(No Model.) 2 Sheets—Sheet 1.

R. R. LEWIS.

CIGAR ROLLING MACHINE.

No. 459,756. Patented Sept. 22, 1891.

FIG_1_

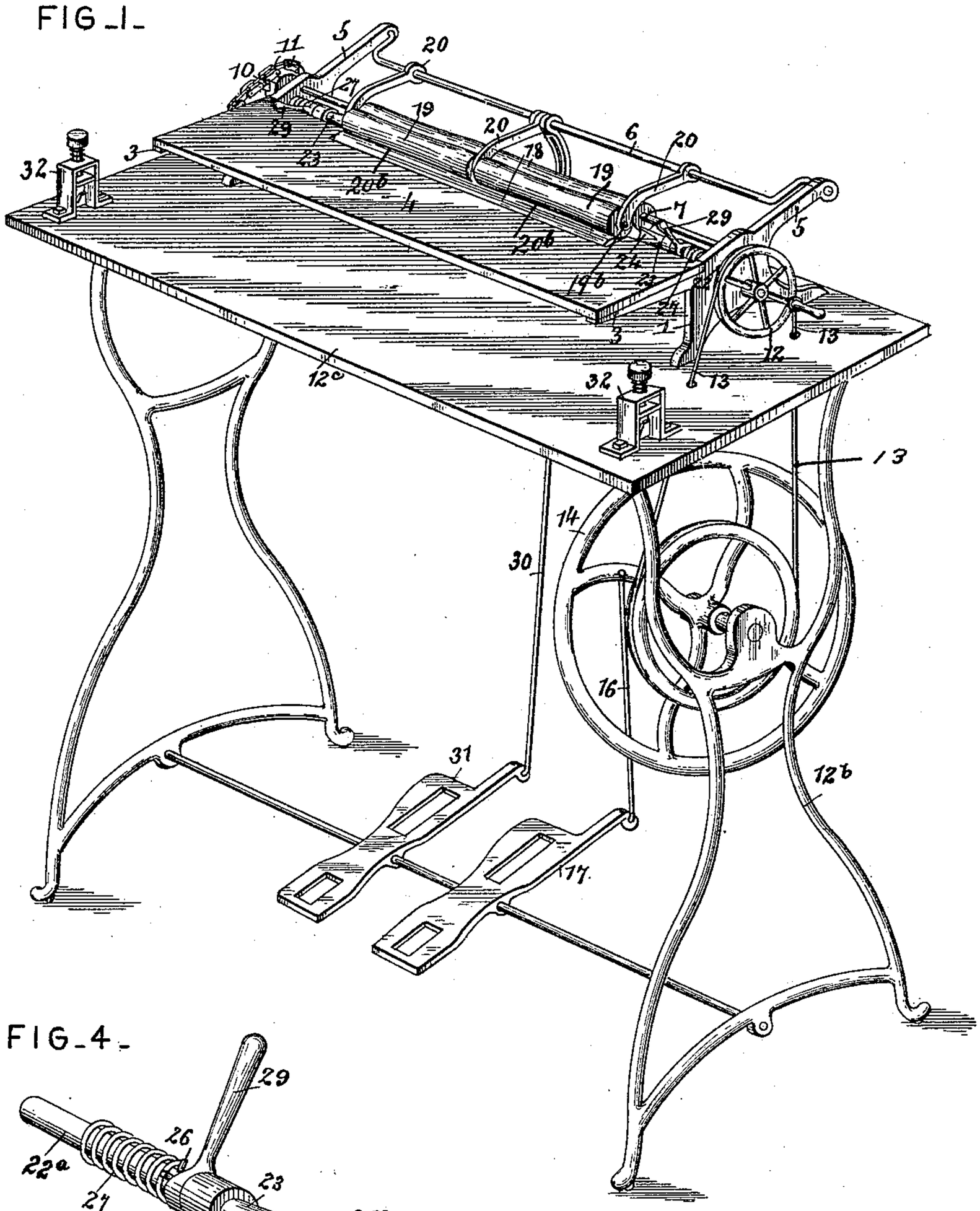

FIG_4_

Witnesses

Jas. K. McCathran

Wm. Bagger

Inventor

Russel R. Lewis

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(No Model.) 2 Sheets—Sheet 2.

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FIG. 3.

