

(No Model.)

J. H. ABRAHAM & E. K. MARTIN.

CIGAR BUNCHING MACHINE.

No. 384,667.

Patented June 19, 1888.

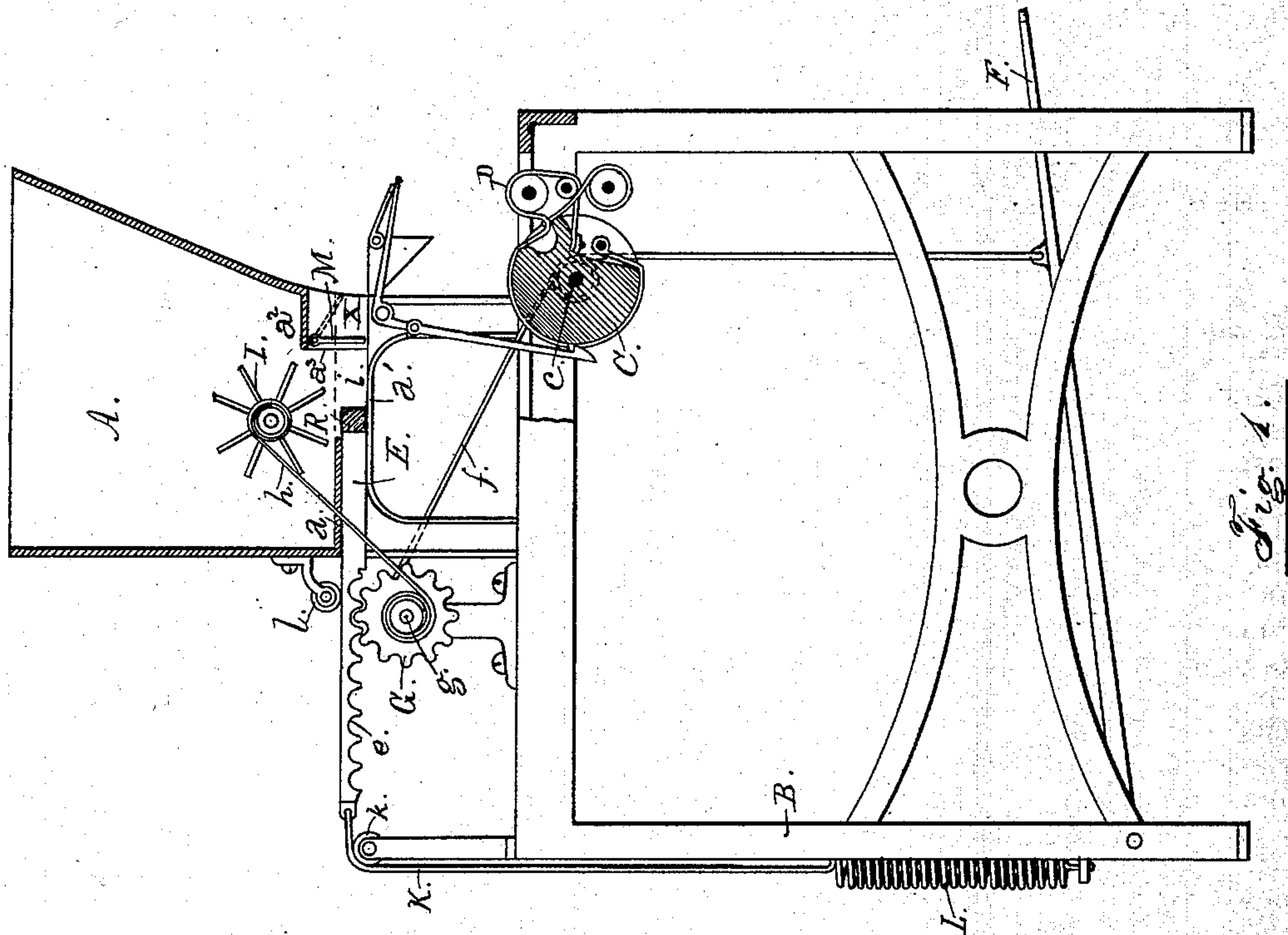


Fig. 1.

