

April 10, 1928.

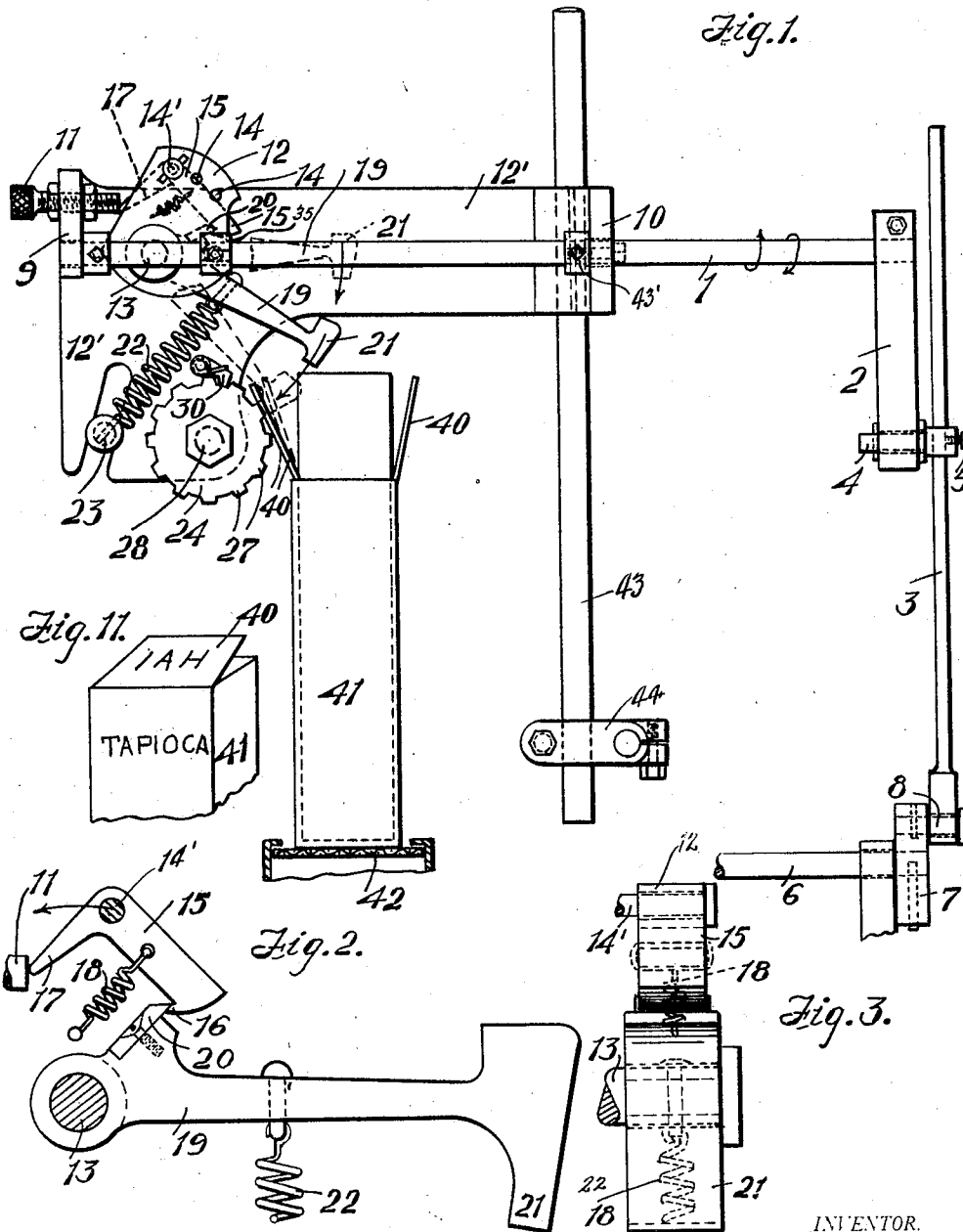
1,665,467

D. B. MILLER

STAMPING DEVICE

Filed Oct. 26, 1926

3 Sheets-Sheet 1



INVENTOR.
David B. Miller.

BY

Harry M. Bourn.
ATTORNEY.

