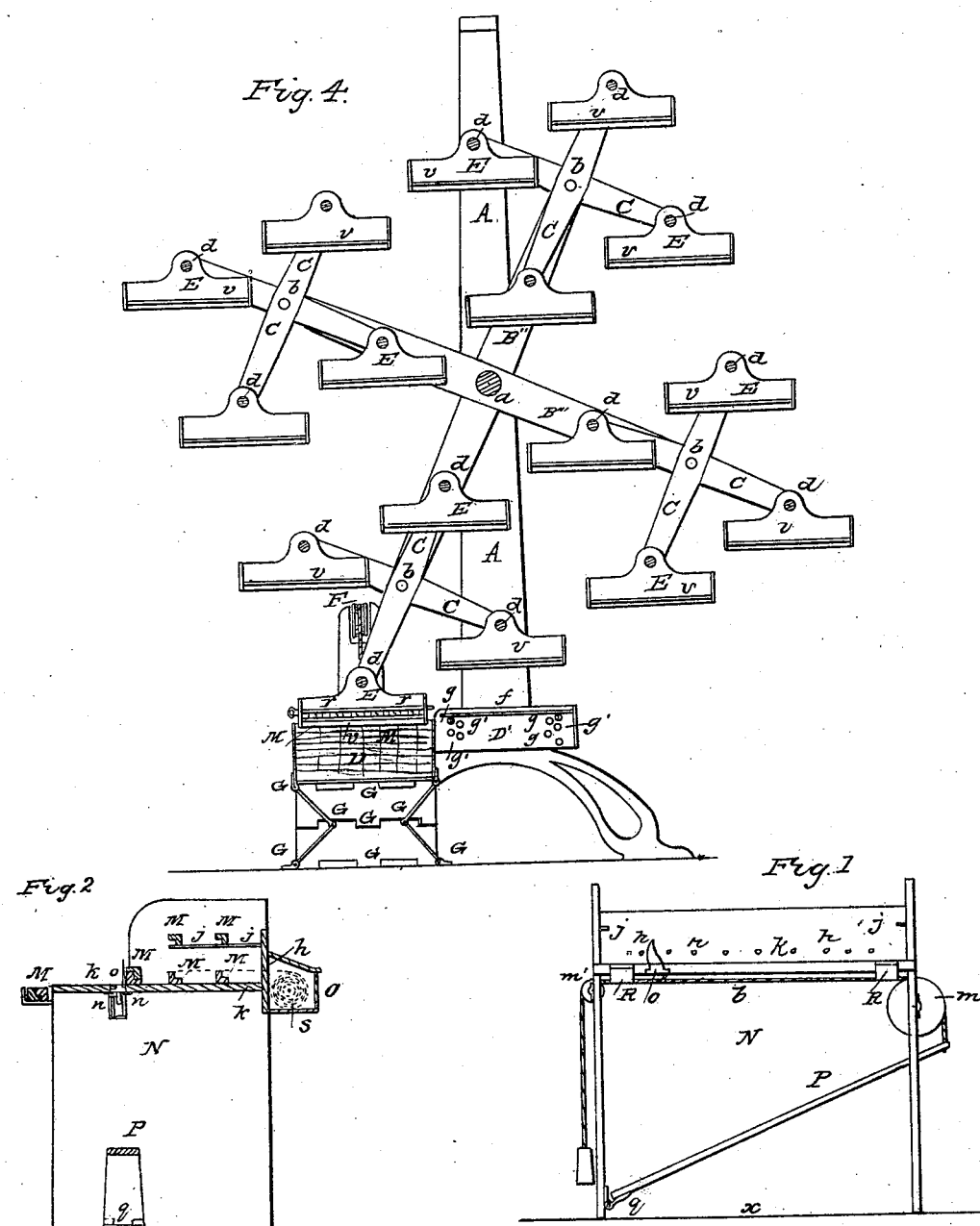


J. A. & A. F. JONES,
Candle Mold.

2 Sheets—Sheet 1.

No. 5,576.

Patented May 16, 1848.



