

(No Model.)

F. C. MILLER.
CIGAR BUNCHING MACHINE.

No. 344,285.

Patented June 22, 1886.

Fig. 1.

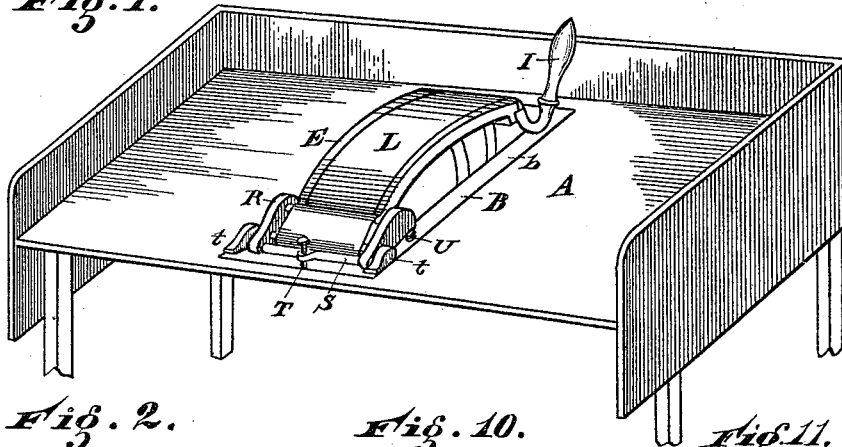


Fig. 2.

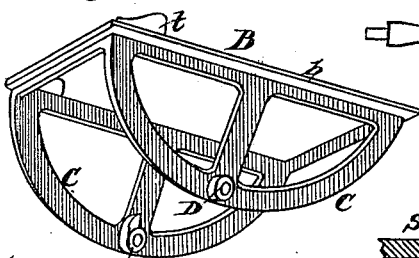


Fig. 10.

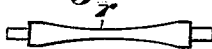


Fig. 11.



Fig. 4.

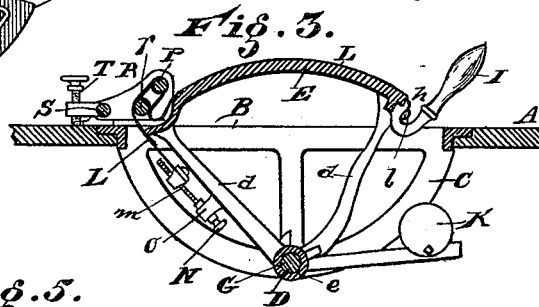
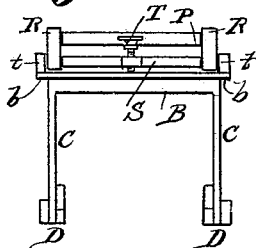


Fig. 5.

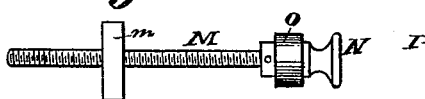


Fig. 6.

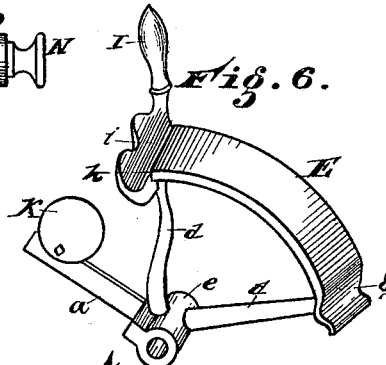


Fig. 7.

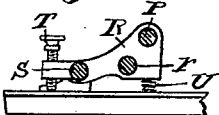


Fig. 8.

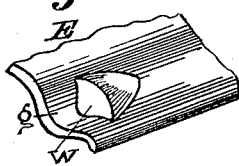


Fig. 9.



Attest

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UNITED STATES PATENT OFFICE.

FREDRICK C. MILLER, OF NEWPORT, KENTUCKY.

CIGAR-BUNCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 344,285, dated June 22, 1886.

Application filed July 12, 1884. Serial No. 137,589. (No model.)

To all whom it may concern:

Be it known that FREDRICK C. MILLER, a citizen of the United States, and a resident of 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.

In the manufacture of cigar-bunches by a machine adapted to shape the bunches and apply the binders at the same time, it is essential to employ a machine capable of running very lightly, and which can also be operated with ease and rapidity.

My invention relates to a cigar-bunching machine of this description; and it consists in certain peculiarities in the construction and combination of parts, as hereinafter more fully set forth.

