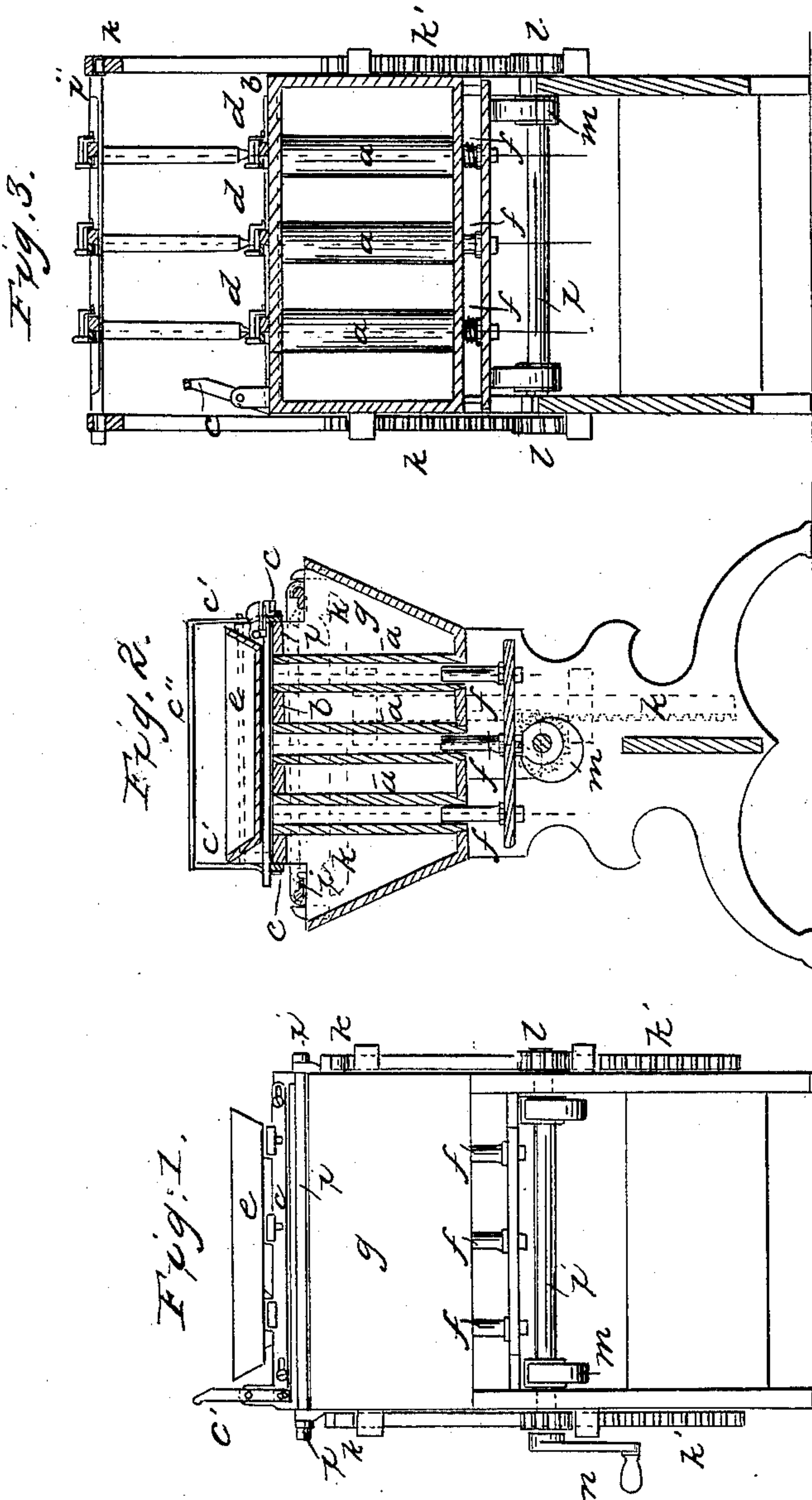


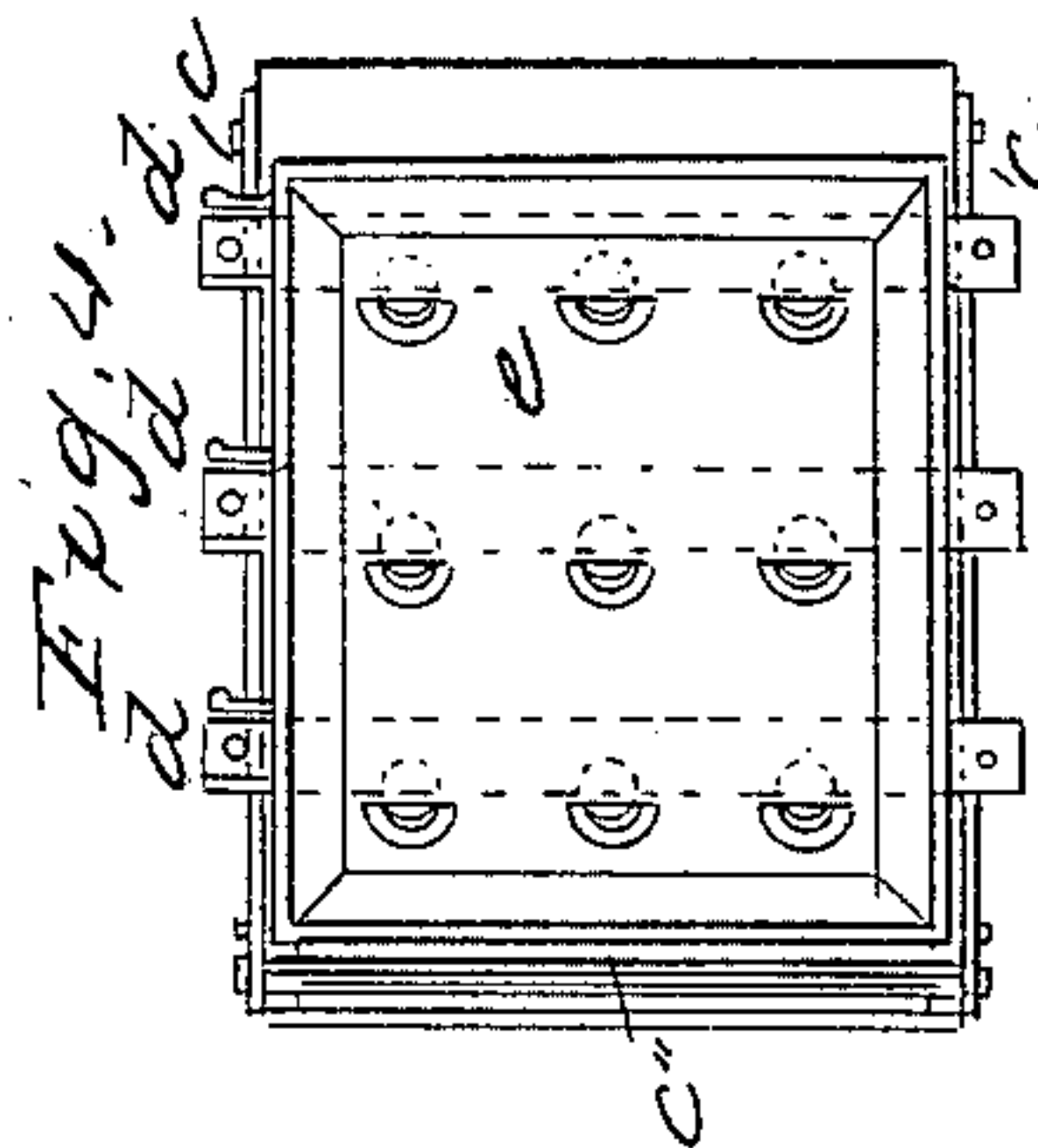
