

W. C. CHILDS.
Candle Mold.

No. 15,968.

Patented Oct. 28, 1856.

Fig. 1.

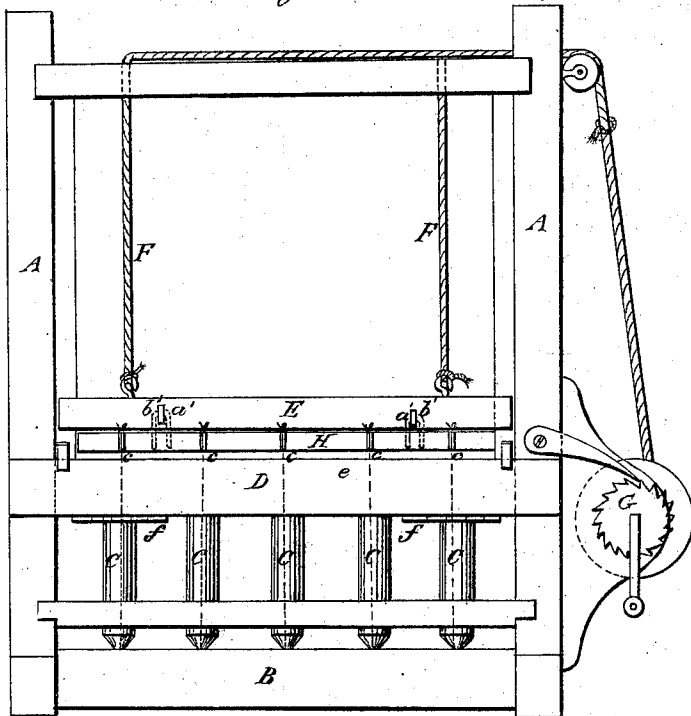


Fig. 2.

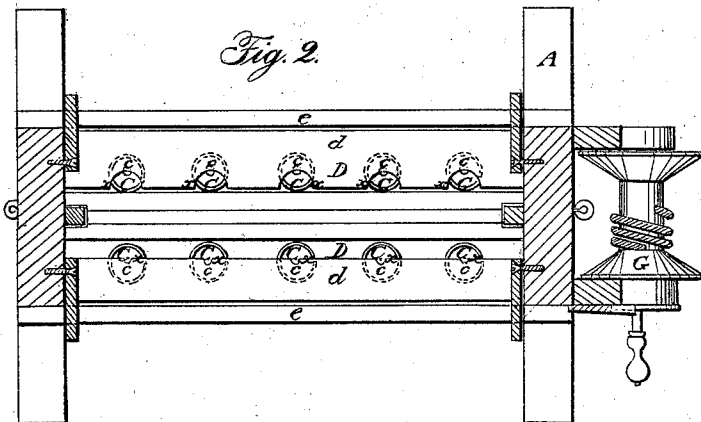
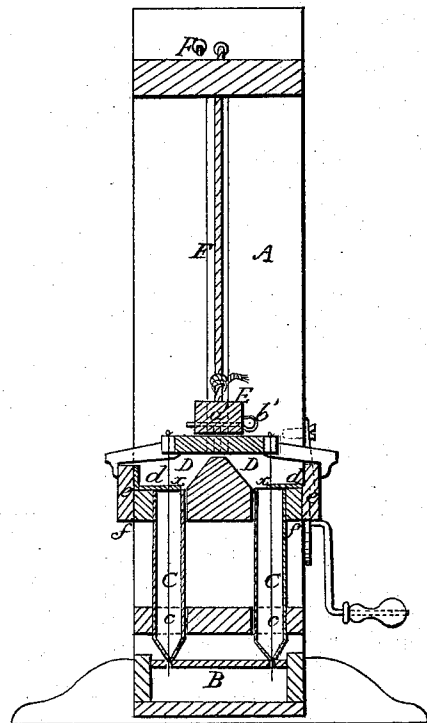


Fig. 3.



UNITED STATES PATENT OFFICE.

WILLIAM C. CHILDS, OF BOSTON, MASSACHUSETTS.

MOLD CANDLE-MACHINE.

Specification of Letters Patent No. 15,968, dated October 28, 1856.

To all whom it may concern:

Be it known that I, WILLIAM C. CHILDS, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Continuous-Wick Machine for Molding Candles; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 denotes a front elevation of my said improved machine. Fig. 2, a horizontal section taken between the lifter frame and the mold troughs. Fig. 3, is a transverse and vertical section of it.

In said drawings, A, is the main frame of the machine; B, the spool box; C, C, C, the molds; D, D, the troughs of the molds; E, the lifter frame supported by cords or chains, F, F, running over guide pulleys and thence down to a windlass, G.

