

(No Model.)

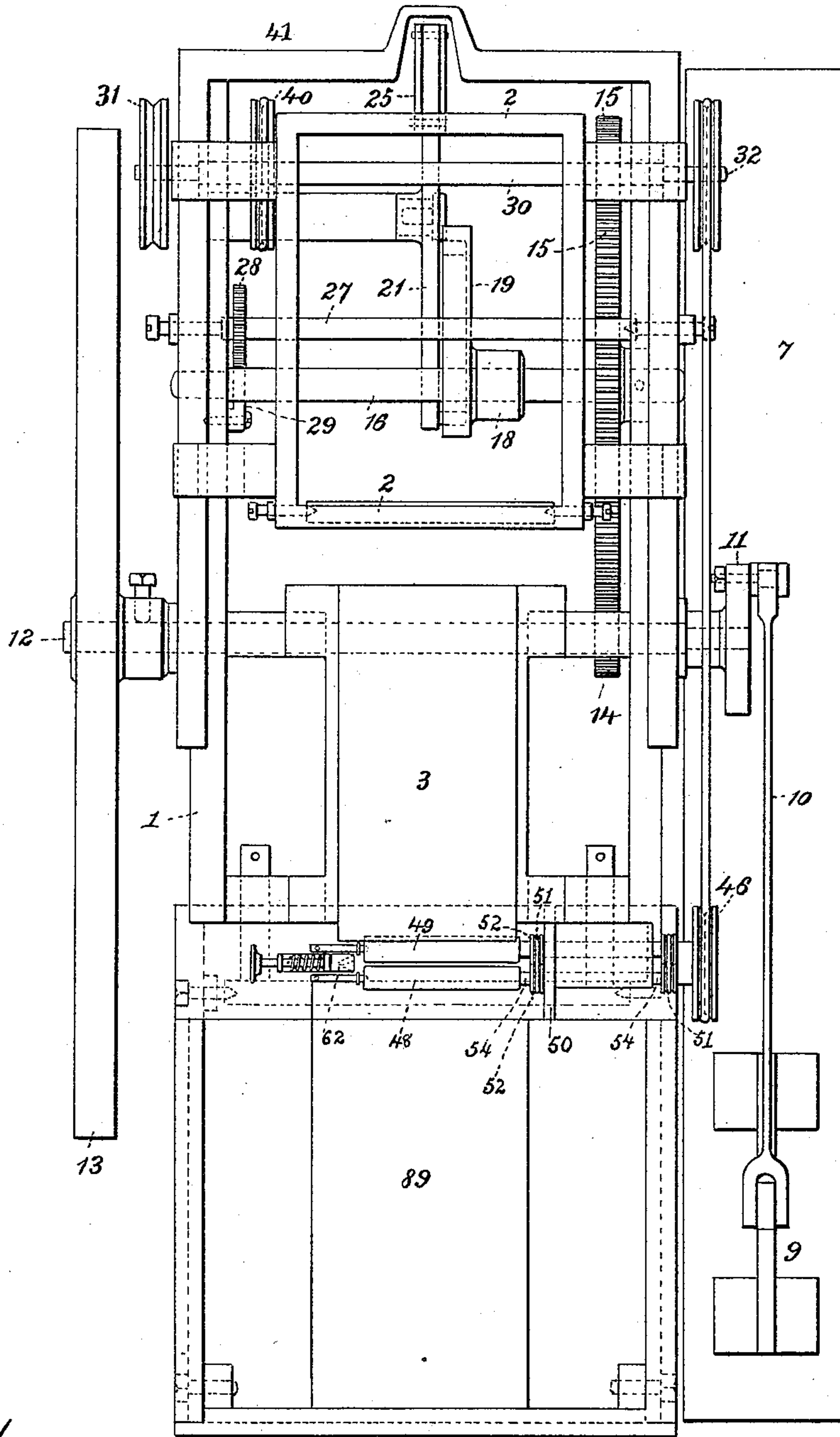
4 Sheets—Sheet 1.

C. L. DRIEFER.
CIGAR MAKING MACHINE.

No. 389,956.