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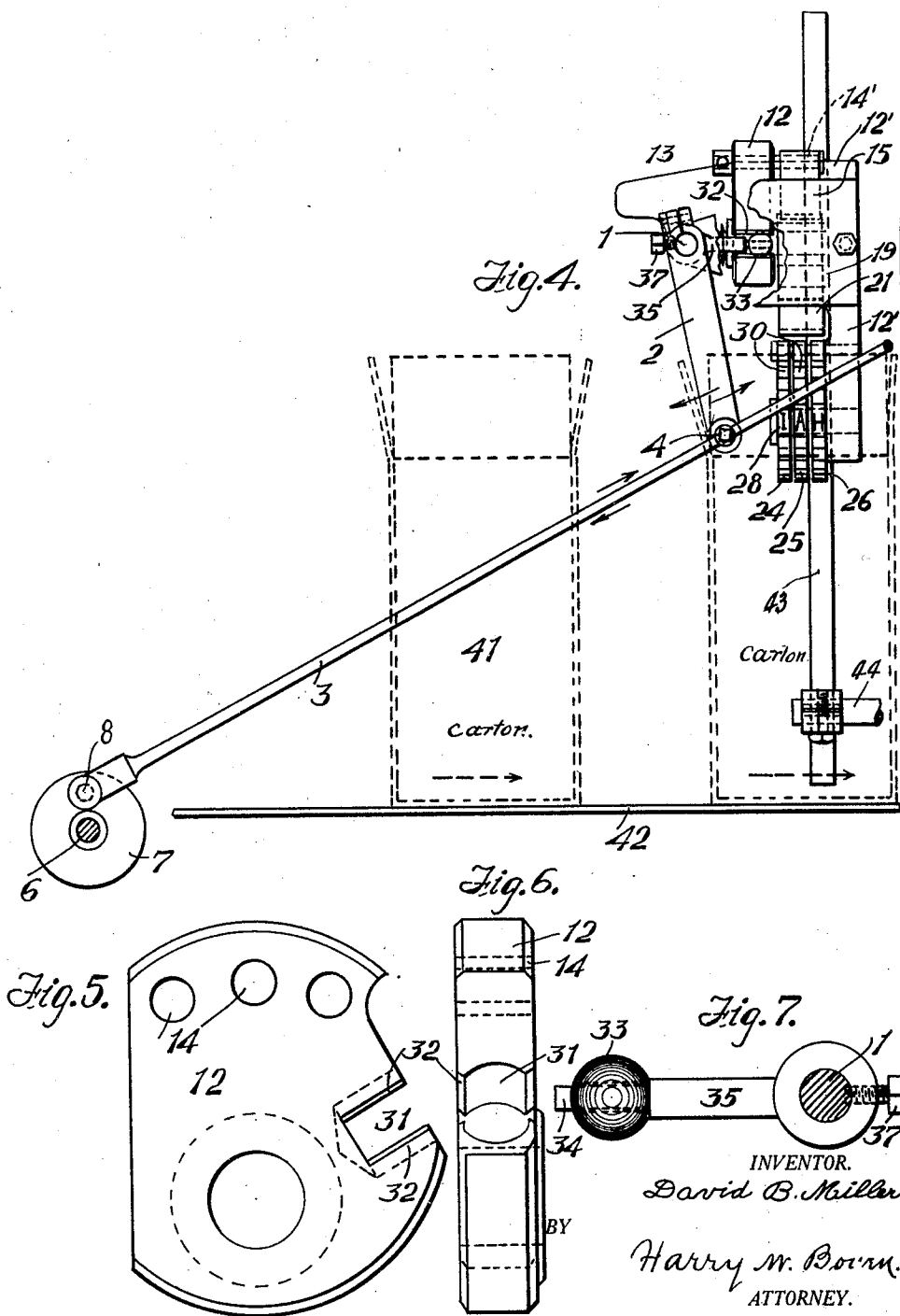
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David B. Miller.

Harry M. Born.
ATTORNEY.