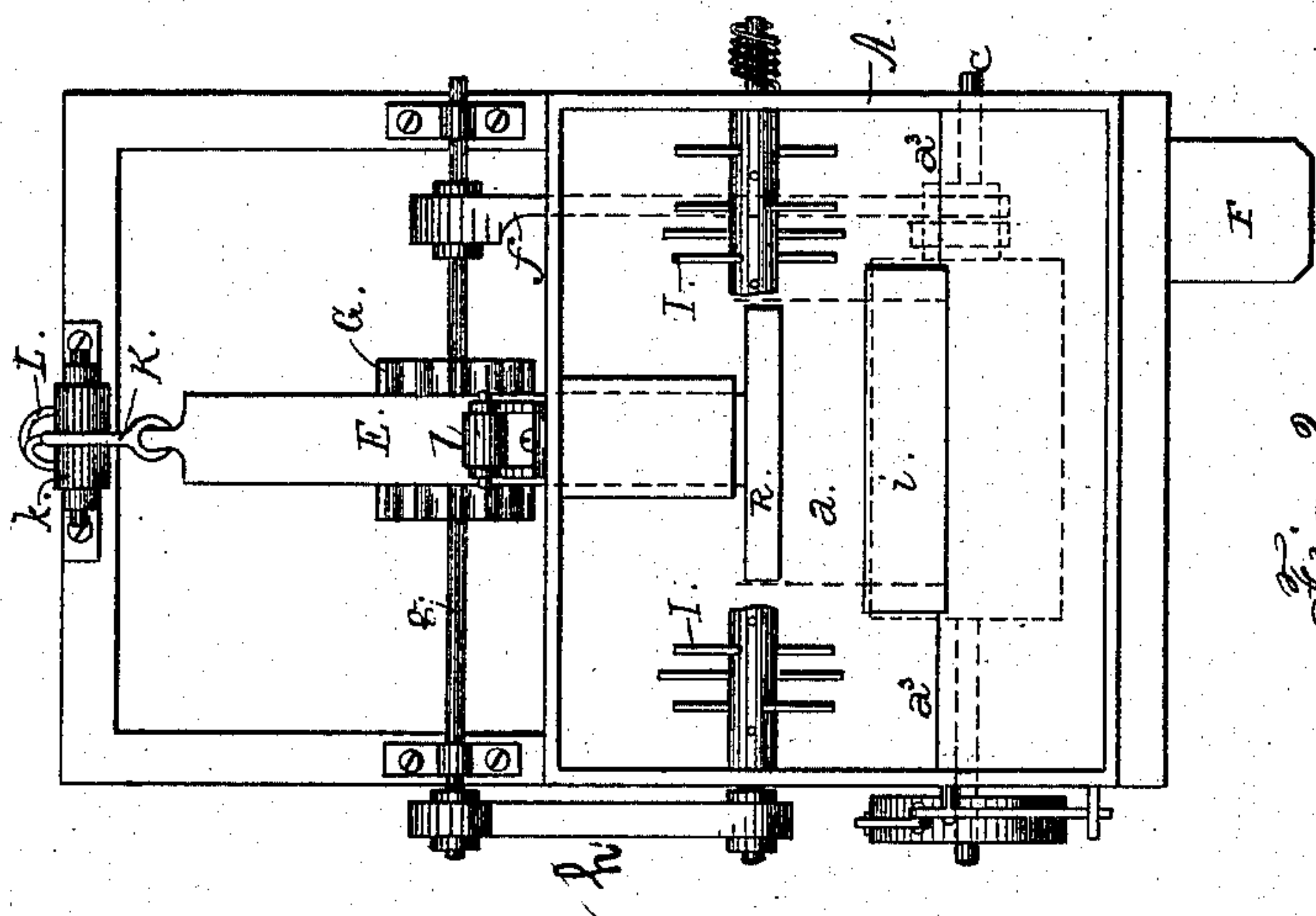


Fig. 2.



Fig. 3.

Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN H. ABRAHAM AND EDWIN K. MARTIN, OF LANCASTER, PENNSYLVANIA, ASSIGNORS TO THE CONESTOGA CIGAR COMPANY, OF SAME PLACE.

## CIGAR-BUNCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 384,667, dated June 19, 1888.

Application filed August 30, 1887. Serial No. 248,305. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN H. ABRAHAM and EDWIN K. MARTIN, citizens of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Cigar-Bunching Machines, of which the following is a specification.

Our invention relates to improvements in cigar-bunching machines, in which a plunger works back of and under an opening in the floor of the hopper to thrust the filling material out of said hopper onto a belt, roller, or other receptacle, and is an improvement upon an invention made by the said John H. Abraham, for which application for Letters Patent was made June 15, 1887, which application is known as Serial No. 244,211; and it consists in the construction and combination of the various parts, as herein fully described and claimed, and as illustrated in the accompanying drawings, which form a part of this specification, in which—

Figure 1 is a side view of our invention, the side of the hopper and the inclosure beneath being cut away from the plunger-bearing plate upward to show the interior mechanism; Fig. 2, a top or plan view of the same, and Fig. 3 a top view of several differently-shaped formers.

Similar letters indicate like parts throughout the several views.

