H. CAMP.

Candle Mold.

No. 7,033. Patented Jan. 22, 1850.

Fig. 1.

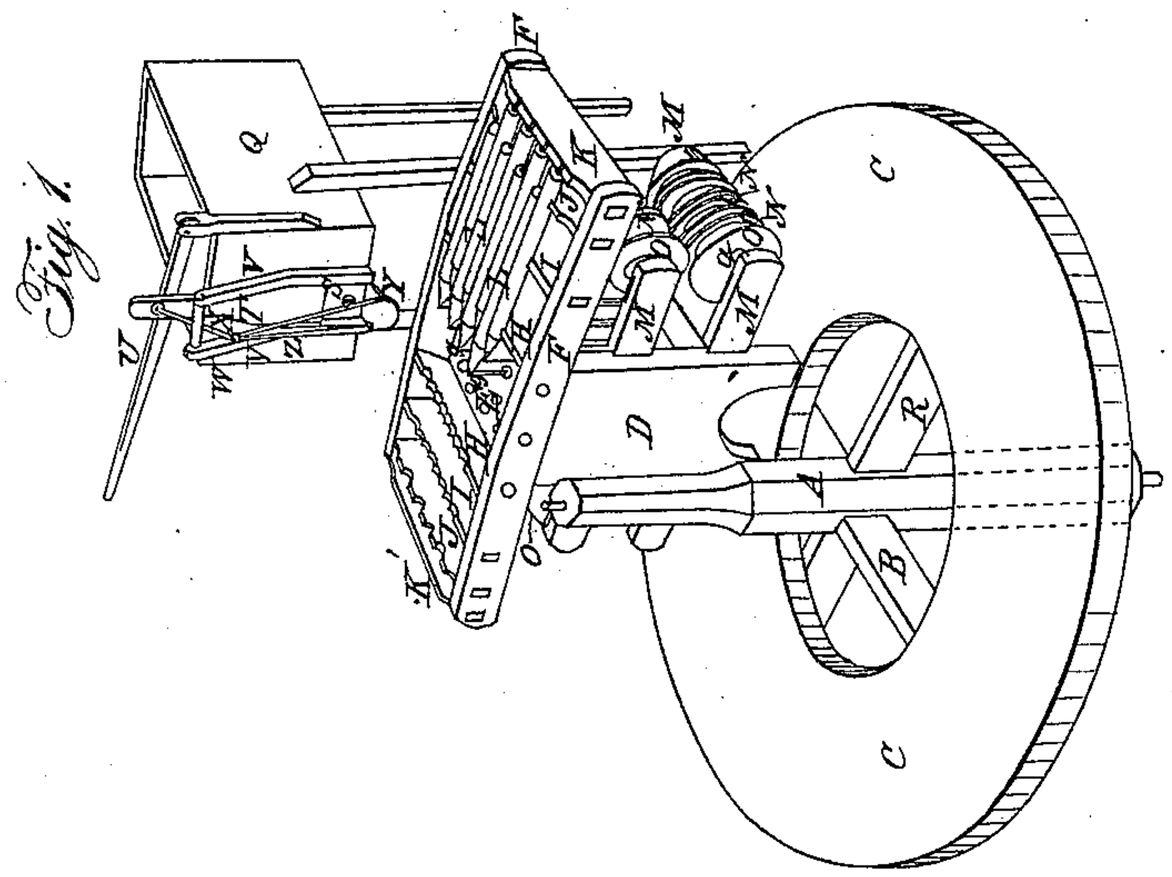
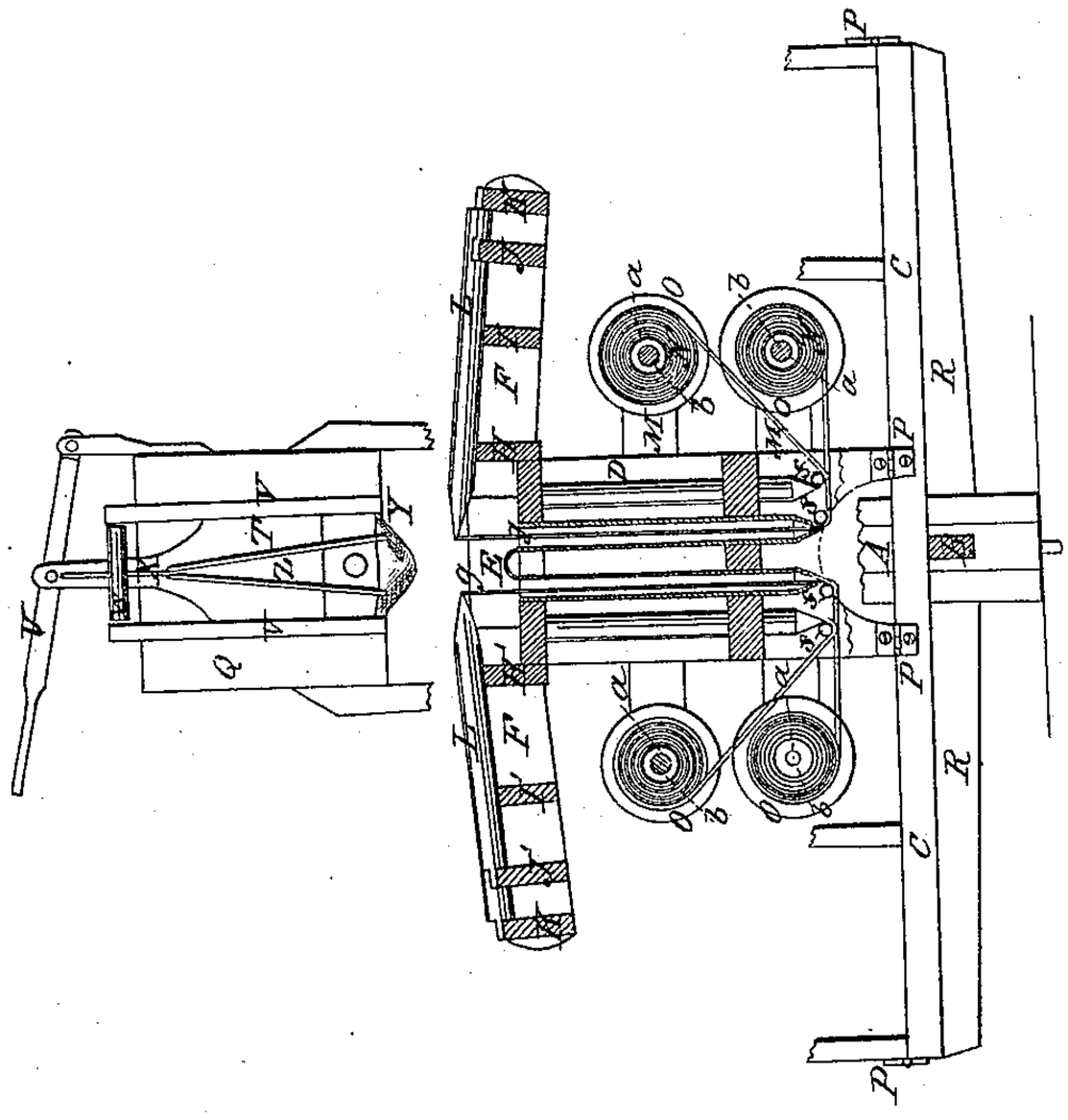