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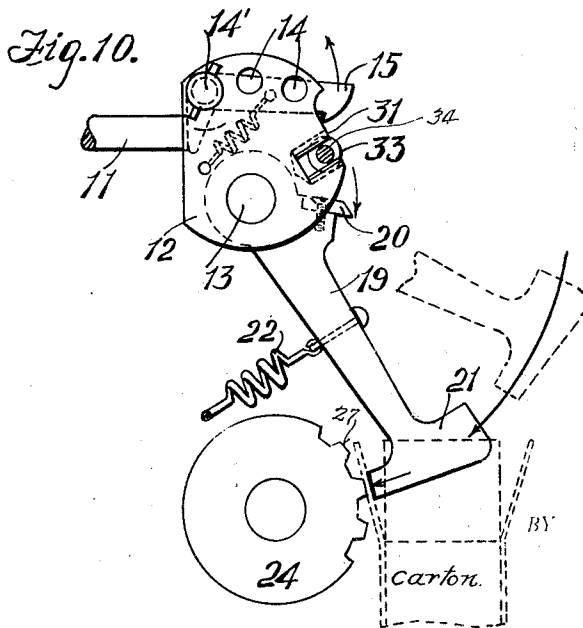
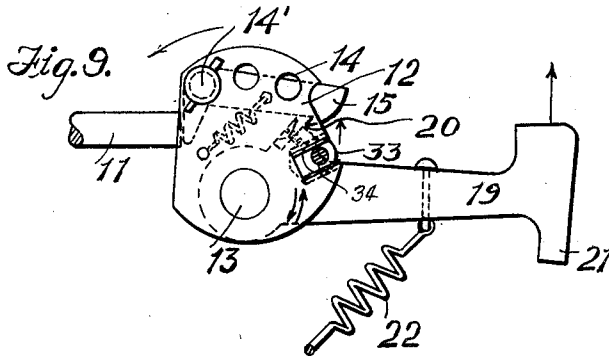
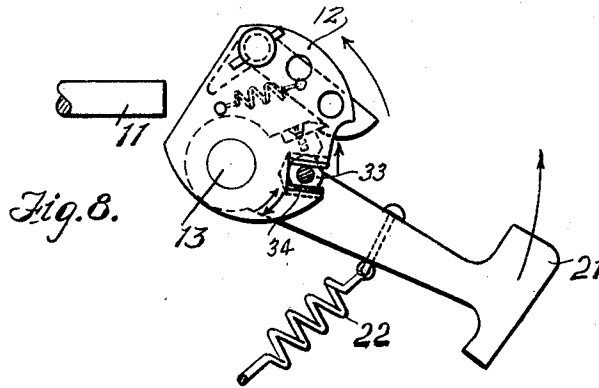
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Harry W. Bourn.
ATTORNEY.

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UNITED STATES PATENT OFFICE.

DAVID B. MILLER, OF GREENFIELD, MASSACHUSETTS.

STAMPING DEVICE.

Application filed October 26, 1926. Serial No. 144,265.

This invention relates to improvements in stamping devices.

An object of the invention is to provide a stamping device for producing an impression in an article to be stamped, as for example one of the closure flaps of a carton for indicating the date on which the carton was filled.

A further object is to provide a stamping device which does not employ ink but directly produces an impression in the material of the carton.

A further object is to effect the stamping operation substantially at the time that the packages are sealed, this being effected by the filled cartons being carried along on a travelling conveyor and the operation of stamping the flap of the carton immediately before the cartons are sealed.

The stamps are designed to be held in a stationary position and the flap of the carton is momentarily located between the fixed stamp and a hammer which strikes the flap and forces it against the stamp, whereby the desired impression is made in the flap of the carton and preferably on the upper side only. If desired, the stamps or markings may be located on the face of the hammer instead of on the stationary member.

Broadly, the invention comprises one or more disks on which are formed figures or other characters, which may represent dates or other suitable information. The disk or disks are designed to be adjusted and held in a stationary position during the stamping operation. A movable hammer is provided which forces one of the closure flaps of a carton against the stationary disk or disks for impressing the characters on one side only of the flaps.

Referring to the drawings:

Fig. 1 is a side elevational view of the stamping device showing a carton in place on a conveyor when the stamping operation takes place, and the mechanisms for operating the movable hammer for forcing a flap of the carton against the stamping device on which the characters are formed.

Fig. 2 is a side elevational view of the hammer and its latch operating device.

Fig. 3 is an end elevational view of Fig. 2.

Fig. 4 is a front elevational view of the stamping device showing a plurality of stamping elements and the means for oscillating the main shaft.

Fig. 5 is an enlarged detail view of the ec-

centric disk which carries the hammer operating latch.

Fig. 6 is an edge view of the disk.

Fig. 7 is a detail view of the ball and its supporting arm which ball cooperates to oscillate the disk.

Fig. 8 is a detail view showing the hammer supported in normal position.

Fig. 9 is a view similar to Fig. 8 showing the hammer in the act of being elevated by the oscillating disk and latch thereon.

Fig. 10 is a view illustrating the position of the hammer at the instant of making the impression on a flap of the carton, and

Fig. 11 is a view showing the impressed characters on a flap of the carton.

