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(54) **Control device for a plurality of fuel dispensers**

Anordnung zur Steuerung einer Anzahl von Zapfsäulen

Dispositif de contrôle d'un nombre de distributeurs d'hydrocarbure

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Description

BACKGROUND OF THE INVENTION

The present invention relates to a control device for controlling a plurality of fuel dispensers arranged in a gasoline station.

In the gasoline station of self-service system, a customer operates the fuel dispenser by himself and a worker in a station office watches the fuelling operation and operates the control device.

In order to maintain the safety, it is preferable to keep the dispensers normally unoperable and change any one of them to be operable according to the customer's request or the worker's judgement. When the fuelling is finished, the concerned dispenser will have to be made unoperable again. In case where the worker senses any danger, for instance fuel overflowing, customer's smoking and the like, the worker in the office cabin must stop the concerned or all dispensers.

Such control device for a plurality of fuel dispensers is known e.g. from Japanese Pat. Appln. Early Opened Gazette Sho 59(1984)-52366, which comprises lamps requesting fuel dispensation and for telling dispensation finished, and switches to be actuated by the worker so as to correspondingly operate the concerned dispenser.

When the number of the dispensers is not so many or if dispensation requests are given little by little, the worker can comply with such control device.

When the number of the dispensers are too many and requests by the customers are given with a rush, however, there is a possibility of erroneous operations.

WO-A-8900974 discloses an interactive pump system which has a pump linked to a central processing unit (CPU), a display and input unit which includes a plurality of instruction displays connected to the pump and CPU. The pump can transmit transaction data concerning fluid pumped to the display and print unit which displays that transaction data, can display one instruction display and can transfer input responses from a user to the CPU. The CPU can process the input responses and controls the pump according to these responses.

SUMMARY OF THE INVENTION

An object of the invention is, thus, to provide a control device for controlling a fairly many fuel dispensers without causing any confusion to the operation.

This object can be attained fundamentally by using a control device for controlling a plurality of fuel dispensers according to claim 1.

BRIEF DESCRIPTIONS OF THE DRAWING

The invention will be explained more definitely according to a preferred embodiment illustrated in the accompanying drawings, in which;

Fig. 1 is a block diagram showing an embodiment of the control device for a plurality of fuel dispensers, Fig. 2 is a block diagram showing construction of a microcomputer arranged in the control device in Fig. 1,

Fig. 3 is a flow chart for showing operation of the dispensation controller in every dispenser,

Fig. 4 is a flow chart for showing operation of the control device of the invention, and

Fig. 5 is a flow chart for showing the other operation of the control device.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

In Fig. 1 each of the fuel dispensers I, II --- arranged in a gasoline station comprises a pump 1 for drawing fuel from a reservoir not shown, a motor 2 for driving the pump 1, a fuel flow meter 3 connected with the pump at the discharge side thereof and a nozzle 4 mounted at the free end of a flexible hose which is connected with the fuel flow meter 3 at the other end so as to dispense fuel to a motor vehicle not shown.

The fuel flow meter 3 is provided with a transmitter 5 for generating a pulse signal representing a fuel flow volume to be received by a dispensation controller 6, which is actuated by a nozzle switch 7 when the nozzle 4 is taken up from a hook 9 mounted on the housing of the dispenser. The actuated controller 6 calculates a fuel flow volume in reference to the pulse signal from transmitter 5 so as to show the result on an indicator 8.

A control device of the invention is generally represented by 20 and comprises a microcomputer 40 mounted in the casing thereof and a display panel 21 which is composed of a touch switch (such as a matrix switch) 24 and a display means (such as a liquid crystal display, a cathode-ray tube and the like). The display means have a sectioned area 22 and a common area 26. The sectioned area 22 is divided into a plurality of sections, eight sections in the illustrated embodiment, which respectively corresponds to the plurality of dispensers I, II ---, eight dispensers in the illustrated embodiment, only two of which are shown for the sake of clarifying the drawing.

