

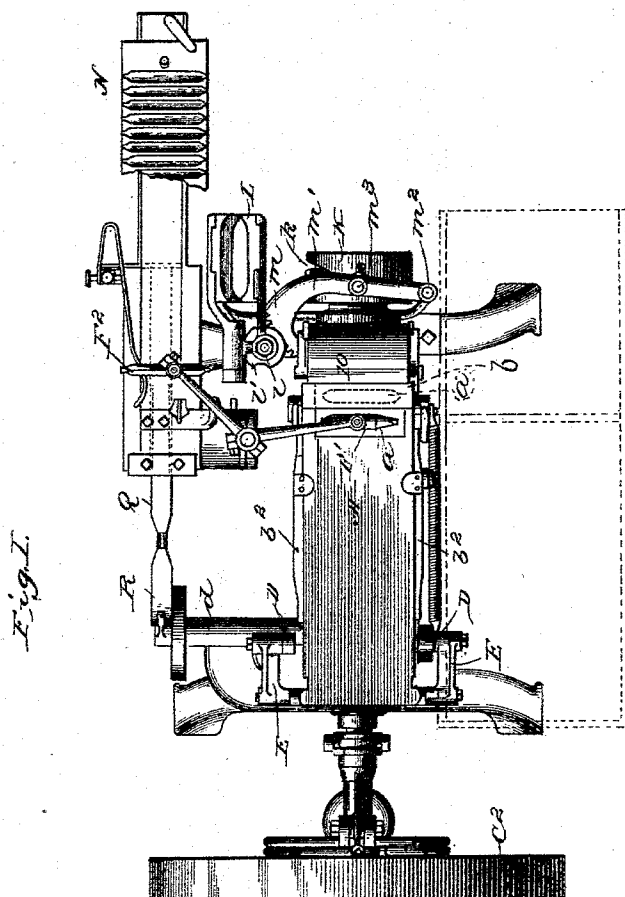
(No Model.)

3 Sheets—Sheet 1.

F. C. MILLER.
CIGAR BUNCHING MACHINE.

No. 494,929.

Patented Apr. 4, 1893.



Witnesses:

Henry D. Cohen.
George E. Cruise.

Inventor:
Fredrick C. Miller
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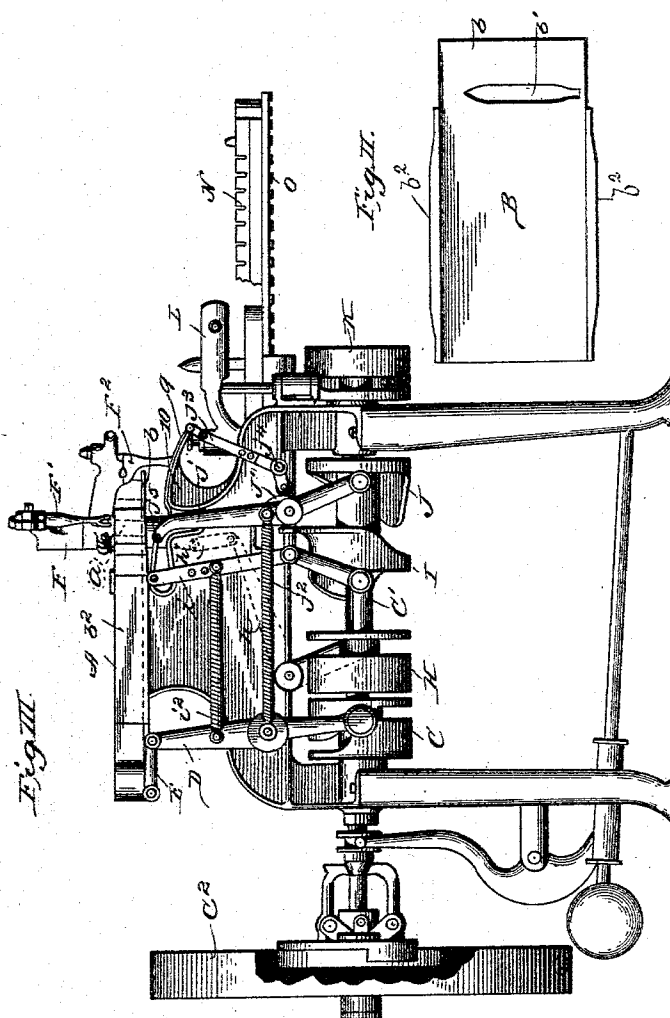
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3 Sheets—Sheet 2.