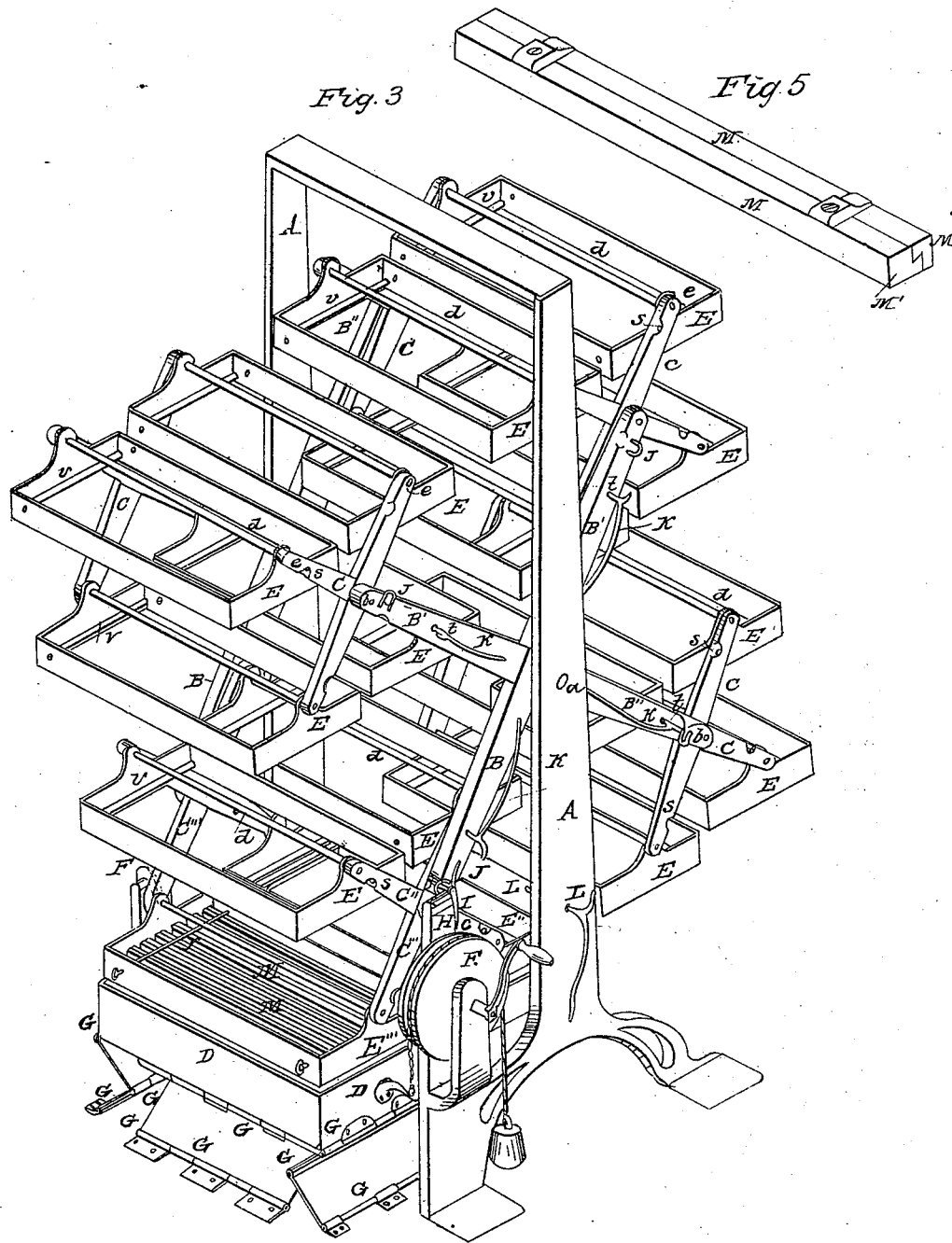
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UNITED STATES PATENT OFFICE.

JNO. A. JONES AND A. F. JONES, OF LEXINGTON, KENTUCKY.

MACHINE FOR DIPPING CANDLES.

Specification of Letters Patent No. 5,576, dated May 16, 1848.