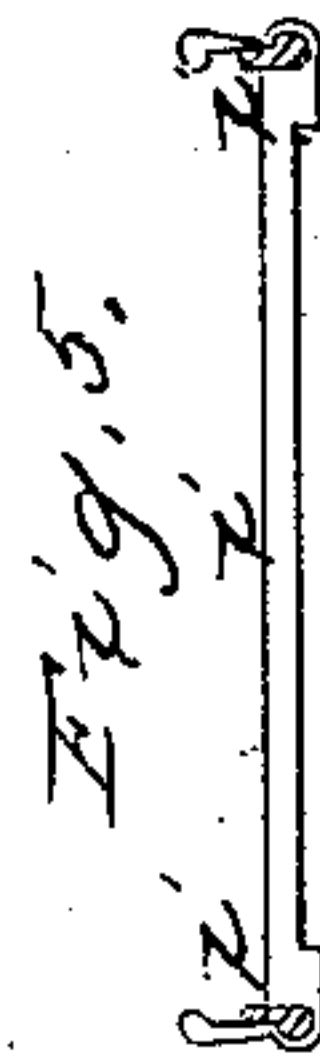
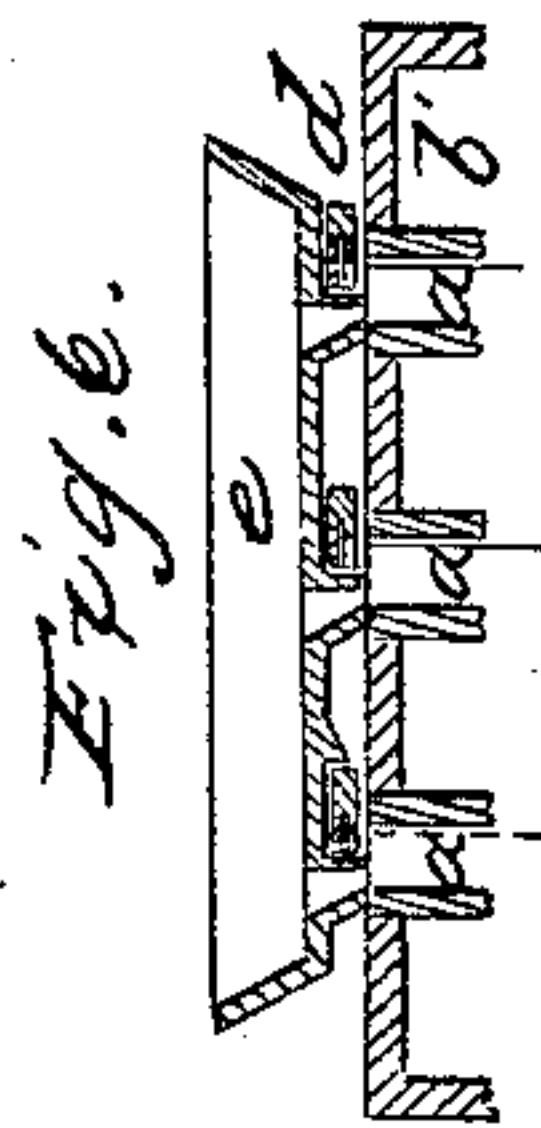
W. THOMAS.  
Candle Mold.