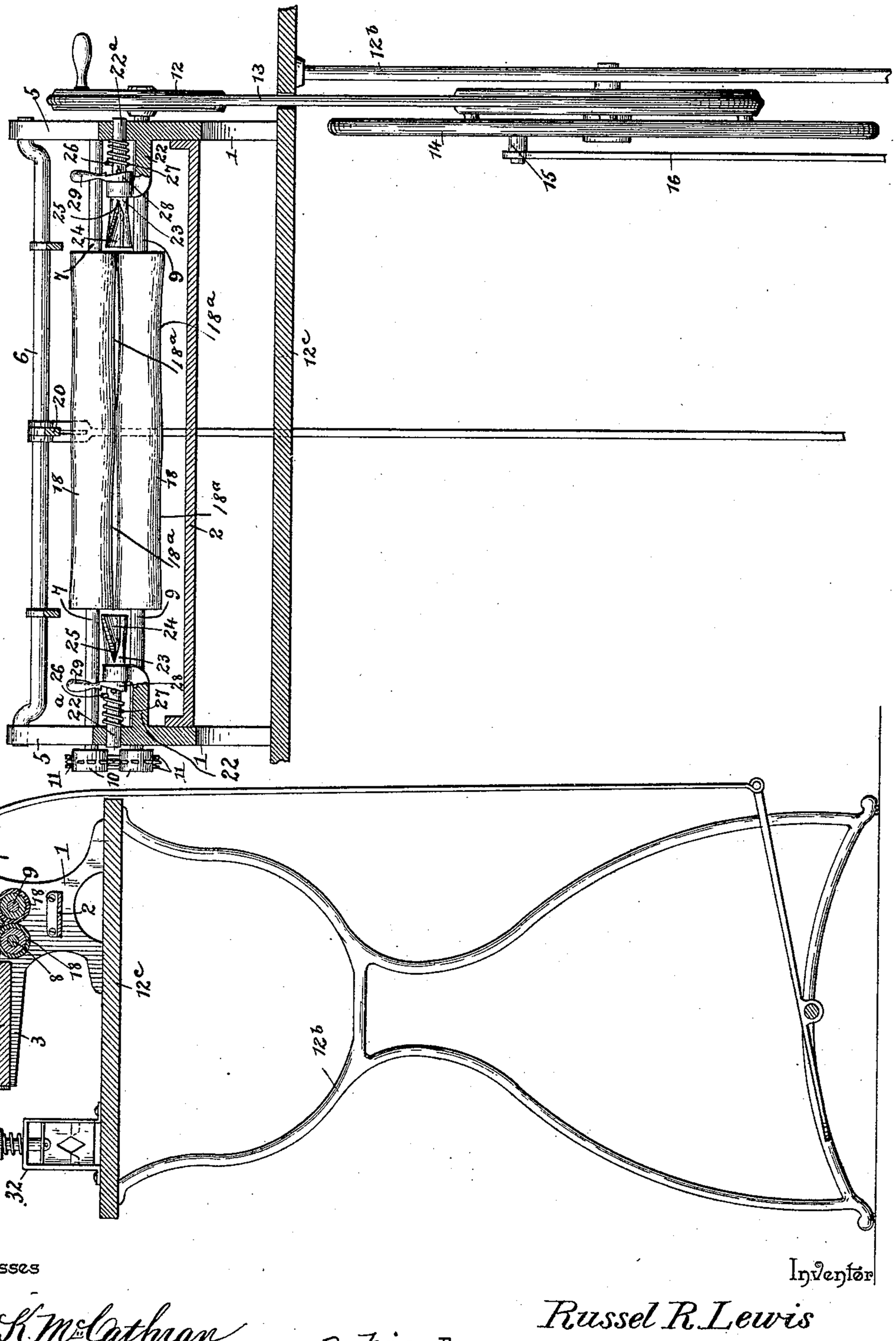

FIG. 2.

Witnesses

Jas. K. McCathran

Wm. Bagger

Inventor

Russel R. Lewis

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

RUSSEL RAY LEWIS, OF PETERBOROUGH, NEW HAMPSHIRE.

CIGAR-ROLLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 459,756, dated September 22, 1891.

Application filed November 5, 1890. Serial No. 370,394. (No model.)

To all whom it may concern:

Be it known that I, RUSSEL RAY LEWIS, a citizen of the United States, residing at Peterborough, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Cigar-Rolling Machines, of which the following is a specification.

This invention relates to machines for rolling cigars; and it has for its object to construct a device of this class which shall be simple, durable, and easily manipulated.

The invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the cigar-rolling machine embodying the principles of my invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a vertical sectional view taken in front of the shafts 7 and 8 and the rollers mounted thereon. Fig. 4 is a perspective detail view.

Like numerals of reference indicate like parts in all the figures.

The frame of my improved cigar-machine is composed of side pieces 1 1, connected by cross pieces or braces 2 and having forwardly-extending arms 3 3, upon which a table or platform 4 is mounted. The side pieces 1 1 are also provided with rearwardly-extending arms 5, having bearings for a crank-shaft 6.

