C. S. BATDORF.

CHECK CONTROLLED DISPENSING APPARATUS.

APPLICATION FILED APR. 25, 1914.

1,135,252.

Patented Apr. 13, 1915

5 SHEETS—SHEET 1.

Fig. 1.

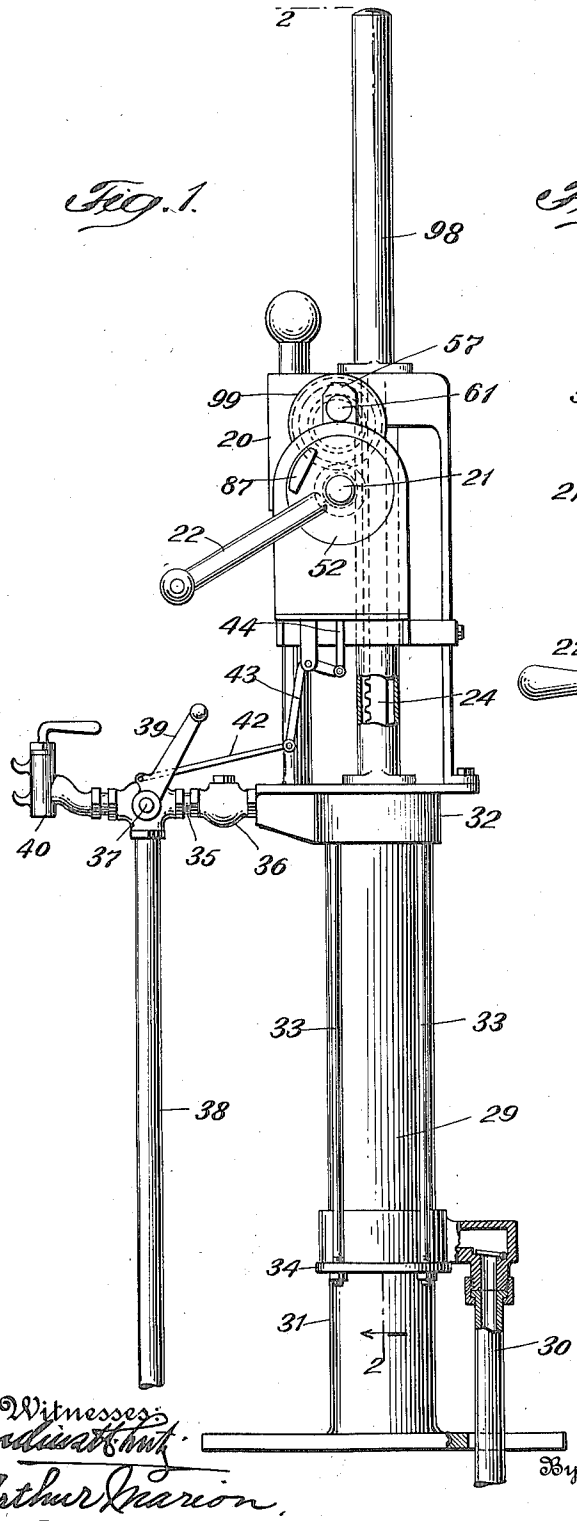
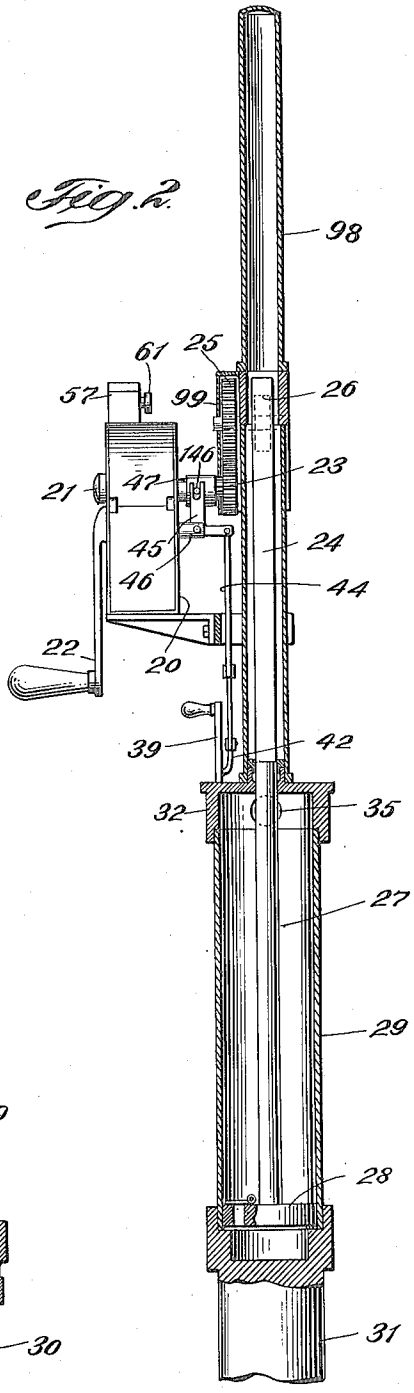


Fig. 2.



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5 SHEETS—SHEET 2.

Fig. 4.

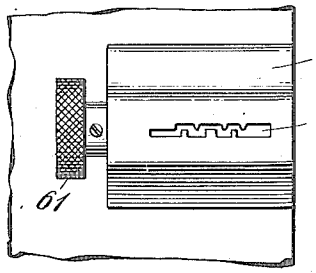
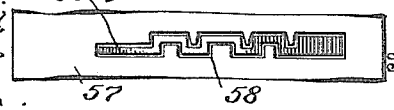


Fig. 3.

Fig. 5

Fig. 6.

Fig. 7.



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5 SHEETS—SHEET 3.

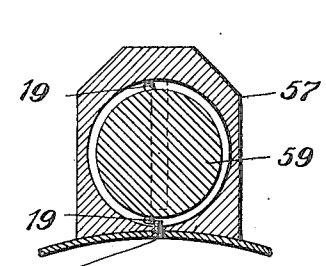


Fig. 9.

