

(No Model.)

3 Sheets—Sheet 1.

F. C. MILLER.
CIGAR BUNCH MACHINE.

No. 484,219.

Patented Oct. 11, 1892.

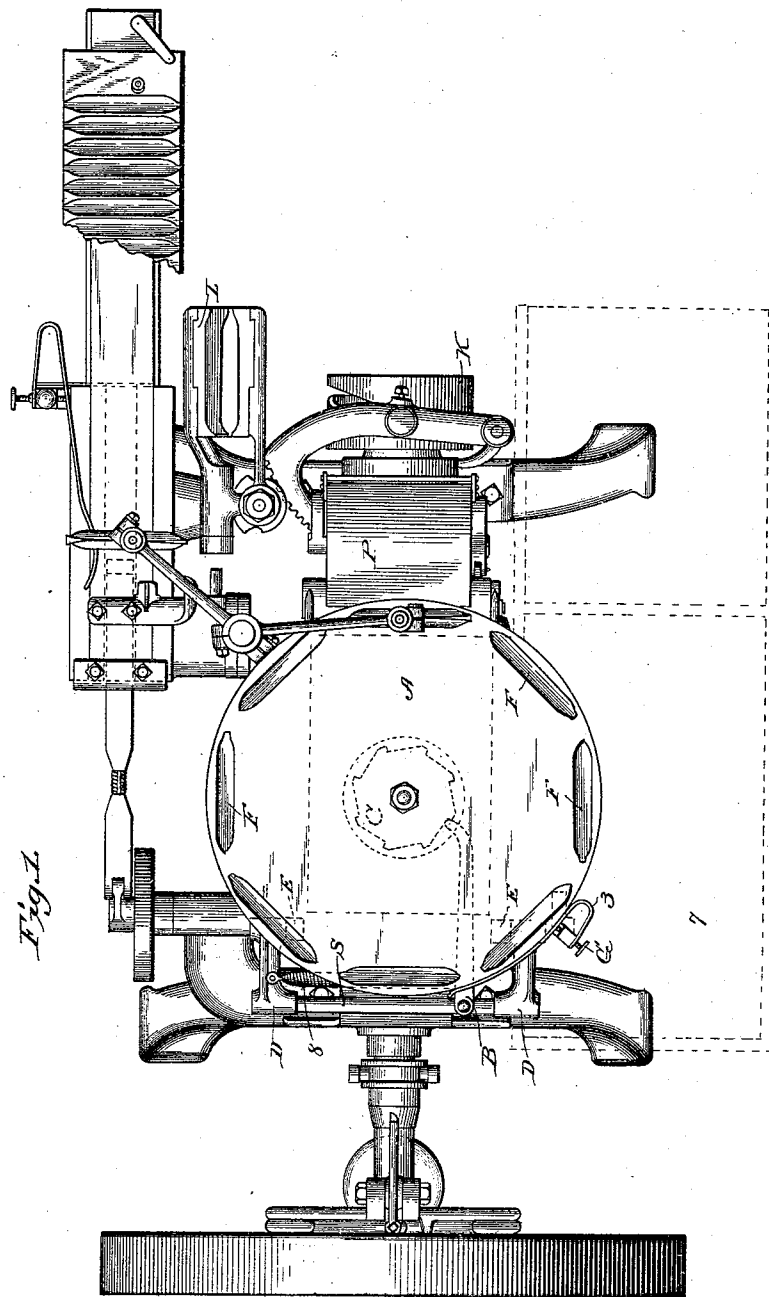


Fig. 1.

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George E. Cruse.

