E. J. Manville,

Fluting Machine.

No. 103,063. Patented May 17, 1870.

Fig. 2.

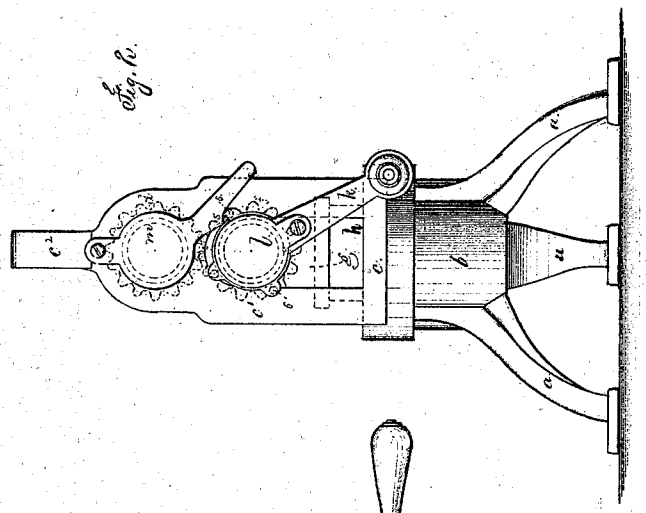
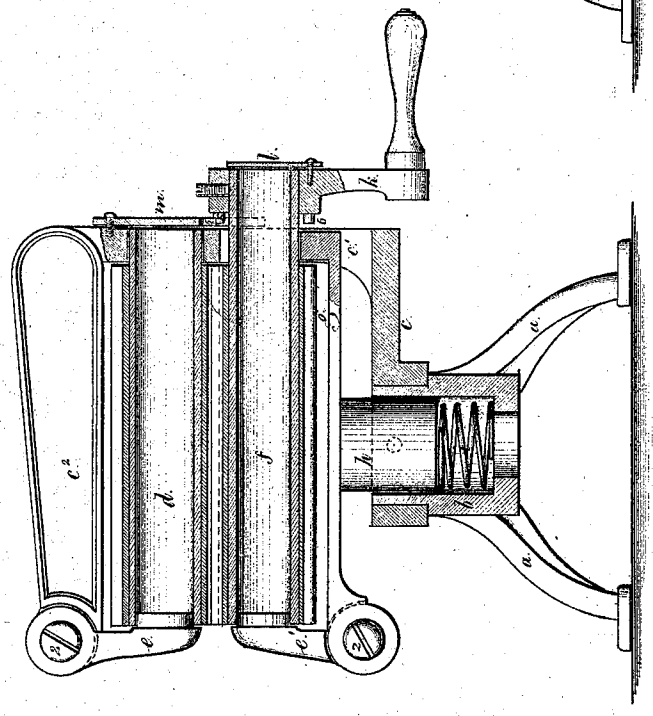


Fig. 1.



Witnesses

Chas. H. Smith

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ELI J. MANVILLE, OF WATERBURY, CONNECTICUT.

Letters Patent No. 103,063, *dated May* 17, 1870.

IMPROVEMENT IN FLUTING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ELI J. MANVILLE, of Waterbury, in the county of New Haven, in the State of Connecticut, have invented a new and useful Improvement in Fluting-Machines; and the following is declared to be a full, clear, and correct description of the said invention.

The object of this invention is to simplify the construction, lessen the cost, and render more durable fluting-machines.

In my machine the rollers are made of brass, cast upon an iron pipe, to lessen the cost of construction, stiffen the rollers, and enlarge the space for the heater.

The rollers are separated by a pendent link, acting when the revolution of the main roller is reversed. The rollers are supported, at one end by swinging jointed bearings, and the frame that carries the lower roller has a sliding cylinder passing into the base, and is guided, at one end, in a stationary frame.

In the drawing—

Figure 1 is a vertical section, longitudinally, of the rollers, and

Figure 2 is an end view of the rollers and frame.

The stand of the machine is made with the legs *a a*, and cylinder *b*, and from this latter the frame *c* rises, the same being made of a lower horizontal arm, with a ring around the cylinder *b*, a vertical portion that is made with two parts at the lower portion, as at c^1, and forming also the bearing for one end of the upper roller *d*.

The top portion, c^2, of the frame carries, at outer end, the bearing *e*, that is jointed at 2, so that it can be swung to cause the projecting stud to enter the hollow roller *d*, or to be drawn out of the same, and when the joint-screw, 2, is turned, it clamps the bearing *e* firmly to place.

The lower roller, *f*, is mounted in the sliding frame *g*. At one end this frame *g* passes in between the parts c^1 of the frame, and at the other end is the swinging bearing *e'*, similar to the one applied to the roller *d*.

The cylinder *h* that is formed upon the under side of the frame *g* slides in the cylinder *b*, and a spring, *i*, within the said cylinder *b*, acts to press the roller *f* up against the roller *d*.

These rollers, *f* and *d*, are made of brass, cast upon an iron pipe, and then fluted. This mode of construction cheapens the rollers and makes them much better, because the iron pipe forms the journals, and also the hole into which the heater is to be introduced. The drilling or boring of the roller is avoided, and the hole can be large in proportion to the journals, the iron tube being less liable to bend than the tubular brass journals heretofore employed.

The journal of the roller *f* projects and receives the hub of the crank *k*, and a swinging cap, *l*, is provided to cover the hole in the roller *f*, into which the heater is inserted.

A swinging cap, *m*, is provided for the opening into the roller *d*, and said cap is extended down with a notched arm, 5, that acts as a pawl, taking against teeth or projections at the back of the hub of the crank *k*, as seen at 6.

The length of this arm 5 is such that, when the roller *f* is turned in the ordinary way the arm is not operative; but when the movement is reversed, the notch of the arm 5 takes one of the projections 6, and a continuation of the movement causes the lower roller and its frame to be depressed by the toggle movement of the arm 5, and projection 6, on the hub of the crank, opening the rollers for the introduction or removal of the article between them.

I claim as my invention—

1. The roller for fluting-machines, herein described, constructed with an iron pipe, which serves as a receptacle for the heater and journals for the roller, and having a corrugated brass sleeve cast upon and around it, as and for the purpose specified.

2. A swinging arm, in combination with the moving roller and frame, substantially as set forth, so that a reverse movement of the roller shall cause the separation of the rollers, as specified.

Signed by me this 3d day of October, 1869.

E. J. MANVILLE.

Witnesses:

R. C. MANVILLE,

HENRY D. LEWIS.