No. 27,763.

Patented April 3, 1860.



Witnesses:  
S. W. Magnord  
George W. North



Inventor:  
William Thomas  
by his attorney  
J. P. Pearson



# UNITED STATES PATENT OFFICE.

WILLIAM THOMAS, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND WILLIAM WEBB, OF SAME PLACE.

## MACHINE FOR MOLDING CANDLES.

Specification of Letters Patent No. 27,763, dated April 3, 1860.

*To all whom it may concern:*

Be it known that I, WILLIAM THOMAS, of New York, in the county of New York and State of New York, have invented certain  
5 new and useful Improvements in Machinery for Making Mold-Candles; and I do hereby declare the following is a full, clear, and exact description of the same, reference being made to the annexed drawing, making  
10 a part of this specification, of which the several figures are fully described herein and in which similar letters indicate similar parts throughout.

My invention is an improvement in candle  
15 molding whereby increased facility is obtained for effecting the operation; greater cleanliness in the application of the tallow and in the removal of the excess or surplus from the top of the mold; and greater facility in discharging or removing the finished  
20 candles.

The first part of my improvements consists in the application of a pouring dish to the top of the mold frame, so operating  
25 in connection with the wick holders that the tallow is prevented from coming into contact with the mold bed or table, thereby keeping it at all times clean. In the old mode this is not the case, as after the molds  
30 are run full, the surplus spreads over the table, and must be cleaned off at each pouring, involving a loss both of time and materials. The second part lies in the manner of holding the wicks and centering the same  
35 in the molds. The third part lies in the use of a supporting frame for sustaining the candles by their wick holders while being taken off the molding frame after having been discharged from the molds.

40 At (a) in the several figures is seen a series of molds of the usual form and construction, set in their tables or frames. These molds are arranged in parallel rows, as seen in top view, Fig. IV. Upon each  
45 of the two longest sides or edges of the table (b) is secured a thin plate (c) in such manner that it shall have a slight sliding motion in the direction of its length, the holes by which they are screwed to the table being  
50 slotted as seen in Fig. I. These plates have notches cut in their upper edges in which the ends of the wick holders (d) lie, as seen in the several figures. The wick holders are of usual construction, being two  
55 bars or plates one of which rests upon the

other within a rabbet, when the two are together, thus pinching the wick which is passed between and clamping it. These bars lie across the table (b) and directly over the  
60 mouths of the molds, there being a wick holder to each cross row of molds as in Fig. IV. The ends of these rest in the notches in the slides (c) but are in no wise supported by those slides, the object being merely to  
65 give a movement to one side of the molds of all the wick holders, and to move them back again at a certain part of the operation. The slides are moved by two levers (c') connected by a cross bar or handle (c'') as  
70 shown. Working in combination with these is the pouring dish, and this is a shallow pan, as shown at (e) having in its bottom a series of semi-circular holes conforming to  
75 the arrangement of the molds, there being a hole for each mold in the frame. Beneath the pan each hole is prolonged by a semi-circular projection which extends below to  
80 a distance equal to the thickness of a wick holder, and in such order that the flat side of each hole is against such holder, as seen in Figs. IV and VI. Thus each pouring  
85 hole in the pan in connection with the wick holder completely incloses the tops of the molds. The semi-circular part closes them in on the one half and the wick holder covers  
90 the opposite half. The object of giving the sliding motion to the wick holders and to the pouring pan is to enlarge the aperture through which the melted tallow may run into the molds, and, where the pan is used, it  
95 also acts to bring the mouths of the several discharge holes directly over the molds so that the tallow will enter, as shown in the section Fig. VI. This is accomplished  
100 by putting the hand against the bar (c'') which connects the levers (c'), and these again move the slides (c). This movement it will be seen transfers the wicks also to one side of their respective molds as seen in Fig. VI, so that immediately on the molds  
105 being filled and before the tallow can set, the bar is shifted back, thus bringing the wick once more to the center as seen in Figs. II and III.

