

Prentice & Wuterich.

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N^o 71532

Cigar Machine.

Patented Nov. 26, 1867.

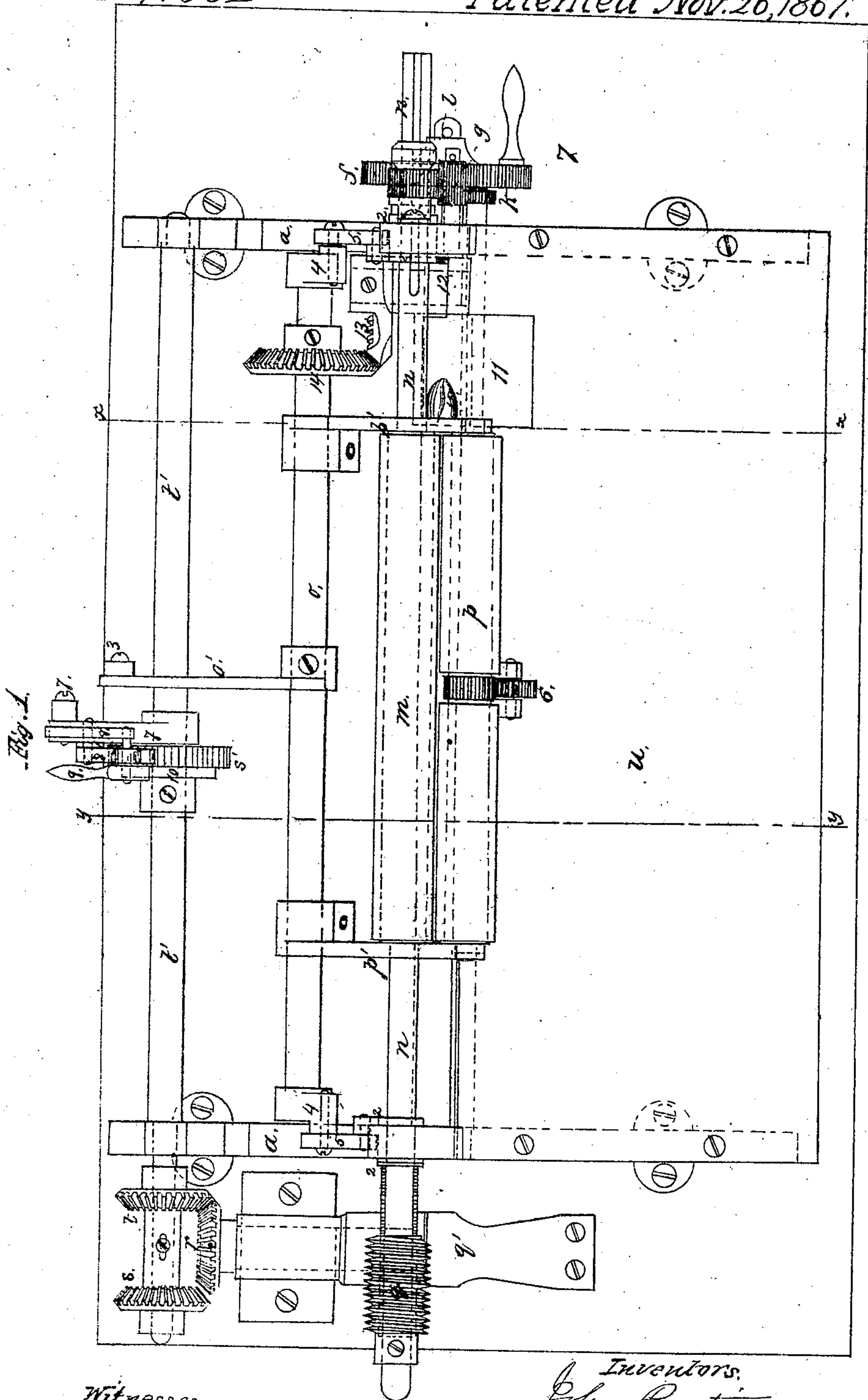


Fig. 1.