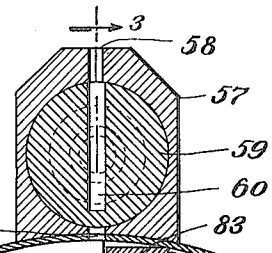
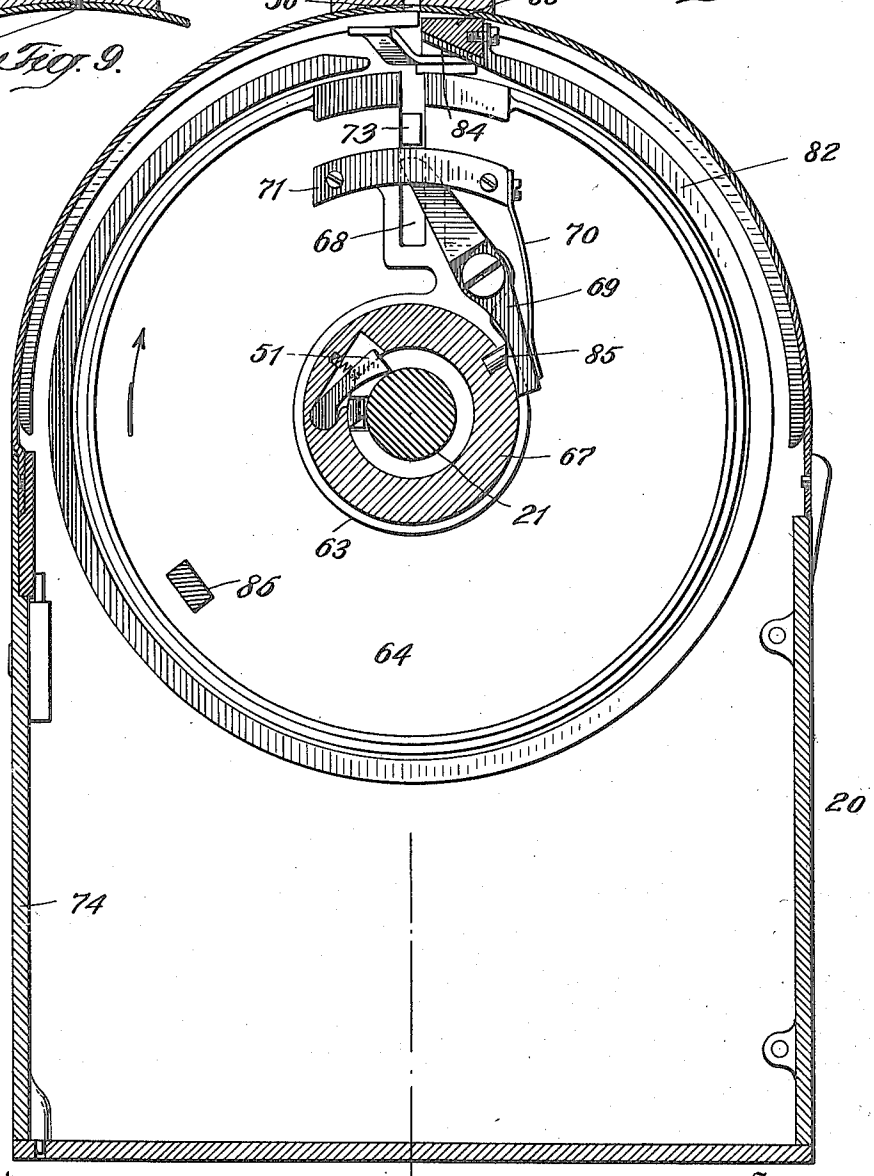


Fig. 8.



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5 SHEETS—SHEET 4.

Fig. 10.

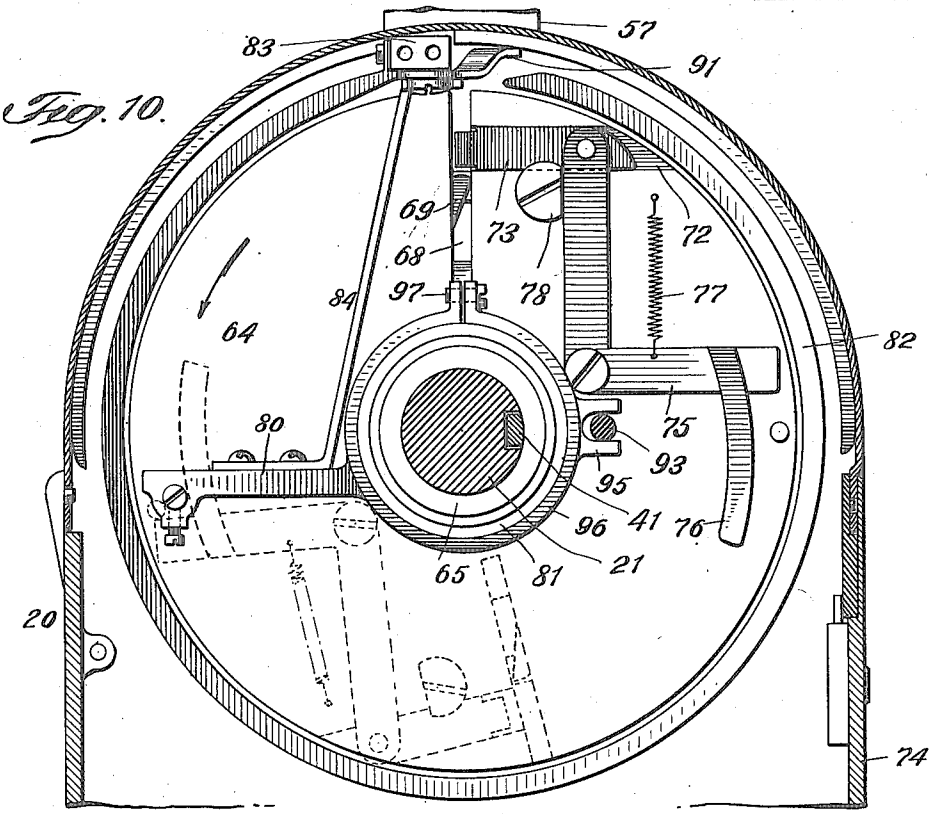
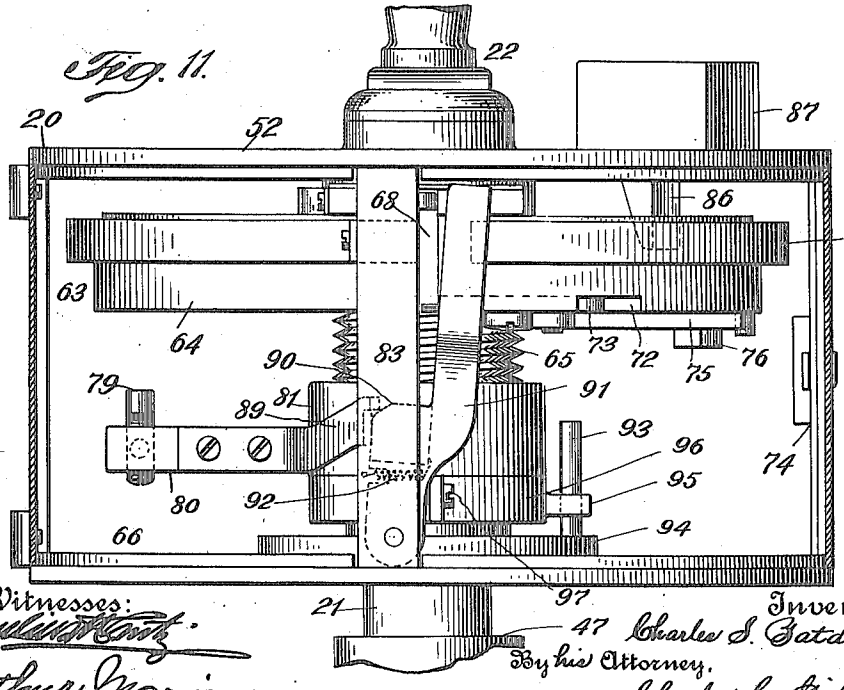


Fig. 11.



