P. R. Gottstein.

Making Dipped Candles.

No. 72019

Patented Dec. 10 1867.

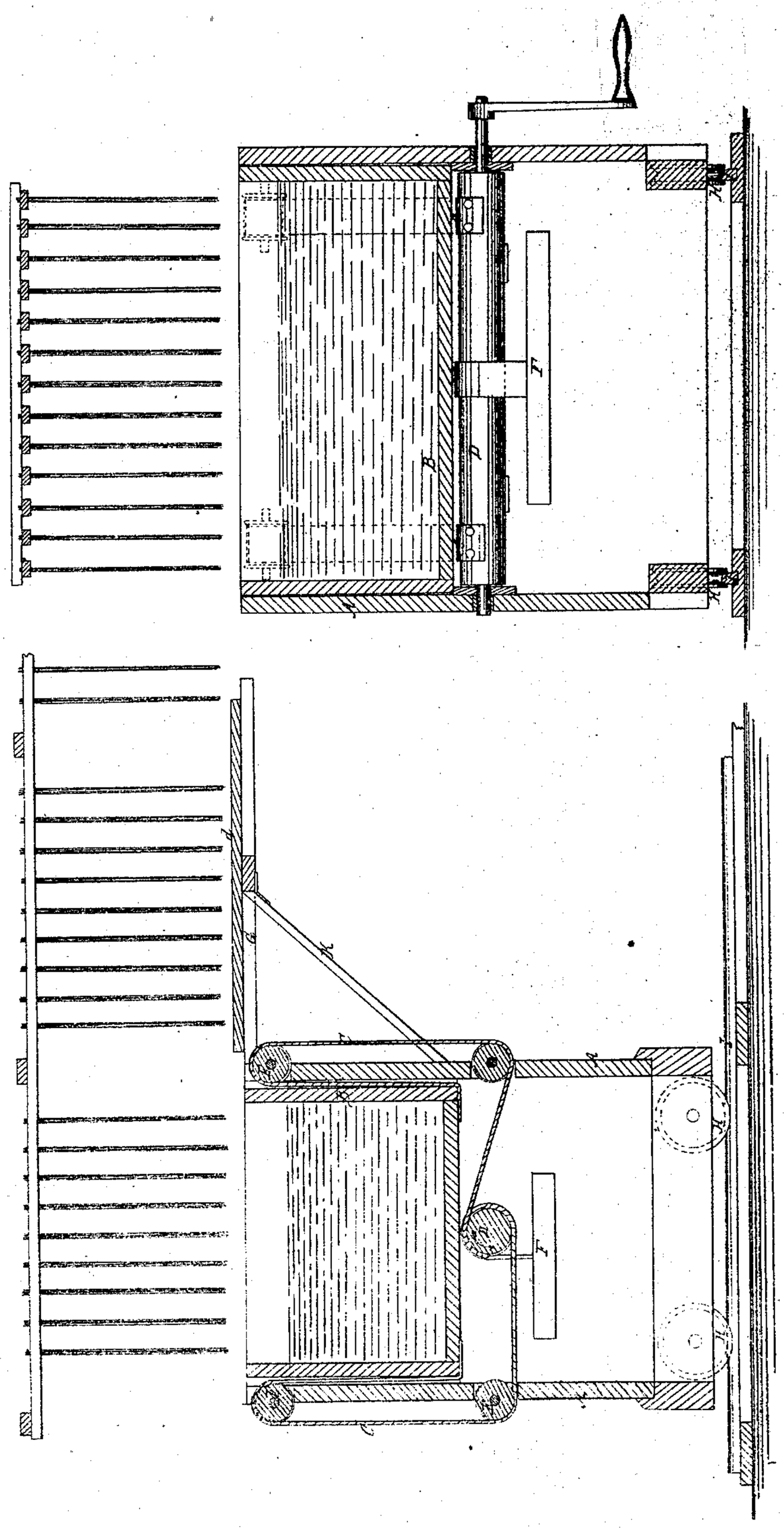

Fig. 2.

Fig. 1.

Witnesses
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PETER R. GOTTSTEIN, OF HOUGHTON, MICHIGAN.

