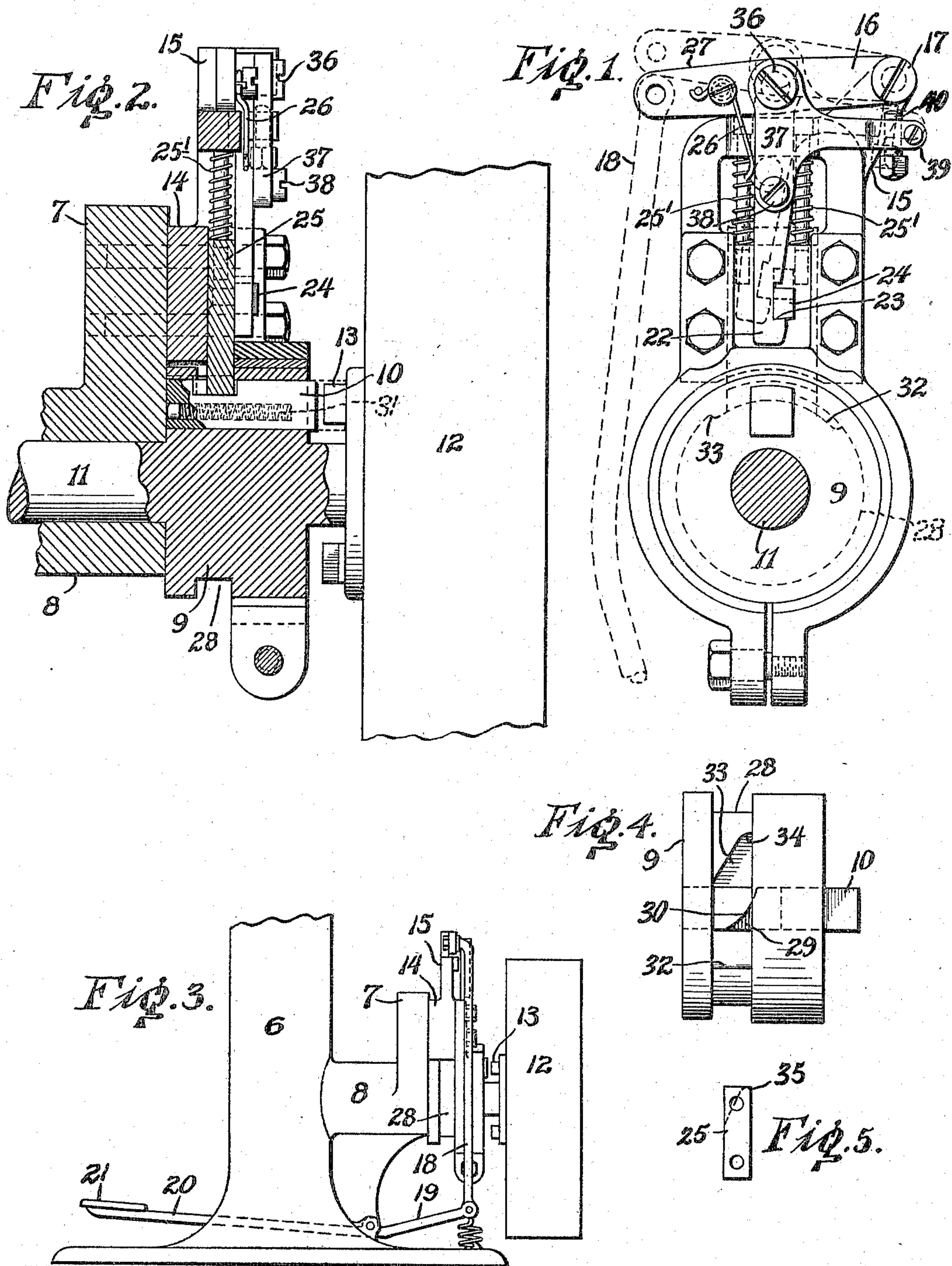


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CLUTCH FOR CAPPING MACHINES.
APPLICATION FILED MAY 15, 1909.

957,929.

Patented May 17, 1910.



WITNESSES
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CLUTCH FOR CAPPING-MACHINES.

957,929.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed May 15, 1909. Serial No. 496,148.

To all whom it may concern:

Be it known that I, LEONARD BARTLETT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Clutch for Capping-Machines, of which the following is a specification.