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5 SHEETS—SHEET 5.

Fig. 12.

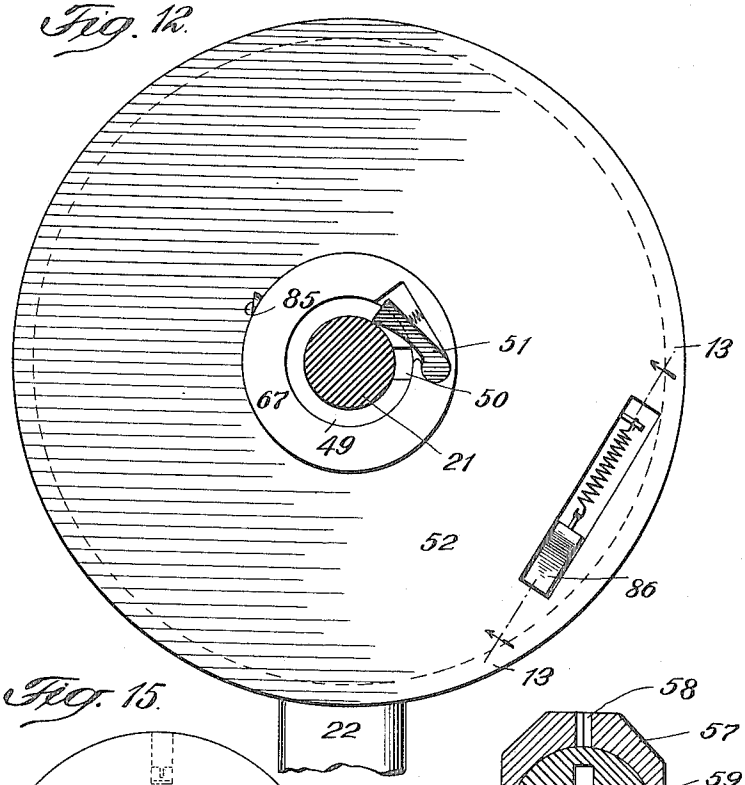


Fig. 13.

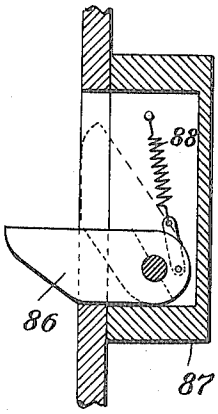


Fig. 15.

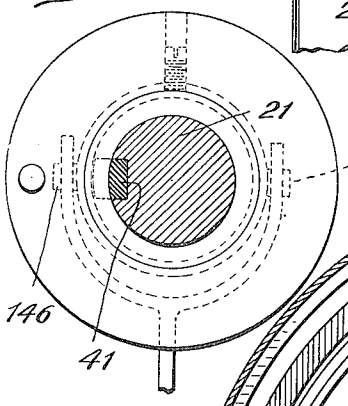
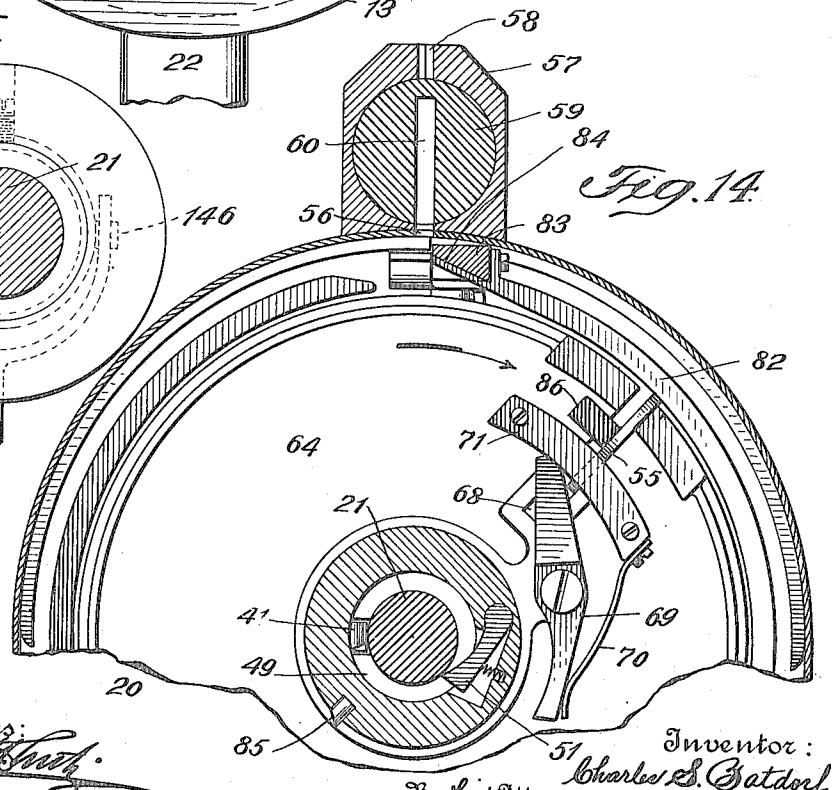


Fig. 14.



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UNITED STATES PATENT OFFICE.

CHARLES S. BATDORF, OF BROOKLYN, NEW YORK.

CHECK-CONTROLLED DISPENSING APPARATUS.

1,135,252. Specification of Letters Patent. Patented Apr. 13, 1915.

Application filed April 25, 1914. Serial No. 834,313.

To all whom it may concern:

Be it known that I, CHARLES S. BATDORF, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Check-Controlled Dispensing Apparatus, of which the following is a specification.

The invention pertains more particularly to apparatus by means of which predetermined quantities of a liquid may be discharged from one container to another or from a reservoir owned by a dealer into a tank or other receptacle owned by a customer or purchaser, or into a tank or receptacle to be emptied into a tank or receptacle owned by a purchaser.

The invention is intended more particularly, though not exclusively, for the use of garages and dealers who supply, as a part of the business transacted, predetermined quantities of gasolene and oil to owners of automobiles, and one purpose of the invention is to provide suitable means whereby in the sale of gasolene or other liquid, both the dealer and purchaser may have a positive assurance that the predetermined quantity of the liquid purchased has been delivered, and also whereby in the sale and delivery of the gasolene or other liquid the dealer, having possibly a number of employees, may ascertain who sold the gasolene and also the quantity sold, to-wit, the number of gallons during, say, any predetermined interval.

