

*C. E. L. Holmes,*

*Plating Machine.*

*No. 100,405.*

*Patented Mar. 1, 1870.*

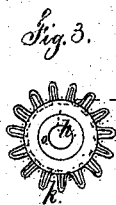
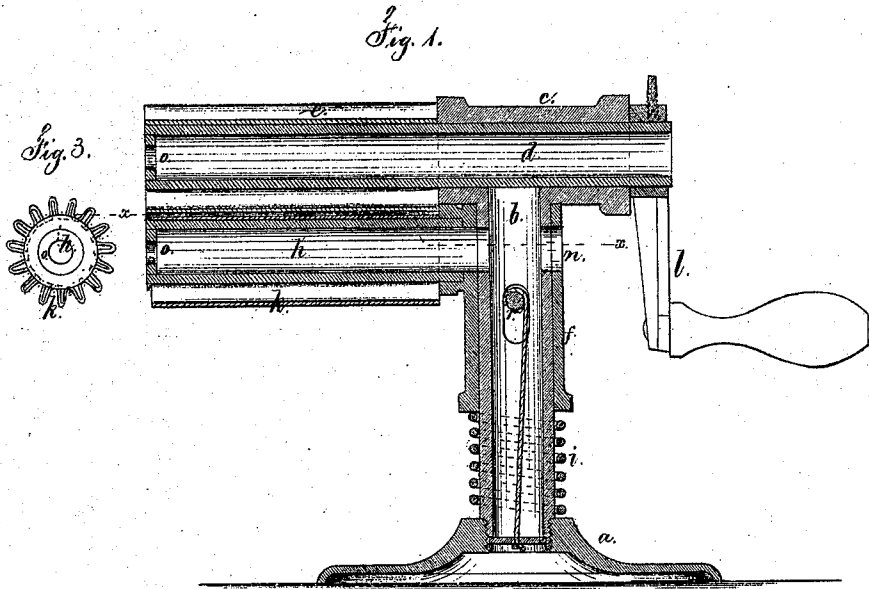
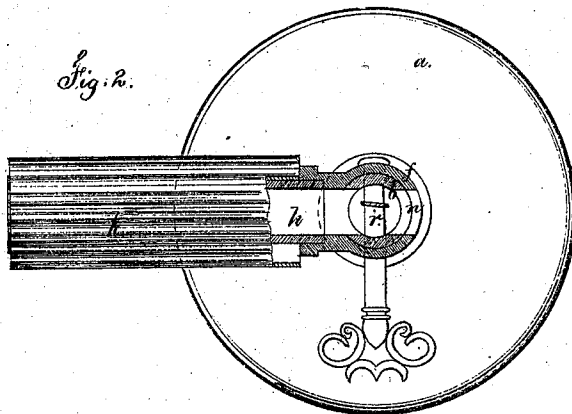


Fig. 2.



WITNESSES.

*Chas. Smith*  
*Geo. D. Partridge*

*Chas. E. L. Holmes*

# United States Patent Office.

CHARLES E. L. HOLMES, OF NEW YORK, N. Y., ASSIGNOR TO GEORGE HOVEY & SON, OF SAME PLACE.

Letters Patent No. 100,405, dated March 1, 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, CHARLES E. L. HOLMES, of the city and State of New York, have invented and made a new and useful Improvement in Fluting-Machines, and the following is declared to be a correct description thereof.

The object of this invention is to lessen the cost of construction, and render the machines lighter and less liable to get out of repair.

I provide a pipe-shaped bearing for the upper roller at the top of the standard, upon which standard is a slide kept up by a spring, and carrying an arm upon which revolves the lower roller.

In the drawing—

Figure 1 is a vertical section of the said machine;

Figure 2 is a horizontal and part sectional plan at the line *x x*; and

Figure 3 is an end view of the fluted sheet-metal roller upon the rigid hollow arm.

The base *a*, of any desired shape, carries the vertical standard *b*, at the upper end of which is a pipe-shaped bearing, *c*, for the hollow shaft *d* of the upper roller *e*.

This roller *e* is made of a sheet-metal tube, corrugated to form the flutes. This, however, does not form my invention.

The sliding-sleeve *f*, around the column or standard *b*, is kept up by a spring, *i*, and carries a hollow rigid arm, *h*, that does not revolve, but the lower roller *k*, made of a fluted tube, as aforesaid, and placed upon the hollow arm, does revolve with the roller *e*, when that is turned by a crank-handle, *l*, applied to said shaft *d* of the roller *e*.

The shaft *d* is open for the introduction of a heater, and the sliding-sleeve *f* and standard *b* are formed with

openings at *n*, on line with the arm *h*, for the purpose of allowing the heating-bolt to be introduced at this end, and the rings *o* or caps of the rollers prevent the bolt passing in too far.

The rollers are opened by pressing down the roller *k*, rigid arm *h*, and sliding-sleeve *f*.

I guide the sliding-sleeve *f* by a pin, *r*, passing through it, and moving in a vertical slot in the standard *b*.

The pin *r* may have a head upon it, so as to be revolved and draw upon a chain or wire cord within the standard *b*, and wind the same up sufficiently to draw down the sliding-sleeve *f*, and thereby separate the rollers; or this revolving-pin *r* might act upon a pinion or a cam for accomplishing the same object.

I claim as my invention—

1. The standard *b*, and pipe-shaped bearing *c* at its upper end, for the shaft *d* of the roller *e*, in combination with the sliding-sleeve *f*, arm *h*, and roller *k*, as and for the purposes specified.

2. The pin *r*, passing through the sliding-sleeve *f*, and a slot in the column *b*, and forming a guide, in combination with the rollers *e k*, and chain, or its equivalent, for drawing the roller *k* down when the pin *r* is turned, as set forth.

3. The arrangement of the rigid arm *h*, made hollow for receiving the heater, with the rotating sleeve or roller *k*, of a pair of fluting-rollers, substantially as specified.

Dated this 28th day of December, 1869.

CHAS. E. L. HOLMES.

Witnesses:

CHAS. H. SMITH,  
GEO. T. PINCKNEY.