Fig. 2.



UNITED STATES PATENT OFFICE.

H. CAMP, OF DUNKIRK, NEW YORK.

CANDLE-MOLD APPARATUS.

Specification of Letters Patent No. 7,033, dated January 22, 1850.

To all whom it may concern:

Be it known that I, HERMAN CAMP, of Dunkirk, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in the Apparatus for Making Mold-Candles, which are described as follows, reference being had to the annexed drawings of the same making part of this specification.

Figure 1, is a perspective view of the apparatus, showing a wheel with one stand upon it from which the candles have just been withdrawn said wheel and stand being placed under the spout of a reservoir (containing melted tallow) ready to be re-filled. Fig. 2 is a vertical sectional view of the wheel and a stand represented as cut through the center, to show its internal structure, and the end of the reservoir of melted tallow.

Similar letters on each figure refer to corresponding parts.

In order that the advantages of my invention, may be readily understood, I will first describe the mode usually practised, which is as follows: A piece of wick is drawn from a ball of wicking, and doubled so as to form a loop, a little longer than the length of the mold; it is then cut off and the two parts twisted together. In order to fill a stand of molds with wicks, the chandler takes a quantity of them in his left hand, and a wooden rod half the diameter of the bore of the mold, with a wire hook in one end which passes through the hole in the bottom of the mold and hooks the loop of one of the wicks over it, then draws the hook out of the mold taking the wick with it; when the wick is drawn a little beyond the end of the mold, it is released from the hook. The same operation is performed to each of the molds in the stand. The operator then takes a pointed wire and slips it through a hole in the side of the stand and through the loop of each wick in the row, he then pulls all the wicks tight upon the wire by taking hold of the ends of the wicks projecting from the opposite ends of the molds; then adjusts the wicks upon the wire over the center of each mold. The same operation is to be had with each row of molds in the stand. The molds are then filled with tallow in a fluid state and allowed to cool; the wires are withdrawn and the tallow in the box upon the top of the mold scraped out; an awl is inserted into the loop from which the wire was drawn and each candle is drawn separately from the molds in the stand.

Having thus fully described the old process of making mold candles, I will now proceed to describe my new process and machinery for molding candles.

I first make the perpendicular shaft A with pivots, one at each end to suit the upper and lower bearings in the building used, and then insert the arms B, B, into it upon which I form the horizontal circular platform or wheel C, of a proper size to accommodate the number of stands that I wish to put upon it; the wheel C is represented as having one stand upon it in the drawing: the end of which is lettered D. E, represents the ends of the mold at which the fluid tallow is received. F, F, are side pieces or ledges of the frame around the top of the stand, H, I, J, K, are cross pieces of the frame upon which the candles L, are laid as represented in Fig. 1, which were withdrawn from the rows of molds next to said end of the frame; the cross pieces H′, I′, J′, K′, of the opposite end are shown without the candles in Fig. 1 and the semicircular notches in which the candles are laid are shown. There are two horizontal bars M, M, across each end of the stand; the ends of the bars M, M, form arms or supports for the rods *a*, *a*, *a*, *a*, which have wooden tubes *b*, *b*, *b*, *b*, upon them inserted into the center of the balls of wicking N, N, N, N, before they are put upon the rods *a*, *a*, *a*, *a* . There are as many tubes upon each rod as there are molds upon each row, with a ball of wicking upon each and a series of circular plates O, O, O, O, placed upon the rods in the spaces between the balls of wicking. The feet of the stand next to the periphery of the wheel are fastened to it by hinges P, P, which are for the purpose of holding it in its place and allow of its being turned down as will be hereafter described. Near the wheel there is a reservoir Q, for containing the melted tallow which is supplied from the caldron by a spout or otherwise. This reservoir Q has a circular hole S, near the bottom, which is closed by the slide or gate T operated by the lever V. The slide T is held and guided in ascending and descending against the box or reservoir by cleats V, V, the upper ends

forming the supports of the bar or rock shaft W, with the rod X passing through it: One end of the rod X is connected with the slide T, and the other end is connected to the spout Y, by the stirrup Z; so that when the lever V, shall be depressed, to close the circular hole S, with the slide T it shall operate the rod X and stirrup Z, and raise the outer end of the spout Y, so that what tallow remains in it runs toward the reservoir which prevents the surplus tallow from dripping after a sufficient quantity has run out to fill the mold. There are four horizontal parallel rollers *f*, *f*, *f*, *f*, under which the wick is guided into the mold.

Having described the construction of my improved machine for making mold candles I will now explain the mode of using the same.