At the present time the owners of garages and places where gasolene is supplied to owners of automobiles, have means for delivering predetermined quantities of gasolene to owners of automobiles, but these means are subject to the intelligence, will and faithfulness, as well as the carelessness, of employees, and it frequently happens that a person purchasing, say, three gallons of gasolene will not receive that quantity but sometimes, due to carelessness or other reason, either less than that quantity or more than that quantity.

My invention compels the accurate delivery of the predetermined quantity of liquid ordered, it being impossible to continue the apparatus of my invention in use except upon the delivery to a purchaser of the exact quantity of gasolene or the like ordered by him. Both the dealer and the purchaser may, therefore, always have the assurance of their business being transacted fairly, the purchaser receiving no more and no less gasolene or the like than he ordered, and the dealer having the knowledge that the purchaser has received the quantity and only the quantity of gasolene or the like purchased.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

Figure 1 is a front elevation, partly broken away and partly in section, of a machine embodying my invention; Fig. 2 is a vertical section through the same on the dotted line 2—2 of Fig. 1; Fig. 3 is a central vertical longitudinal section, partly broken away, through the manually operated mechanism of my invention which I apply to a pump for delivering predetermined quantities of gasolene or other liquid, said mechanism depending for its operation on the presence of a check or token of appropriate character introduced through the receiving slot of the machine for locking the exposed crank handle to the driving shaft from which the pump is operated and which mechanism may be referred to as the check receiving mechanism; Fig. 4 is a detached top view of a portion of the same and illustrates the receiving slot for the check or token by which the machine is rendered operative; Fig. 5 is an edge view of a metal check or token adapted to the receiving slot illustrated in Fig. 4; Fig. 6 is a face view of the check or token; Fig. 7 is an enlarged view showing in top elevation the coin slot with a part of the walls surrounding it and with the check or token in position in said slot, Fig. 7 being presented to illustrate the relation of the outline of the slot to the cross-section of the check or token; Fig. 8 is a vertical section through the main portion of the check-receiving mechanism taken on the dotted line 8—8 of Fig. 3, and Fig. 8 denotes by the dotted line 3—3 the section on which Fig. 3 is taken; Fig. 9 is a vertical transverse section, on the dotted line 9—9 of Fig. 3, through a portion of the check or token primary receiving devices, these devices comprising a superposed exterior casing having therein the check or token receiving slot, a rotary cylindrical gate therein which receives a check or token from said slot, and means, such as two pins, for controlling the rotary movement of said gate;

Fig. 10 is a vertical transverse section through a portion of the general manually operated check or token receiving mechanism taken on the dotted line 10—10 of Fig. 3 and illustrating by solid lines the normal position of the parts shown and by dotted lines an operated position of said parts at the time the check retaining devices are tripped for releasing the check to descend into a receiving chamber provided therefor; Fig. 11 is a top view, partly broken away and partly in section, of the manually operated check receiving mechanism, the semi-circular head-covering for said mechanism having been cut away in Fig. 11, and the parts being shown in their normal position ready for operation; Fig. 12 is an inner face view of the front disk-plate of the machine to which the operating crank is applied, the crank being shown as partly broken away and the shaft on which this disk-plate is mounted being shown in section; Fig. 13 is a sectional view on a larger scale through a portion of the same taken on the dotted line 13—13 of Fig. 12; Fig. 14 is a view corresponding with the upper portion of Fig. 8 but illustrating the mechanism as having received a check or token and been started in operation; and Fig. 15 is a vertical section through a portion of the machine taken on the dotted line 15—15 of Fig. 3.

In the drawings, 20 designates a main casing containing the manually-operative check-receiving mechanism of my invention, 21 a shaft extending transversely through said casing, 22 a crank handle to be connected at the appropriate time and by proper means with one end of said shaft for its manual operation, 23 a pinion wheel connected with the other end of said shaft, 24 a vertically movable rack-bar to be reciprocated from said pinion wheel 23 through the gear wheel 25 and pinion wheel 26 on the operation of said shaft 21, 27 a piston or pump rod extending downwardly from said rack-bar, 28 a valved pump plunger, of usual construction, secured on the lower end of said rod, 29 a pump cylinder within which said plunger or piston has its movement, 30 a supply-pipe connected with the lower end of said cylinder for maintaining a body of gasolene or other liquid under pressure, either atmospheric or gravity, against the lower side of said plunger or piston and leading from any suitable source of supply, 31 the supporting base for the pump cylinder, 32 an upper capping-plate therefor, 33 rods of ordinary character connecting said cap 32 with a ring 34 engaging a shoulder on the base 31 for firmly confining the pump cylinder, 35 an outlet or delivery pipe from the upper end of the pump cylinder and containing an ordinary valve 36 and three-way valve 37, 38 a return pipe from the three-way valve casing to the source of supply for the gasolene or other liquid, and 39 a crank handle by which the three-way valve may be operated to direct the gasolene or other liquid or fluid either into the return pipe 38 or to the final discharge nozzle 40 for gasolene or other liquid. The pipe 38 is a by-pass pipe, and when the three-way valve 37 connects the pipe 35 with the by-pass pipe 38, the discharge outlet 40 is closed by said valve, and when the three-way valve 37 is turned to connect the pipe 35 with the discharge nozzle 40, said valve closes the entrance to the pipe 38. The pipe 38 will preferably be made of glass so that a purchaser of gasolene may observe what is passing through said pipe, and one of the main purposes of the pipe 38 is to permit, prior to the sale of gasolene, the operation of the pump for a few moments to insure the discharge of such air as may have gathered in the pump cylinder 29 through the pipe 38 so that when a predetermined quantity of gasolene is purchased that quantity may be delivered free of any appreciable quantity of air stored in the pump cylinder.

The pump plunger 28 is operable from the crank 22, gear wheels 23, 25, 26, rack bar 24 and pump rod 27, but said crank handle 22 is only enabled to operate the pump plunger when it is operatively connected with the main shaft 21 either through the mechanism contained within the casing 20, plus a proper check, token or coin introduced therein, or by a slidable key 41 set within a groove in the shaft 21 and slidable therein by means of the crank handle 39, link 42, bell crank lever 43, link 44, and bell crank lever 45, the latter being pivotally secured at its angle to a stud 46 and having its bifurcated upper member connected with studs 146 extending outwardly from a sleeve 47 which is slidably mounted on the shaft 21 and is adapted at its inner portion to engage a stud 48 on the outer end of the key 41 and effect the sliding motion of said key, said key moving in one direction when the crank handle 39 is moved in one direction and moving in the opposite direction when said crank handle 39 is turned or moved in the opposite direction to its first movement. The movement of the key 41 due to that of the crank handle 39 to open the by-pass pipe 38 and close the discharge 40 has the effect of carrying the front end of said key 41 (Fig. 3) across an annular groove 49 in the shaft 21 and into a recess 50 at the front side of said groove 49. When the front end of the key has crossed the groove 49 and entered the recess 50 the movement of the crank handle 22 may then be communicated to the shaft 21, although said crank handle normally is not connected with said shaft, by reason of the fact that a pivoted dog 51 carried by the disk face-plate

52, which is integral with said crank handle or at least rigid therewith, may, on the rotation of said plate 52 from said crank handle, engage the edge of said key 41 and thereby communicate the motion of the crank handle and said plate to the key 41 and through said key to the shaft 21, with the resultant effect of setting the gear wheels 23, 25, 26 in motion and operating the pump rod and pump plunger to discharge any air from the pump cylinder which may have gathered into the upper end thereof prior to the sale of a predetermined quantity of gasolene to a purchaser.

