V drops between said pins, and is pressed down by the pin *g'* rising upon it, which operation raises up the roller W, so that the charge of tobacco may be carried between the rollers, which are during

this operation stationary. Underneath the front part of the carriage, and attached thereto, there is a cam, *h*, which moves between two pins, *i i*, in a sliding bar, *X*, placed on top of the frame, and as the carriage moves forward and back the cam *h* slides the bar *X* back and forth across the frame, all of which is more clearly shown in dotted lines in Fig. 3. To one end of the sliding bar *X* is attached an arm, *Y*, which has its ends branched, and catching in a groove, *k*, cut in a clutch, *Z*, sliding on the shaft *F*, for the purpose of throwing the rollers in and out of motion, as may be required for each particular operation of the machine.

On the end of the shaft *F* is a spur-wheel, which meshes with the spur-wheels on the ends of the rollers *W W' W'' W'''*, and by which they are rotated. The rollers *W'' W'''* are hung in yokes *l*, Figs. 1 and 3, which are arranged on bars *m*, said bars being connected by rods *n n*. To the sliding bars *m* are attached the arms *o o*, which have their lower ends fixed in a rock-shaft, *p*, and on the under side of said rock-shaft is a cam-lever, *q*, which, by means of a spring, *y*, Figs. 1 and 2, is held against the periphery of the cam-wheel *K*, and in said periphery is cut a cam, *r*, into which it is forced by said spring, which motion slides out the bars *m*, carrying out with them the rollers *W'' W'''*, hung in the yokes thereon, sufficiently far to allow the cigar when finished to drop out. The roller *W* of the series, which together forms the cigar, has a smooth surface, and is smaller in diameter than the others which have their surfaces roughened. When the filler is rolled up, the operator, who stands in front of the machine, places in between the rollers *W* and *W''*, at one end thereof, a corner of the wrapper, which is caught by the filler as it is rolled around and drawn in between the rollers, winding itself around the filler. The wrapper, in passing in between the rollers, presses against the roller *W*, which is smooth, while the roughened rollers carry around the filler. The rough rollers, being the

larger, have a greater velocity at their peripheries than the smooth one *W*, and consequently roll around the filler faster than the roller *W* lets in the wrapper. This causes the wrapper to be spread out by the roller and holds it sufficiently taut to wind it with the proper tightness upon the filler.

On top of the frame is arranged an endless apron, *s*, which feeds in the tobacco to the knives, and which is operated by a ratchet, *t*, which is struck by an adjustable pawl, *u*, on the carriage *U*. On that end of the apron next the knife is arranged a roller, *v*, which may be weighted, for holding down the tobacco while being cut off, said roller being operated by star-gearing *w* on its end, working into similar gearing, *x*, on the end of the roller around which the apron moves.

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

1. The manner herein described of making cigars—viz., by combining with the cutters and followers, which cut off and feed in the requisite quantity of tobacco for each cigar, the rollers for rolling up the fillers and putting on the wrappers, said rollers having the requisite arrangement of parts, so as to open to receive the material and close to form the cigar, and again open to deliver the finished article, in the manner substantially as herein described.

2. The making of the roller which feeds in the wrapper of less diameter than the rollers which form the filler, so that the roller may move at an increased velocity over that of the wrapper, for the purpose of more evenly spreading out the wrapper and winding it more tightly upon said fillers, substantially as herein described.

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Witnesses:

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S. C. DONN.