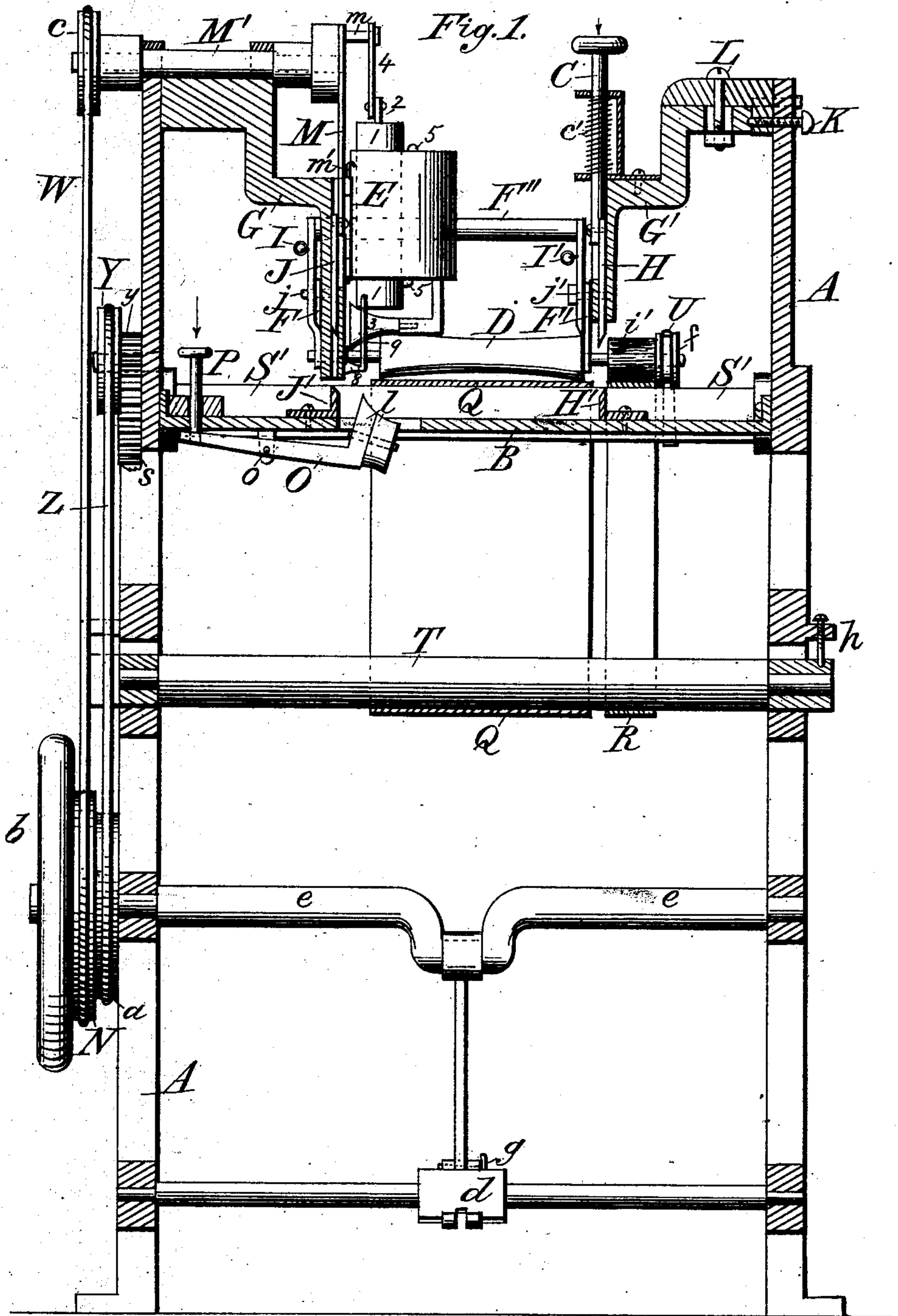


C. M. MANN.

# Machine for Wrapping Cigars.

**No. 237,117.**

**Patented Feb. 1, 1881.**



*Attest:*

H. H. Schott  
N. C. Lombard

*Inventor*

Chester W. Mann  
per J. C. Parker atty



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Fig. 6.