F. C. MILLER.
CIGAR BUNCHING MACHINE.

No. 494,929.

Patented Apr. 4, 1893.



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(No Model.)

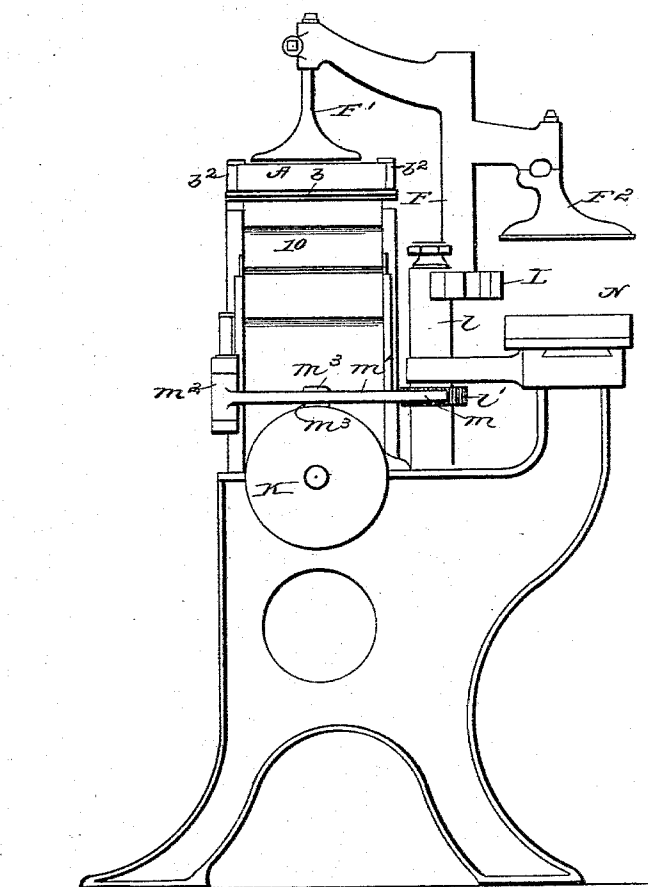
3 Sheets—Sheet 3.

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Fig. IV.



witnesses:

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UNITED STATES PATENT OFFICE.

FREDRICK C. MILLER, OF NEWPORT, KENTUCKY.

CIGAR-BUNCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 494,929, dated April 4, 1893.

Application filed August 20, 1892. Serial No. 443,612. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK CHARLES MILLER, a citizen of the United States, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Cigar-Bunching Machines, of which the following is a specification.

The subject of my invention is a cigar bunching machine in which long filler cigars can be readily made, said machine being adapted for simple manual feed and consisting essentially of a filler carrier having a bottomless pocket, a fixed table having a projecting end forming a temporary bottom for the pocket while in filling position and a space or aperture located beneath the bottom of the pocket when the carrier is retracted; an operating cam and connections to impart the reciprocating movement to the carrier to advance and retract the pocket; bunch rolling mechanism beneath the table; a horizontally oscillating bunch receiver and plungers serving to discharge the fillers from the carrier pocket and the bunches from the bunch receiver, the whole operating in time movements as hereinafter described.

In the accompanying drawings:—Figure I is a plan view of a machine, illustrating the invention. Fig. II is a detail plan of the fixed supporting bed. Fig. III is a side view of the machine. Fig. IV is a front view thereof.