The hopper A is supported by the framework B, the rotating cylinder C, with its accompanying forming-belt D, as described in the specification of the aforesaid application, being located beneath the chute, with the necessary appliances for operating it. The bottom of the hopper is formed by the two plates  $a$  and  $a^2$ , the one  $a^2$  being separated a suitable distance from the lower one,  $a$ , at its center by the opening or space  $i$ , as shown in Figs. 1 and 2, but which are connected together by a vertical wall,  $a^3$ , at each end. The part  $a^2$  of the bottom is raised above the other part for the purpose of allowing the door M to be hinged under it, and so as to allow an opening, X, to be formed through the side of the hopper, as shown in Fig. 1, for the discharge of the tobacco by means of the plunger E. The opening  $i$  allows the loose tobacco to fall from the

hopper upon the bed-plate  $a'$ , and then from this bed-plate the tobacco is pushed through the opening X. The horizontally and forwardly working plunger E operates between the bottom of the hopper and the bed-plate  $a'$ , upon which said plunger rests. This plunger is actuated by the belt  $f$ , connecting the treadle F with the gear-wheel G, which meshes with the rack  $e$ , projecting rearwardly from the plunger E, and passing around the journal  $c$  of the cylinder C and imparting motion thereto. There is also a belt,  $h$ , connecting and wound about the journal  $g$  of the gear-wheel G, which actuates the agitator I, located above the opening  $i$  in the bottom of the hopper. The plunger is retracted after its forward motion by a belt, K, passing over a pulley,  $k$ , and acted upon by the spring L.

In order to prevent the rack of the plunger from becoming disengaged from the gear-wheel G, there is a roller,  $l$ , journaled to the frame and bearing upon it.

Pendent from the inner edge of the raised part  $a^2$  of the bottom and in the opening X there is hinged a swinging door, M, of such depth as to close the space between the plate  $a$  and bed-plate  $a'$  in front of the opening X in the side of the hopper and prevent the accidental escape of material. When the plunger is moved forward by the depression of the treadle, the fillers in front of it between the bottom and bed-plate  $a'$  push the gate outward, and they are thus permitted to fall into the chute. The withdrawal of the plunger is effected by the spring L, as previously mentioned. The forward end of the plunger is also provided with a removably-attached former, R.

Formers of different shapes can be used, as may be desirable. If it is preferred that the cigar be proportionably large at the center, the front of the former presents a concave face and drives more of the filling material out of the center of the delivery-opening and less at the sides, while if the cigar is to be made larger near the closed end and then tapers entirely to the other, a former of the requisite shape is substituted. These formers, which may be attached to the plunger by screws passing through them and engaging threaded holes in the face of said plunger, can be removed at any time and others sub-



stituted, as the exigencies of the case may require.

As will be observed, the bunching-machine is operated by the treadle and the belt communicating force to the revolving cylinder with its forming-belt. The same belt gives motion to the cog-gearing in order to cause the forward movement of the plunger, the same being retracted by the spring.

10 The throw of the plunger can be regulated by removing or loosening the gear-wheel G, setting the plunger horizontally, and then replacing the gear-wheel in place in engagement with the rack *e*.

15 No claim is made in this application to any of the devices, construction, or arrangement of parts shown in the application filed by J. H. Abraham, July 13, 1887, Serial No. 244,211, as the device therein shown constitutes a separate and independent invention.

20 Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a bunching-machine, 25 of the hopper having its bottom formed of the two plates *a a'* and provided with an opening, *i*, between the two plates, the bed-plate *a'*, a swinging gate which closes the opening X in the side of the hopper, the plunger provided 30 with a rack, and which forces the tobacco from the bed-plate through the opening in the side of the hopper, a gear which meshes with the rack of the plunger, a belt connected with the shaft of said gear, the stirrer and a belt 35 for operating the same, a spring for retracting the plunger, a device for rolling the filler in the binder, and a treadle which is connected to the belt which passes around the shaft of the gear which operates the plunger, substantially as specified.

2. The combination of the hopper having its bottom formed of the two plates *a a'* and having an opening, *i*, between the plates for the discharge of the tobacco, and an opening, X, through its side under the plate *a'*, 45 through which the tobacco is forced by the plunger, the bed-plate *a'*, upon which the tobacco falls from the hopper, and a stirring device placed in the hopper, the belt for operating the stirrer, the plunger provided with a rack, the spring connected to the rear end of the rack, a gear for moving the plunger, a device for rolling the filler in the binder, the treadle, and the belt *f*, which connects the treadle with the shaft *g*, substantially as described. 55

3. The combination, in a bunching-machine, of the hopper having its bottom formed of the plates *a a'* and having the opening *i* between the plates, and an opening, X, through its side 60 for the discharge of the tobacco by the plunger, the stirrer placed in the hopper, and a belt for operating it, the bed-plate placed a suitable distance below the bottom of the hopper, upon which the tobacco falls through the opening *i*, and the swinging gate located in the opening X, and which keeps the tobacco in position upon the bed-plate, with the plunger provided with a rack, a gear for operating the rack, the spring for returning the plunger to position, and belt extending from the shaft of the gear to the treadle, the treadle, and the device for rolling the filler in the binder, substantially as set forth. 70

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Witnesses:

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