To all whom it may concern:

Be it known that we, JOHN A. JONES, and ALFRED F. JONES, of the city of Lexington, in the county of Fayette and State of Kentucky, have invented a new and useful Machine for Dipping Candles; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an elevation of the apparatus used in preparing the wicks to be dipped. Fig. 2 is a vertical section in the line $x-x$ of Fig. 1. Fig. 3 is a perspective view of our dipping machine, Fig. 4 is a vertical section of the same, and Fig. 5 represents one of the pairs of bars from which the wicks are suspended.

N, Figs. 1, and 2, is a rectangular box or frame, having on the upper part of its rear side a receptacle O, into which the balls of wicking S are placed; the ends of the wicks are then passed through the holes h, h, h , in the rear side of the box N. This box N has a plate or covering k , extending from end to end, and from its front to its rear side, and having the plane of its surface a short distance below the line of the holes h, h . A portion of each of the ends of the box N, extends a short distance above the plate k and has projecting from its inner side ledges or shelves j ; these ledges or shelves are used for the purpose of supporting the ends of the bars M', M' ; while below them, resting on the plate k are the bars M, M. The bars M M' are dovetailed lengthwise in the manner represented in Fig. 5 and when brought together are prevented from coming apart by the buttons seen also in Fig. 5. The plate k has a longitudinal slot or opening in it, in which opening, resting on ways n, n , the carriage o , supporting the knife i is made to traverse by means of the cord l , passing from one end of the carriage o , over the pulley m and attached to the end of the treadle P, which vibrates on a joint at q . From the other end of the carriage o , a cord passes over the pulley m' , and is attached to

a weight which draws the knife i , into its original position when the pressure is taken from the treadle P.

A, A, Figs. 3 and 4 are the standards of our dipping machine and support the ends of the shaft a . From each end of the shaft a , and between the standards A, A, radiate the arms B, B', B'', B''', placed at right angles to each other and revolving upon said shaft a . The corresponding ends of the arms B, B', &c., are connected by the rods or shafts b, b, b, b . Each of these rods or shafts b, b , supports and has revolving upon it at each end a set of arms C C &c., which are arranged in the same manner upon the shafts b , as the arms B, are upon their axis a . The corresponding ends of the arms C', C', C'', C''', are connected by rods d, d, d , in the same manner as the ends of the arms B B B are connected by the rods b, b . From each of these rods d, d , is suspended, in such a manner as always to preserve a horizontal position, a rectangular frame of iron or other suitable material open at bottom and at top; on the inner sides of the ends of this frame are ledges or shelves v , Fig. 4, used to support the ends of the bars M M' after they are buttoned together. The longer sides of the frame E have holes through them near their ends, so situated that wires r, r , being run through said sides will rest upon the tops of the bars M M' and hold them firmly in place.

D is the tallow box; this is connected at its ends and sides to the platform of the machine by and supported upon the double flap hinges G, G, arranged substantially as represented in Figs. 3 and 4. To each end of the tallow box D, a cord is attached; one end of which passes twice around the pulley F, and is attached to a weight; the other cord also passes over another pulley F' (Fig. 3) and is also kept tight by a weight. The pulley F, is turned by hand by means of a crank, the weight lessening the labor of raising the box of tallow D, while its own weight will carry it down again when the crank of the pulley F, is released; the hinges G, in the mean time being so arranged that

they keep the tallow box D, always in a horizontal position. From the rear side of the tallow box, at each end thereof, projects a plate D' (Fig. 4); extending from one of these plates to the other are rods *g, g*; upon these rods rests the dripping board *f*; the position of which may be altered by placing the rods *g* in different sets of the holes *g', g'*, in each of the plates D'.