In the annexed drawings illustrating the invention, Figure 1 is a perspective view of my improved cigar-bunching machine. Fig. 2 is a perspective view of a frame in which is to be journaled an oscillating belt-carrying sector. Fig. 3 is a central cross-section of the table, the rocking sector, and its frame, and shows also the details of construction. Fig. 4 is a front elevation of the sector-frame removed from the table. Fig. 5 is an enlarged bottom plan view of the belt-adjusting devices. Fig. 6 is a perspective view of the oscillatory sector with its operating-handle and weighted arm. Fig. 7 is a sectional side elevation of an adjustable roller-frame that is mounted on the table at one end of the sector-frame. Fig. 8 is a perspective view of one end of the rocking sector with bunch-pocket and adjustable end pieces placed therein. Fig. 9 is a bottom plan view of the same. Fig. 10 is a view of the concave shaping-roller, and Fig. 11 is a detached view of one of the adjustable end pieces or gages.

Referring to the drawings, A designates a table of suitable form, and B is a metallic sector-supporting frame inserted in a transverse opening formed in said table, and having flanges b, which rest on the edges of said opening. The frame B is provided with curved brace-arms C, having journal-bearings D, for attachment of an oscillatory belt-carrying sector, as hereinafter explained. This form of construction affords a very firm and rigid support for the

moving parts of the machine, and facilitates their disengagement and removal, when necessary.

In the frame B is mounted an oscillatory or rocking sector, E, consisting of a segmental rim or plate having spokes d, connected by a hub, e, through which passes a shaft, G, that is supported in the journal-bearings D of the frame B. The front end of the rocking sector E is formed or provided with a recess or pocket, g, in which are placed the binder and filler for wrapping the bunch. At the other end of the sector is a recess or pocket, h, into which the cigar-bunch is dropped after being wrapped. The outer edge of the pocket h is formed with a notch, i, to allow the cigar-bunch to be readily grasped with the fingers for removal. The curved recess or pocket h may be integral with the sector-rim, but is preferably made of a separate piece of metal, and secured to the sector by bolts or rivets l, or otherwise. The upper end of the oscillatory sector E is provided with an operating-handle, I, and from its hub e projects an arm, a, carrying an adjustable weight, K, adapted to balance the sector upon its journal and overbalance it at its extreme backward position. This weight K may be attached to the arm a by means of a socket, set-screw, or other means, so as to be adjusted on said arm as required.

A belt, L, is attached to the rear edge of the rocking sector E, preferably between the sector-rim and the detachable pocket h, from which it passes over the periphery of the sector-rim, and is secured to an adjusting-head, m, which is provided on its lower side with a screw-threaded orifice, to engage with a threaded rod, M, that is swiveled or journaled in a lug, o, cast on one of the sector-spokes. One end of this screw-threaded rod M is provided with a head or button, N, by which said rod can be turned so as to adjust the tautness of the belt L according to the size of the bunch to be rolled. The belt L also passes over rollers P and r, that are mounted in an adjustable frame R at the forward end of the sector. This adjustable frame R is rigidly secured to a pivotal shaft, S, which is journaled in bearings t on the forward end of the frame B, so that the frame R can be oscillated on its centers. Beneath each side of the adjustable frame R, at its rear end, is a spring, U, and at the forward

end of said frame is an adjusting-screw, T, which bears on the table A, so that by simply turning said screw the frame R can be adjusted or oscillated to bring the belt-supporting roller P into greater or less proximity to the sector E, for the purpose of adjusting the machine to bind any desired size of bunch. The distance that the roller P is from the path of travel of the oscillatory or rocking sector E determines the tautness with which the bunch is rolled, and hence the binding can be controlled by simply turning the screw T, so as to oscillate the roller P toward or from the sector.

The shaping-roller *r* is journaled in the frame R below the roller P, and is preferably made concave in longitudinal section, as shown in Fig. 10, or of other suitable shape, according to the desired contour of the bunch.

It will be seen that the belt L passes from the adjusting-head *m* upward over the rollers *r* and P into the pocket *g*, and thence over the sector-rim to the pocket *h*, where it is secured.

The sector-pocket *g* is not an essential feature of the machine, as the space between the roller P and sector E, together with the belt L, form a receptacle for the bunch in the act of rolling. The pocket *g* is simply placed there as a more convenient way of packing the filler in the binder for starting the operation, and allows adjustable end pieces, W, to be used for lengthening or shortening the space in which the bunch is packed. These adjustable end pieces or gages are secured in the pocket *g* by a spring-clamp, *c*, and screw *c'*, which passes through a slot, V, formed in the rim of the sector E, as shown in Fig. 9. The spring-clamp *c* and slot V enable these end pieces or gages, W, to be moved out and in without turning the screw *c'*, and so facilitates the longitudinal adjustment of said gages. In the drawings I have shown only one of these gages in position; but it is designed to use one at each end of the pocket *g*, for the purpose of reducing the length of the pocket to correspond with the desired quantity of filler in the ends of the bunch. These end pieces or gages, W, are preferably formed on their under sides to fit the pocket *g*. On their upper surfaces they are concave or dished to receive the ends of the bunch, and at one end is a ridge or shoulder to guide that portion of the belt which is in the pocket.