Patented Sept. 25, 1888.

FIG. 1.



Attest:
Geo. T. Smallwood.
Geo. L. Wheelock.

Inventor:
Conrad L. Drierer.
134 Knight Bros.
attys

(No Model.)

4 Sheets—Sheet 2.

C. L. DRIEFER.
CIGAR MAKING MACHINE.

No. 389,956.

Patented Sept. 25, 1888.

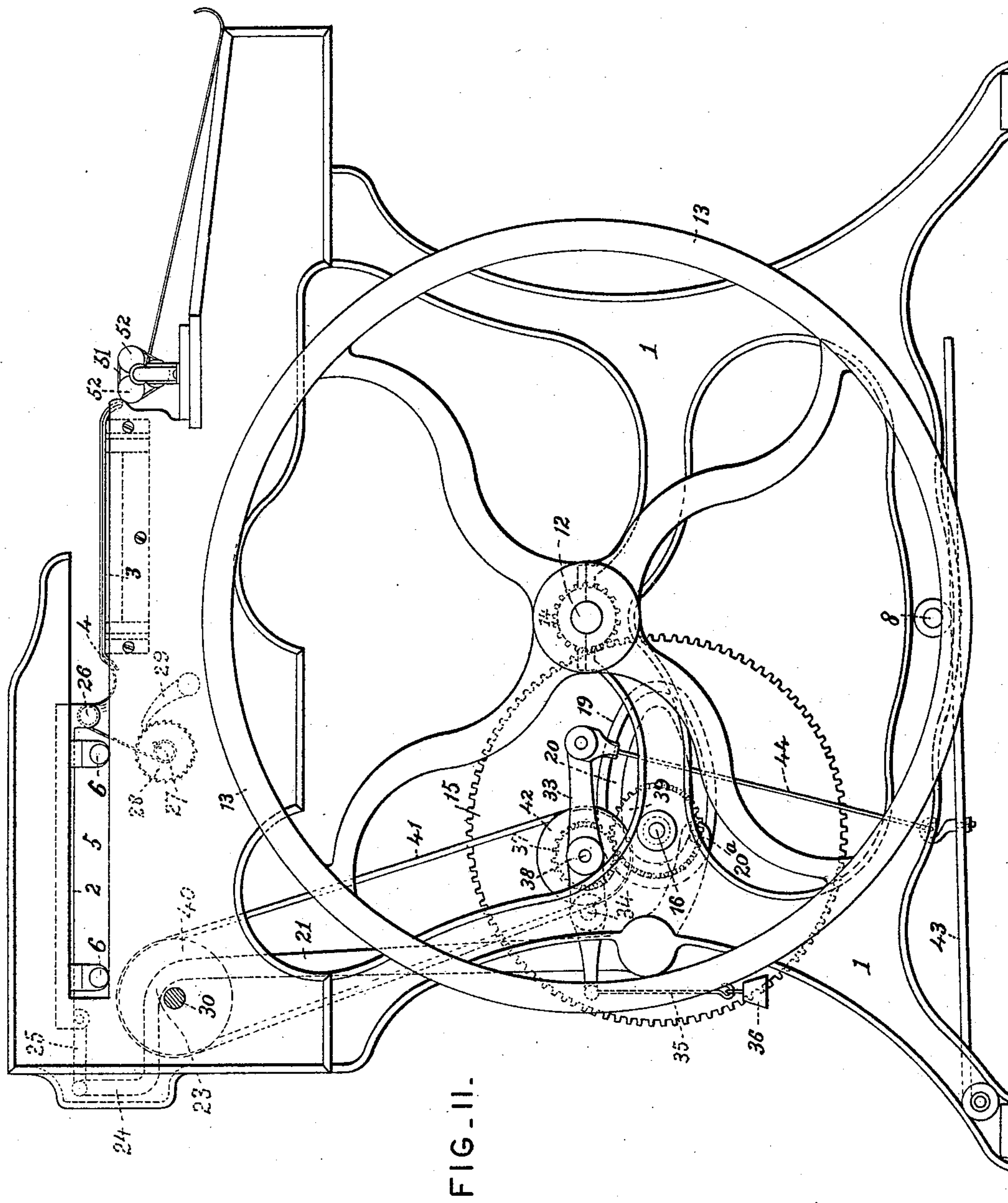


FIG. II.

