

Improvements in devices for filling and capping capsules / [Frank Burgett Grove].

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COMPLETE SPECIFICATION.

Improvements in Devices for Filling and Capping Capsules.

We, FRANK BURGETT GROVE, of 63 North Main Street, and GEORGE MITCHELL, of 36 W. Third Street, both of Mansfield, in the County of Richland, and State of Ohio, United States of America, Gentlemen, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly
5 described and ascertained in and by the following statement:—

Our invention relates to improvements in capsule machines, and the object of our invention is the provision of a machine of the character and for the purpose named, which will fill and make the capsule in a rapid and perfect manner; which will be compact in order that it will occupy little space and be easily transported
10 from place to place and which will possess merit in point of simplicity, durability and inexpensiveness of construction and thereby prove entirely practical.

To attain the desired objects the invention consists of a capsule machine embodying novel features of construction and combination of parts substantially as disclosed herein.

15 Figure 1 represents a perspective view of the machine.
Figure 2 represents a vertical central sectional view.
Figure 3 represents a detail sectional view of one of the molds, and
Figures 4 and 5 represent detail perspective views of the cells or dividing cases.
Referring by letter to the drawing:—

20 A designates the frame, which is of open rectangular shape having at the top portion B, the ledges or supports C C¹, the ledges or supports E², the guide frame P, having the guides Q, in which fits and moves the plunger N, having the stem O, said plunger being operated by the lever R, which is fulcrumed in the uprights S, and connected to the adjusting device T, which is connected at U, to said lever R,
25 and the throw of the lever is regulated by means of the set screw or by the cam lever W, fulcrumed at V, to the frame.

Fitting on the head of the plunger by means of the cleats z, is the mold X, which carries a series of sections D², of capsules which fit in sockets Y, of the mold.

30 Fitting in the open top of the frame is the plate H, I secured by screws K, and having the depending rim J, and passing under the rim is the slide or sliding plate L, upon which rests the cell cases M, having cells F², and below these cells is the cell or guiding case F, having a flange or rim E E¹, which rests on the ledge C C¹, and said cell case has its lower portion D, depending for a suitable
35 distance below said supporting ledges C C¹.

In Figure 3, is shown a holder A² for the upper portion of the capsules B², which may rest on the supports C C¹ or on the ledges E², E³ and is provided with the openings C², for holding said upper portion B².

The operation of our machine will be readily understood from the foregoing
40 description taken in connection with the accompanying drawings and briefly stated, is as follows:

The parts are in the position shown in Figure 2, the material for making the

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Improvements in Devices for Filling and Capping Capsules.

capsules is placed in the cells and rests upon the plate L, the plunger carrying the lower portion of the capsules is pushed up until said portion of the capsules enters the openings G, of the upper mold, then the plate L is withdrawn which permits the material to fall in the capsules, then the plate is pushed back into position and the plunger is forced up until the capsules receive and compress the 5 entire amount of material therein.

In order to put the upper portion or top of the capsules on the lower portion to form the complete capsules, the plate A², which carries the upper portion of the capsules B², is placed on the ledges E², and the plunger is pushed up until the lower portion of the capsules slides into the upper portion of the capsules making 10 perfect and complete capsules.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, we declare that what we claim is:

1. A capsule machine consisting of a framework, a plunger carried thereby, 15 having the capsule carrier, and a cell case for receiving a section of the capsule and directing the material into said sections of the capsules.

2. A capsule machine consisting of a framework, a plunger mounted therein, mechanism for operating the plunger, a mold mounted on the plunger and carrying the lower sections of capsules, a mold resting in the framework and 20 carrying the upper sections of the capsules, whereby the plunger may be operated to bring the two sections together and make the complete capsule.

3. A capsule machine consisting of the framework, a cell case mounted in the framework, a plate arranged above the same, a guide cell case above said plate, a plunger carrying the lower sections of capsules, mechanism for operating the 25 plunger to force the lower sections of the capsules into the cell case to receive the material, and a mold carrying the top sections of the capsules supported or arranged in such relation to the plunger as to receive the lower sections and form perfect capsules.