This invention relates to machines for applying the caps or seals to a bottle, and especially to clutches therefor to set the capping head in motion; and the object of the invention is to provide simple and efficient means to insure a single stroke of the capping head each time the trip is applied.

In all machines adapted to operate a stroke when tripped, as power punches, capping machines, etc., unless the operator is quick in removing his foot from the tripping device, more than one stroke will be given. In capping machines, this may often cause the breakage of the bottle. In this invention, but one stroke can be given without another application of the trip, hence all danger of a second stroke is removed.

The invention is illustrated in the accompanying drawing, in which—

Figure 1, is a side elevation of a portion of a capping machine having my improvement applied thereto; Fig. 2, is a vertical section thereof; Fig. 3, is an elevation of the same on a smaller scale, including the tripping device; Fig. 4, is a plan view of the cam wheel and trip, or clutch pin; and, Fig. 5, is a plan view of the trip plate.

In the drawing like numerals of reference refer to the same parts in each of the views; and in practice I provide a clutch for a capping machine comprising the combination with an ordinary capping machine, having a column as 6, and bracket, as 7, which may be mounted on, or integral with the bearing cylinder 8, and having a cam wheel as 9, with sliding block 10, said wheel 9, being integral with, or secured to the shaft 11, of the machine on which the belt pulley 12, is normally free to rotate, said wheel having the usual posts 13, with which the sliding block 10, is adapted to contact to operate the capping head, of my improved means for insuring the operation of the capping head but once unless tripped again by the operator. To the bracket 7, I secure a plate

14, carrying an arm 15, to which is pivotally connected a lever 16, at 17. This lever is connected by a rod 18, indicated in dotted lines in Fig. 1, with the trip lever 19, as clearly shown in Fig. 3, said rod 18, being connected with the free end of said lever 16, whereby this end will be raised when the end 20, of the lever 19, is depressed by pressing down on the tread 21.

Pivotally connected with the central part of the lever 16, is a depending arm 22, notched at 23, to engage a pin 24, in the trip plate 25, which is normally held under pressure against the cam wheel 9, by springs 25', on suitable posts, two of which are shown. The notched part 23, of the arm 22, is normally held in engagement with said pin 24, by a spring 26, so that in raising the end 27, of the lever 16, the plate 25, will be carried up by the arm 22, as will be readily understood. The lower end of the trip plate 25, is adapted to slide in the groove 28, of the cam wheel 9; and the sliding block 10, is provided with a notch, or groove 29, providing a rounded shoulder 30, which the end of the plate is adapted to engage and slide said block transversely of said cam wheel against the action of a spring 31, indicated in dotted lines in Fig. 2, which would normally hold said block in engagement with the post 13, on the belt wheel. The groove 28, in the wheel 9, is provided with a depression 32, ending in an angled, abrupt wall 33, forming a pocket 34, in which the edge 35, of the plate 25, is adapted to rest, at which time the central part of said plate is in engagement with the shoulder 30, of the block 10, holding said block from contact with the post 13. This plate 25, may be beveled at the lower end, as indicated in dotted lines in Fig. 5, to make the contact with the shoulder 30, less abrupt. Pivotally mounted on the lever 16, and on the same pivot 36, on which the arm 22, is mounted, is a trip lever 37, which is secured to said arm 22, by a screw 38; and this lever 37, is provided with an arm 39, in which is mounted a regulating screw 40, adapted to contact with the bottom of the lever 16.

The operation will be readily understood from the foregoing description. When it is desired to cap a bottle, by depressing the end