Attest:

Geo. T. Smallwood.

Geo. L. Wheelock.

Inventor:

Conrad L. Drierer.

By Knight Bros. Attys

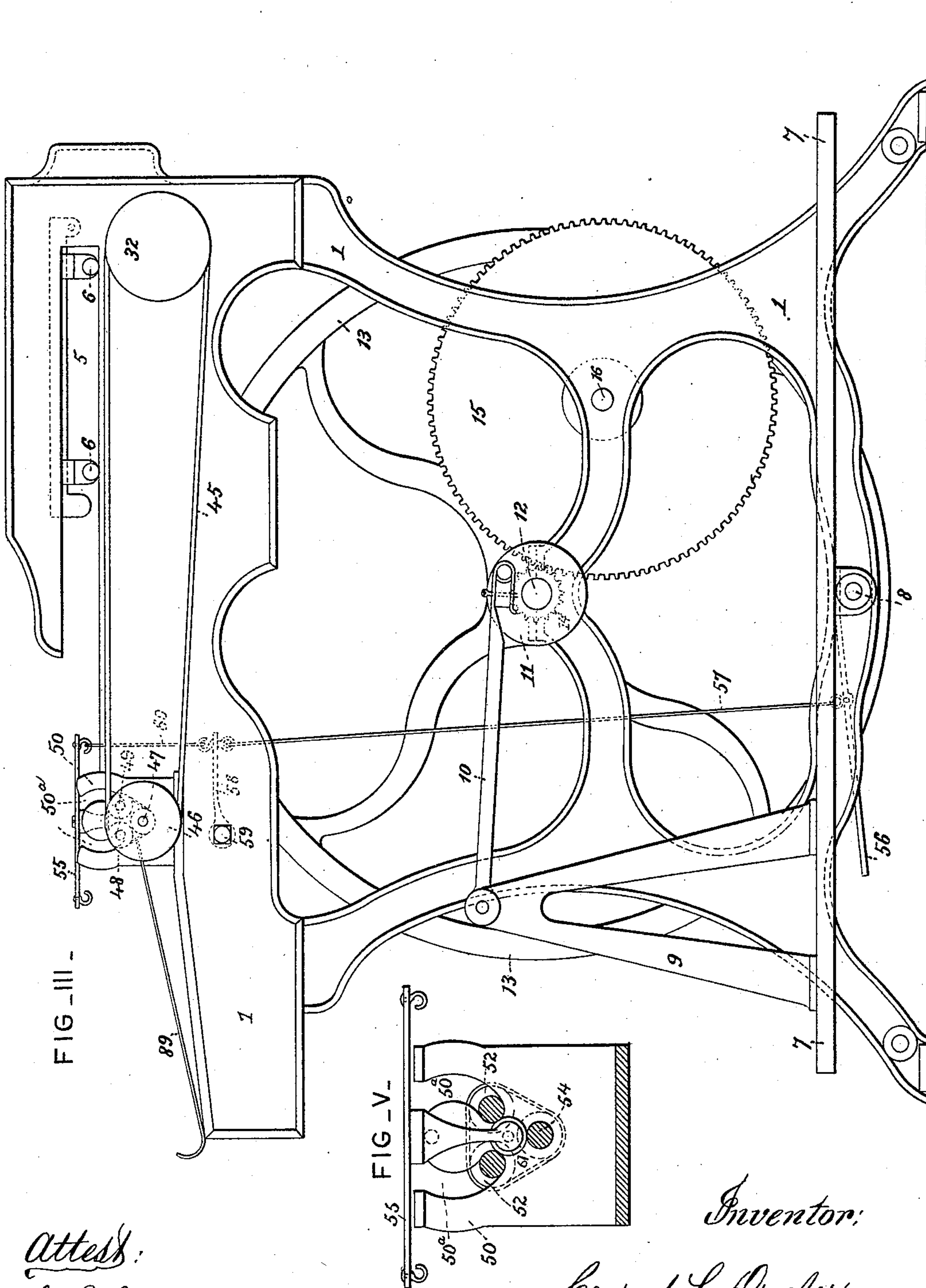
(No Model.)