Witnesses.
Geo. Orricker
Chas. Smith

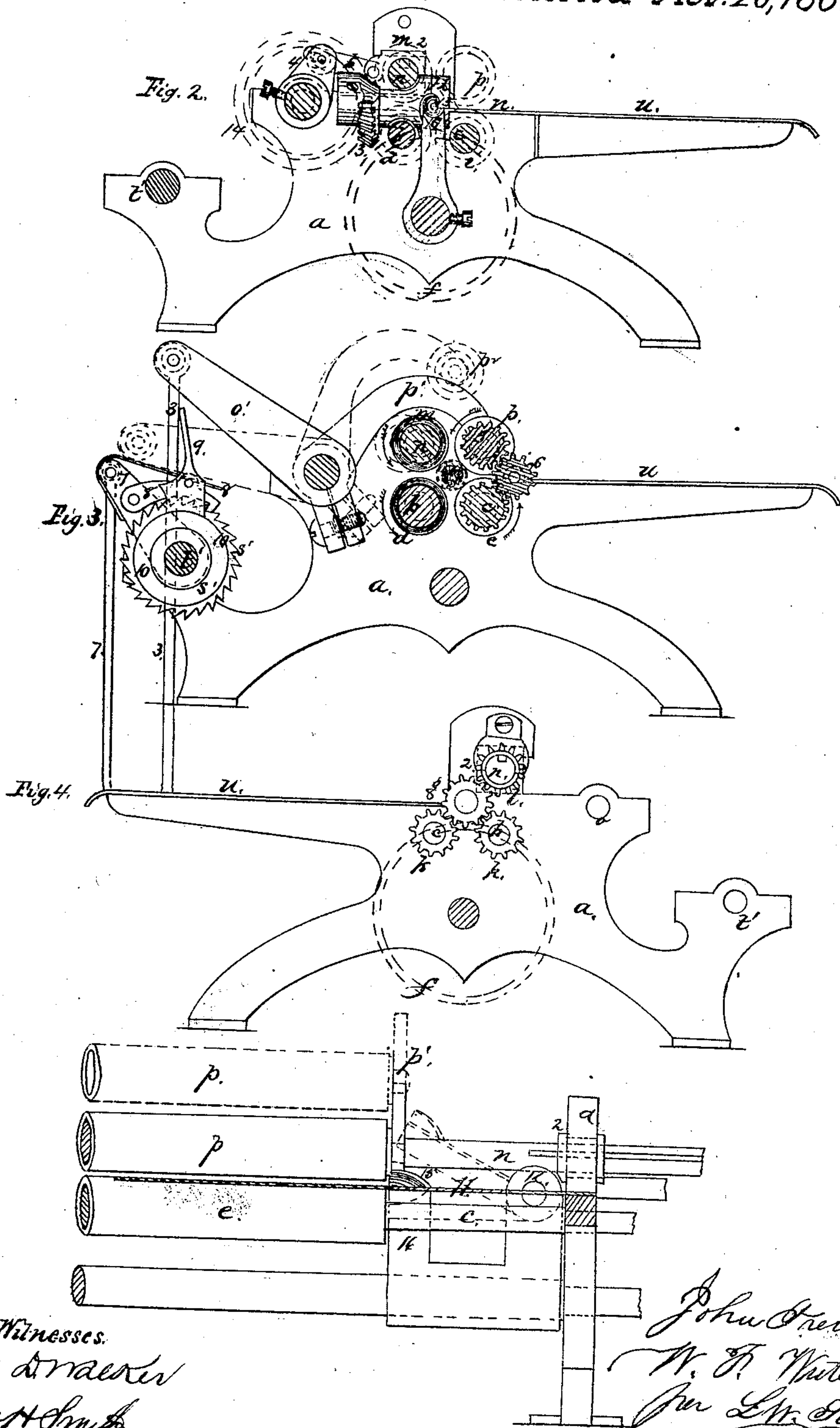
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John Prentice
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Witnesses.
Geo. A. Maerker
Chas. Smith

John Prentice
W. F. Wuterich
per L. M. Sewell
Att'y

UNITED STATES PATENT OFFICE.

JOHN PRENTICE AND WILLIAM F. WUTERICH, OF NEW YORK, N. Y.,
ASSIGNORS TO JOHN PRENTICE.

IMPROVEMENT IN CIGAR-MACHINES.

Specification forming part of Letters Patent No. 71,532, dated November 26, 1867.

To all whom it may concern:

Be it known that we, JOHN PRENTICE and WILLIAM F. WUTERICH, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Cigar Machinery; and we do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a plan of the said machine complete. Fig. 2 is a transverse section at the line *x x*. Fig. 3 is a similar view at the line *y y*. Fig. 4 is a view of the gearing at the end *z* of the machine; and Fig. 5 is an elevation near one end of the rollers, showing the cutting-die to shape the end of the filling.

Similar marks of reference denote the same parts.

This invention is an improvement upon that for which Letters Patent were granted to said John Prentice, dated September 6, 1864; and consists, first, in the means for giving pressure upon the cigar or filling, or separating the rollers for removing the cigar; second, in means for removing surplus tobacco from the ends of the filling, so as to produce a rounded tapering end or tip; third, in means for giving end motion to one of the rollers to cause the wrapper to be properly pressed upon the tip of the cigar as it revolves within a mold.