Before proceeding to dispense a predetermined quantity of gasolene to a purchaser it should be known that no air has gathered in the upper end of the pump cylinder 29, since otherwise the purchaser might not receive the quantity of gasolene paid for. Therefore, in fairness to the purchaser the operator of the pump will throw the crank handle 39 in a direction to connect the front end of the key 41 with the plate 52 and crank 22 and then operate the crank 22 so as to pump air or whatever may be within the pump cylinder 29 out into the discharge pipe 35 and down through the by-pass pipe 38, until he is assured that a solid quantity of gasolene will be delivered by the pump. The pipe 38 being transparent, by preference, both the operator of the pump and the purchaser of the gasolene may observe whether air or gasolene is passing through said by-pass pipe. When all of the air has been discharged from the pump cylinder 29 the mechanism within the casing 20 will be re-set for operation and the crank handle 39 will be turned to a position withdrawing the key 41 from across the annular groove 49 in the shaft 21 or to the position shown in Fig. 3, and under such condition the by-pass pipe 38 will be closed by the three-way valve 37 and the discharge 40 will be opened for the discharge of gasolene from the pump. At this time, however, the rotation of the crank handle 22 will not effect the rotation of the driving shaft 21 or the movement of the pump rod 27 and pump plunger 28, said crank handle 22 if turned at that time merely causing the disk plate 52 to rotate idly around the front end of the shaft 21. In order to enable the crank handle 22 and disk plate 52 to rotate the shaft 21 for the proper discharge of gasolene from the outlet 40, proper means must be introduced into the machine for connecting said disk plate with said shaft, and these means will comprise a check, token or coin introduced into the casing 20 and mechanism within said casing to receive said check, token or coin and permit the same to operate as a key for connecting said mechanism at the shaft 21 with the disk plate 52 and consequently with the crank handle 22, so that on the operation of said crank handle under such proper conditions, said handle may rotate the shaft 21 and set the pump in motion.

The sleeve 47 is provided with an annular groove 53 (Fig. 3), and this groove permits the stud 48 to be rotated or carried by the rotating shaft 21 without danger of striking said sleeve. The groove 49 in the shaft 21 is provided for the use of the dog 51 carried by the disk-plate 52, and when the key 41 has not been moved to cross said groove, the dog 51, on the rotation of the disk-plate 52, idly travels around said groove without performing any duty. The shaft 21 is hollow and bifurcated at its left hand end (looking at Fig. 3) and receives a stub shaft 54 extending from the gear wheel 23, the parts 21, 54 finally constituting a complete driving shaft, it having been found more convenient however to make the shaft in two sections to be afterward connected together.

I have hereinbefore described the key 41 and dog 51 as means for connecting the disk-plate 52 and driving shaft 21 together when it is desired to pump air from the cylinder 29 through the return by-pass 38. The key 41 is not used for any other purpose than to permit the disk-plate 52 when rotated to operate the pump-plunger for pumping through the by-pass 38, and after that operation has been completed the crank handle 39 of the three-way valve 37 is moved to withdraw the key 41 to the position shown in Fig. 3, leaving the disk-plate 52 entirely free on the end of the shaft 21 and disconnected from the entire mechanism within the casing 20.

I will now describe the method of utilizing the mechanism within and connected with the casing 20 for enabling the delivery of predetermined quantities of gasolene from the pump on the rotation of the crank handle 22 and with the coöperation of a proper check or token, such, for illustration, as I illustrate in Figs. 5, 6 and 7 and numbered 55, said check or token being of special character and to be made the subject of a separate application for Letters Patent. In the top of the casing 20 is formed an entrance slot 56 for a check or token 55, and upon the top of the casing 20 and concealing the slot 56 is a casing 57 having in its top an entrance slot 58 for the check or token and within its body portion a rotary plug or gate 59 containing a pocket 60 for a check or token 55, said gate or plug 59 being within the casing 57 and provided with a handle 61 by which it may be rotated so as to turn the pocket 60 downwardly, as shown in Fig. 14, directly over the slot 56 for the discharge of a check or token therefrom through said slot 56 and then returned to its position shown in Fig. 3 with the open end of the pocket 60 directly below

the entrance slot 58. When a check or token is introduced into the slot 58 it falls into the pocket 60 of the gate 59, and then when the gate 59 is rotated to turn said pocket upside down, the check or token falls therefrom and passes through the slot 56 to the mechanism presently to be described. When the gate 59 is in its inverted position (Fig. 14) it prevents an additional check or token 55 from being passed into the machine. The gate 59 becomes arrested at its proper initial and inverted positions by the engagement of one or the other of the pins 19 carried thereby with a stop pin 18 extending upwardly through the top of the casing 20, a groove being provided for the play of said pins 19 in the path of the upper end of the pin 18, as shown more particularly in Figs. 3 and 9.

In the present instance the check or token 55 is ribbed and grooved across both faces, and the side walls of the entrance slot 58 are similarly ribbed and grooved, and hence it will be understood that only checks of predetermined character are capable of being introduced to the machine. It is intended that the owner of each machine shall have checks 55 specially constructed for his machine and that the entrance slot 58 in his machine will only take his checks, this enabling the owner of a machine to distribute among his employees or sell to customers a predetermined number of checks suitable for his machine and not suitable for any other machine of the same class.

