

Dec. 29, 1936.

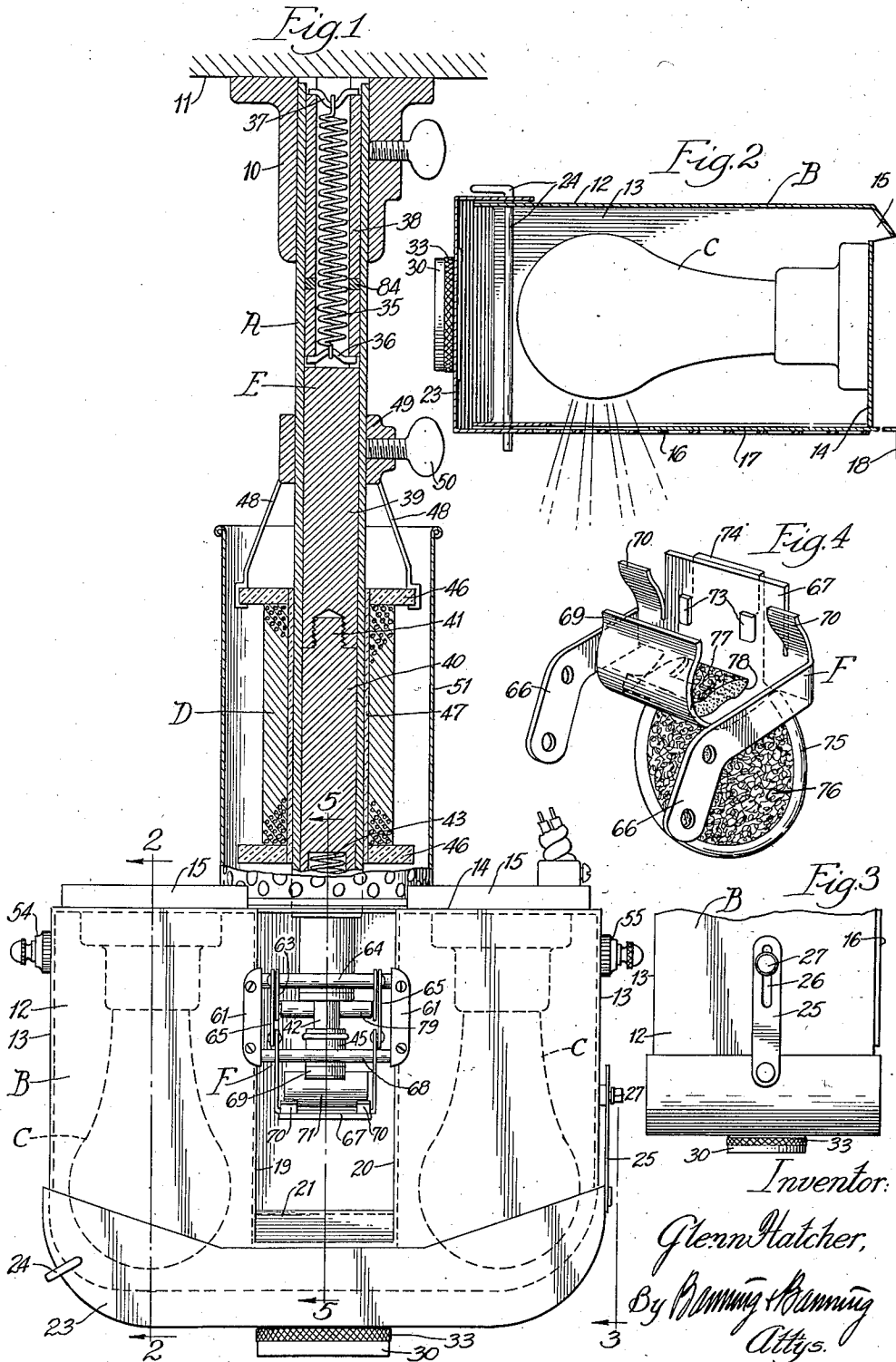
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2,065,694