Bearings are provided in the side pieces 1 1 for shafts 7, 8, and 9, the ends of which are provided with sprocket-wheels 10, connected by a chain 11. One of the said shafts is also provided with a band-wheel or pulley 12, which is connected by a band 13 with a drive-wheel 14, which is suitably mounted in the supporting-frame 12^b of the table 12^c, upon which the frame of the machine is mounted. The drive-wheel 14 has a wrist-pin 15, which is connected by a pitman 16 with a treadle 17, suitably pivoted in the supporting-frame of the machine. The shafts 7, 8, and 9 are provided with forming-rollers 18, the faces of which, as will be plainly seen in Fig. 3, have concavities, as 18^a, between their ends and center, the purpose of the machine being to form what may be described as a "double" cigar, which may afterward by cutting it in two be converted into two cigars of ordinary length and shape. A pair of additional rollers 19, which are termed the "pressure-rollers," are mounted independently and a short distance apart upon a shaft 19^b, having its bearings in arms 20, which extend radially and in a forward direction from the crank-shaft 6. These pressure-rollers are so arranged as to normally rest or bear against the surfaces of the rollers mounted upon the shafts 7 and 8, and each of said pressure-rollers has a concave surface, as 20^b, adapted to engage the meeting faces of the rollers upon the shafts 7 and 8, the concavities 20^b in the faces of the said pressure-rollers 19 being each of an outline to correspond with the usual shape of a single cigar.

The side pieces 1 1 of the machine are provided with inwardly-extending arms or brackets 22, arranged slightly above the shaft 8, between the latter and the shaft 7. The inner ends of the brackets 22 are provided with bearings for the stems 22^a of the end-forming dies 23, which latter have a sliding motion in the said brackets. Springs 27 are coiled upon the stems 22^a between the side pieces of the frame 1 and pins extending transversely through said stems, whereby the latter are forced in an inward direction against the ends of the forming-rollers. Cam-levers 29 are arranged to force the dies 23, when desired, in an outward direction or away from the cigar against the tension of the springs 27. The said end-forming dies are provided with conical recesses 24 and with flanges 25, extending from the front edges of notches 25^a at the inner ends of the said conical recesses. By this construction the dies are adapted to engage the binders or the wrappers and to shape them properly to form the tips or ends of the cigars while the latter are rotated by the rolls.

The crank-shaft 6, carrying the pressure-rollers, is connected by means of a pitman 30 with a suitably-arranged treadle 31, whereby the said crank-shaft may be manipulated to lift the pressure-rollers when a bunch or filler is to be inserted in the machine or the finished cigar removed from the latter. I also arrange at each side of the machine a cutter 32 for cutting the butts of the cigars to re-

duce the same to proper length. A suitably-arranged spring may, if desired, be used to hold the pressure-rollers in contact with the forming-rollers during the operation of the machine.

In operation the workman sits in front of the machine and forms the filler with his hands. The filler is made twice the length of an ordinary cigar, and it is placed in the machine between the forming-rollers and under the pressure-rollers, the shaft of which latter is meanwhile lifted by pressure upon the treadle 31. While placing the filler in the machine the end-forming dies may also be withdrawn from the tension of the springs 27 by manipulating the cam-levers 29. The filler having been placed in position, the end-forming dies may be released and the pressure-roller lowered. The binders are then introduced between the pressure and forming rolls, and a rotary motion is imparted to the latter by means of the treadle and the band-wheels herein described. The binders are thus wrapped around the double-length filler from the middle to the ends of the latter. The wrappers are then introduced and wound around the binder from the center to the ends, the tips or ends being formed by means of the dies 23. The pressure-rollers are then raised and the double cigar removed from the machine, one or both of the end-forming dies having been previously withdrawn in order to prevent injury to the tips. The double cigar is then cut in two and each is cut off to the proper length and then finished. It is obvious that during the operation of the machine the end-forming dies, which are mounted yielding, as herein described, will readily accommodate themselves to slightly-varying lengths of cigars.

My improved cigar-machine, as will be seen from the foregoing description, is exceedingly simple in construction and operation. By means of this machine a double cigar, which is afterward cut in two, may be rolled in a very rapid and convenient manner, and the product will be found to be of good appearance and have good smoking qualities.

I have in the foregoing described what I consider to be the preferred form of my improved cigar-machine; but I desire it to be understood that I reserve the right to any changes and modification in the construction of the same which may be resorted to without departing from the spirit of my invention.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a cigar-machine, the combination of the frame, the forming-rollers, the pressure-rollers mounted upon a shaft journaled in arms extending radially from a suitably-arranged crank-shaft, the laterally-yielding spring-actuated end-forming dies normally forced in the direction of the forming-rollers, and cam-levers adapted to force the said end-forming dies against the tension of the springs, substantially as set forth.

2. In a cigar-machine, the combination, with a suitable frame having forwardly and rearwardly extending arms and inwardly-extending brackets, of the table mounted upon the forwardly-extending arms, a crank-shaft mounted in the rearwardly-extending arms and having radial arms, a shaft journaled in said arms, two pressure-rollers, the forming-rollers journaled in the sides of the frame, the laterally-yielding spring-actuated end-forming dies mounted in the brackets of said frame, cam-levers to force said dies against the tension of the springs, and suitable operating mechanism for the rollers, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

RUSSEL RAY LEWIS.

Witnesses:

EZRA M. SMITH,

JAMES F. BRENNAN.