

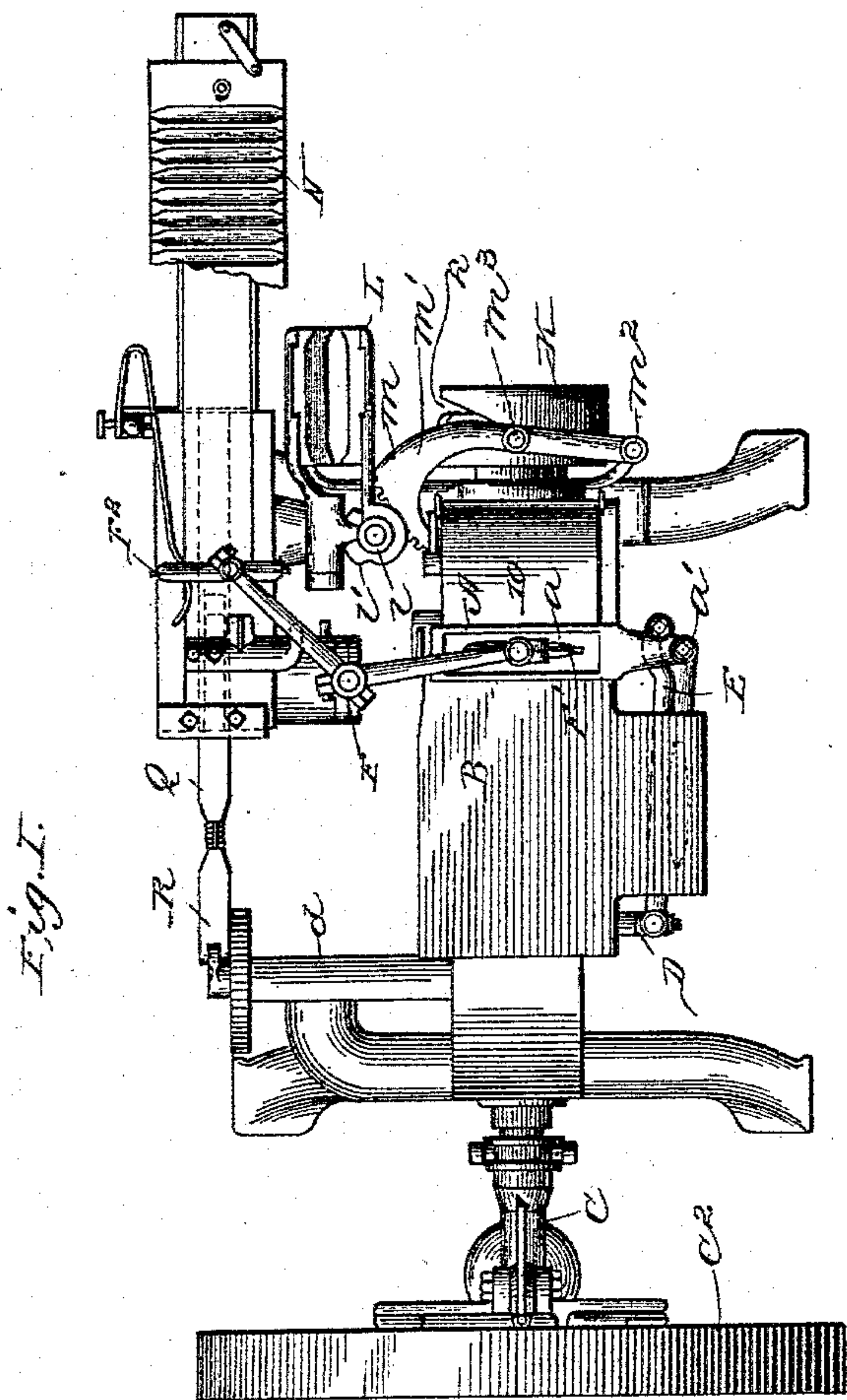
(No Model.)

2 Sheets—Sheet 1.

F. C. MILLER.  
CIGAR BUNCHING MACHINE.

No. 494,931.

Patented Apr. 4, 1893.