Referring to the drawings in detail:

1 designates a shaft which is oscillated about its axis by means of the arm 2 that is secured to this shaft. 3 is a link that is attached to the arm 2 by means of the pin 4 and set screw 5. The link 3 is actuated from the shaft 6 of the carton filling machine (not shown), by disk 7 to which the link 3 is pivotally attached as indicated at 8. The shaft 1 is mounted in bearings 9 and 10. Adjustably secured in the bearing 9 is a latch trip screw 11 for releasing the hammer. 12 is a disk which is rotatably mounted on the frame piece 12' as indicated by the pin 13. This disk is formed with several openings 14. Located on a pin 14' in these openings is the angular shaped latch 15 having the catch portion 16 and the trip arm 17. The latch is normally drawn downward by means of the coiled spring 18. 19 is a hammer that is pivotally mounted on the pin 13 of the frame piece 12' and carries a trip plate 20. 21 indicates the head portion of the hammer. 22 is a spring which is attached to the hammer at one end and to an adjustable stud 23 at its other end. This spring is so adjusted that the hammer normally assumes the full line position shown in Fig. 1 which is in practice about one inch above the stamp member. Located in the path of the face of the hammer head are a plurality of marking stamps 24, 25, and 26 bearing on their outer edges the raised characters 27 which may consist of numerals, letters or other characters, as desired. These disks are separably rotatable on the stud 28 of the main frame piece 12'. Each of the disks are retained in their adjusted positions by means of a pawl 30. The disk 12 is formed with a recess 31 which is formed with

the oppositely located curved grooves 32. The curvature of the grooves correspond with the curvature of the spherical ball 33, which ball is slidably located on the reduced portion 34 of the arm 35. This arm is secured to the oscillating shaft 1 by means of set screw 37 whereby an up and down rocking motion is imparted to the arm 35. This motion causes the ball 33 to move up and down and slide on the reduced portion 34 of the arm 35. The ball 33 at the same time moves back and forth in the curved grooves 32 of the eccentric disk 12. This operation imparts a rocking up and down motion to the disk. As this disk is moved downward the hook portion 16 of the latch 15 engages the plate 20 on the hammer 19, and, as the disk is moved upward by the action of the ball 33, the hammer 19 is elevated against the tension of the spring 22. This movement continues until the arm 17 of the latch 15 strikes the trip screw 11 and releases the hammer 19 which is drawn forcibly downward by the recoiling of the spring 22. Immediately prior to this operation, one of the closure flaps 40 of the carton 41 assumes a position directly in front of the impression characters 27 of the disks 24, 25, and 26.

As the hammer descends, it engages the flap 40 of the carton and forcibly drives it against the characters 27, thus making an impression in the material of the flap and on one side only. If desired, the disk wheels may be formed with a smooth surface and the characters located on the face of the hammer. Preferably the construction should be such that the impression appears on the upper surface only of the flap when the carton is closed or sealed.

If desired, the latch 15 may be pivotally located in one of the other openings 14 rather than that shown in the drawings, with the result that the elevation of the hammer may be changed, thus varying the blow.

42 indicates a travelling conveyor on which the cartons are placed, for filling, stamping, and sealing.

From this description it will be seen that I have provided a stamping device which produces an impression in the flap of a carton without the employment of ink or other coloring matter, the impression being made directly in the material of the flap and preferably on the upper surface as stated. Fig. 11 illustrates how the impression appears on a flap 40 after the stamping operation is completed and before sealing.

43 is a supporting standard for varying the height of the stamping device which is connected to the frame 12' at 43'. The lower end is connected to the arm 44 of the main machine.

It is to be understood that the herein described stamping device is not limited in its

use for forming an impression on the flap portion of a carton as the impression may, if desired, be made upon any convenient part of the carton.

What I claim is:

1. In a stamping device, the combination with a stamp member having characters formed thereon, a hammer, means for moving the hammer against the said member comprising a rotatable and an eccentrically mounted disk, a latch carried by the disk for engaging the hammer for elevating the hammer, means for actuating the eccentric disk, and means for releasing the hammer supporting latch at a predetermined point in the travel of the disk, a spring for retracting the hammer when released for moving it against the member having characters, the spring operating to retain the hammer normally out of contact with the stamp member, whereby the flap of a carton may be inserted between the hammer and the characters on the stamp member.