Upon the shaft 21 is secured, by means of a pin 62, a frame 63 comprising a disk member 64 and hub member 65, said hub member being screw-threaded on its exterior and extending to the back 66 of the casing 20. The front face of the disk member 64 of the frame 63 is close against the hub 67 of the disk-plate 52, as shown in Fig. 3. The disk member 64 is formed at one edge with an inwardly extending radial slot 68 (Figs. 3, 8, 10 and 14) which normally is directly below the entrance slot 56 for the checks or tokens and receives the checks or tokens which pass through said lot or opening 56, one of the tokens being shown by dotted lines as within the slot 68 in Fig. 3, this being the initial position of the token after passing through the opening or slot 56. Upon the front face of the disk member 64 is pivotally secured a double-ended dog 69 whose normal position is illustrated in Fig. 8 and in which it will be seen that the then upper end of the dog extends across the slot 68 in a position to aid in supporting the coin, check or token 55 within said slot, said dog being yieldingly retained in this position by the pressure of a spring 70 against its shank end, which is normally against the hub 67 of the disk plate 52. Upon the front face of the disk member 64 and crossing the slot 68 therein and adjacent to the upper end of the dog 69, is secured a plate or thin strip 71 which aids in retaining or supporting the check or token 55 within said slot 68. It will be observed on reference to Fig. 3 that the dog 69 and plate or strip 71 are below the outer portion of the check or token 55 and of themselves could not retain said check or token in the slot 68. Upon the inner face of the disk member 64 is provided a groove 72 containing a slide 73 (Fig. 10) whose inner end is normally across the slot 68 and serves, as shown in Fig. 3, to prevent a check or token 55 falling inwardly from the slot 68. At the proper time, when it is desired that the check or token 55 shall escape from the slot 68, the slide 73 is moved from across the slot 68 and at such time the check or token becomes unseated and falls automatically from the frame 63, then descending into the chamber at the bottom of the casing 20 and to be finally removed therefrom by opening a door 74 of usual character provided for that purpose.

The slide 73 is pivotally connected with a bell-crank lever 75 secured upon the inner face of the disk member 64 (Fig. 10) which lever carries a cam arm 76 and is connected with a spring 77 which presses one arm of the bell-crank lever against the stop 78 and serves to normally hold the slide 73 in the position shown in Fig. 10 with its inner end extending transversely across the check holding slot or pocket 68. The means for acting on the bell-crank lever 75 to move the slide 73 from across the slot 68, so as to release the check or token to fall therefrom, consists of a pin 79 (Fig. 11) carried by an arm 80 which extends laterally from the hub portion of a frame 81 mounted upon the externally threaded portion 65 of the frame 63, the hub portion of the frame 81 being internally threaded and adapted to have a direct traveling movement, without rotation, on said hub portion 65, during the rotation of the frame 63 with the shaft 21. The pin 79 is normally out of the path of the cam 76 carried by the bell-crank lever 75, as may be seen in Fig. 11, but when the driving shaft 21 has made a proper number of rotations and the frame 81 has traveled forwardly on the hub 65 of the frame 63 to a proper extent, the pin 79 will have been carried into the path of the cam 76 and on the movement of said cam against said pin said cam and pin will coöperate to trip the bell-crank lever 75 or turn it outwardly on its pivot and from its stop 78 and cause it to withdraw the slide 73 from across the slot 68, thus allowing the check or token to fall from said slot. In Fig. 10 I illustrate by dotted lines the action of tripping the bell-crank lever 75 by the engagement of the cam

76 with the pin 79, while by solid lines the initial normal position of said bell crank lever is illustrated.

Extending closely around the periphery of the disk member 64 of the frame 63 is a band 82, which is fastened to a cross bar 83 extending across the interior upper portion of the casing 20 adjacent to one edge of the entrance opening or slot 56 for the checks or tokens to said casing. The band 82 does not touch the frame 63 but is slightly separated therefrom as illustrated in Figs. 3, 10 and 14, the separation between the frame 63 and said band being greatest at the upper end of the band where it is secured to the cross bar 83 and is given a distinct incline or cam shape 84 as shown in Figs. 8 and 14, this cam-shape 84 being directly at one side of the vertical plane of the slot or opening 56. When a check or token 55 is dropped through the slot or opening 56 and enters the slot 68 in the disk portion 64 of the frame 63, said check will project upwardly in the path of the cam 84, being thus held on the upper end of the dog 69, and then when the said disk member 64 is rotated, it carries the check or token with it and against the cam 84, said cam then serving to force the check or token downwardly into the slot 68 and against the end of the dog 69 to such extent that after the disk member 64 has made a partial rotation, the dog 69 takes the position in which it is shown in Fig. 14 and the outer edge of the check or token is held by the spring 70 acting through the dog 69 against the inner edge of the band 82, said check or token keeping this relation to the dog and band 82 until it becomes discharged from the slot 68. The tilting of the dog 69 by the inward thrust of the check or token 55 causes the shank end of said dog, as shown in Fig. 14, to stand off from the hub 67 of the disk plate 52, and hence at that time the pin 85 carried by said hub can have no effect on said dog, although after the coin has been discharged, said pin does coöperate, on the reverse movement of the disk plate 52, with the dog 69 in the restoration of the operative parts of the mechanism to their initial relative positions, as hereinafter explained.

The means which, during the operation of the machine for pumping, permits the frame 63 to be rotated from the crank handle 22 and disk face plate 52, consists of a pivoted dog 86 (Fig. 13) which is pivotally mounted in a box 87 carried by the disk plate 52, said dog 86 being connected with a spring 88 which normally tends to throw the end of the dog outwardly into the path of the check or token 55 held within the slot 68 of the frame 63. The dog 86 is tapered on one edge and flat on the other edge, and the flat edge of the dog, when the check or token 55 is in position and the disk-plate 52 is rotated, passes against the face of said check or token and, by pressing against the same during the continued rotation of the disk plate 52 effects the rotation of the frame 63 and parts connected therewith, the rotation of the disk plate 52 and frame 63 continuing in unison during the pumping operation so long as the check or token 55 remains in position in the path of the dog 86. When the check or token 55 is tripped from the slot 68, the motion of the disk or plate 52 turned as in the act of pumping will have no effect on the frame 63. If during the operation of pumping with the parts moving in the direction of the arrow shown in Fig. 14, the operator should reverse the movement of the crank handle 22 and disk plate 52, the check or token would remain in position, but the frame 63 would not be rotated to do any pumping since at that time the inclined or beveled edge of the dog 86 would come around and strike the check or token and not be able to act against the same to reverse the rotation of the frame 63 but would fall inwardly and pass the check or token to the position indicated by dotted lines in Fig. 13. It will be understood, therefore that for a pumping operation the check or token 55 must be in position in the slot 68 so that it may coöperate with the pivoted dog 86 carried by the disk plate 52, otherwise the disk plate 52 would rotate without performing any duty whatever.

At the end of each pumping operation and after the check, token or coin 55 has been tripped from the slot 68, as hereinbefore explained, the pump plunger 28 must be returned to its lower position and the mechanism within the casing 20 must be restored to its initial position, and this is effected by a reversal of the movement of the crank handle 22 and disk plate 52, said disk 52 during its reverse movement causing the pin 85 connected with its hub to act against the shank end of the dog 69 and thereby effect a locking of said disk plate and frame 63 together to such extent that during the reverse movement of the plate 52 the frame 63 will be rotated in reverse direction and through its threaded hub 65 restore the frame 81 and parts carried thereby to their initial or rearward position. The reverse movement of the frame 63 acts through the pin 62 to impart a reverse motion to the shaft 21, and gear wheels 23, 25, 26 and thereby effects the descent of the rack bar 24 and plunger rod 27. In order to prevent motion being imparted to the rack bar 24, except under proper conditions and from the crank handle 22, I secure over said bar a cylindrical casing 98 which conceals said bar and prevents access thereto. I also apply a casing 99 over the gear wheels 25, 23.