4 Sheets—Sheet 3.

C. L. DRIEFER.
CIGAR MAKING MACHINE.

No. 389,956.

Patented Sept. 25, 1888.



Attest:
Geo. H. Mallwood.
Geo. L. Wheelock.

Inventor:
Conrad L. Drier.
By Knight Bros. attys

(No Model.)

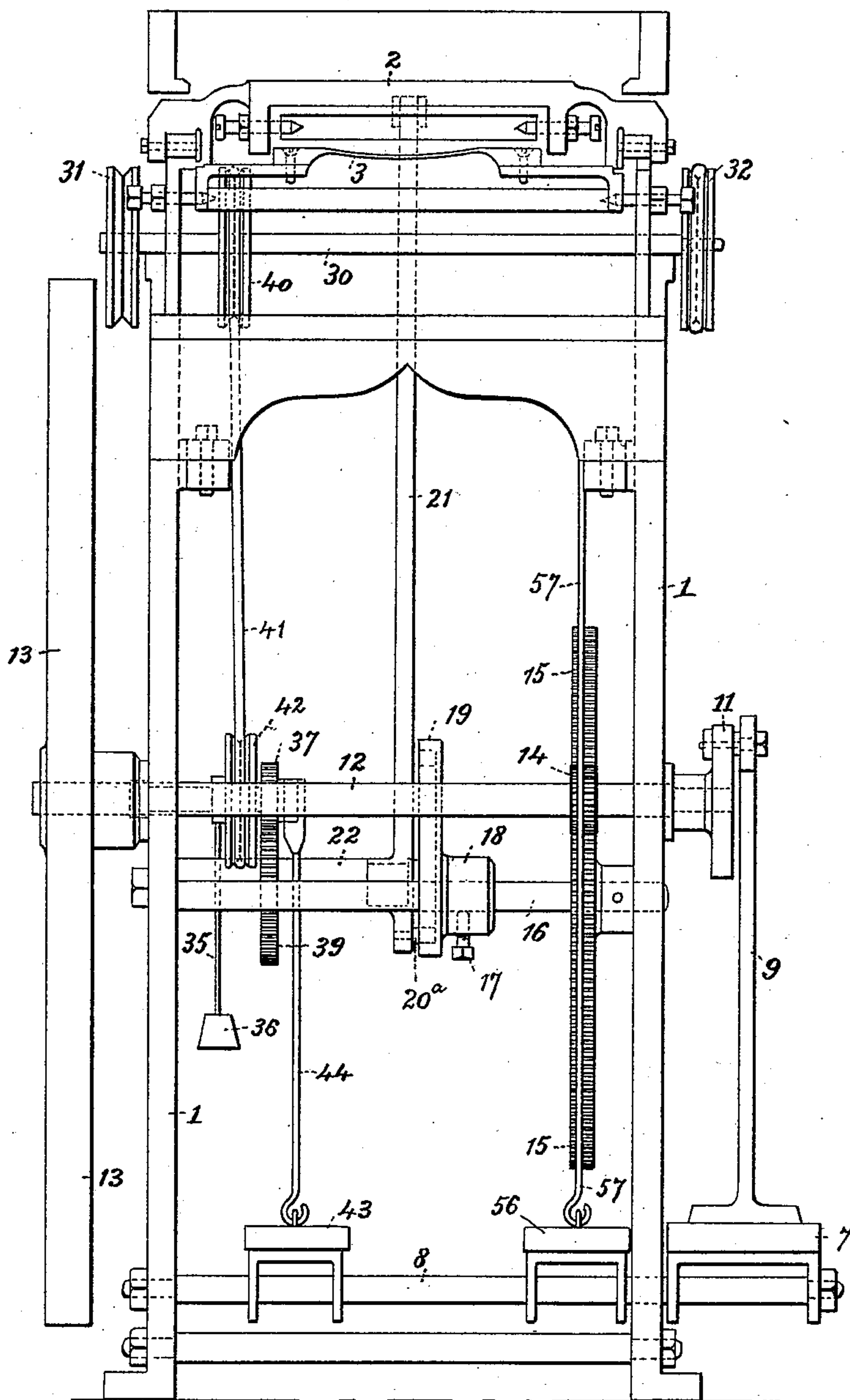
4 Sheets—Sheet 4.