EGG CANDLING AND STAMPING DEVICE

Filed Oct. 4, 1934

2 Sheets-Sheet 1



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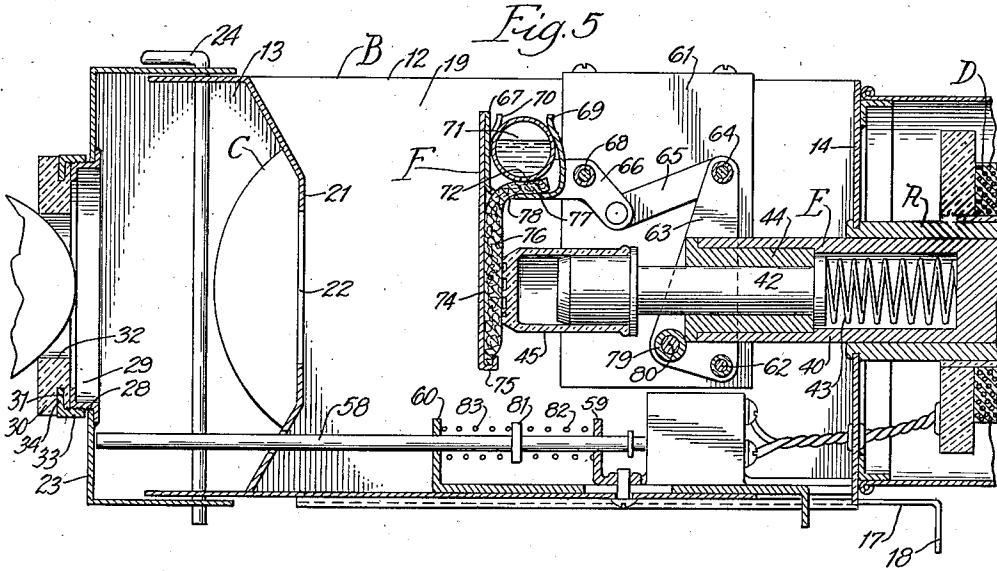
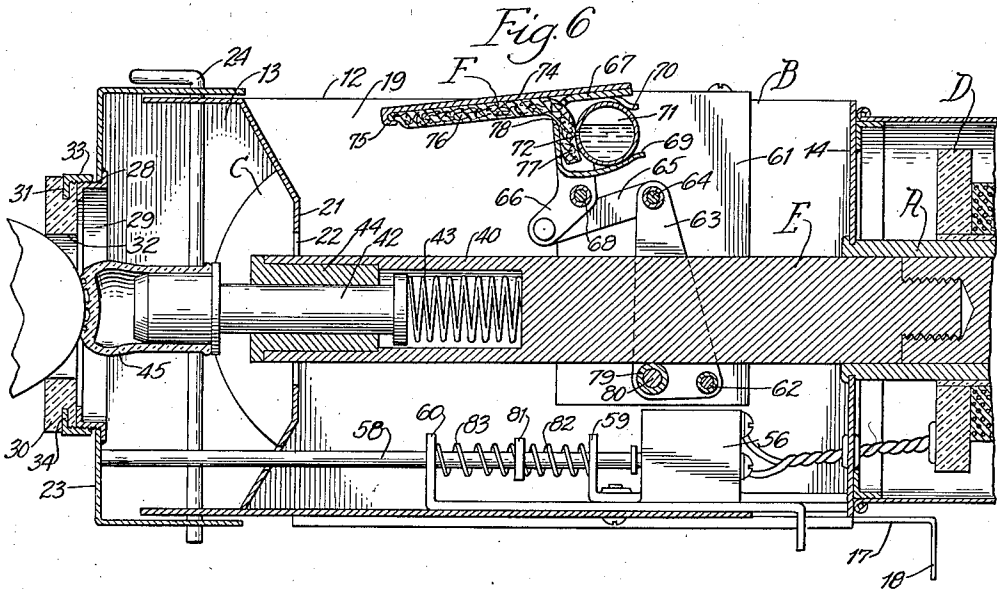
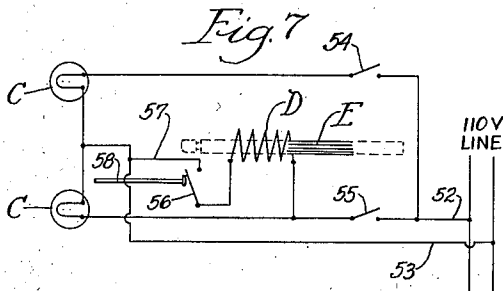
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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EGG CANDLING AND STAMPING DEVICE

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5 Claims. (Cl. 88—14.2)

This invention relates to an egg candling and stamping device in which the eggs are automatically stamped during the process of candling, it being only necessary for the operator to press the egg against a support to complete an electrical contact which operates a ram carrying a suitable stamp into contact with the egg. The device is advantageous in that there is little or no lost time in completing these two separate operations, namely, candling and stamping.

The stamping mechanism is provided with a novel automatic ink feed which requires practically no attention, and for replenishment of the ink supply requires only that an empty cartridge be replaced with a filled one. Other novel features of the present device will appear from the following description in conjunction with the accompanying drawings, in which—

Figure 1 is a plan view, partly in section, showing the device in normal inactive position;

Fig. 2 is a sectional view through one side of the candling compartment, the section being taken as indicated by line 2—2 of Fig. 1;

Fig. 3 is a fragmentary view in side elevation showing the means for securing the door in closed position, the figure being viewed on line 3 of Fig. 1;

Fig. 4 is an enlarged perspective view of the stamp pad and clip mechanism for holding the ink cartridge in place;

Fig. 5 is an enlarged sectional view, the section being taken on the center line of the device as indicated by line 5—5 of Fig. 1, and showing a portion of an egg adjacent the peep hole for candling, the stamping mechanism being in normal inactive position;

Fig. 6 is a view similar to Fig. 4 but showing the stamping mechanism in actuated position; and

Fig. 7 is a diagrammatic view of the electrical circuit used in the operations of the mechanism.