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By *Knight Bros*
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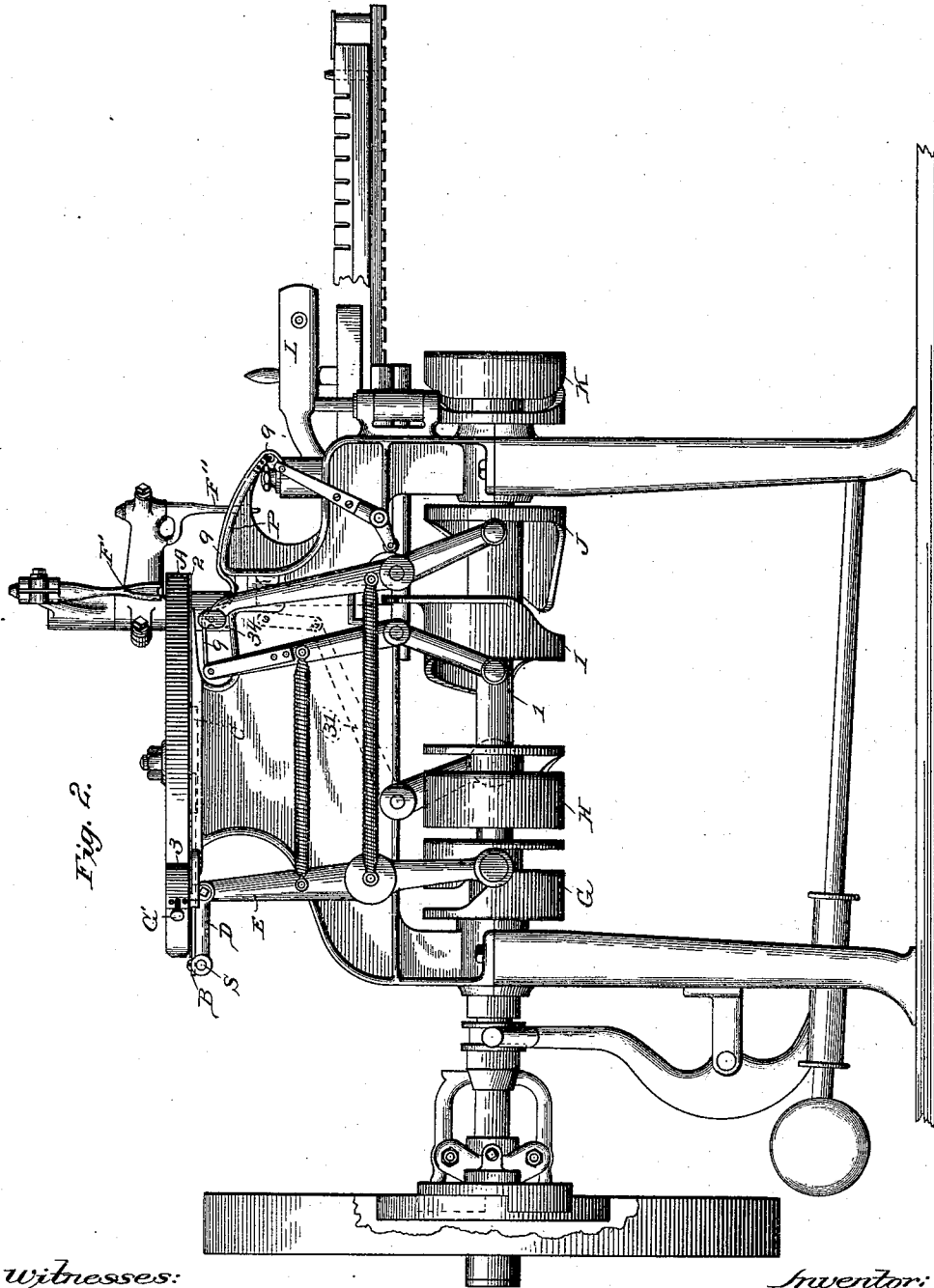


Fig. 2.

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Fig. 3.

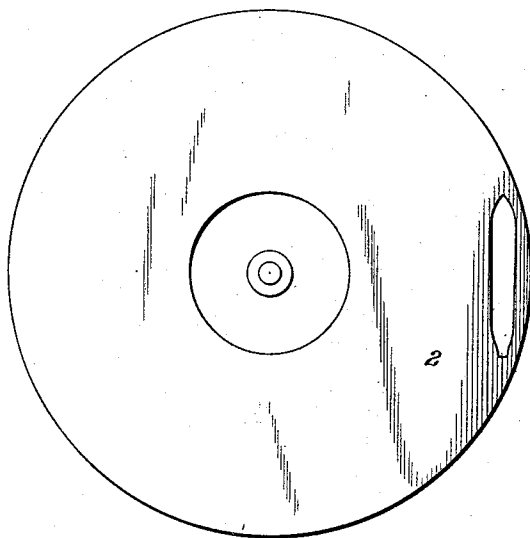
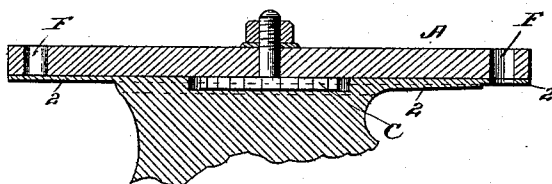


Fig. 4.