I desire it to be understood that my invention is not limited to the details of construction hereinbefore described as illustrative of one embodiment thereof. In carrying out my invention in the form illustrated I utilize what may be termed a single acting pump, but I do not confine my invention to use with any special style of pump so long as the main purposes of the invention are carried into effect.

The frame 81 will, during the rotation of the frame 63 to effect the pumping of the gasolene or other liquid, travel toward the disk member 64 of said frame, and on the reversal of the movement of the disk member 64 of the frame 63 said frame 81 will travel rearwardly or in a direction from the disk member 64 or back to its normal initial position. I have hereinbefore described the pin 79 carried by the arm 80 of the frame 81 as the means for tripping the check or token from the slot 68 of the disk member 64 at the end of the pumping operation or when the frame 81 has traveled sufficiently near to the disk member 64 of the frame 63 for said pin 79 to arrive in the path of the cam 76 carried by the bell-crank lever 75. The frame 81 also carries a vertical arm 89 (Figs. 3, 10, 11) whose upper edge normally engages a projection 90 connected with a pivoted shutter plate 91 to which a small spring 92 is connected and which has a normal tendency to draw the plate 91 against the upper end of the arm 89. The plate 91 is pivotally secured to the cross bar 83 and in the normal position of the parts of the machine said plate 91, in opposition to the force of the spring 92, is compelled by the arm 89 to lie at one side of the slot or opening 56 through which the checks or tokens are fed to the machine. After a check or token 55 has been fed into the slot 68 of the frame 63 and said frame has been set in motion by the rotation of the disk plate 52 and the engagement of the dog 86 with said check or token, the arm 89 travels with the frame 81 in a direction toward the disk member 64 and leaves the projection 90 on the shutter plate 91 and thereupon the spring 92 causes the plate 91 to move at its forward end directly below the opening or slot 56, closing said slot and preventing an additional check from passing through the same. Upon the completion of the rearward or outward movement of the frame 81 during the reverse motion of the disk 52 to reset the interior mechanism, the arm 89 will be carried against the projection 90 on the plate 91 and remove said plate from below the slot or opening 56. If during the operation of the mechanism in pumping, a check should have been inserted into the rotary gate 59 and said gate turned upside down so that the check entered the opening or slot 56 and rested on the shutter plate 91, no harm would have been done because on the opening of the shutter plate 91 said check would fall into the slot 68 of the frame 63 in a position to render the mechanism operative from the crank handle 22.

The frame 81 is prevented from having rotary movement by means of a pin 93 fastened to a washer 94 and a bifurcated lug 95 which receives said pin and travels along the same during the forward and backward movement of the frame 81. The forked lug 95 is carried by a band 96 which is fastened by a screw 97 upon the rear end of the hub portion of the frame 81 (Figs. 10 and 11). By loosening the screw 97 the hub portion of the frame 81 may rotate within the band 96 and be given its correct initial adjustment so that the trip pin 79 may at the correct predetermined moment pass into the path of the cam 76 for tripping the bell crank lever 75 and releasing the check or token from the slot 68. The pin 79 is also in itself adjustable so that it may be so positioned as to act at the proper time against the cam 76.

The operation of the machine will be at least somewhat understood from the description hereinbefore presented. If an attempt is made to operate the machine without a proper check, token or coin 55 being in position in the disk member 64 of the frame 63, the crank handle 22 may rotate the disk plate 52, but this will have no effect on the driving shaft 21, unless at that time the sliding key 41 has been moved across the annular groove 49, in which event the crank handle 22 could be used for pumping, but under such condition whatever gasolene might be pumped would flow through the return by-pass 38. If in the absence of a proper check, token or coin 55 anyone should attempt to pump when the sliding key 41 is in its initial position, not crossing the annular groove 49, the disk plate 52 would be rotated, but would have no effect on the internal mechanism of the machine further than that the small pin 85 carried by the hub of said disk plate would ride against the shank end of the dog 69 and by tilting the dog pass by the same. When a proper check, token or coin is in position in the slot 68 of the frame 63 the pumping operation may be performed as hereinbefore explained, the dog 86 coöperating with the check, token or coin, serving to lock the disk plate 52 and frame 63 together. During the pumping operation the pump plunger or piston 28 ascends through the cylinder 29 then filled with gasolene and effects the discharge of said gasolene, there being a predetermined quantity present, through the pipe 35 and discharge 40. Normally therefore the pump plunger 28 is at the bottom of the cylinder 29 and reaches the top of said cylinder on the completion of the pumping operation.

The present invention is not limited to the specific outline of the entrance slot 58 for the checks, keys or tokens 55, nor to some of the finer details of the general construction of said slot and check, key or token, nor in every instance to any special construction of the entrance slot and check, key or token, but I may call attention to the fact that I prefer that the slot 58 be ribbed and grooved in both its side walls with the ribs on one wall in line with the grooves in the opposite wall and less in width than said grooves. I desire to generally claim the formation of the slot 58 and check, key or token 55 in this application and expect to file a separate application dealing more specifically with said slot and key, check or token. In any event the intention is to modify the ribs and grooves in the check, key or token and in the walls of said slot, as occasion may require, so that a person holding checks adapted for one machine may not be able to use them in a different machine.

What I claim as my invention and desire to secure by Letters Patent, is:

1. A shaft, mechanism to be operated therefrom, a crank for the manual operation of said shaft and normally free thereof, check or key controlled means interposed between said crank and shaft and comprising a primary member normally free to rotate independently of said shaft and connected with said crank, a second rotary member rigid on said shaft and to be temporarily connected with said primary member by the introduction of a check or key connecting them so that the motion of one may be communicated to the other and to said shaft, means for supporting said check or key in operative position, means for releasing said check or key after said members and shaft have completed their movement for the discharge, a casing inclosing said control means having an entrance slot for the key or check, and a band encompassing the periphery of said second rotary member to engage the edge of the check or key introduced through said slot and held by said rotary member.

2. A shaft, mechanism to be operated therefrom, a crank for the manual operation of said shaft and normally free thereof, check or key controlled means interposed between said crank and shaft and comprising a primary member normally free to rotate independently of said shaft and connected with said crank, a second rotary member rigid on said shaft and having a slot or pocket to receive the check or key and a yielding support for the check or key in said pocket, means carried by said primary member to engage the face of said key or check for connecting said primary member and said second rotary member so that the motion of one may be communicated to the other and to said shaft, means coöperating with said yielding support carried by the second rotary member for maintaining said check or key in the slot or pocket of said member, means for tripping said last-mentioned means to release the check or key after said members and shaft have completed their movement in one direction, a casing inclosing said control means having an entrance slot for the check or key, and a band encompassing the periphery of said second rotary member to engage the edge of the check or key introduced through said slot during the movement of said rotary member, said band having a cam end for pressing the check or key against said yielding support and placing the latter under tension during the initial movement of said second rotary member.