The operation of my machine is as follows: A number of balls of wicking S, being placed in the box O, Fig. 2, the ends are passed through the holes *h, h*, and are brought forward over the bars M, which rest on the plate or cover *k*, and under the bars M', which rest on the ledges *j*, in the manner represented in Fig. 2, when one of the bars M, is brought close to the opening in which the knife *i* traverses, a corresponding bar M', is brought down from the ledges *j, j*, by hand and placed upon M, and the two are buttoned or otherwise fastened together, (see Fig. 5,) thus being made to clamp as many wicks as there are holes in the back of the frame N. The two bars thus connected together are then brought forward into the brackets R, where they are kept until another pair of bars has been fastened down upon the row of wicks. The bars M, M', that were placed in the brackets are now turned over on their edges in order to give greater tension to the wicks which are extending from them to the bars that are still behind the knife *i*; the distance between the two pairs of bars being just what is required for the length of a wick. The wicks being thus tightened the operator throws down the treadle P, with his foot, and the knife *i*, is made to traverse and cut the wicks close to the bars that were last fastened together. After the knife is drawn back by the weight, the pair of bars that were in the brackets R, are removed to make room for the pair from which it has just been separated; and the operation of clamping and cutting the wicks is continued until the operator has bars enough to fill all of the rectangular frames E, in the manner represented at E''' Fig. 3, the wicks of course being pendant from the under side of the bars. The dipping machine is now brought into the position shown in Fig. 3, and is held in that position by the following device. To the side of the standard H, is attached a spring I, having a tooth I' at its vibrating end; the tooth I' is made to pass through the loop and recess J, on the arm B, near its extremity, and thus prevents the arm B from turning upon the shaft *a*. The frame E''' is now exactly over the tallow box D, and is maintained there by the tooth *t*, on the end of the spring K, which spring is fastened at its other end to the arm B. In Fig. 3 the tooth *t*, is represented as

passing through B, into the opening *s* in the arm C. Every one of the arms C has a corresponding opening *s* which is for the same purpose.

By turning the pulley F, by its crank, the tallow box is elevated and the wicks are immersed in its contents, as represented at D, Fig. 4. The tallow box is then allowed to descend with its own weight, the arms C are made to revolve upon their axis *b*, the tooth *t*, is made to catch in the opening *s*, in the arm C, and the frame E, is brought over the tallow box, and the frame E''', is carried from above the tallow box to above the dripping board. The tallow box is again raised, the dripping board *f*, is raised with it, and at the same time that the wicks hanging from the bars M, M', in E, are being dipped, the dripping board is receiving the drops from the ends of the wicks that were dipped immediately preceding. If we suppose the wicks in E''' to be the last to be dipped on this set of arms C, it is desirable to clean the end of these wicks without again dipping those that have already undergone that operation. To effect this it is obvious that the position of the arms B, must be altered. This is done as follows: The spring catch I, is released from the loop and recess J, on the arm B, and the whole apparatus is made to revolve on its axis *a*, until the spring catch L, passes through the loop and recess J, on the arm B, and holds it in such a position that there is no frame E, over the tallow box, but the one that was last dipped is over the dripping board *f*, which is now raised and receives the drops from the wicks. The spring catch L, is now released from the loop and recess on the arm B, and the arm B' is brought to be fastened by the tooth I' which now passes through its loop and recess J, corresponding to the same on the arm B, and the operation of turning and securing the arms C, dipping the wicks, cleaning their ends, shifting the arm B, to clean the ends of the wicks last dipped on this set of arms C, is repeated until the wicks have become coated to the proper thickness, which, it is evident, will not be the case until the machine has made a number of revolutions.

Having thus fully described our candle making machine, what we claim therein as new and desire to secure by Letters Patent, is—

1. The constructing the candle rods in two pieces, and the manner of supplying them with candle wicks, substantially as herein set forth.

2. We also claim the use of the large vertical rotating reel, combined with the series of small rotating reels suspended at the extremities of its arms, and with the swinging frames, that receive the candle rods, sus-

pended from the extremities of the arms of the small reels, arranged and operating substantially as herein set forth.

3. We also claim the combination of the tal-
5 low box and dripping board, with the large rotating reel, the series of small reels and swinging frames, suspending the candle rods, substantially in the manner herein set forth.

10 4. We also claim the connecting of the tallow box to the platform or base of the machine, by means of hinges at its sides and

ends, for the purpose of preserving the box in an undeviating horizontal position while it is being raised and lowered.

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ALFRED F. JONES.

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Witnesses as to Alfred F. Jones:

Z. C. ROBBINS,
L. WILLIAMS.