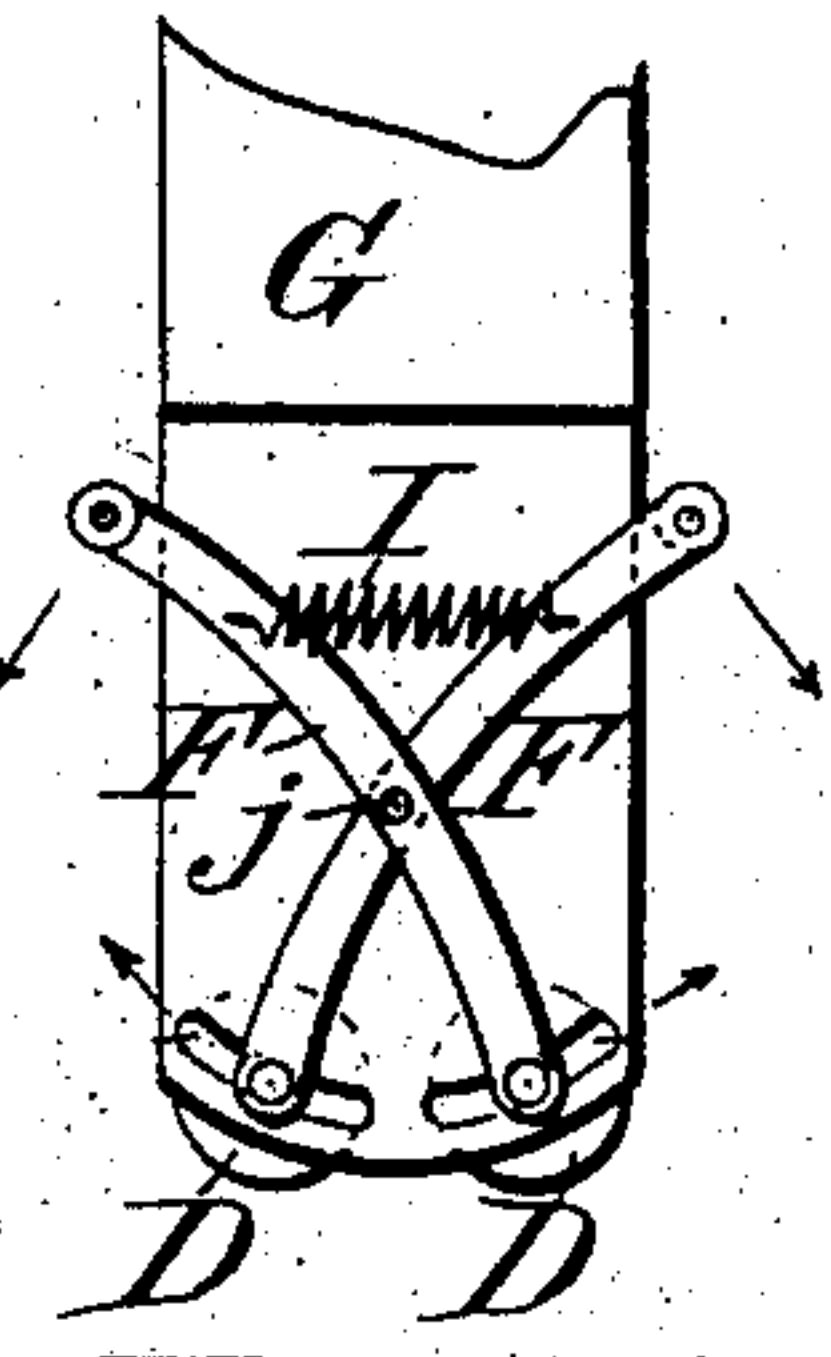


Fig. 7.

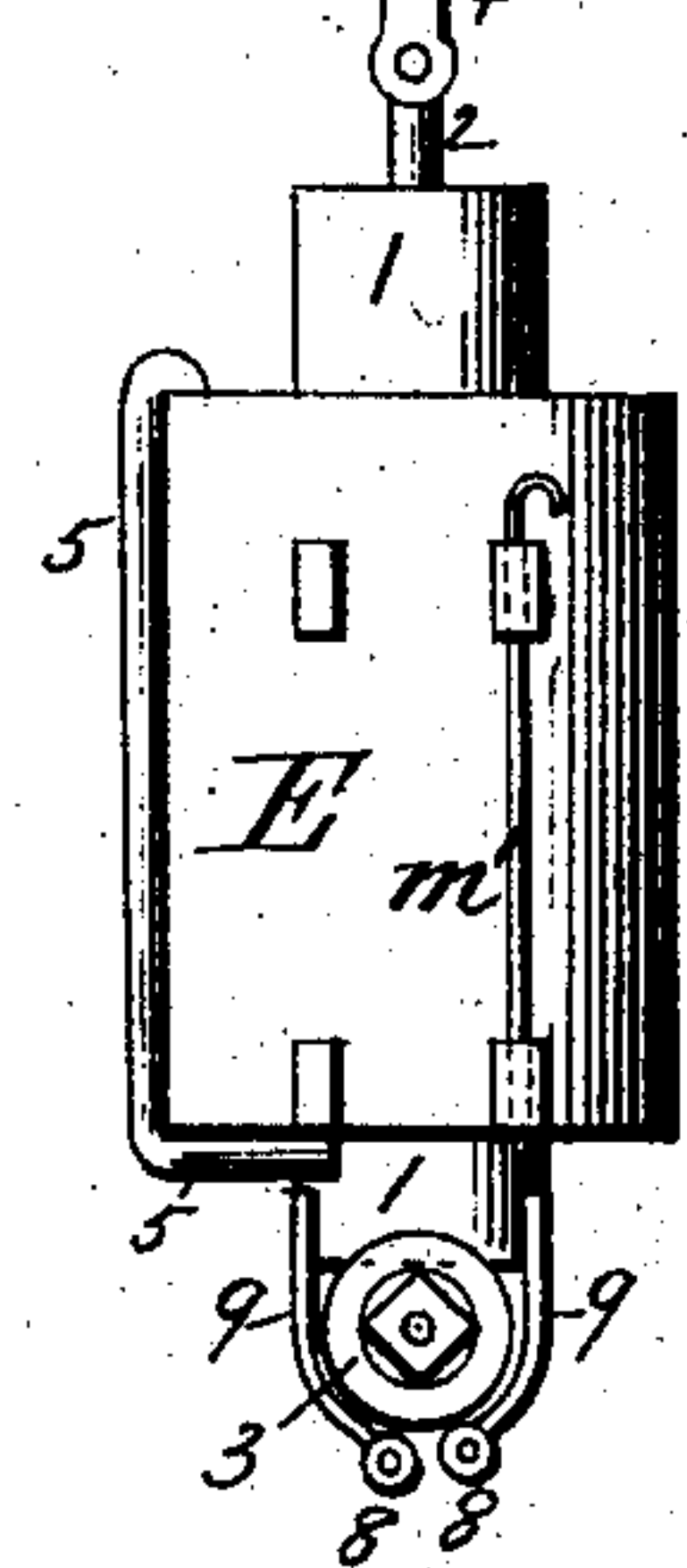


Fig. 2.