The balls of wicking N, N, N, N, being properly arranged as heretofore described the end of the wick is taken under the rod or roller *f*, and carried up through the mold and secured over a stick laid across the stand to hold it for the first set of candles, care being taken to adjust the wick in the center of the mold; each of the molds in the stand having been furnished with a wick, as above described; turn the wheel C, until the molds in the stand are directly under the spout Y; elevate the slide T by raising the lever V, which lets the spout Y down at the same time and the melted tallow runs out of the circular hole and fills the molds. The lever V is then depressed which closes the circular hole *s*, and raises the spout Y, so that any tallow that remains in the spout will not run out while the wheel is moving to bring another stand with its molds under the spout Y. When the tallow in the molds shall have cooled sufficiently, the wicks are cut off a little above the tallow, and the sticks removed, the stand turned downward over a box and the tallow above and around the ends of the molds scraped out, and the stand raised up, and the candles drawn out by seizing the end of the wick, with the appropriate nippers or clamps. As the candle is drawn out of the mold it draws a wick in for another candle from the ball N, which turns and lets the wick off. When the candle is drawn from the mold a proper distance, it is laid into the semicircular notches (opposite the mold) in the cross pieces H, I, J, and the end against K, which is placed at such a distance from the mold as will bring the wick from the candle (which was drawn from the ball N into the mold when the candle was drawn out) in the center of the molds as shown at g^2 g^2 Fig. 2, ready to receive the tallow to form another set of candles. All the candles in the first row of molds being withdrawn and laid in their appropriate places the candles of the second row are withdrawn and laid in same way upon the cross pieces H and I in the semicircular notches with their ends against the cross piece J, which is placed at a proper distance from the molds to bring the wick which is attached to the end drawn out in the center of the mold, as heretofore described for the first row of candles. The candles from all the molds in the stand being withdrawn and laid in the places provided for them, as above described, I turn the wheel until the stand comes under the spout, when I again fill the molds with the tallow as before described, and allow it to cool. I then cut the wicks off about half way between the candles in the molds and those laying upon the notched frame and remove the latter; then proceed to turn down the stand, scrape out the tallow, &c. as heretofore described.

I make a wheel large enough to receive a sufficient number of stands to allow the one filled first, to cool, by the time I have manipulated each of the other stands upon the wheel, so that I go on drawing the candles, and filling the molds continually, and do not have to carry the molds to the reservoir of tallow to be filled, or carry them away after they are filled; and as it is very little if any, more work to draw the candles out of the molds with the continuous wick, than when wicked by the old method, I thereby save two-thirds of the labor; or rather make treble the quantity of candles with the same labor, in the same time. But this is not the only advantage gained as I am enabled by using a continuous wick to have the wick twisted to any degree that is desirable, and to have the twist uniform and perfect in every candle alike. Whereas by the old method the quantity of the twist in the wick is entirely accidental; and, also, when drawing in the wicks a part of the strands may not catch over the hooks, or may slip off and become disarranged and make a candle so imperfect that half the tallow will run away while the other half may be burning.

I contemplate that my improved machine is as well adapted to making candles of wax, spermaceti, stearin, or other materials, as from tallow, and may be used to greater advantage in candles that require braided wicks, than in tallow, as the wicks can be twisted so hard and the twist retained in the wick, as to supersede the necessity of braiding, which is several hundred per cent. more expensive than twisting.

Having thus fully described the construction and operation of my machinery for facilitating the operation of manufacturing candles and the manner of using it, what I claim as my invention and desire to secure by Letters Patent is—

1. The before described mode of making candles by using the candles previously

drawn from the molds to hold the wicks for the succeeding candles, in the center of the molds, until the latter become sufficiently hard to sustain their own wicks as described.

2. I claim the combination of the frames F K, recessed candle holders H I J—H′, I′, J′, frames M, M, and spools O, *b* containing the continuous wicks N with the candle molds D, as described.

3. I claim the employment of the revolving platform in combination with the hinged molds constructed as aforesaid, arranged and operated in the manner and for the purpose herein fully set forth.

4. I also claim the manner of raising the outer end of the spout (Y) of the vat Q simultaneously with lowering the gate T for the purpose of stopping the dripping of the tallow while turning the frame of molds by combining the spout with the gate by the stirrup, roller, and lever as described.

I do not however intend to confine my claims to the precise construction described in the foregoing specification, but to use such a form of construction, as may be the best adapted to accomplish the desired object, by means substantially the same. Neither do I claim any portion of the machine above described, that has been practiced successfully by others, prior to its being invented by myself.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

H. CAMP.

Witnesses:
ERNEST MULLETT,
L. B. BROWN.