In the drawing, *a a* are suitable frames, carrying the shafts *b c* of the rollers *d e*, which are driven in the directions indicated by the arrows, Fig. 3, and for this purpose the gearing shown in Fig. 4 is employed. This consists of a main gear, *f*, driven by suitable power; we prefer a treadle. *g* is a gear, intermediate to the gears *h* and *k*, on the shafts *b* and *c*, and the gear *l* on the shaft *n* of the roller *m*. This shaft *n* is set in sliding boxes 2 in horizontal slots in the frames *a*, and said shaft is slotted to take a feather in the pinion *l*, so that end motion can be given to said shaft *n*, for the purpose hereinafter more fully set forth. *o* is a shaft, with a lever, *o'*, and rod 3 to a treadle, by which a partial rotation can be given said shaft *o*, in order that the cranks 4 and links 5 to the boxes 2 may draw the shaft *n* and roller *m* back bodily when the

lever *o'* is depressed, as seen in Fig. 3, and thereby relieve the cigar or bundle of filling between the rollers *d*, *e*, *m*, and *p* from pressure, from removing the same, or the reverse movement of the lever *o'* brings upon such cigar or filling the desired pressure, the roller *p* being mounted on arms *p'* from this same shaft *o*, so as to be raised or depressed, as indicated in said Fig. 3. In order to drive the roller *p*, we introduce, near the middle, a pinion, 5, with an intermediate, 6, to a similar pinion in the middle of the roller *e*.

We remark that this machine is to be made with rollers twice the length of the longest cigar, in order that it may be employed for making cigars with the wrappers formed of one half or the other of the leaf, and consequently the tip lying to the right or left hand. We have shown the parts that form the tip at the right hand of the operator; but the same parts that form the tip may be duplicated in reverse at the left hand, or machines may be made separately with shorter rollers, adapted to either right or left hand wrappers.

In order to give motion endwise to the roller *m* we employ a worm-pinion, *q*, that runs in the teeth of a wheel below it, held by a friction-clamp, *q'*, against its side. The end of the shaft of this toothed wheel is fitted with a miter-gear, *r*, and *s* and *t* are similar gears on the shaft *t'*, facing each other, and connected by a sleeve held by a set-screw, so that either gear *s* or *t* can be brought into gear with the wheel *r*. *s'* is a ratchet-wheel on the shaft *t'*, and 7 is an arm and link to a treadle. 8 is a pawl and spring on 7 to the teeth of the wheel *s'*, and 9 is a disengaging-lever, with its end against a smooth part, 10, of the wheel *s'*, to allow the pawl to act when in the position shown in Fig. 3; or when turned down at right angles, the end of the lever lifts the pawl and prevents its moving the parts, should the treadle be operated carelessly when the treadle is thus disconnected. By a partial rotation of the shaft *t'* by its treadle, the roller *m* will be moved back to its normal position, the miter-gears *s* and *t* giving a partial rotation to the wheel that gears with the worm-pinion *q*, and this end motion can be given in either direction, according as the miter-gear *s* or *t* is

in gear with the wheel *r*; and by changing simply the worm-pinion *q* the roller *m* will be made to move endwise either to the right or to the left by its rotation, according to which way the cigar-tip is to be formed; and if rotation is continued of the roller *m* after it reaches its extreme end movement, no injury will result, as the gears *s*, *t*, and *r* and shaft *t'* will turn. From the bed *u* a section is removed, as at 11, and this section is on the hinge 12, that has at the other end of its hinge-pin the segment miter-gear 13, taking the miter-gear 14 on the shaft *o*, so that as this shaft *o* is given a partial rotation in lifting the roller *p*, the end of this section 11 will be lifted (see Fig. 5) and closed down by the reverse movement. Upon this section 11 is half of a mold, 15, shaped like the end of a cigar, with an opening in one side to admit the leaf passing in as it is rolled up, and the other half, 16, of this mold is a fixture. We form a cutting-edge on the under side of the section 11, around the mold 15, that shuts down around the mold 16 as a diverging or curved shear. Hence, as the filling is laid in between the rollers *d*, *e*, *m*, and *p*, and the section 11 is brought down simultaneously with the closing of the rollers, the filling-tobacco is cut and dressed off to shape to form the tip, and the end motion of roller *m* constantly presses the cigar endwise into the conical die or mold 15 and 16, bringing the same to a taper, and properly pressing on the wrapper that is passed in between the rollers, and is by them

wound around the filling, and thus the cigar is completely formed.

What we claim, and desire to secure by Letters Patent, is—

1. The shaft *o*, with the cranks 4 and links 5, to the boxes 2 of the shaft *n*, for drawing back the roller *m*, as set forth.
2. The roller *p*, mounted on arms *p'* from the shaft *o*, in combination with the rollers *d*, *e*, and *m*, as and for the purposes set forth.
3. The roller *m*, in combination with a mold for forming the tip, substantially as specified.
4. The arrangement of the gears *s*, *t*, and *r*, in combination with the worm *q*, shaft *t'*, and ratchet-wheel *s'*, as set forth.
5. The ratchet-wheel *s'* and its pawl 8, constructed as set forth, in combination with the gearing *s*, *t*, and *r* and rollers *d*, *e*, and *p*, as set forth.
6. The moving section 11 and tip mold or die, fitted and operating substantially as and for the purposes set forth.

In witness whereof we have hereunto set our signatures this 27th day of September, A. D. 1867.

JOHN PRENTICE.
W. F. WUTERICH.

Witnesses as to Wuterich:
ORVILLE H. PLATT,
WM. N. BEECH.

Witnesses as to Prentice:
GEO. D. WALKER,
CHAS. H. SMITH.