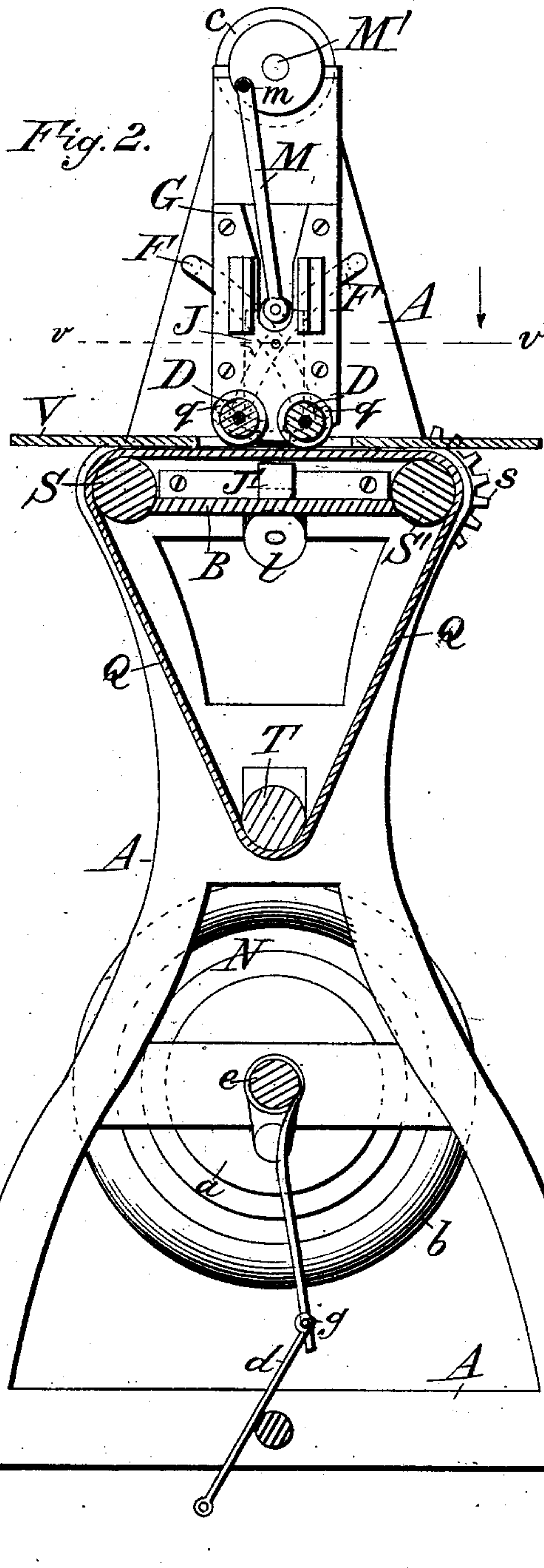
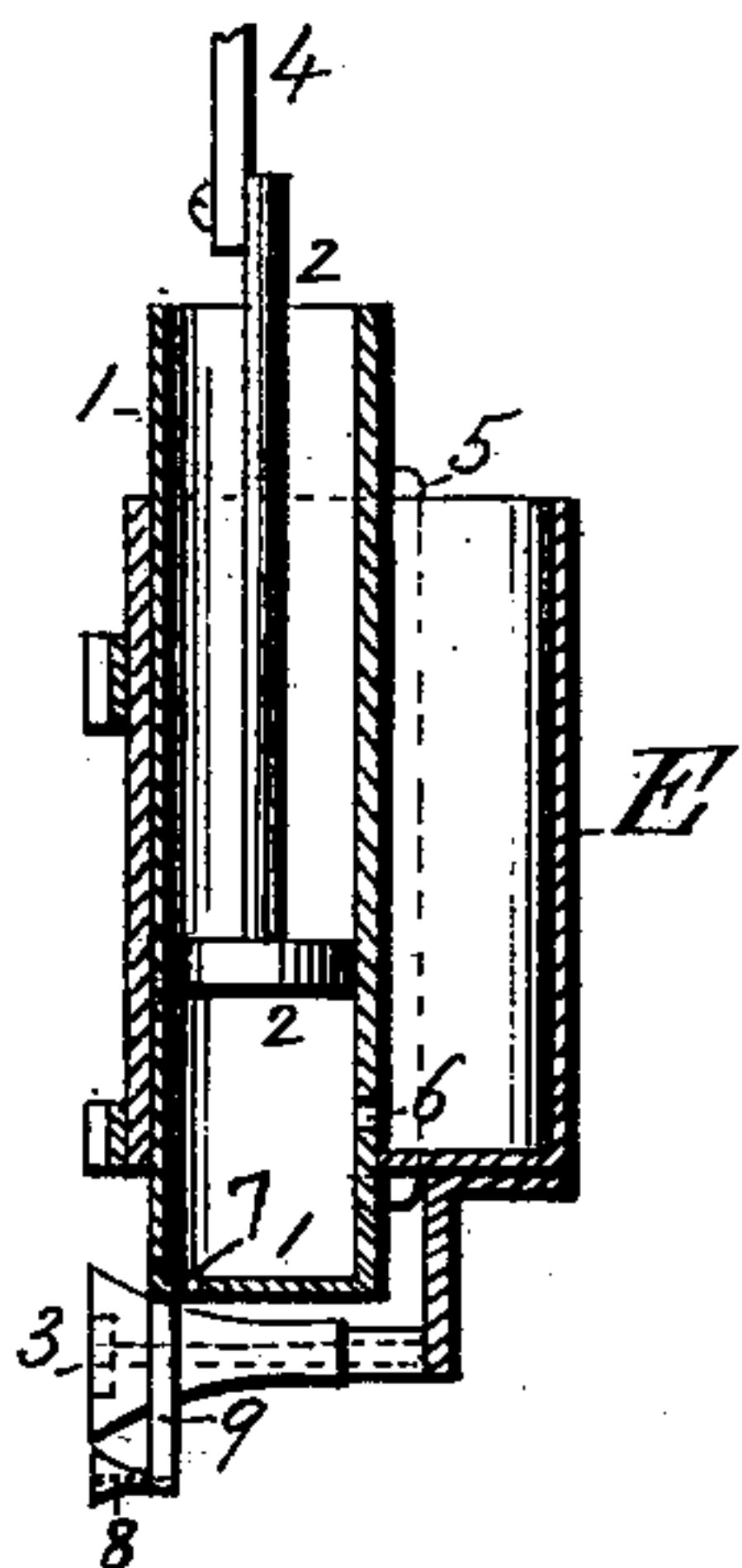