To assist in discharging the finished  
110 dles, there are the usual pistons beneath, as shown at (f), through small holes in which the wicks pass from their bobbins. In the old way each row of candles held by the wick holders is lifted clear, after being



started by the pistons, and then cut off. The surplus tallow upon the table is then to be cleaned off, and new wick holders introduced and carefully adjusted. In my machine I have improved this part, by introducing a supporting frame which being raised as the candles are started from beneath, takes under the ends of the wick holders and continuing the lifting motion raises the whole frame of candles at once clear of the molds and table, and suspended over the molds until new wick holding clamps are placed beneath. This frame rests upon the top of the trough (*g*) which incloses the molds. It consists of four pieces forming an oblong square. The two pieces (*i*) lying parallel with the slide plates (*c*) form the bearers and are pivoted into the end pieces (*i'*) so as to be capable of turning; they have also handles to turn them. In Fig. V, is shown detached one of the end pieces (*i''*) and the bearers (*i'*) are in section, shown as turned up. In Fig. II the bearers are seen turned down. The ends of the wick holders overhang the side plates (*c*) and the bearers of the supporting frame rest beneath on the trough (*g*) as in Fig. II; when raised, this frame therefore takes under the ends of the wick holders and lifts them accordingly. The raising of the frame is performed by its end pieces (*i''*).

On each side of the mold stand there is a crutch (*K*) shown in dotted lines in Fig. II, attached to the top of a rack (*k''*). This is worked by a pinion (*l*) on the cross shaft (*l'*) as plainly seen in the figures. Upon this cross shaft (*l'*) there are also two eccentrics (*m*) upon which the table holding all the pistons (*f*) rests, so that by the turning of the crank (*n*), the candles are started from beneath by the eccentrics raising the pistons (*f*) and the upward motion is continued by bringing the bearers (*i*) under the wick holders.

The operation is as follows: The wicks having been adjusted in the wick holders and these latter in place with ends in the recesses in the slide plates (*c*), place the pouring pan (*e*) upon the mold table. The flat sides of the pouring holes will press against the edges of the wick holders. Move (*e''*) so as to cause the holes to come over the molds as in Fig. VI, then pour in the melted tallow, or whatever material the candles are to be composed of until the molds are filled.

By reason of the close contact of the bottom of the pouring holes with the table and the wick holders, no tallow can flow out upon the said table; it is therefore preserved clean. When the tallow has sufficiently cooled the crank (*n*) is to be turned; thus raising the pistons (*f*) while the lifters (*i*) are approaching the wick holders, and starting up the candles in the first instance; the bearers will then come up under the ends of the wick holders, and raise the whole until the candles are clear of the molds as in Fig. III. The table being entirely clean, as well as the edges of the molds, no clearing off of tallow is necessary. A second set of wick-holders is then put upon the table, as seen in same figure, and the candles are then severed from the wicks, and the entire frame removed from the crutches (*k*). Another frame is then put on and lowered, but as it approaches the table the projecting ends of the wick holders would interfere with its descent past them in order to rest once more upon the trough (*g*). They either turn up of themselves on striking or are turned up by their handles, as seen in Fig. V, when they will pass clear. The handles are then turned down for the bearers to engage for the next discharge of candles. The pouring pan being now replaced upon the new set of wick holders and over empty molds the pouring is gone over again as before.

I claim—

1. The pouring pan fitted with holes so formed as to inclose in combination with the wick holders, the top of each mold as described.

2. I claim the arrangement of the wick holders upon slides, so as to be capable of shifting the wicks to one side of the molds for facilitating the free entrance of the tallow as described.

3. I claim the supporting frame, operating in combination with the discharging apparatus, and with the wick holders for raising and supporting the candles after they are discharged, as described.

In testimony whereof I have hereunto subscribed my name.

WILLIAM THOMAS.

Witnesses:

I. P. PIRSSON,  
S. H. MAYNARD.