C. L. DRIEFER.
CIGAR MAKING MACHINE.

No. 389,956.

Patented Sept. 25, 1888.

FIG. IV.



Attest:
Geo. T. Smallwood.
Geo. H. Wheelock.

Inventor:
Conrad L. Drierfer.
By Knight Bros.
Atty's

UNITED STATES PATENT OFFICE.

CONRAD L. DRIEFER, OF LONDON, ONTARIO, CANADA.

CIGAR-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 389,956, dated September 25, 1888.

Application filed March 19, 1888. Serial No. 267,076. (No model.)

To all whom it may concern:

Be it known that I, CONRAD L. DRIEFER, a citizen of the United States, and a resident of the city of London, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Machines for Making Cigars, of which the following is a specification.

My invention relates to certain improvements in the operating mechanism of the machine shown and described in my application, Serial No. 249,130, filed September 8, 1887.

My invention consists in the improved construction and combination of parts of the same, as will be hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, wherein—

Figure I is a plan view of the machine constructed according to my present invention. Fig. II is a view looking from one side of the same, and Fig. III is a view looking from the opposite side. Fig. IV is an end view of the machine. Fig. V is a vertical sectional view through the frame which carries the wrapping and finishing rollers.

Referring now to the drawings, in which like references indicate like parts, 1 is the frame of the machine, (which it is not necessary to describe in detail;) 2, the reciprocating table or frame; 3, the stationary table, and 4 the apron.

The reciprocating table 2 extends through slots 5 in each side of the frame of the machine. The portion of the frame below the slots 5 affords a track for the anti-friction rollers 6 of the reciprocating frame 2 to run upon. This table or frame 2 is given its reciprocating movement by the following mechanism:

7 is a treadle extending the entire length of the machine, and is secured rigidly outside of the frame to a rock-shaft, 8, journaled centrally in the frame of the machine near its bottom. This treadle has an upwardly-extending bracket, 9, which is connected by a link, 10, with a crank-wheel, 11, mounted on a horizontal shaft, 12, journaled near the center of the frame of the machine. The other end of the shaft 12 carries a fly-wheel, 13, outside of the machine. Keyed to the shaft 12, inside

of the frame of the machine, near the crank-wheel 11, is a pinion, 14, engaging a large cog-wheel, 15, fixed to a horizontal shaft, 16, journaled in the frame toward the rear end of the machine. Secured to the shaft 16 by means of a set-screw, 17, passing through its hub 18, is a cam, 19, having a cam-groove, 20, in which plays the anti-friction roller 20^a of the bell-crank 21, which is fulcrumed on an inward extension, 22, from the frame of the machine. The long arm of this bell-crank 21 is bent backward at 23 and upward at 24, so that its upper end, 24, will fall quite in the rear of the table 2, which is connected thereto by means of links 25.

The operation of the cam upon the bell-crank is as follows: When the anti-friction roller 20^a of the bell-crank is caused to travel in the eccentric portion of the cam-groove 20 by the revolution of the shaft 16, the long arm of the bell-crank will be reciprocated back and forth; but when the anti-friction roller travels in that portion of the cam-groove which is concentric with the shaft 16 the bell-crank will be at rest, and the intervals of motion and rest of the reciprocating table 2 will correspond to those of the bell-crank. This intermittently-moving table 2 permits during the period of rest an operator to place a new filler in the pocket of the apron 4. The apron 4 is secured at its forward end to the under side of the table 3, and at its rearward end it passes over roller 26 of the table 2, and is secured to shaft 27, having a ratchet-wheel, 28, wherewith engages a pawl, 29.