Fig. 8.



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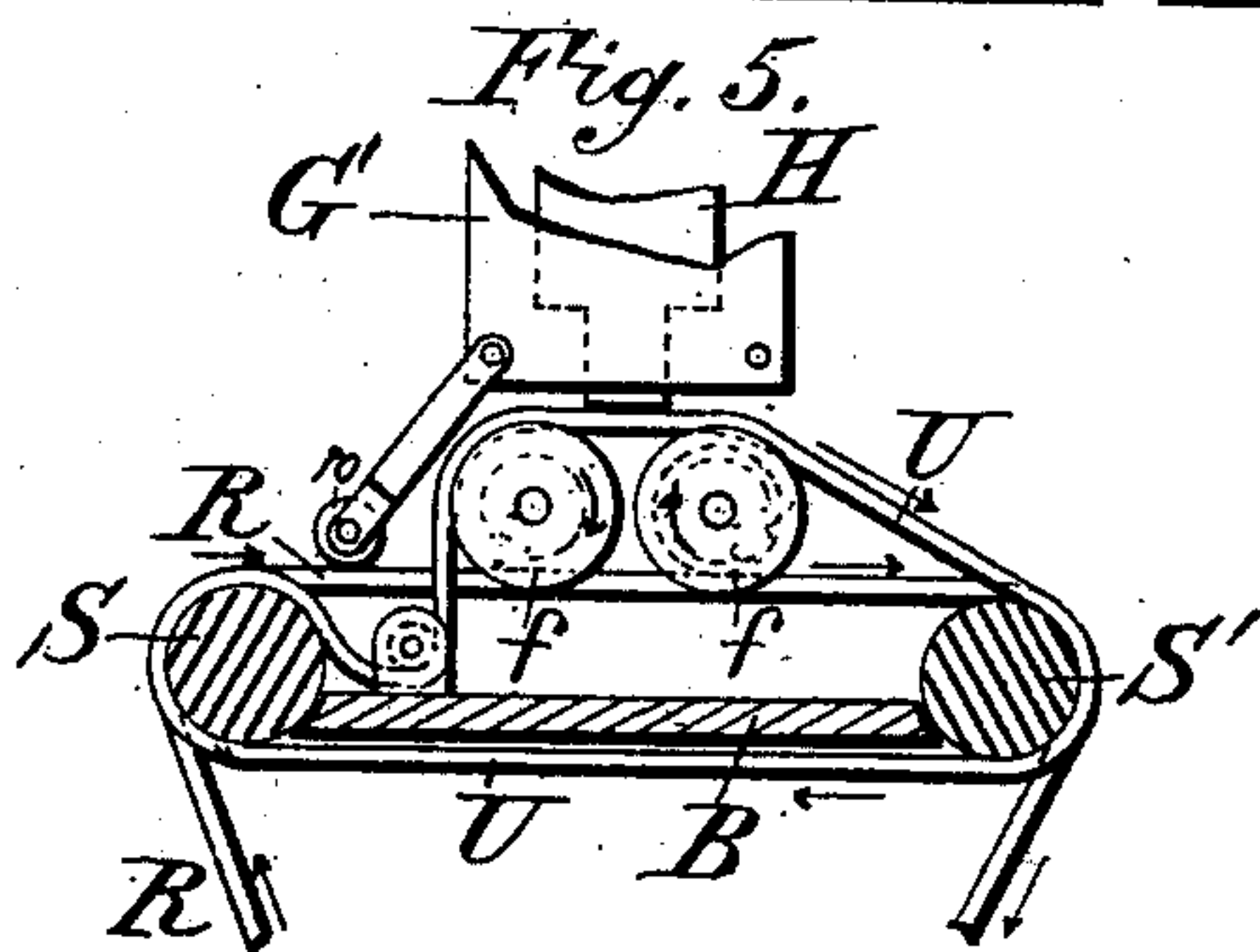
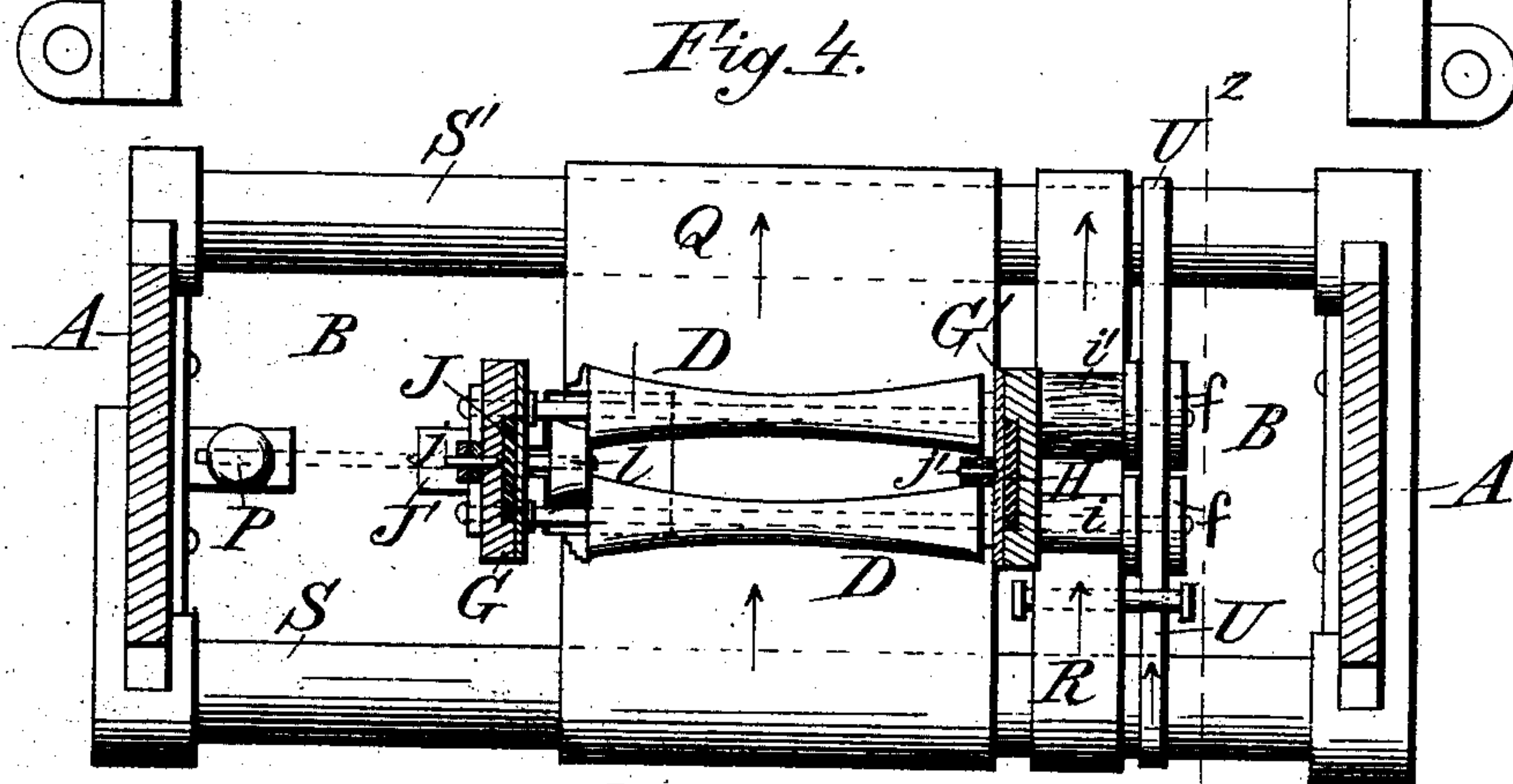