20, of the lever 19, the end 27, of the lever 16, will be elevated to the position indicated in dotted lines in Fig. 1. As this lever is elevated, the arm 22, will carry the trip plate 25, out of the depression 32, thereby allowing the spring 31, to force the block 10, outward into contact with the post 13, on the belt pulley whereby the shaft 11, will be rotated, as will be understood, and the capping head will be operated during the balance of that revolution of the said shaft 11. As the end 27, of the lever 16, ascends the arm 39, will be carried vertically upward until the end of the screw 40, contacts with the underside of the lever 16; but as the end 27, of the lever 16, continues to ascend the said screw 40, will prevent the further ascension of the outer end of this arm; and as the lever 37, is secured to the arm 22, by the screw 38, the stopping of the ascension of the outer end of the arm 39, will cause the lower end of the lever 37, to move laterally, carrying with it the arm 22, until the notch 23, thereof is disengaged from the pin, or projection 24, on the plate 25, when the plate 25, will be caused to descend by the springs 25', to contact with the bottom wall of the groove 28, and when the depression 32, reaches the plate, the said plate will enter said depression, and engage the shoulder 30, on the block 10, causing the said block to be drawn out of engagement with the post 13, when the capping head will not be operated again until the plate 25, is raised again by the trip. It will thus be seen that as the plate 25, is released automatically before the end 27, is raised to the full limit as indicated in dotted lines, the said plate will be held elevated only a sufficient length of time to be disengaged from the depression 32, which will require a very limited amount of time since the edge of the plate rests in the pocket 34, of said depression, and the least movement of the cam wheel 9, will prevent the reentrance of the plate 25, into the depression 32, until the shaft 11, has made a revolution, thereby assuring the operation of the capping head, and also assuring that the said head will operate but once since the plate 25, is not controlled by the operator except at the beginning of the tripping.

While I have described the device as being especially adapted to capping machines, it is evident that it can be used with power punches, or any kind of a machine, or press where it is desired to use the machine periodically at the will of the operator.

If it is desired to operate the capping head continuously, or for a number of strokes continuously, by removing the screw 38, the arm 22, will not be forced out of engagement with the pin, or projection 24, on the plate 25, and this plate can be held in an elevated position as long as desired by the operator.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent of the United States, is:

1. A clutch for a periodically operated machine comprising a cam wheel having a groove with a recess therein ending in an abrupt wall forming a stop, a trip plate mounted in said groove and adapted to engage said stop, a sliding block passing through said recess, a fly wheel carrying a stud adapted to engage said sliding block when projected by suitable means when released from said plate, means to raise said plate from said recess, and means to automatically return said plate to said recess.

2. In a clutch for a periodically operated machine, a trip plate, a pivotally mounted lever, an arm pivotally mounted thereon and adapted to engage said plate, and a second lever pivotally mounted on said first lever, and adapted to contact with another point thereon during the operation of said first lever, said second lever being secured to said arm, for the purpose set forth.

3. In a clutch for a periodically operated machine, a trip plate, a lever and means to operate the same, an arm pivoted on said lever and adapted to engage said trip plate, a second lever pivotally mounted on said first lever at the same pivotal point as said arm, said second lever having an arm adapted to contact with said first lever when lifted to a certain height, and having a second arm secured to said pivoted arm, for the purpose set forth.

4. In a clutch for a periodically operated machine, a trip plate, a lever pivotally mounted at one end the opposite end being in engagement with an operating rod, an arm pivotally mounted on the center of said lever and having a notch adapted to engage said trip plate, a second lever pivotally mounted on the center of said first lever and having an arm extending away from said operating rod, an adjusting screw mounted in the end of said lever arm adapted to contact with said first named lever when raised to a predetermined height and said second lever having an arm secured to said pivoted arm by a screw, as and for the purpose set forth.

5. In a clutch for a periodically operated machine, a cam wheel having a groove formed therein with a recess formed in the bottom thereof having diagonally-extending walls, a trip plate having a chamfered edge adapted to move in said groove and engage the wall of said recess, a sliding contact block entering said recess and adapted to engage said plate, a lifting mechanism adapted to lift said trip plate from engagement with the wall of said recess, and an automatic tripping device adapted to release said trip plate, for the purpose set forth.

6. In a clutch for a periodically operated machine, engaging mechanism and means to hold the same out of engagement, a lever

adapted to disengage said mechanism, a second lever carried by said first lever and having an arm with adjustable contact means adapted to engage said first lever at a pre-determined point of elevation and disengage the same from engagement with said mechanism.

7. The herein described clutch for bottle capping machines comprising a power wheel having a projection, a sliding block adapted to engage the same, a spring adapted to hold said block in engagement with said projection, a grooved wheel in which said block is mounted, a trip plate adapted to move in said groove and normally rest in a depression therein, said plate being in engagement with

said block when in said depression, a lever adapted to lift said plate out of said depression, and means to operate the same, an arm on said lever adapted to engage said plate, a lever mounted on said arm and having a laterally projecting arm, a regulating screw in said last named arm adapted to contact with the said lifting lever whereby said lifting arm is thrown out of engagement with said plate, as and for the purpose set forth.

Dated this 6th day of May, 1909.

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Witnesses:

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