30 is a shaft journaled near the upper rear end of the frame of the machine, having at each end outside the frame pulleys 31 and 32, respectively.

33 is a lever fulcrumed at 34 intermediately of its ends to the frame of the machine. The rear end of the lever 33 supports, through the medium of a link, 35, a weight, 36, which causes cog-wheel 37, fixed on a shaft, 38, journaled in the lever, to be normally disengaged from a cog-wheel, 39, fixed on shaft 16.

Fixed to the shaft 30, inside of the frame of the machine, is a pulley, 40, over which passes an elastic belt, 41, passing also over a pulley, 42, fixed on shaft 38.

It will be seen that by pressing down on

treadle 43, connected by a rod, 44, with the front end of the lever 33, the cog-wheel 37 will be caused to engage the cog-wheel 39, (which is supposed to be rotating,) when the belt 41 will be caused to move and revolve pulley 40 on shaft 30.

When pulley 40 is revolved, motion is communicated through shaft 30 to a belt, 45, passing around either pulley 31 or 32 on the same shaft with pulley 40, which belt also passes around pulley 46, fixed on the shaft of the lower roller of the finishing-rollers, (presently to be described,) thereby communicating motion to the latter.

The arrangement of and the device for separating the upper rollers from the lower roller to admit the cigar-bunch is substantially the same as in my application referred to herein, and hence a short description only thereof is necessary.

47, 48, and 49 are three rollers, preferably having elastic sides and arranged in a triangle and revolving freely in bearings in the frame 50, removably secured to the frame of the machine, so that it may be reversed. The lower roller, 47, is not movable transversely; but the upper rollers, 48 and 49, are supported in bearings in the lower ends of two concentric slots, 50^a, formed in the frame 50.

The three rollers are held together by elastic bands 51, which pass around pulleys 52 and 53, respectively, on each end of the shafts 54 of the rollers and outside of the frame 50.

55 represents a lever pivoted in bearings in frame 50, and it may be adjusted by pressing the foot on treadle 56, connected through the medium of the rod 57 with an arm, 58, pivoted at 59 to the frame 1, and this arm 58 is in turn connected removably to the hooks at each end of lever 55 by means of link 60.

61 are the anti-friction rollers, pivoted in bearings at the lower end of lever 55, and are fitted between the shafts of rollers 48 49 and above roller 47, but between the latter and the former, so that when the lever is tilted on either side the anti-friction rollers will engage the shaft on one of the upper rollers and lift

this roller away from the lower roller to admit the cigar-bunch with the binder wrapped around it by means of the reciprocating table 2, table 3, and apron 4.

The special construction of my finishing-rollers, as well as the tip-forming thimble 62, used in connection therewith, forms the subject of a separate application, Serial No. 267,675, filed contemporaneously herewith. When the rollers are required to be reversed for either right or left wrappers, should the belt which passes around pulley 46 of the lower roller, 47, be running on either pulley 31 or 32, it is only necessary to remove the belt from the pulley on that side of the machine that pulley 46 is nearest, reverse the rollers, and place the belt upon the pulley on the opposite side of the machine.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a cigar-machine, the combination of the lever 33, pivoted intermediately of its ends and weighted at one end, a treadle having connection therewith at the other end, the wrapper-rollers, a revoluble shaft, pulley 42, carried by the lever, the belt 41, passing around the fixed pulley 23 and aforesaid pulley 42, belt-and-pulley connection between the wrapper-rollers and said fixed pulley, the cam 19, mounted on the revoluble shaft, the bell-crank 21, operated by said cam, and the bunch-rolling mechanism connected with the bell-crank, substantially as shown and described.

2. In a cigar-machine, the combination of the pivoted lever 33, weighted at one end and having a short shaft, 38, pulley 42, and cog-wheel 37, mounted on said shaft, a revoluble shaft having a cog-wheel, 39, adapted to be brought into engagement with cog-wheel 37, a treadle having connection with lever 33, and an elastic belt passing around the pulley 23 and pulley 42, substantially as set forth.

CONRAD L. DRIEFER.

Witnesses:

D. J. BATZNER,
PAUL H. COOK.