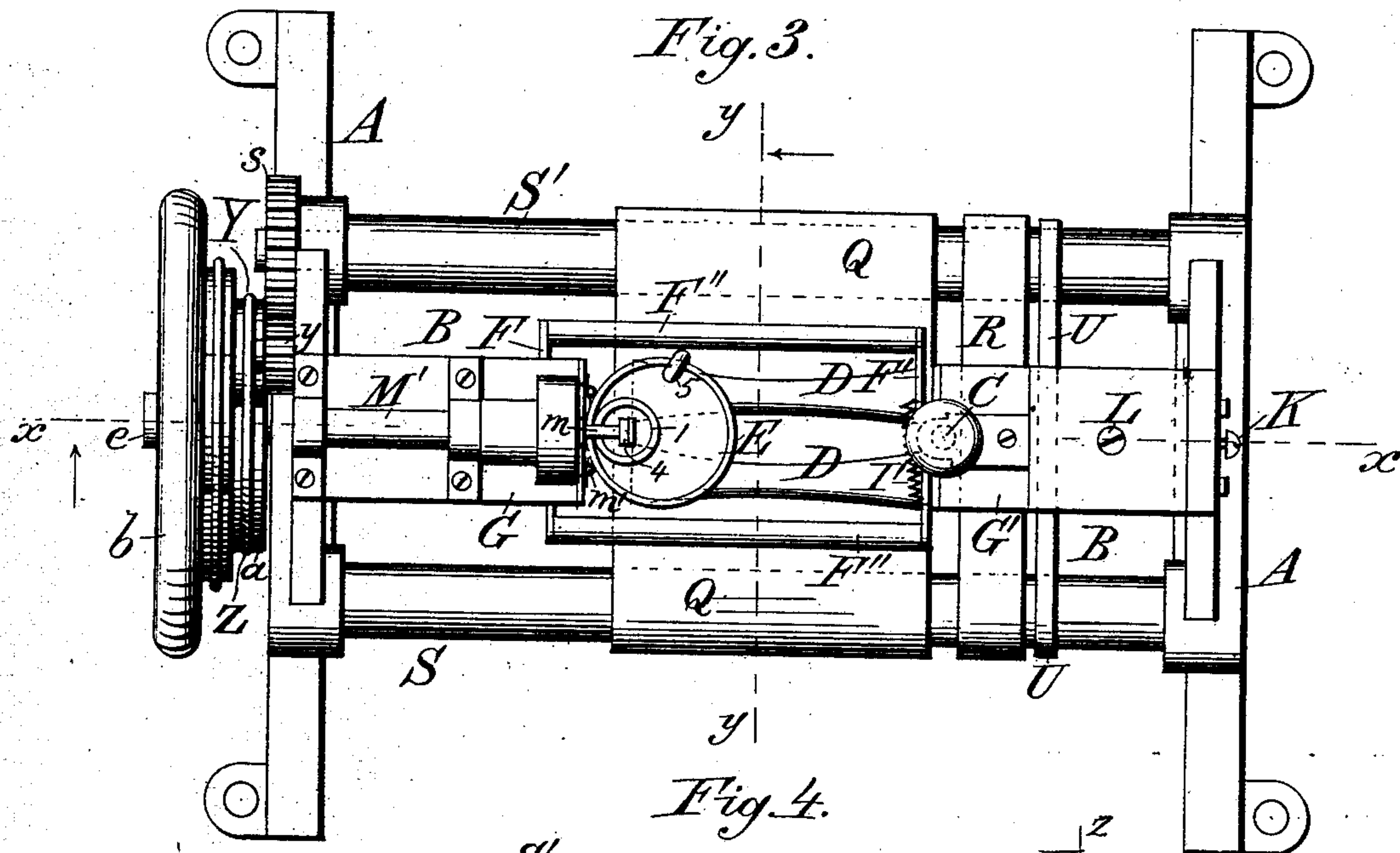
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# UNITED STATES PATENT OFFICE.