Instead of a pocket, *g*, formed as shown, the periphery of the sector E could be made eccentric to its center by sloping off the abrupt inner side of the recess or pocket, so as to provide a large space for reception of the bunch, or the pocket may be omitted entirely.

The binders are put on the bunches in the following manner: The binder is placed on the belt L, and the bunch or filler is placed in the receptacle formed by the belt between the roller P and sector E. The operator then grasps the handle or lever I with one hand and draws it quickly toward him, thereby rocking the sector E forward, so as to roll the

binder around the bunch and wrap it between the faces of the roller P and sector E by the belt. When the pocket *h* arrives opposite the roller P, the bunch will be discharged into said pocket, whence it is quickly and easily removed by the operator. As soon as the handle I is released, the weight K carries the sector back to its former position, ready for the next bunch.

In order to obviate strain during the first portion of the rolling movement for shaping the bunch, I prefer to set the rocking sector E eccentrically to the roller P, so that as the pocket *g* passes below the roller P, the reduction of space between the periphery of sector E and roller P is gradual, and gradually reduces the size of the bunch as the sector E is oscillated or moved forward.

This machine is firm and durable in structure, can be operated with ease and rapidity, and produces bunches that are smoothly made with comparatively little wear upon the belt or strain upon the other operative parts.

What I claim as my invention is—

1. In combination with the table A, having a transverse opening, and the flanged frame B, set in said opening, the rocking sector E, journaled in said frame and provided with recesses *g h* and belt L, and the adjustable frame R, carrying rollers P and *r*, substantially as described.

2. In combination with the table A, frame B, and rocking sector E, journaled in said frame, and provided with belt L, the adjustable frame R, carrying rollers P and *r*, and the head *m*, and adjusting-rod M, for regulating the belt, substantially as described.

3. In combination with the rocking sector E and the adjustable frame R, carrying rollers P and *r*, the head *m*, and adjusting-rod M, connected with one of the sector-spokes, and the belt L, passed over said sector and rollers, and secured to said head and to one end of the sector, substantially as described.

4. In combination with the rocking sector E, having notched recess *h*, the adjustable frame R, carrying rollers P and *r*, and the belt L, substantially as described.

5. In combination with the frame B and the rocking sector E, journaled therein, the adjustable frame R, journaled to the forward end of the frame B, the rollers P and *r*, mounted in said adjustable frame, the belt L, passing over said rollers and sector and secured to one end of the sector, and the adjusting-head *m*, substantially as described.

6. In combination with the sector E and the belt L, carried thereby, the pivoted frame R, screw T, and rollers P and *r*, mounted in said frame, substantially as described.

7. The combination, with the stationary frame B, the sector E, journaled therein, the belt L, and the pivoted frame R, having means for adjustment, of the roller P, and the concave roller *r*, mounted in said pivoted frame, substantially as described.

8. The rocking sector E, having a pocket, *g*,

and longitudinally-adjustable end pieces or gages, W, fitted therein, in combination with the belt carried by said sector, substantially as described.

- 5 9. The combination, with the rocking sector E, having pocket *g*, and slots V, of the adjustable gages W, set in said pocket, and the spring-clamps *c* and screws *c'*, substantially as described.
- 10 10. The combination, with the rocking sector E, having handle I, adjustable counter-balance K, and adjusting-head *m*, of the adjustable frame R, carrying rollers P and *r*, and the belt L, passed over said sector and rollers, and
15 secured at one end to the adjustable head *m*, and at the other end to the sector-rim, substantially as described.
- 20 11. The combination, with the rocking sector E, having a detachable pocket, *h*, and adjusting-head *m*, of the adjustable frame R, carrying rollers P and *r*, and the belt L, passed over said sector and rollers, and secured between the sector-rim and pocket at one end
25 and to the adjusting-head at the other end, substantially as described.

12. The combination, with the stationary frame B and the rocking sector E, journaled therein, and provided with pockets *g h*, handle I, and adjustable counter-balance K, of the adjustable frame R, pivoted in bearings *t* at the forward end of the stationary frame, the rollers P *r*, mounted in said adjustable frame, and the belt L, passed over said rollers and sector and secured to the latter, substantially as described.

13. The combination of the table A, the stationary frame B, having journal-bearings D and *t*, the rocking sector E, journaled in the bearings D, the belt L, carried by said sector, and the adjustable frame R, journaled in the bearings *t*, and provided with rollers P *r*, adjusting-screw T, and springs U, substantially as described.

In testimony whereof I have hereunto set my hand.

FREDRICK C. MILLER.

Witnesses:

ANDREW E. SCOTT,
M. E. MILLIKAN.