A represents a filler carrier formed with a bottomless pocket *a* and having a reciprocating rectilinear movement upon a fixed supporting bed or table B, between guides *b*¹. The fixed table B is formed with a projecting end *b* which, when the filler carrier is advanced so as to bring its pocket *a* into the filling position indicated by dotted lines in Fig. I, forms a bottom for the pocket. Back of this projecting end the fixed table has an aperture *b*² with which the pocket *a* registers when the carrier A is retracted to discharging position.

The reciprocating movement of the filler carrier A as imparted by a cam C through the medium of rocking levers D and links E by which said levers are connected to the reciprocating carrier. The rotary cam C is carried by a shaft C¹ which is preferably driven by a clutch pulley C². The operating shaft C¹ also carries rotating cams H I J K. The revol-

ving cam H actuates a bell-crank lever *h* connected by a link *h*¹ to a rod F guided in a vertical path and carrying plungers F¹ F² the former serving to eject the filler from the filler pocket *a* and deposit it in the bight or pocket of the rolling apron 9 while the plunger F² serves to discharge the previously formed bunch and deposit in the mold N as hereinafter described. The cams I J actuate rocking levers *i*, *j* respectively, and a third rocking lever *j*³ fulcrumed at *j*⁴ is actuated by a rocking cam J¹ of the shaft of the lever *j*. The bunch rolling apron 9 rests in customary manner upon a convex rolling table 10 and is attached at its respective ends to the upper extremities of the rocking levers *i* and *j*³, the cams I and J¹ being suitably formed to draw and relax the rolling apron 9 at the proper times to permit the intermediate lever *j* actuated by a suitably formed rotary cam J and having at its extremity a roller *j*⁵ to press the bight of the apron around the cigar filler which has been deposited on a binder upon the apron in customary manner, roll the same over the convex rolling table 10, and discharge the finished bunch over the edge of the said table. The levers *i*, *j* are kept in contact with the faces of operating cams I J by tension springs *i*², *j*² respectively. This bunch rolling mechanism is described more in detail in Letters Patent No. 417,116, granted to me November 26, 1889. The finished bunch as it is discharged from the rolling table 10, is caught by a bunch receiver L having oscillating movement upon the vertical shaft *l* by means of the pinion *l*¹ and a segment rack *m* upon the extremity of a lever *m*¹ fulcrumed at *m*² and operated by the cam K, the groove *k* in which engages with a pin or stud *m*³ upon said lever *m*¹. The outer movement of the oscillating bunch receiver L carries the bunch around beneath and in the path of the plunger F² by the descent of which the bunch is ejected by the bunch receiver and is deposited in one of the matrices of the mold N.

The above mechanism actuates the filler carrier A the plungers F¹, F², the bunch rolling apparatus and the oscillating bunch receiver L in time movements as described. An automatic device is employed to communicate a step by step movement to the mold N so as to bring the successive matrices in position to

receive a bunch. This consists of a rack bar O upon which the mold N is mounted, actuated by a reciprocating pawl Q, which is pivoted to a rocking arm R upon the rock shaft 5 *d* of the levers D.

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

10 A cigar bunch machine constructed as herein described with a filler carrier A having a bottomless pocket *a* formed approximately to the shape of a cigar bunch; a fixed table B having a projecting end *b* extending in front of the carrier when the latter is in normal 15 position and forming a temporary bottom for the pocket *a* while the filler carrier A is in its advanced position and a space or aperture *b'* lo-

cated in rear of the projecting end and beneath the bottom of the pocket when the carrier is retracted, an operating cam C, levers D and 20 links E connecting the cam with the filler carrier and imparting oscillating movement thereto, to advance the pocket *a* into receiving position and retract it to discharging position; the bunch rolling mechanism beneath the ta- 25 ble B; a horizontally reciprocating bunch receiver, and plungers F', F² having vertical reciprocating movement to discharge the fillers from the pocket *a'* and the finished bunches from the bunch receiver as herein described. 30

FREDRICK C. MILLER.

Witnesses:

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