CHESTER M. MANN, OF CHICAGO, ILLINOIS.

## MACHINE FOR WRAPPING CIGARS.

SPECIFICATION forming part of Letters Patent No. 237,117, dated February 1, 1881.

Application filed October 23, 1879.

*To all whom it may concern:*

Be it known that I, CHESTER M. MANN, of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Machine for Wrapping Cigars; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and the letters of reference marked thereon.

The nature of my invention consists in the combination and arrangement of devices for wrapping cigars by machinery, hereinafter to be described and claimed.

Figure 1 is a vertical longitudinal section of my machine, taken on line *x x* of Fig. 3; Fig. 2, a transverse vertical section on line *y y* of Fig. 3, with paste-cup removed. Fig. 3 is a plan view; Fig. 4, a horizontal section on line *v v* of Fig. 2. Fig. 5 is a transverse section on line *z z* of Fig. 4; Fig. 6, a detailed view; Figs. 7 and 8, detailed views of the paste-cup.

Similar letters refer to similar parts throughout the several views.

The term "tip" will in this specification always refer to the point of the cigar.

A is the frame-work of the machine, which is strongly bolted together, and of sufficient width and height to support and carry the mechanism and devices to be described.

A shaft, *e*, bearing in frame-work A, has a fly-wheel, *b*, and pulleys *a* N. This shaft *e* is driven by a crank and connecting-rod attached by a pin, *g*, to a treadle, *d*. Pin *g* in the treadle can be changed at pleasure from one end of the treadle to the other, thus permitting the machine to be operated from either side.

A base or sill, B, is firmly attached to the inside of frame-work A, to support the under knives, and for other purposes. Upon opposite sides of base B, running parallel with it, are placed two rollers or pulleys, S S', bearing in journals in frame-work A and turning easily upon their shafts. The pulley S' is driven by a cog-wheel, *s*, on the end of its shaft, gearing into a pinion, *y*, on a shaft carrying a pulley, Y, as shown in Figs. 1 and 3. A belt, Z, passes around pulley Y and over pulley *a* on shaft *e*, thus causing rotation of pulley S'.

A short distance below base B, and directly under its center, is placed a pulley, T, turn-

ing easily on its bearings in frame-work A. The main function of this pulley is to tighten the belts Q and R which run upon it. A means of adjusting this pulley is shown in Fig. 1 at *h*.

The pulleys S, S', and T carry the belts Q and R. The pulley T may be dispensed with and the belts run upon the pulleys S S' and have a tightening device attached to them.

G and G' are hangers or brackets attached to frame-work A, and having grooves for holding and guiding the vertically-moving knives J and H. The upper tip-knife, J, is worked up and down in its groove in bracket G by a pitman, M, attached to its upper end, and also to a crank-pin, *m*, on a disk on shaft M'. This shaft M' bears in frame A, and is driven by a band, W, running from its pulley *c* to pulley N on the shaft *e*, as shown in Fig. 1. The upper butt-knife, H, is fastened to a rod fitted to slide in a groove in bracket G', and so adjusted as always to be ready to cut off the butt-end of the cigar by downward pressure upon its handle. A spiral spring, *c'*, around the rod C keeps the knife H up and in position.

On base B, immediately under upper butt-knife, H, is fastened the under butt-knife, H'.

J' represents an under stationary tip-knife, also secured to base B and under knife, J, so as to form a kind of shear cut with it. These under knives may be adjusted on the base by set-screws working in slots.

The lower part of bracket G has circular slots *q q* cut through it, as seen in Fig. 6. These slots hold the journals of two small cigar-rollers, D D, placed over the center of base B and above belt Q. Said rollers are sufficiently far apart to hold a bunch for a cigar of any required size, and should perfectly fit the shape of the bunch held between them. Rollers D D, by means of two pairs of cross-levers, F F and F' F', which fit over the ends of their journals, are opened and closed. The cross-levers F F, where they cross each other, are pivoted by pin *j* to bracket G, their lower ends fitting over the ends of journals of the rollers D D, as shown in Fig. 6. A spring, I, extends from one lever F to the other, above the pivot *j*, holding the levers in position, and also affording an elastic bearing of the rollers D D upon



the bunch held between them.  $F' F'$  are similar levers crossing each other and pivoted at  $j'$  to the bracket  $G'$ , their lower ends surrounding the shafts of rollers  $D D$  where they emerge from the said rollers. A spring,  $I'$ , is attached to these levers, similar to spring  $I$  and for the same purpose. Handles  $F'' F''$  run from one pair of levers to the other. By pressing down upon either handle either roller  $D$  will be raised (its journal raised in the curved slot  $g$ ) in either direction from the bunch or cigar which lies between them.

