

C. A. McPHETRIDGE. Making Candles.

No. 16,211.

Patented Dec. 9, 1856.

Fig. 2.

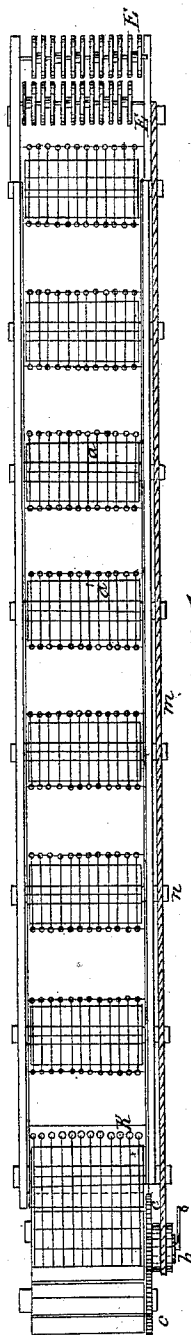


Fig. 1.

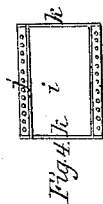
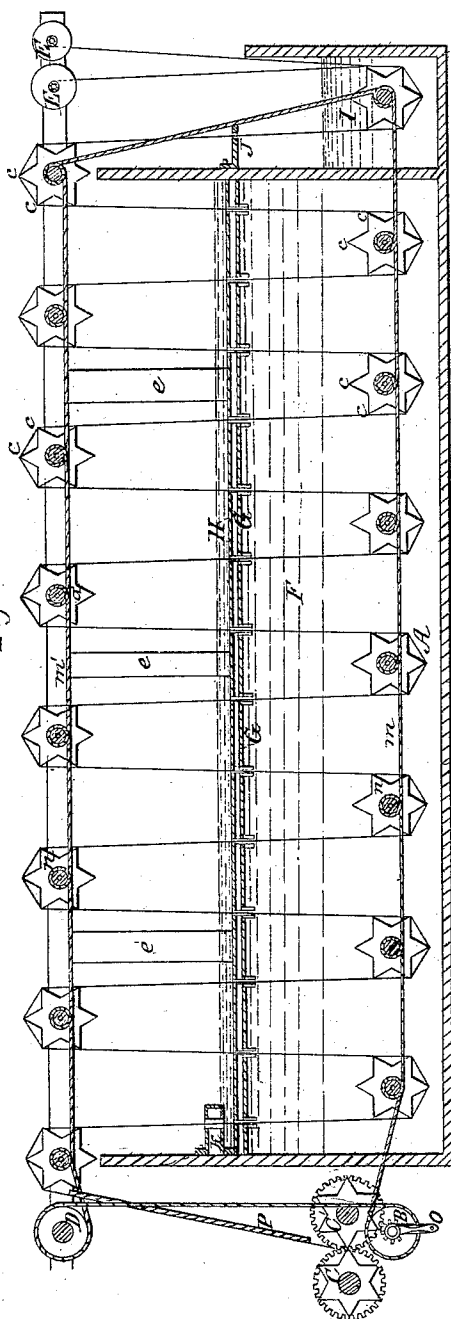
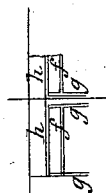


Fig. 3.



UNITED STATES PATENT OFFICE.

C. A. McPHETRIDGE, OF ST. LOUIS, MISSOURI.

CANDLE-DIPPING MACHINE.

Specification of Letters Patent No. 16,211, dated December 9, 1856.

To all whom it may concern:

Be it known that I, C. A. McPHETRIDGE, of the city and county of St. Louis and State of Missouri, have invented a new and useful
5 Machine for the Manufacture of Candles; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference
10 marked thereon.

Figure 1 is a longitudinal section. Fig. 2 is a plan view. Fig. 3 is a sectional end view of the float. Fig. 4 is a plan view of the float.

