

S. SCHOLFIELD.

Cigar-Machines.

No. 140,845.

Patented July 15, 1873.

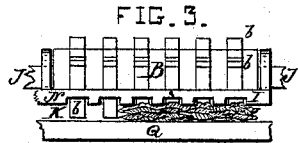


FIG. 4.

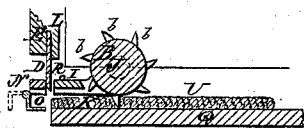


FIG. 2.

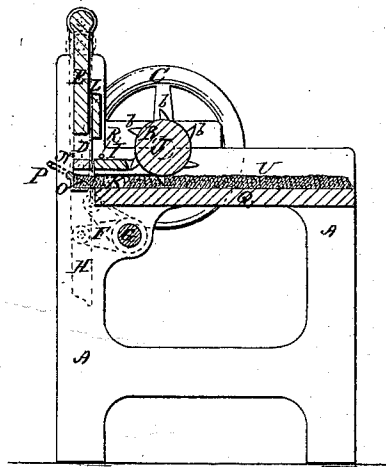


FIG. 5.

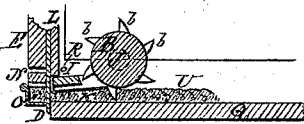


FIG. 6.

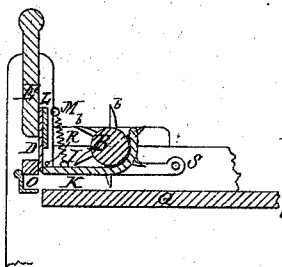


FIG. 1.

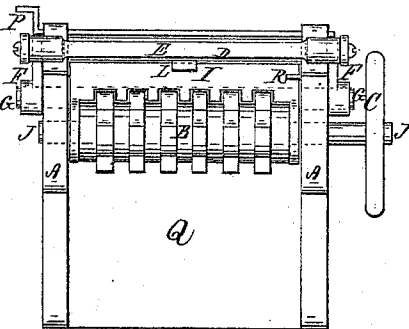
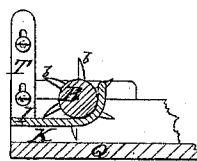


FIG. 7.



WITNESSES

George S. Rogers.
Paris M. Whitman.

INVENTOR

Socrates Scholfield

UNITED STATES PATENT OFFICE.

SOCRATES SCHOLFIELD, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN CIGAR-MACHINES.

Specification forming part of Letters Patent No. 140,845, dated July 15, 1873; application filed April 14, 1873.

To all whom it may concern:

Be it known that I, SOCRATES SCHOLFIELD, of Providence, in the county of Providence and State of Rhode Island, have invented an Improvement in Cigar-Machines, of which the following is a specification:

The nature of my invention consists in the employment of an alternately contracting and expanding throat or passage, through which the tobacco is forced into or towards the sizing-chamber; and in carrying out my invention I have preferred to operate upon the upper rather than the lower throat-plate, a limited up-and-down movement being imparted to the same in timely relation to the opening-and-closing movement of the knife or gate used to separate the tobacco in the sizing-chamber from that held in the throat or passage.

The greatest difficulty experienced in cigar-bunch-forming machines has been to produce bunches of the required uniform size and consistence; and in that class of machines where the tobacco is forced transversely into a sizing-chamber through a throat or passage, the friction of the tobacco against the sides of the passage is so great as to prevent the attainment of the delicate adjustment necessary to produce perfect and uniform bunches. I am, however, enabled to obviate this difficulty by making the plates or bars, which serve to form either the top or bottom of the passage through which the tobacco is to be forced, capable of a limited up-and-down movement, so that whenever the opening to the sizing-chamber is closed by the downward stroke of the knife, the tobacco in the passage will be compressed, and so held until the sizing-chamber has been emptied and the knife and throat plate again raised; the tobacco will then be forced into the sizing-chamber by the action of the feeding-roll, free from the injurious friction against the sides of the passage, as above mentioned, the sizing-chamber in this case becoming properly filled before the tobacco previously compressed in the throat or passage has had time to expand to its former limit.

My invention also consists in forming one side of the sizing-chamber with transverse ridges or grooves, when used in combination with a grooved or barred throat-plate, in order that the tobacco may not be liable to catch

and be held back in its passage from the throat into the sizing-chamber.

Figure 1 is a top view of a machine for making cigar-bunches, arranged to operate by hand, the binding mechanism being omitted. Fig. 2 is a sectional side view. Fig. 3 is a detached view, showing the throat or passage, and the ribs or grooves of the upper side of the sizing-chamber and of the throat-plate. Figs. 4 and 5 are partial sectional views, showing the different positions of the throat-plate. Figs. 6 and 7 show some of the various modes of arranging and operating the throat-plate.

In the accompanying drawing, A is the frame of the machine; B the feed-roll, set with spurs *b b*. C is a hand-wheel, by means of which the feed-roll is operated. The knife D is attached to the slide E, which is operated in its up-and-down movement from the cranks F F upon the shaft G, the relative position of the cranks, when the knife is raised and when closed, being shown by the dotted lines in Fig. 2. The bar H connects to a treadle, by means of which the knife D may be operated. The throat-plate I may be hinged to the shaft J, and may also be forced down upon the tobacco in the passage K, in timely relation to the action of the knife, by means of the projecting-piece L, or a pin attached to the back of the knife or slide. The throat-plate I may be raised to contact with a stop, R, by means of a friction-joint arranged about its bearing upon the shaft J; or by a spring, M, as shown in Fig. 6; or by a suitably arranged weight. The bar N, which forms the upper side of the chamber O, is grooved out transversely, or ribbed, as shown in Fig. 3, to correspond with the grooves or bars of the plate I, in order that the tobacco may enter the sizing-chamber without resistance arising from the swell or curvature of the tobacco between the bars or ribs of the throat-plate. The hinged side of the chamber O is operated to discharge the fillers into a binding-machine by means of the crank P, as in machines heretofore constructed.

The operation of this machine will be as follows: The loose tobacco U is to be first fed upon the bed Q, under the action of the spurs of the roll B, which is to be turned by means of the hand-wheel C, until the tobacco has been forced into the chamber O and compressed to

the required degree; the knife D is then to be brought down, thus cutting off the proper quantity of tobacco in the chamber. The downward stroke of the knife brings the piece L in contact with the upper side of the throat-plate, thus pressing it down upon the tobacco in the passage K, as shown in Fig. 5, by which means, upon the subsequent raising of the knife and throat-plate, as shown in Fig. 4, the tobacco in the passage—before it has had time to expand to its former dimensions—will be free to slide into the sizing-chamber under the forward action of the roll B, without encountering the frictional resistance of the upper and lower plates of the passage K, as in machines heretofore constructed.

The throat-plate I, instead of being hinged upon the shaft J, may be pivoted at a point,

S, as shown in Fig. 6; or the whole surface may be made to rise and fall equally by being attached to a slide, T, arranged as shown in Fig. 7.

I claim as my invention—

1. The throat or passage K, arranged to expand and contract in timely relation to the movement of the knife, substantially as described.

2. The transversely ribbed or grooved bar N, forming one side of the sizing-chamber, in combination with a grooved or barred throat-plate.

SOCRATES SCHOLFIELD.

Witnesses:

GEORGE H. ROGERS,
ALBA R. ABBOTT.