$l$  (shown in Fig. 1) is a movable under tip rest or roller, and may be made as shown, consisting partly of a roller,  $l$ , and partly of the bar  $O$ , or it may be a roller the whole length of the tip, and is so shaped as to perfectly fit the contour of the point of cigar against which it fits, and must be made to drop away from point of cigar at will.  $O$  is a bar attached to this under tip-rest,  $l$ , and pivoted at  $o$  to a projection on under side of base  $B$ . A rod,  $P$ , works up and down in a hole through base and bears on the end of bar  $O$ , opposite to  $l$ . By pressing upon this rod the lower tip-rest,  $l$ , will be raised, as desired, to fit the point of the cigar or bunch being wrapped.

$ff$  are two small pulleys on the ends of shafts that carry rollers  $D D$ , and are driven by an elastic band or belt,  $U$ , which is carried and driven by the pulleys  $S S'$ . Adjoining the pulleys  $f f$ , and fast on the same shafts, are two (2) small end rolls,  $i i'$ . The one of these two rollers  $i i'$  farthest from the operator when working the machine I call the "cushion-roller." In this case I have taken it to be the roller  $i'$ , and it must be placed and run as closely to the end of the roller  $D$  next it as practicable, only allowing space enough between roller  $D$  and roller  $i'$  for the passage of the upper butt-knife,  $H$ , down between the belts  $Q$  and  $R$ , to meet the under butt-knife,  $H'$ , that it may cut off the butt of cigar when otherwise completed, the cushion-roller  $i'$  being made large enough by a soft elastic covering to sweep the narrow belt  $R$ , which moves in an opposite direction to the roller  $i'$ . The butt-end of cigar lying upon the belt  $R$  rests against the elastic cushion on roll  $i'$ , so that when the belt  $R$  carries in the end of the wrapper under the roll  $i$  (which, not being cushioned like roll  $i'$ , does not touch belt  $R$ , but leaves sufficient space between them for the wrapper to pass in,) the roller  $i'$ , moving in the direction of the arrow, Fig. 5, opposes its progress upon said belt and forces it (the wrapper) up and back upon the bunch which is turning in an opposite direction to roll  $i'$ . The wrapper then turns with the bunch, and in connection with rollers  $D D$  is rolled tightly about the butt and bunch of the cigar. Belt  $R$  runs under rollers  $i i'$ , and is carried by pulleys  $S S'$ , and works with belt  $Q$  for carrying along the end of wrapper past butt-knife  $H$ , and in connection with the working of roller  $i'$  starts and rolls the wrapper upon the ex-

treme end of the bunch. This belt also carries off butt or tuft of cigar when cut off by butt-knife  $H$ . Belts  $Q$  and  $R$  must be far enough apart to permit knife  $H$  to pass down between them, meet knife  $H'$ , and thus cut off the cigar the required length when completed.

$E$  represents a paste-cup, fastened to the bracket  $G$  by rods  $m'$  passing through lugs on cup and bracket, or in any other suitable way. It is placed directly over rollers  $D D$  and point or tip of cigar, and is of cylindrical shape. This cup  $E$  is provided with a tube, 1, of similar shape, running down its inside and extending a short distance below the cylinder  $E$ . A slot or hole, 6, is cut in the tube 1 a little above the bottom of cup  $E$ , for passage of paste into tube 1 from cylinder  $E$ . The bottom of tube 1 is pierced at its bottom with one or more extremely small holes, 7, (see Fig. 8,) where discharge of paste is required. Tube 1 extends a little above the cup  $E$  for convenience in filling in paste. A plunger, 2, fits closely the inside of tube 1 and works up and down in it. The upper end of plunger-rod is pivoted to a pitman, 4, which pitman is fastened to pin  $m$ , as shown in Fig. 1. Pitman 4 may have an adjustable device for shortening or lengthening stroke of plunger 2 in tube 1. A small air-tube, 5, may be run from tube 1, just below cup  $E$ , to top of cup, its end bent over into cup to allow any discharge from it to pass into cup  $E$ .

Immediately under tube 1 is a small upper tip-roller, 3, revolving on a shaft in the bracket, which fastens it to under side of paste-cup, as shown in Fig. 8. The contour of this upper tip-roller is made to fit the tip of cigar to its exact center, and this bugle-shaped tip-roller 3 works directly under tube 1 and over tip of cigar, allowing paste from cup  $E$ , through holes in bottom of tube 1, to be forced out by action of the plunger 2 upon it, (roller 3.) The plunger forces paste from tube 1 (when over-charged) up the air-tube 5 and into cup. The discharged paste, then, will always be upon the upper tip-roller, 3, while it is revolving upon and fitting the shape of tip or point of cigar. To stop discharge of paste when work is done the plunger is thrown down by pitman to bottom of tube, to remain there till work is resumed.

9 9, as seen in Figs. 7 and 8, are rods fastened to sides of tube 1 over or around roll 3, near point of cigar, provided with bell-tip rests or rollers 8 8, made to fit contour of extreme point of cigar, and adjusted for working as closely as possible to the roller 3 without touching it, and made short to allow easy escape of cigar from machine when completed. These bell-tip rollers 8 8, besides assisting to wrap and perfect the point of cigar, also hold the point steady and prevent its working forward under the tip-knife  $J$ .