4. A capsule machine consisting of a casing, a plunger mounted therein and 30 carrying the lower sections of capsules mechanism for operating the plunger and for adjusting or regulating the movement thereof, means for filling the lower sections of the capsules, and means for holding the upper sections of the capsules to force them upon the lower sections by the action of the plungers.

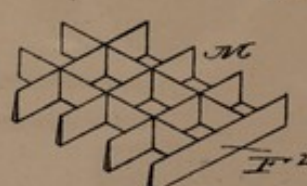
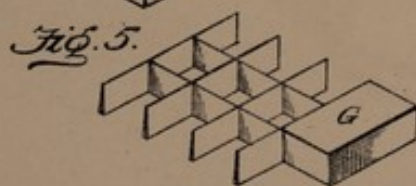
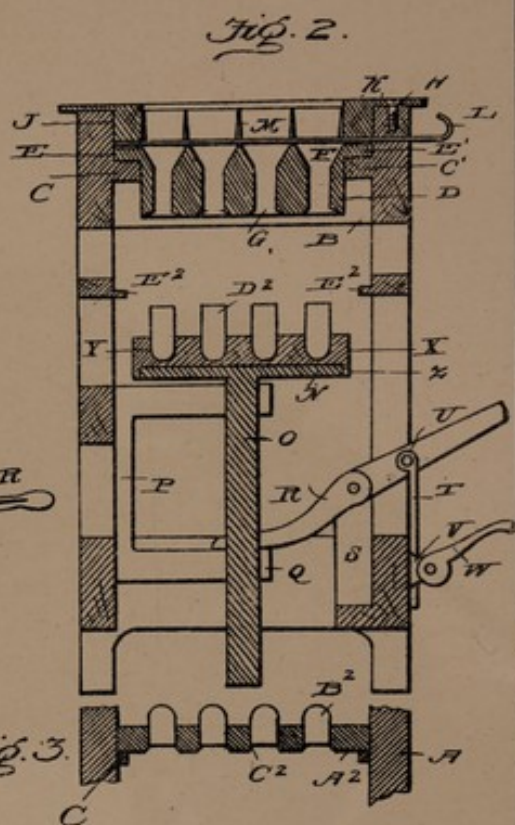
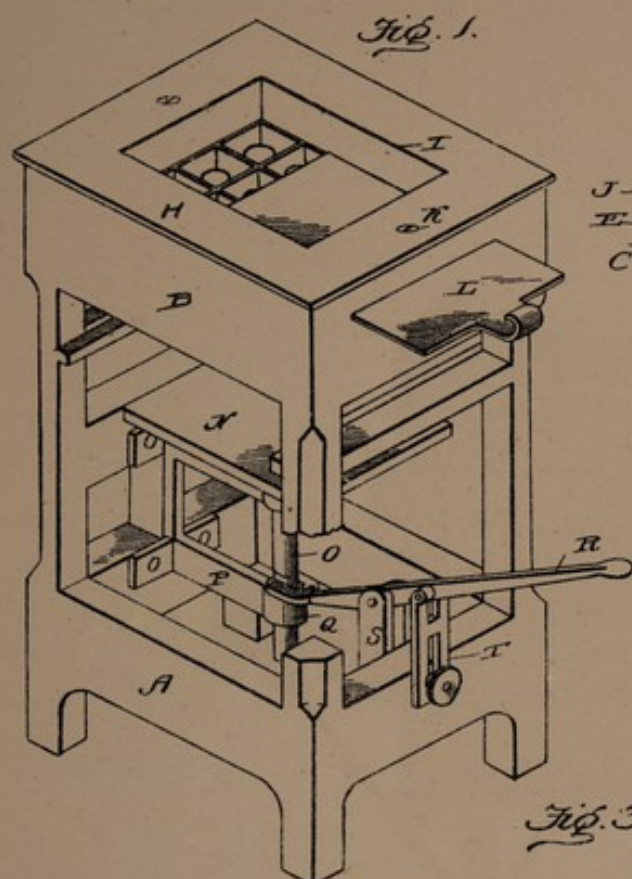
Dated this 16th day of March 1897.

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Agent for Applicants.

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[This Drawing is a reproduction of the Original on a reduced scale]

