(No Model.) 2 Sheets—Sheet 1.

F. C. MILLER.

CIGAR BUNCHING MACHINE.

No. 494,932. Patented Apr. 4, 1893.

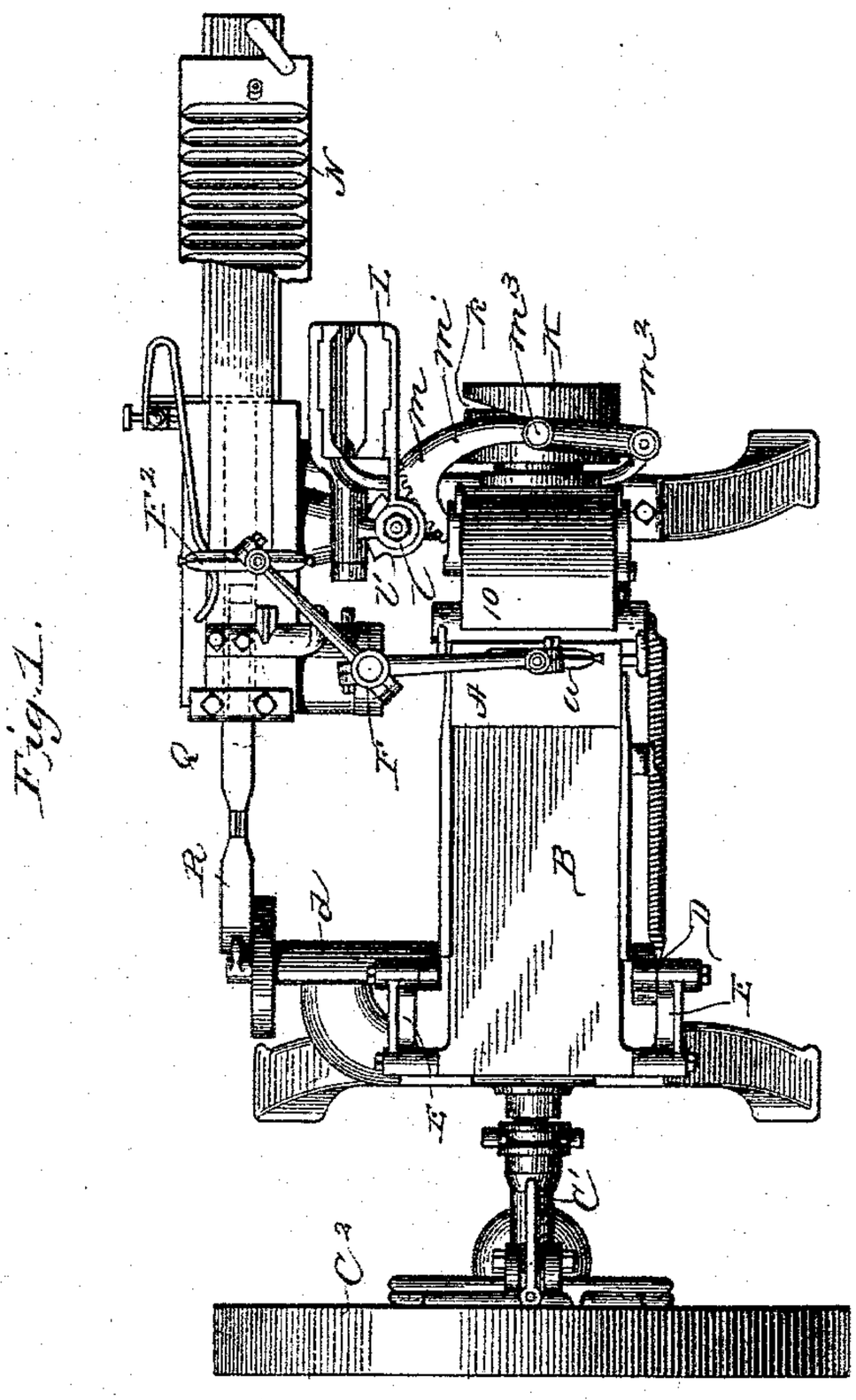

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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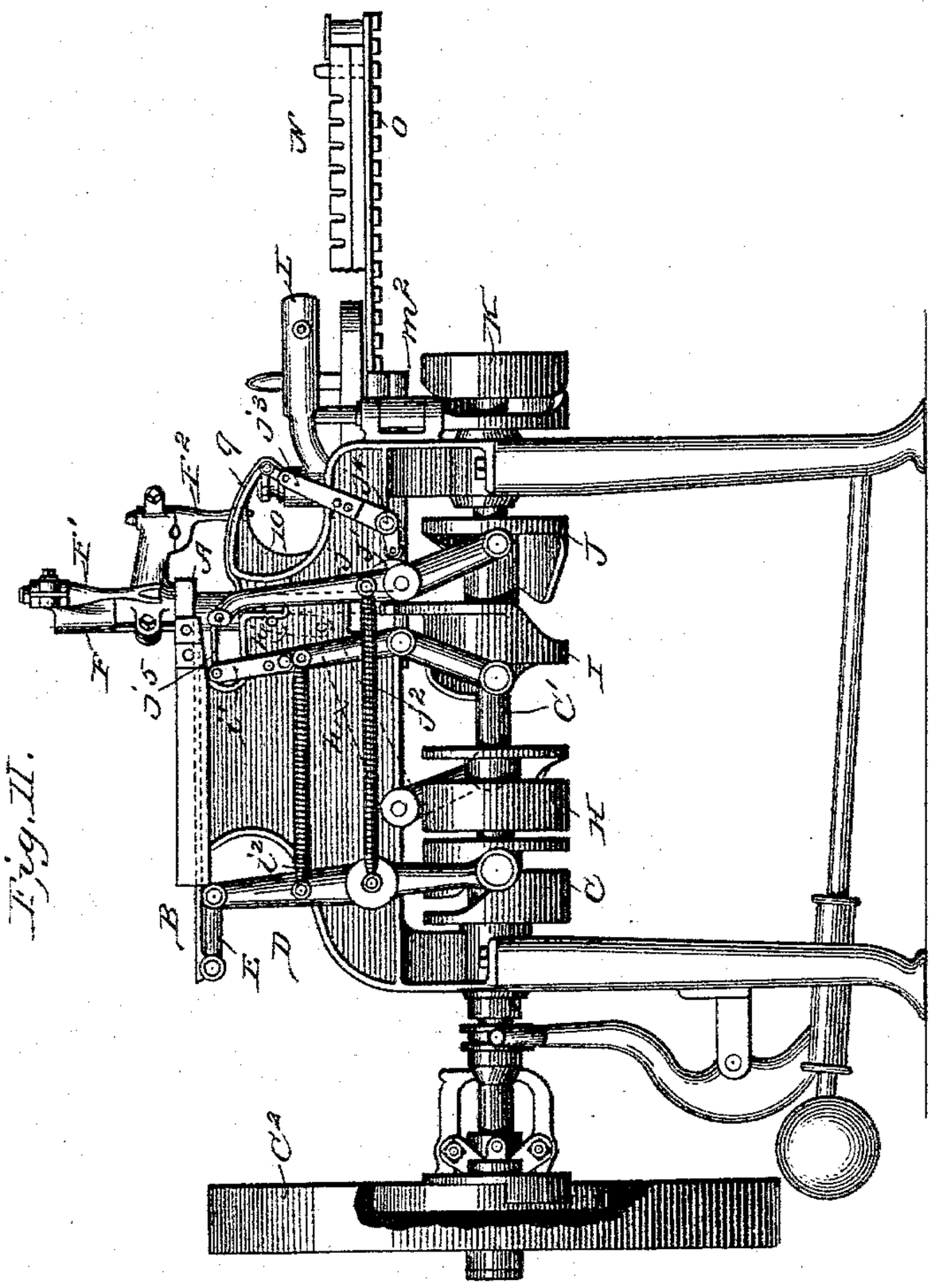

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UNITED STATES PATENT OFFICE.

FREDRICK C. MILLER, OF NEWPORT, KENTUCKY.

CIGAR-BUNCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 494,932, dated April 4, 1893.

Application filed August 20, 1892. Serial No. 443,615. (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 receiver having a bottomless pocket, a sliding plate forming a temporary bottom for the filler pocket while in filling position, and operating cam and connections to impart reciprocating movement to the sliding bottom plate to open and close the bottom of the pocket, bunch-rolling mechanism beneath the table, a horizontally oscillating bunch receiver and plunger serving to discharge the fillers from the filler receiver 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 stationary filler receiver formed with a bottomless pocket *a*.

B is a slide having a reciprocating rectilinear movement beneath the filler receiver A so as to form a temporary bottom for the pocket *a* while being filled and to uncover the bottom thereof for discharging the filler.

The reciprocating movement of the slide B is imparted by a cam C through the medium of a rocking lever D and links E by which said levers are connected to the said reciprocating slide B. The rotary cam C is carried by a shaft C′ which is preferably driven by a clutch pulley C^2. 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 vertical rod F guided in a vertical path and carrying plungers F′, F^2, 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^2 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 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. 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 a 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^2 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 slide B the plungers F′, F^2, the bunch rolling apparatus and the oscillating bunch receiver L in time movements as described. An automatic device is also 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 levers D.

Having thus described my invention, what

I claim as new therein, and desire to secure by Letters Patent, is—

The combination of the filler receiver A having a bottomless pocket *a*, the sliding bottom plate B, the operating cam C, levers D and links E imparting a reciprocating movement to the bottom plate B to alternately close and open the bottom of the pocket *a;* suitable bunch rolling mechanism beneath the filler receiver; and a plunger F′ having a vertical reciprocating motion in time movements with the sliding bottom B, to discharge the fillers from the pocket *a* to the rolling mechanism as described.

FREDRICK C. MILLER.

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