10 is a small guide-roller, pivoted to bracket  $G'$  and resting upon belt  $R$ , which carries it, for the purpose of easily running in the end of



wrapper, guiding and keeping it in place upon belt R until it reaches cushion-roll *i'*. This guide-pulley can be used on either side of machine as occasion may require.

5 The operation of the machine is as follows: A gentle pull upon pulley Y, with pressure on treadle *d*, starts the machine. The handle *F''* farthest from operator is pushed down from him, raising roller D next to him. A  
10 molded bunch for a cigar is now placed upon the moving belt Q and is thereby carried in between rollers D D. Handle *F''*, just pressed down, is released, and roller D springs back to its working position, and the bunch is put  
15 in rapid motion, rolling between the rollers D D and upon the belt Q. The proper end of the wrapper is then passed in upon the narrow belt R, under the guide-pulley 10. The cushion-roller *i'*, catching it from the belt R,  
20 turns it up and rolls it tightly around the butt of the cigar. The wrapper, held at a proper angle to be rolled upon the entire body of the cigar, is carried along rapidly to the tip or point of the cigar. The tip-knife J, in quick  
25 and constant motion, cuts off all the surplus wrapper that is not required to cover and finish the tip or point of cigar. The point and the wrapper at the point as it rolls on are pasted by constant contact with upper tip-roller, 3,  
30 above it, supplied with paste from the cup E. The lower tip-rest, *l*, is now raised by pressing down the rod P with the hand. Said rest, fitting the lower line of tip of the cigar, in connection with upper tip-roller, 3, completely finishes the  
35 cigar. The rod P is now released, and the under tip-rest, *l*, drops away from the cigar-point, the handle of rod C is depressed, and the butt-knife H thereby caused to cut off the tuft or butt of cigar. The handle *F''* next the operator  
40 is then pulled down, and the cigar, completely finished, passes out. The tuft left upon the belt is deposited into proper receptacles provided for them to drop into, and a second molded bunch is likewise placed in the machine and the same process continued at  
45 pleasure.

The machine may be so arranged that the above process can be performed with the same result from either side of the machine, for the following reason: All leaf-tobacco used for wrappers produces a right-hand and a left-hand wrapper. In wrapping cigars by hand one is rolled by the right hand and the other by the left. To accomplish this upon my machine the operator  
55 has only to change his position at the machine from one side of it to the other, being careful to make the following slight changes, to wit: Make the roll farthest from operator the cushion-roll; also, change connecting-rod by pin  
60 *g* to other end, of treadle *d*. Pivot guide-roller 10 to other side of bracket *G'*, and simply reverse the motion of the machine. Thus upon one side of the machine can be wrapped right and upon the other left hand wrappers  
65 with ease and rapidity.

I am aware that machines have been invented and patented for wrapping cigars; but I am not aware of any machine or combination of devices for producing the result so complete as those herein described, and by which  
70 a bunch for a cigar is held in such an essential elastic position and perfectly wrapped, the wrapper cut to a point and in proper shape while being rolled on, and at the same time sealed and perfected at the tip, the butt cut off, and  
75 the cigar delivered from machine completed, and by the same combination of devices a right and left hand wrapper rolled upon the cigar by one person only.

A table, V, (see Fig. 2,) may be placed over  
80 pulleys S S' for convenience, if desired.

Instead of working the knife J by a pitman, it may be driven by an ordinary cam, or even by hand.

K in Fig. 1 is a screw for adjusting the  
85 bracket *G'*. L is a bolt in frame-work A, and passing through a slot in the bracket. By means of the nut shown the bracket *G'* is fastened when adjusted.

Base B may be made in two parts, and the  
90 part carrying the knife H' set in lateral grooves firmly secured to the frame-work, and adjusted by a screw.

Lateral slide-joints may be formed in the center of handles *F'' F''*, and thus, by using  
95 wider or narrower belts Q and R, be able, by such adjustment, to use rolls D D of any desired length, and so adjusting said rollers as to wrap any size, form, or length of cigar desired.  
100

The under adjustable tip-rest, *l*, may be operated by any other simple mechanical device thought best.

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

1. In a cigar-wrapping machine, the combination of bracket *G* with the knives J and J' and pitman M, for cutting off point of cigar, as shown and described.  
110

2. The combination, in a cigar-wrapping machine, of the bracket *G'* with knives H' and H, provided with spiral spring *c'*, and rod C, for cutting off butt of cigar, as shown and described.  
115

3. The rollers D D, with end rolls, *i i'*, hung in brackets *G* and *G'*, and opened and closed by levers *F F* and *F' F'*, and turned by pulleys *f f*, driven by belt U, in combination with belts Q and R, moving in opposite directions  
120 to the rolls D D, for wrapping the cigar, as set forth.

4. The combination of end rolls, *i i'*, with belt R, bracket *G'*, and guide-roller 10, arranged and operated for the purpose set forth.  
125

5. The adjustable under tip rest or roller, *l*, in combination with tip-roller 3 and bell-tip rollers 8 8, for finishing tip of cigar, as shown and described.

6. The paste-cup E, provided with tube 1,  
130



plunger 2, pitman 4, air-tube 5, tip-roller 3, and bell-tip rollers S 8, substantially as shown, and for the purposes specified.

5 7. In a machine for wrapping cigars, the combination of base B with pulleys S, S', and T, belts Q, R, and U, end rolls, *i i'*, pulleys *ff*, guide-pulley 10, rollers DD, opened and closed by levers F F and F' F', brackets G and G',

paste-cup E, tip-roller 3, bell-tip rollers 8 8, under tip-roller, *l*, knives J J' and H H', and 10 pitman M, all arranged as and for the purpose set forth.

CHESTER M. MANN.

Witnesses:

P. L. HAWKINSON,  
JONAS P. MAGNUSSON.