Witnesses  
Harry S. Robins.  
George C. Crease

Inventor  
Fredrick C. Miller  
By Knight Bros.  
Attorneys

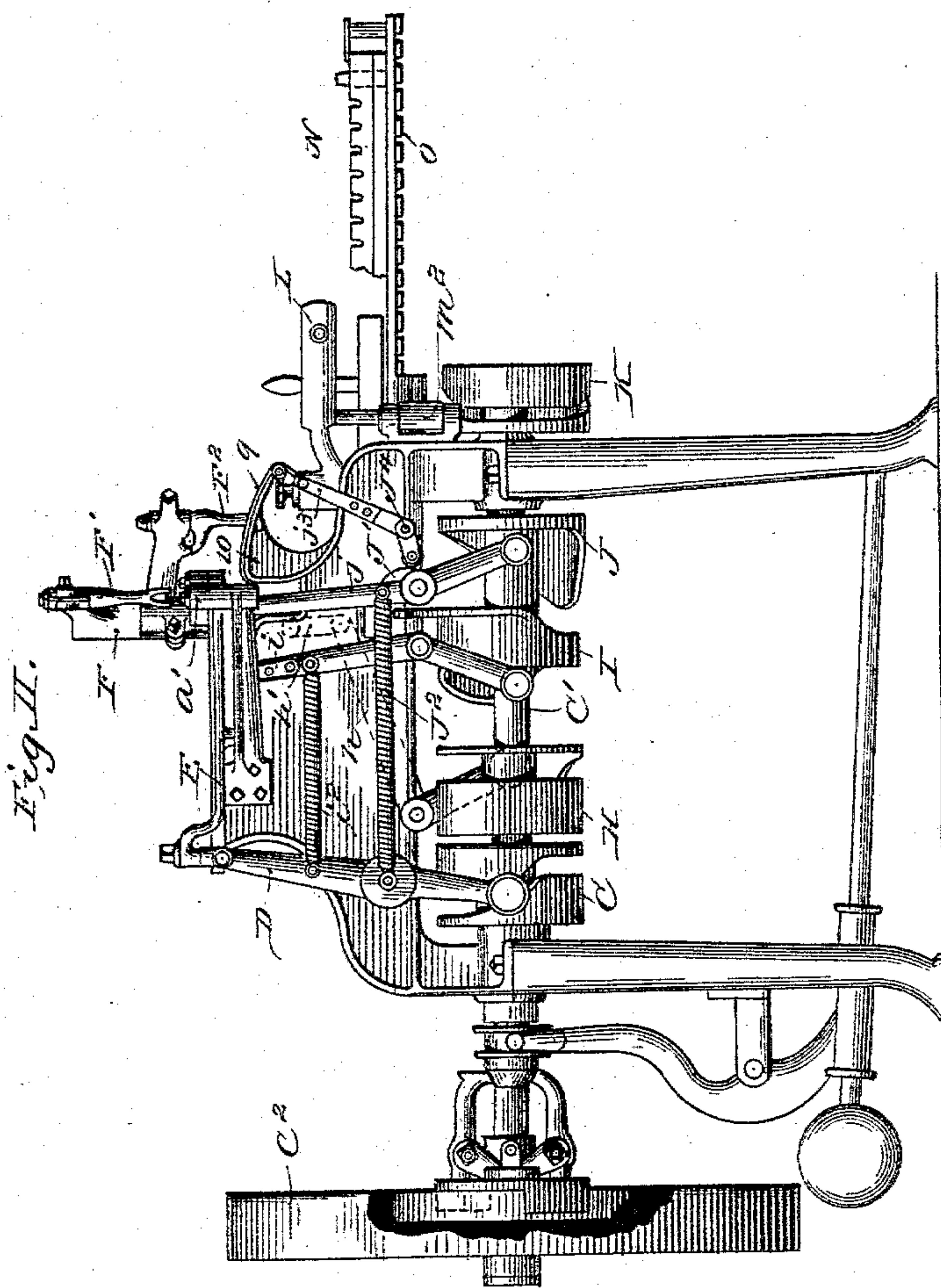
(No Model.)

2 Sheets—Sheet 2.

F. C. MILLER.  
CIGAR BUNCHING MACHINE.

No. 494,931.

Patented Apr. 4, 1893.



witnesses:

Henry B. Rohrer.  
George E. Bruce

Inventor:  
Fredrick C. Miller.  
By *Knights Bros.*  
Attorneys.



# UNITED STATES PATENT OFFICE.

FREDRICK C. MILLER, OF NEWPORT, KENTUCKY.

## CIGAR-BUNCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 494,931, dated April 4, 1893.

Application filed August 20, 1892. Serial No. 443,614. (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 pivoted filler carrier having a bottomless pocket and receiving a horizontal oscillating movement over a fixed table which forms a temporary bottom for the pocket while in filling position and uncovers the bottom of the pocket when the carrier is moved around into discharging position; an operating cam and connections to impart the oscillating 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 side view of the same.

A represents a filler carrier formed with a bottomless pocket  $a$  and having an oscillating rotary movement in a horizontal plane upon a pivot  $a'$  and over a fixed bed or table B, which, when the filler carrier is retracted so as to bring its pocket  $a$  into the filling position indicated by dotted lines in Fig. I, forms a temporary bottom for the pocket. When the carrier is advanced to the position shown in full lines the bottom of the pocket  $a$  is uncovered to permit the discharge of the filler. The oscillating movement of the pivoted filler carrier A is imparted by a cam C through the medium of a rocking lever D and a connecting rod E pivoted to the oscillating carrier A near its pivot  $a'$ . The rotary cam C is carried by a shaft C' which is preferably driven by a clutch pulley C<sup>2</sup>. The operating shaft C' also carries rotating cams H I J K. The revolving cam H actuates a bell crank lever  $h$  connected by a link  $h'$  to a rod F guided in

a vertical path and carrying plungers F', F<sup>2</sup>, 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 F<sup>2</sup> serves to discharge the previously formed bunch and deposit it 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 J' 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 J' 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 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. 416,117, 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  $l'$ , and a segment rack  $m$  upon the extremity of a lever  $m'$  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  $m'$ . The outer movement of the oscillating bunch receiver L carries the bunch around beneath and in the path of the plunger F<sup>2</sup> 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 F', F<sup>2</sup>, 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 *d* of the lever D.

Having thus described my invention, what I claim as new therein, and desire to secure 5 by Letters Patent, is—

The combination of the filler carrier A formed with a bottomless pocket *a* and mounted upon a vertical pivot *a'*; the fixed bed or table B forming a bottom for the 10 pocket *a* when in filling position, the operating cam C, lever D and pitman E connected to the carrier A and imparting an extended oscillating movement thereto in a horizontal

plane upon its pivot *a'* to shift it from filling to discharging position and vice versa; suitable bunch rolling mechanism beneath the 15 table, and the plunger F' having a vertical reciprocating movement in line with the pocket *a* when in discharge position above the bunch rolling apparatus, all substantially 20 as set forth.

FREDRICK C. MILLER.

Witnesses:

H. R. FREY,

W. S. RICHARDSON.