15 The nature of my invention consists in dipping candles from a continuous wick, as hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the construction of my invention, in Fig. 1, F the trough or vat for containing the water on which the melted tallow rests; G, the steam floats through which the steam
25 passes for keeping the tallow in a heated state; H, the tallow; E, E, the spools for holding the cotton for the wick; I, the vat for holding the melted beeswax; J the gage plate through which the wick passes after
30 being saturated in the beeswax; A, *a*, the reels; *m*, *m*, the belt or cord for operating the reels; *n*, *n*, pulleys on the end of reel; *b*, the wick as it passes over and under the reels. The reels are constructed with bars *c*
35 and are regulated in regard to the distances they are set apart on the shaft that from one bar to the other shall be the length of the candle required. K, the gaging box through the holes of which the candles pass when
40 dipped and may be of any shape required to form the candle of said shape and size; D, B, driving pulleys; C, C, revolving cutters for cutting the candles. The blades of these cutters are made to correspond with the distances
45 of the bars on the reels and will cut the candles at the points where they pass over the reels, which may be called joints. P, the inclined plane down which the candles pass on their way to the cutters. This
50 plane may be fluted to fit the size of the candle. *d*, the top of the frame; *e* uprights of frame.

In Fig. 2, E E the spools for holding the cotton; (*a*), the reels; *b*, the wick; *n*, the pulleys for operating the cord; *m*, the cords;
55 *b*, the holes in the steam float through which

the wick passes; *d*, the top frame; K, the gaging box; *c*, *c*, revolving cutters.

In Fig. 3, *f* the steam chamber of the steam float; (*g*), the skirts extending down
60 at the sides; (*h*), the skirt extending up above the steam chamber; *b*, the wick.

In Fig. 4, (*i*) the body of the steam chamber or float, the side projections with hole for the wick to pass through; (*k*), the end
65 of the float.

In the operation of my invention, I fill my trough with water within an inch more or less of the top. I then pour the melted tallow into the trough and which it floats.
70 I then wind the cotton out of which the wick is made. The wick is then passed through the vat I, in which is contained heated beeswax or other suitable material. The wick then passes through the gage
75 plate J, which strips off all superfluous material and lays the fiber and renders the wick perfectly smooth and in a better condition to burn. It then passes over the reel (*a*), then descends through the holes
80 in the floats (*i*), passing through the heated tallow, taking a dip, then descends through the cold water and around reel A, coming up again through the water thoroughly chilled. It passes through the tallow, taking
85 another dip. It is then carried through the air again around reel *a*, and down again, being chilled ready for a dip in descending. It thus continues descending and ascending until the candle has ac-
90 quired the requisite size, when it passes through the gaging box K, which is heated with steam let into it from a pipe attached for that purpose. This gage is intended to shape the candle, as the holes in it may be
95 any shape required. It then passes over the last reel (*a*) and down the inclined plane P to the cutters, where the candles are severed at the joints by means of the revolving knives, when the candles are ready to
100 be packed away. The distance of the knives from the cutting edges must correspond with the distance the bars on the reels are apart, and both can be changed according to the length of candles I wish to dip.
105

The steam box or floats G are for the purpose of containing steam, which may be let in by means of pipes extending from one to the other the whole length of the trough. When the steam boxes or floats are laid on
110 the tallow the trough rides down the tallow is retained in it, and as the floats cover the

entire length of the trough the tallow is kept constantly hot. The tallow may be introduced into the trough in a fluid state in any convenient way, and may entirely
5 cover the floats, if I wish to do so. The water in the trough is kept cool by allowing a jet of water to pass into the trough at one end and out at the other.

10 Having thus fully described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent is:

1. Dipping candles on a continuous wick, from spools E, by passing it through heated

beeswax, in vat I, through gage plate J, 15 and then alternately through heated tallow and cold water and through steam gage box K, and then separating them by means of the cutters c, c, as herein described and set forth. 20

2. I claim the steam chambers or floats G constructed as described and for the purposes set forth.

C. A. McPHETRIDGE.

Attest:

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