2. In a device for stamping a flap of a carton, the combination, a member having characters formed thereon, a hammer, disk means for moving the hammer against the said member comprising a rotatable member, a latch carried by the rotatable member for engaging the hammer to elevate the same, means for actuating the disk means, means for releasing the hammer supporting latch at a predetermined point in the travel of the rotatable member, a spring for retracting the hammer when released and so placed to normally retain the hammer spaced from the stamp member, the rotatable member having grooves formed therein, a ball engaging the grooves, and means for actuating the ball for imparting an oscillating movement of the rotatable member, whereby when the article is inserted between the character bearing member and the hammer, an impression will be made in the article when the hammer is operated.

3. A device for forming an impression in the flap of a carton comprising a conveyor for supporting the carton, a stamp member, a hammer normally spaced from the stamp member to receive a flap of the carton in the space, means for operating the hammer to engage the flap and move it against the stamp member for forming an impression in the flap, including an eccentrically mounted and movable disk, means for operating the disk, a latch on the disk for engaging the hammer to elevate it when the disk is operated, means for releasing the hammer and a spring for returning the hammer for moving it against the flap and the flap against the stamp member to produce an impression in the flap.

4. Means for operating a hammer releasing device comprising a disk which is eccentrically mounted for rotary movement, a latch

on the disk, the disk having a substantially radial grooved recess with curved surfaces, a ball in the groove, an arm arranged at right angles to the face of the disk, the ball being slidably mounted on the arm, means for rocking the arm, whereby as the ball is moved toward and away from the center of the disk it will be oscillated, the hammer being pivotally located adjacent the disk, cooperating means between the latch on the disk and a part of the hammer, and means for disengaging the latch from the hammer.

5. A stamping device for the purpose described comprising in combination, a shaft member, an arm part attached thereto, means for operating the shaft, a disk member having raised characters formed thereon, a flat faced hammer member cooperating with the characters of the disk member, trip means for actuating the hammer from the arm part on the shaft for engaging and forcing a closure flap of a carton against the said characters of the disk, whereby an impression is made on the closure flap when the flap is located between the hammer and disk.

6. In an impression forming device, a member having raised characters formed thereon, means for moving a carton which is formed with closure flap members into a position adjacent the raised characters of the stamp member, a hammer device, and means including a shaft, an arm on the shaft, a member carrying the hammer and operated by the arm for actuating the hammer which engages and forcibly drives a flap of the carton against the raised characters of the member for producing an impression in the material of the flap of the carton.

7. A device for forming an impression in the material of a closure flap of a carton comprising a conveyor for supporting the carton, a member having raised characters, a hammer normally spaced from the character bearing member to receive a flap of the carton in the space, latch means carried by a disk for operating the hammer to engage the flap and move it against the raised characters of the member for forming an impression in the flap.

8. A device for forming an impression on a closure flap of a carton comprising a member with raised characters, a hammer normally spaced from the said member to receive an impressionable closure flap of the carton in the space, latch means for elevating the hammer, means engaging the latch for

releasing the hammer, and a spring for returning or moving the hammer for engaging the said article and move it against the raised characters of said member.

9. In a machine for forming an impression in the closure flap of the carton, the combination, a conveyor to receive and move the cartons along, a plurality of adjustable character bearing disks, a hammer for engaging the flap of the carton for driving the flap against said disks, means for normally retaining the hammer spaced from said disks to permit the conveyor to move a flap into said space, means drawing the hammer away from the disk, and a spring actuated latch for permitting the hammer to return to engage the flap of the carton and drive it against said disks for forming an impression in the flap.

10. In a machine for forming an impression in the closure flap of the carton, the combination, a conveyor to receive and move the cartons along, a plurality of adjustable character bearing disks, a hammer for engaging the flap of the carton for driving the flap against said disks, means for normally retaining the hammer spaced from said disks to permit the conveyor to move a flap into said space, means drawing the hammer away from the disk, and a spring actuated latch for permitting the hammer to return to engage the flap of the carton and drive it against said disks for forming an impression in the flap, and means for varying the extent of movement through which the hammer is drawn before being released.

11. In a machine for the purpose described, the combination with a conveyor for moving the cartons to be stamped, a normally retracted hammer for engaging the flap of a carton for moving it against a member having raised characters, a pivotally mounted disk, a latch on the disk, the hammer being pivotally attached to the disk and having a part which cooperates with the latch, means for operating the disk including a radial slot in the disk, a ball in the slot and a shaft for moving the ball back and forth in the slot, means for actuating the latch and for tripping the hammer at a predetermined point in the travel of the disk and a spring for forcibly moving the hammer after being tripped.

DAVID B. MILLER.