The device comprises by preference a horizontal tubular standard A of brass provided at one end with a bracket 10 for securement to any suitable upright 11, and having at its other end a light compartment B which houses light bulbs C. Surrounding the standard adjacent the compartment B is an electrical solenoid D for advancing a ram E. The inner walls of the compartment B provide a central compartment or recess in which is mounted an inking mechanism F and associated printing mechanism.

Referring more specifically to the light compartment B, this part of my device comprises a top 12, side walls 13, and a rear plate 14 from

which are struck ventilating openings 15. The bottom of the compartment is provided with a perforated grill 16 over which is placed a slide 17 having at one end a grip 18. A certain amount of light may accordingly pass through the grill onto a table or bench therebelow, and air is permitted to circulate through the grill and out through the openings 15. The center of the compartment is divided by upstanding walls 19, 20, and 21, providing a recess or inner compartment for the inking mechanism which is thereby protected from the heat of the light bulbs C. The wall 21 is formed with an opening 22 through which the ram E passes in its advance toward the egg. By the construction described, the light compartment is of general U-shape with one light on each side thereof.

Fitted over the front side of the light compartment is a cover or closure 23 hinged on a pin 24 whereby it may be swung open for replacing the light bulbs. The closure is provided at its free edge with a slip link 25 having a slot 26 through which extends a headed screw 27 in threaded connection with the light compartment. For normal operation the screw 27 is not tightened so that the slip link is free to move longitudinally for a limited distance which determines also the swinging arc of the door; the screw may, however, be tightened in case the stamping mechanism is not to be operated or while the device is not being used. By means to be hereinafter described the closure is normally held open to the extent permitted by the slip link.

The closure is provided with an opening 28 in which is secured a threaded bushing 29. A cushion 30, preferably made of leather, with an annular groove 31 and a central opening 32, is placed adjacent the bushing 29 and secured thereto by a bezel 33 having an intumed flange 34 fitted in the annular groove of the cushion. The bezel is internally threaded to cooperate with the threads on the bushing whereby a portion of the cushion is securely clamped between the flange on the bezel and the end of the bushing. By referring to Fig. 5 it will be seen that the cushion provides a suitable peep hole in which an end of the egg being tested may be inserted in the usual manner for candling.

The means for stamping the egg while being held in candling position may comprise a reciprocating ram E slidably fitted in the standard A and normally held in retracted position by a spring 35 which is secured to the ram by a cross pin 36, and anchored to the standard by a cross pin 37

which abuts a tubular plug 38 securely fitted in the standard A.

The ram is made of two sections 39 and 40 secured together as by threaded connection 41, the section 39 being of soft iron, whereas the section 40 is preferably made of brass. Slidably fitted in the forward end of the section 40 is a plunger 42 backed by a spring 43 which normally holds the plunger head against one end of a bushing 44, as shown in Fig. 5. Fitted to the forward end of the plunger is a rubber stamp 45 having suitable indicia on its face for transferring a mark to the egg. By preference, the stamp is hollow so as to be easily compressed when it contacts the egg to thereby take the shape of the egg contour when making an impression thereon.

Referring now to Fig. 1, I have there shown a solenoid D surrounding the standard, the solenoid being made of two end members 46 connected by a tube 47 forming a spool which receives the windings. Attached to one of the end members are fingers 48 extending outwardly from a collar 49 which is secured as by means of a thumb screw 50 to the standard at any desired position of adjustment. Secured to the back of the light compartment is a guard 51 which surrounds the solenoid to protect the same from being damaged or moved out of position of adjustment.

The solenoid is connected to a source of electric current as shown in Fig. 7 wherein the two lights C—C and the solenoid D are all connected in parallel across the leads 52 and 53. Separate switches 54 and 55 are adapted to close the circuit to the lights, and a switch 56 is interposed in the line 57 leading to the solenoid. The switch 56 may be of any conventional snap-switch type, actuated by a rod 58 one end of which is located adjacent the closure 23 and having sliding bearings 59 and 60, the latter being adjustable with respect to the former so as to vary the movement of the rod 58 required to actuate the switch 56.

The stamp is inked by mechanism F which is mounted on plates 61—61 secured adjacent the walls 19 and 20. A pivot pin 62 secured to the plates 61—61 pivotally support triangular arms 63—63 the outer ends of which are joined by a cross pin 64 which also connects one end of links 65—65 which are loosely pivoted to arms 66—66 formed from a sheet metal cradle 67. The arms 66—66 are pivotally supported on a cross pin 68 the ends of which are riveted to the plates 61—61.