Letters Patent No. 72,019, *dated December* 10, 1867.

IMPROVED APPARATUS FOR MAKING DIPPED CANDLES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, PETER R. GOTTSTEIN, of Houghton, in the county of Houghton, in the State of Michigan, have invented a new and improved Apparatus for Making Dipped Candles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 is a vertical cross-section of an apparatus made according to my invention.

Figure 2 is a vertical longitudinal section.

Similar letters indicate corresponding parts.

The object of this invention is to improve the apparatus or means employed for making candles of the kind known as "dipped," and thereby to facilitate the manufacture of such candles, and improve the product.

The invention involves a change in the method or process in this respect, among others, that the candles, while being formed or built up, are kept stationary, and the frames or "ports," from which they are suspended, are only removed after the candles are fully formed.

The letter A designates a car or movable frame, mounted on wheels H, which roll on a track, I, laid on the floor of the dipping-room, or place where the manufacture is carried on. The track is laid in a line with and beneath the "ports" or frames, from which the wicks, seen in red outline in the drawing, are suspended. There are as many such tracks as there are lines or ranges of "ports," and the tracks may be connected to each other by switches, or other devices, to enable the car A to go from one to the other. The car is hollow, and has suspended within it a dipping-vat or cistern, B, the tallow in which is kept supplied at a proper height, and it is kept in a melted state and hot, by steam-pipes arranged within and around the cistern, or by means of a furnace in the lower part of the car, or by any other method preferred. The cistern is suspended upon double sets of straps, C, whose ends are fastened respectively to the bottom of the cistern B and to the periphery of a shaft, D, which is mounted in the ends of the car, one end of the shaft extending out far enough to receive a crank, by which it is rotated. The straps C are fastened to the shaft in reverse order, one being passed over and the other under the shaft, so that when the shaft is turned both straps will be either wound thereon or unwound at the same time. The said straps are carried from the shaft in opposite directions, and go through the sides of the car, and beneath and around pulleys E E, whence they go upwards over other pulleys E E, arranged on the upper part of the car, and thence downwards to the bottom of the cistern, where they are fastened, as shown in fig. 1. I balance the cistern by means of a weight, F, suspended by a strap from the middle of shaft D.

When the cistern is in its lower position, as in the drawing, the strap of the weight is wound up on the shaft, and *vice versa*. The office of the weight is to counterbalance the cistern, and enable the workman to operate the apparatus with facility. When the straps C are wound upon the shaft, the cistern B ascends until its bottom reaches the upper sets of pulleys E, and, by its ascent, allows the wicks suspended from the "ports" or wick-frames to become immersed in the molten tallow, the weight F assisting the ascent of the cistern, and relieving the workman of a portion of the labor. The cistern is next caused to descend to its lower position, the weight serving to regulate the rapidity of its descent, and the car and cistern are then pushed along the track I to the next division of wicks, which are immersed in the same manner. When the wicks have been dipped or immersed, I remove the drops of tallow which hang upon their bottoms, and give their butts a square form by means of the devices next described, which act in conjunction with the car and cistern.

To one side of the car, I hinge a bracket, G, which is held up in a horizontal position by the hinged brace K. This bracket supports a slab or smooth board, J, which is loose on the bracket, and is taken off after each dipping, and is put on the top of the cistern, the slab being so made as to cover it completely. When the slab is in place upon the cistern, the car is brought beneath the candles, and the cistern is raised by means of the crank until the slab comes against the butts of the candles, and removes the drops that hang on their ends by a single operation, and gives the candles a square form. The bracket G enables the operator to have the slab always at command to be put on the cistern, and the work proceeds with ease and dispatch.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination and arrangement, substantially as described, of the weighted cistern B, car A, and straps C, for the purpose set forth.

2. The combination of the cistern B, car A, and track I, substantially as and for the purpose described.

3. The combination and arrangement of the slab or board J with the weighted cistern B, substantially as and for the purpose described.

4. The new process of producing dipped candles by raising the molten tallow or other liquid to the wicks, substantially as described.

PETER R. GOTTSTEIN.

Witnesses:

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