3. A shaft, mechanism to be operated therefrom, a crank for the manual operation of said shaft and normally free thereof, check or key controlled means interposed between said crank and shaft and comprising a primary member normally free to rotate independently of said shaft and connected with said crank, a second rotary member rigid on said shaft and having a slot or pocket to receive said check or key and a spring-pressed dog for aiding in supporting the check or key in said pocket, a pivoted spring-pressed dog carried by said primary member to engage the face of said check or key for connecting said primary member and said second rotary member so that the motion of one may be communicated to the other and to said shaft, means cooperating with said spring-pressed dog carried by the second rotary member for maintaining said check or key in the slot or pocket of said member, means for tripping said last-mentioned means to release said check or key after said members and shaft have completed their movement in one direction, a casing inclosing said control means having an entrance slot for the check or key, and a band encompassing the periphery of said second rotary member to engage the edge of the check or key introduced through said slot during the movement of said rotary member, said band having a cam end for pressing the check or key against said spring-pressed dog of and during the initial movement of said second rotary member.

4. A shaft, mechanism to be operated therefrom, a crank for operating said shaft and normally free thereof, check or key control means interposed between said crank and shaft and comprising a primary member normally free to rotate independently of said shaft and connected with said crank, a second rotary member rigid on said shaft and having a slot or pocket to receive a check or key and a spring-pressed dog for

aiding at one end in supporting the check or key in said pocket, means carried by said primary member to engage the face of said check or key for connecting said primary member and said second rotary member, means coöperating with said spring-pressed dog carried by the second rotary member for maintaining said check or key in the slot or pocket of said member, means for tripping said last-mentioned means to release said check or key after said members and shaft have completed their movement in one direction, a casing inclosing said control means having an entrance slot for the check or key, and a band encompassing the periphery of said second rotary member to engage the edge of the check or key introduced through said slot during the movement of said rotary member, said band having a cam end for pressing the check or key against said spring-pressed dog during the initial movement of said second rotary member so as to turn said dog to a limited extent and thereby set its shank end in a free path, combined with means on the release of the check or key and the automatic return to its initial position of said spring-pressed dog to engage the shank end of said dog on the reverse movement of the crank for resetting the mechanism of the machine to its initial position ready for a subsequent operation on the introduction of another check or key.

5. A shaft, mechanism to be operated therefrom, a crank for the operation of said shaft normally free thereof, check or key controlled means between said crank and shaft and comprising a primary member normally free to rotate independently of said shaft and connected with said crank, a second rotary member rigid on said shaft and to be temporarily connected with said primary member by the introduction of a check or key connecting them so that the motion of one may be communicated to the other and to said shaft, means for supporting said check or key in operative position in a pocket in said second rotary member and comprising a slide having an end to cross said pocket and said check or key, a lever spring-pressed in its initial position holding said slide and a cam connected with said lever, and means for tripping said check supporting means after said members and shaft have completed their movement in one direction comprising a frame mounted to travel toward and from said second rotary member and to be actuated therefrom and a pin carried by said frame and which during the rotation of said crank to effect the operation of the discharging mechanism, moves toward said cam and arrives in the path thereof on the completion of said rotation to thereby trip said lever and withdraw said slide so as to permit the release of the check or key.

6. A shaft, mechanism to be operated therefrom, a crank for the manual operation of said shaft and normally free thereof, check or key controlled means between said crank and shaft and comprising a primary member normally free to rotate independently of said shaft and connected with said crank, a second rotary member rigid on said shaft and having a pocket to receive a key or check adapted to temporarily connect said primary member with said second rotary member so that the motion of one may be communicated to the other and to said shaft, means for supporting said check or key in said pocket, a spring-pressed dog carried by said primary member and having a flat edge to engage said check or key when in said pocket when the crank is turned to operate the mechanism and an inclined edge to move against and slip by said check or key on any reversal of the movement of said crank prior to the completion of the regular operation of the machine, and means for releasing said check or key after said members and shaft have completed their movement in one direction.

7. A shaft, mechanism to be operated therefrom, a crank for the manual operation of said shaft and normally free thereof, check or key control means between said crank and shaft for locking the crank to the shaft on the introduction of a check or key thereto, means for supporting the check or key in operative position, means for releasing the same after the shaft has made a predetermined movement, an inclosing casing for said control means having an entrance slot for the check or key, a pivoted spring-pressed shutter plate for automatically closing said slot during the actuation of said mechanism from the shaft, and means for holding said shutter plate in its open position in the initial condition of the machine, said means comprising a frame adapted to have a traveling movement during the rotation of said shaft toward and from said crank and carrying an arm which normally holds said shutter plate in its open position and releases the same to close when said frame moves toward said crank and from its initial position.

8. Apparatus of the character described comprising a shaft, mechanism to be operated therefrom, a crank for rotating said shaft and normally free thereof, a check or key controlled mechanism interposed between said crank and shaft and comprising a primary member normally free to rotate independently of said shaft and connected with said crank, a second rotary member rigid on said shaft and to be temporarily connected with said primary member by the introduction of a check or key between them so that the motion of one may be communicated to the other and to said shaft, means

for supporting said check or key in operative position, and means for releasing said check or key after said members and shaft have completed their movement in one direction, said releasing means comprising a threaded sleeve rigid on said shaft, an internally threaded non-rotary frame on said sleeve, a part carried by said frame to engage and move the check supporting means from the check on the completion of said movement of said members, an adjustable band on said non-rotary frame carrying a fork at one side thereof and an angularly adjustable washer plate (94) carrying a pin within said fork for preventing the rotation of said non-rotary frame without interfering with its traveling movement.

9. Apparatus of the character described comprising a shaft, mechanism to be operated therefrom, a crank for rotating said shaft and normally free thereof, a check or key controlled mechanism interposed between said crank and shaft and comprising a primary member normally free to rotate independently of said shaft and connected with said crank, a second rotary member rigid on said shaft and to be temporarily connected with said primary member by the introduction of a check or key between them so that the motion of one may be communicated to the other and to said shaft, means for supporting said check or key in operative position, and means for releasing said check or key after said members and shaft have completed their movement in one direction, said releasing means comprising a threaded sleeve rigid on said shaft, an internally threaded non-rotary frame on said sleeve and an arm extending from said sleeve and carrying a trip pin to engage and trip the check supporting means from the check on the completion of said movement of said members, an adjustable band on said non-rotary frame carrying a fork at one side thereof and an angularly adjustable washer plate (94) carrying a pin within said fork for preventing the rotation of said non-rotary frame without interfering with its traveling movement.

Signed at Brooklyn, in the county of Kings and State of New York, this 24th day of April A. D. 1914.

CHARLES S. BATDORF.

Witnesses:

ARTHUR MARION,

CHAS. C. GILL.