The cradle 67 comprises a sheet metal stamping cut and bent to form a clip 69 and co-operating clips 70 which firmly hold a replaceable cartridge of ink 71, the cartridge having a small seepage hole 72 through which the ink is dispensed. Secured to the cradle, as by means of lugs 73, is a plate 74 the edges of which are rolled over at 75 to engage the edges of a felt pad 76 normally positioned against the stamp 45, as shown in Fig. 5. A wick or tongue 77 extends upwardly from the pad through an opening 78 in the cradle to lie adjacent the seepage hole 72 in the cartridge and receive therefrom ink which is fed to the pad 76.

A tubular roller 79 mounted on a pin 80 which is secured at its ends to the arms 63—63 normally lies adjacent the bushing 44 on the ram and in the path of its travel, as shown in Fig. 5, for the purpose of actuating the inking mechanism out of the path of the advancing ram, as shown in Fig. 6.

The rod 58 is provided with a fixed collar 81 abutted on one side by a spring 82 exerting a thrust against the bearing 59 to normally hold the rod away from the switch 56 and to return the

closure 23 to the position shown in Fig. 5. On the opposite side of the collar 81 is a spring 83 which bears against the adjustable bearing 60 and positions the rod with respect to the switch to vary the distance necessary for the closure to travel in order to close the switch.

The operation is as follows: The operator turns on switches 54 and 55 to light the bulbs C—C. An egg is then placed before the peep opening 32 to candle the same, and if satisfactory the operator then advances the egg with a slight pressure against the closure 23 which swings upon the hinge pin 24. The resulting movement of the closure thereupon transmits a longitudinal movement to the rod 58 which closes the switch 56, thereby energizing the solenoid D which pulls the arm E forward against the tension of the spring 35.

As the ram is drawn forward, the roller 79 is moved downward causing the arms 63 to rotate about the pin 62. This movement imparts to the stamping mechanism a rotating movement about the pin 68 to the position shown in Fig. 6. As the ram approaches the end of its travel the rubber stamp contacts the egg to mark the same with a suitable indicia, the final movement of the ram causing the stamp to expand and fit the contour of the egg, and the spring 43 compressing to absorb the shock of the ram. As the egg is removed from contact with the peep hole the spring 82 returns the rod 58 to normal position and opens the switch 56, whereupon the solenoid is de-energized and the spring 35 returns the ram against a rubber bumper 84 adjacent the plug 38.

While the drawings illustrate a candler with but a single peephole, obviously two or more may be used each in conjunction with a stamp applied to the end of a ram, all as hereinbefore suggested.

I claim:

1. An egg candling and stamping device comprising a light compartment having an inner wall, a cover having a peep hole hinged to the compartment to move relative to the inner wall thereof, a ram mounted in the inner compartment and operable through the inner wall of the light compartment into alignment with the peep hole in the cover, means for actuating the ram mounted in said inner compartment, and means actuated by movement of the cover to advance the ram into the light compartment, and a stamp longitudinally yieldable on the forward end of the ram for contacting the egg.

2. In an egg candling and stamping device, the combination of a light compartment having a peep hole in a wall thereof and an inner compartment having a wall opening in alignment therewith, a ram operably supported within said inner compartment for movement through the light compartment, stamping means on the forward end of the ram, and means supported within the inner compartment and protected from the light compartment adapted to ink the stamping means after the ram has been actuated.

3. In an egg candling and stamping device, the combination of a light compartment having a peep hole in a wall thereof and an inner compartment having a wall opening in alignment therewith, a ram operable through the wall opening of said inner compartment, stamping means on the forward end of the ram, means supported within the inner compartment adapted to ink the stamping means after the ram has been actuated, and means abutting the ram end when in retracted position within said inner compartment

adapted also to move the inking means away from the stamping means upon advancement of the ram.

5 4. In an egg candling and stamping device, the combination of a U-shaped light compartment having a source of light in each side of the U-shaped compartment and a peep hole in the outer center wall thereof against which an egg may be placed to be candled, a stamping device positioned
10 between the spaced inner side walls of the U-shaped compartment, and means for causing the stamping device to move into the light compartment to mark the egg while positioned over the
15 peep hole.

5. An egg candling and marking device com-

prising an outer compartment and an inner compartment divided by a partition wall, illuminating means within said outer compartment, said outer compartment having an outer wall spaced from said partition wall and providing therebetween a
5 light compartment, said outer and partition walls having operatively associated openings, a printing mechanism supported within said inner compartment and including a stamping device movably carried thereby in operative association with
10 the openings in said walls, and means for causing said stamping device to be moved from said inner compartment and into said outer compartment adjacent the opening in the outer wall thereof.
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