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UNITED STATES PATENT OFFICE.

FREDRICK C. MILLER, OF NEWPORT, KENTUCKY.

CIGAR-BUNCH MACHINE.

SPECIFICATION forming part of Letters Patent No. 484,219, dated October 11, 1892.

Application filed March 8, 1892. Serial No. 424,173. (No model.)

To all whom it may concern:

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

The object of the present invention is to provide convenient mechanism for manufacturing cigar-bunches of long fillers, which are sized by an attendant and placed in position for being operated on by the machine. To work expeditiously, two attendants are required, one to size and prepare the filler and the other to place the binder in position for rolling the filler into a bunch.

In the invention shown in Letters Patent No. 416,117, granted me November 26, 1889, I have shown and described a mechanism for making short-filler bunches, which are automatically delivered to the binder and apron, an attendant having placed the binder in position for wrapping the filler deposited by the automatic operation of the hopper.

The object of my present invention is to make long-filler cigars involving a different construction and combination of mechanism, as fully set forth in the following description and the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top or plan view of the machine. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view of the filler-bed. Fig. 4 is a vertical section of the revolving filler-carrier and the stationary bed beneath it.

In the device herein shown and described the driving mechanism—to wit, the main shaft 1, the cams G H I J K, the levers 31 42 74 91, the bunch-rolling table P, the plungers F' F'', bunch-carrier jaws L, and mechanism for operating them—is substantially the same in construction and operation as shown in my said former patent. The mechanism herein shown differs from said patented device in the following particulars: The hopper is dispensed with and a filler-carrier is substituted therefor with appropriate mechanism for operating it. This filler-carrier is made of a

rotating disk A of sufficient thickness to contain a series of filler-pockets F, which are pierced through said disk and preferably of a shape conforming approximately to the cigar-bunch. This disk or filler-carrier rests upon a bed 2, which thus forms a common bottom for the pockets moving over it, so as to support and hold the filler in the pocket while it is being carried forward to the plunger F'; but the said bed-plate is mortised or cut away beneath the plunger F', so that the said plunger may force the filler from the pocket down to the bunch-rolling mechanism.

The mechanism for revolving the disk A is as follows: S represents a cross-bar, which is connected by links D to the levers E, driven by cam G, which is of appropriate shape to intermittently operate said bar and move it to and fro at appropriate times. Upon said bar S is mounted a pawl B, which is held in engagement with the ratchet-wheel C by a tension-spring 8. When the bar S is moved forward by the movement of the levers E, links D, and cam G, the pawl B moves the ratchet C forward one step and brings the next pocket F into position for filling. In order to secure an accurate and positive movement of the filler-carrier, I provide a brake-spring 3, which bears against the side of the disk A. The spring 3 is supported upon the bed 2. The said spring is shown of U shape, and at its tension end is provided with an adjusting-screw G', so that its tension may be regulated to bear with greater or less force against the edge of the disk D. The pawl B moves the disk forward positively and the spring holds it in position against the backward movement of the pawl and secures a positive registration of the successive filler-pockets with the plunger F'.

The manner of making cigars is as follows: A box 7 (shown in dotted lines, Fig. 1) is placed upon one side of the disk A, in which box is placed the filler material. An attendant gathers the filler and puts it into one of the pockets F—say the forward pocket next to the plunger—the machine is started, and the disk A is moved forward one step by the operation of the pawl upon the ratchet-wheel,

carrying the pocket containing said filler forward under the plunger F'. The said plunger then forces the filler from the pocket down upon the bunch-rolling apron 9. Another attendant has previously placed the binder in position to engage with the filler. The bunch is then rolled by the mechanism shown in my said former patent and dropped into the swinging bunch-carrier jaws L, which are at that time under the front end of the rolling or apron table P. These bunch-carrier jaws are then carried around by the machine directly under the plunger F'', so as to register with said plunger and with one of the matrices of the mold underneath. The plunger F'' is then automatically carried down and forces the bunch from the jaws L into the matrix underneath it.