So far my machine may be said to be similar to Tuck's well known continuous wick machine patented in England in 1842, and described in Campbell Morfit's *Treatise on Chemistry*, applied to the manufacture of soap and candles, new and improved edition, printed in 1836, to which reference may be had by those who may not be familiar with such machine. In other respects my machine differs from that of Tuck or other continuous wick machines, as I shall now proceed to describe.

In the first place, I combine with the lifter bar or frame, E, a separate bar, H, so applied to it as to be removable from and attachable to it, such separate bar being provided with contrivances or means by which the several wicks may be attached or connected to it. The frame for supporting the lifter bar and the molds I make high enough to enable me, to raise the lifter bar sufficiently to form several candles on each wick. After they have been successively made, the separate holding bar is to be removed from the lifter bar, and with the strings of candles suspended thereto by their wicks, it may be placed in a drying or bleaching frame. In order to connect the separate bar H, to the lifter bar the former may have staples projecting from it and up into the lifter, bar and pins may be extended through the latter and the staples. In Fig. 1, the staples are shown at a' , a' , by dotted lines, while the pins are shown at b' .

In the second place, I arrange on the bot-

tom of each of the filling troughs of the mold, a thin metallic plate d , having its inner edge provided with a series of notches x , x , x , for the reception of the wicks respectively. This plate when, in place in the trough D, should be in front of the row of wicks, c , c , (represented in red lines in the figures) and such plate should partially cover the filling mouth or top of each mold C. In one of the troughs D, the plate, d , is represented as fixed to and so as to be movable with the front board e , of the said troughs; while in the other trough the plate is separated from the front board, that of each trough being attached to the bottom board of said trough by hinges as shown at f , in order that it, (the front board) may be turned down into a horizontal position or below said bottom board for the purpose of enabling an attendant to obtain access to the trough in order to remove therefrom the surplus fat or material to be molded. It is not essential however, that the centering plate d , should be attached to the front board e , but on account of separating from the candles the surplus fat of the mold trough, it will be found very convenient to have the plate d , attached to the board, e , for under such circumstances during the act of turning downward the board, it will lift the plate, d , and the fatty matter that may rest upon the board e , thus becoming a lever, by which said matter may be separated to great advantage from the candles in the molds.

In most other continuous wick machines, and especially in that of Tuck hereinbefore mentioned, the wick centering plate, answering to the plate d , is placed above and out of the molding trough. By arranging it in the molding trough and on the bottom of the same, as described, it not only serves to form or finish part of the upper end of each candle, but it extends under the surplus material of the trough, so that when such plate is lifted from the bottom of the trough it will separate the surplus fat or most of it from the candles.

It should be borne in mind, that during the operation of casting the candles, more fat or tallow is used than will fill the molds connected with each trough, the surplus fat generally being allowed to stand and cool in the troughs in order that the upper ends of the candles may be properly formed. Thus my arrangement of the centering plate

facilitates the removal of such surplus material preparatory to the elevation of the candles out of their molds.

In operating with this machine, the wicks
5 are drawn from the spools in the spool box,
B, and upward through the molds respectively and are fastened to the bar H, of the
lifter frame E, each wick in the meantime
being run through one of the notches of the
10 centering plate. After the molds have been
filled with the tallow, and the surplus thereof removed as above described, the windlass
is put in motion so as to elevate the lifter
bar or frame, and thus raise the candles out
15 of their molds fresh wicking at the same
time being drawn upward into and through
the molds. The candles having been elevated a few inches above the molding trough
another supply of fatty matter is next to be
20 poured into the mold troughs, and after it
has cooled therein, and in the molds, and its
surplus has been removed the lifter frame
should be raised again so as to draw the second
row or set of candles from the mold.
25 Thus by continuing the process a row of
candles may be formed on each wick, and
will depend from the bar H, which after being
elevated to its highest position may be
separated from the lifter board and with
30 the candles hanging from it, may be removed
to a rack or stand situated in the dry-

ing or bleaching room, where they may be dried or bleached.

Another such board H, may be attached to the lifter bar and have the wicks affixed to it, or after removal of the board H, to the
35 drying or bleaching apartment, its strings of candles may be taken from it and suspended on drying frames, the board or bar subsequently being replaced in the molding
machine. 40

Having thus described my improved machine, I claim—

1. Arranging the wick centering plate *d*, in the trough of the candle molds and on the
bottom of said trough as specified. 45

2. I also claim so applying the front board to the bottom board of the trough, that said front board may be turned down or removed from the trough in order that the vertical edge or front part of the surplus fat in the trough may be exposed for
50 the purpose of facilitating the removal of said surplus fat from the candles.

In testimony whereof, I have hereunto set my signature this 29th day of August A D
1836. 55

WILLIAM C. CHILDS.

Witnesses:

R. H. EDDY,
F. P. HALE, Jr.