In the form of construction here shown the plungers F' F'' move simultaneously and are operated upon by the same bell-crank lever 31 and vertical slide 34. The machine is so timed that when the plunger F'' is delivering a bunch from the carrier-jaws L a second filler is forced from the pocket F by the plunger F' onto the bunch-rolling mechanism. The machine may be made to stop automatically at each revolution after the forming of one bunch and the delivering of another bunch to the molds, or it may work continuously; but by having a series of pockets F in the disk A the attendant making the fillers can have one, two, or three fillers made ahead, and thereby not depend upon the time movements of the machine in filling the pockets, as it requires longer to make some fillers from tobacco than others. Hence an important advantage is gained and the bunch-former does not have to work in time movements; but the attendant placing the binder upon the apron must work in time movement in the intervals when the apron is stationary between the intermittent operation of the plungers and the intermittent operation of the filler-rolling mechanism. This is not material, inasmuch as the binder-attendant can perform his work in much less time than the filler-former.

Having described my invention, the following is what I claim as new and desire to secure by Letters Patent:

1. In a machine for making long-filler cigar-bunches, the combination of the horizontal rotary filler-carrier A, having one or more exposed pockets F extending completely through it, formed approximately to the shape of a cigar-bunch, the stationary bed 2 beneath the rotary carrier, forming a bottom for the pockets thereof and having an aperture with which the successive pockets register, the plunger F' for ejecting the successive fillers from the pockets of the carrier, the bunch-rolling mechanism beneath the filler-carrier, and the described mechanism imparting intermittent motion to the filler-carrier and plunger in time movements corresponding

with the movement of the rolling mechanism, substantially as described.

2. In a machine for making long-filler cigar-bunches, the combination of the horizontal rotary filler-carrier A, having one or more exposed pockets F extending completely through it, formed approximately to the shape of a cigar-bunch, the stationary bed 2 beneath the rotary carrier, forming a bottom for the pockets therein and having an aperture with which the successive pockets register, the plunger F' for ejecting the successive fillers from the pockets of the carrier, the bunch-rolling apron 9 beneath the filler-carrier, upon which the fillers are delivered, and the cams G I J and levers and connections, substantially as described, whereby the filler-carrier A, the plunger F', and the rolling mechanism are operated in synchronous movements, as explained.

3. In a machine for making long-filler cigar-bunches, the combination of the horizontal rotary filler-carrier A, having one or more exposed pockets F extending completely through it, formed approximately to the shape of a cigar-bunch, the stationary bed beneath the rotary filler-carrier, forming a bottom for the pockets therein and having an aperture with which the successive pockets register, the plunger F' for ejecting the successive fillers from the pockets of the carrier, the bunch-rolling apron beneath the filler-carrier, the bunch-receiver L, the plungers F' and F'', and connections for imparting reciprocating movement to the said plungers for ejecting fillers from the carrier A and bunches from the receiver L, all substantially as described.

4. In a machine for making long-filler cigar-bunches, the combination of the horizontal rotary filler-carrier A, having one or more exposed pockets F extending completely through it, formed approximately to the shape of a cigar-bunch, the stationary bed beneath the rotary filler-carrier, forming a bottom for the pockets therein and having an aperture with which the pockets register in the rotation of the carrier, the plunger F' for ejecting the successive fillers from the pockets of the carrier, the bunch-rolling apron beneath the filler-carrier, the cam G, levers E, links D, cross-bar S, pawl B, and ratchet-wheel C for imparting intermittent motions to the rotary filler-carrier in synchronous movement with the filler-discharging and bunch-rolling mechanism, as explained.

5. In a machine for making long-filler cigar-bunches, the combination of the horizontal rotary filler-carrier A, having one or more exposed pockets F extending completely through it, formed approximately to the shape of a cigar-bunch, the stationary bed beneath the rotary filler-carrier, forming a bottom for the pockets therein and having an aperture with which the pockets register in the rota-

tion of the carrier, the vertically-reciprocating plunger F' for ejecting the successive fillers from the pockets of the carrier, the bunch-rolling apron beneath the filler-carrier, the cams, levers, and connections for actuating the filler-carrier, ejecting-plunger, and rolling-apron in proper time movements, the brake-spring 3, and the regulating-screw G',

whereby the positive intermittent movement of the filler-carrier and the adjustment of the pockets thereof in line with the ejecting device are secured, as explained.

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Witnesses:

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