Each section of the sectioned area 22 has an area 23a showing a number of the concerned dispenser, an area 23b showing a fuel flow volume and an area 23c showing situation or state of the concerned dispenser at the present, i.e. "Nozzle on Hook", "Nozzle Taken", "Dispensation Allowed", "Now Dispensing", "Emergent Stop" and the like respectively in the form of symbols understandable at a glance as shown in Fig. 4.

In an area 23d of every panel section, a memory or memories 41, 42 (Fig. 2) in the microcomputer 40 which have stored fuel flow volume are shown as explained later. Informations common to the all dispensers inclusive of the fuel volume of any of the dispensers which has finished its fuelling may be shown by request on the area 26 below the eight panel sections.

The control device 20 is provided further therewith with a key board 28 which has switches 28a-28c and a ten-key board 28d. The control device 20 has also a printer 29 for issuing a payment slip. First switch 28a is for selecting either of the two memories, second one 28b for setting printing means to issue the payment slip, and third one 28c for stopping all dispensers in emergency, e.g. when finding anyone smoking.

Now in reference to Fig. 2 showing arrangement of elements in the microcomputer 40 of the control device 20 of the invention, data as to the dispensed fuel flow volume is given by the dispensation controller 6 and sent through the line 10 (Fig. 1) to be stored in a first or second memory 41, 42. It is a reason why the two memories are provided that any dispenser having just finished its fuelling may be used at once by the second customer if the dispensed fuel volume is stored in the other memory. Thus, three or more memories may be provided if necessary.

The sectioned area 22 of the display panel 21 having eight sections is constructed also as a touch sensitive panel as said in the above so that, when touching any section of the panel with a finger, e.g. section "1", section judging means 45 connected therewith receive a signal therefrom so as to identify the number and give a signal to command output means 46 and symbol judging means 47.

The symbol judging means 47, on receiving a signal from the section judging means 45 and the controller 6, selects one of the symbols stored in a symbol memory 48, which is shown on the area 23c of a section of the display 21 through display driving means 44. The command output means 46, on receiving a signal from the section judging means 45, gives a command through the line 10 to the controller 6 of the concerned dispenser (e.g. dispenser I) by taking account of a signal given by the symbol judging means 45 which represents a current state of the dispenser.

Now in reference to Fig. 3, a flow chart showing the operation of the dispensing controller 6 in any of the dispensers and Fig. 4 showing the operation of the control device 20 for the all, e.g. eight dispensers, when a customer selects any one of the dispensers, e.g. the dispenser I and takes the nozzle 4 out of the hook 9 in order to start fuelling, the nozzle switch 7 is turned ON (Fig. 3, Step 1) from the normal OFF state so that the controller 6 outputs a signal for demanding fuel dispensation (Fig. 3, Step 2), which is given through the line 10 to the control device 20 (Fig. 4, Step 1). In the control device 20, the supplied signal is transmitted to the symbol judging means 47 through a line 50. Symbol judging means 47 on receiving the signal selects the symbol corresponding to "Nozzle Taken" from symbol storing means 48 so as to correspondingly actuates means 44 for driving the display 21, whereby the symbol for the second mode is indicated on the area 23c of the display panel section "1" which is for the dispenser I (Fig. 4, Step 2).

When a worker touches the display panel section "1" with his finger in reply to this requirement by the customer (Fig. 4, Step 3), the corresponding signal is given to the controller 6 of the dispenser I through section judging means 45 and command output means 46. In view of the state at that moment is that dispensation is being requested (Fig. 4, Step 4), the symbol on the area 23c is turned to the third mode, "Dispensation Allowed" (Fig. 4, Step 5).

When the signal for allowing dispensation is received (Fig. 3, Step 3), the controller 6 energizes the motor 2 for driving the pump 1 and sets the indicator 8 to "zero" (Fig. 3, Step 4). When the customer actuates the nozzle trigger to start fuelling, the controller calculates the fuel flow volume moment by moment in reference to pulse signals from the transmitter 5, the result of which is shown on the indicator 8 and sent to the control device 20 through the line 10 (Fig. 4, Step 10). In the control device 20, the signal of fuel flow volume from the line 10 is sent to the display 21 through the line 50, the symbol judging means 47 and the display driving means 44 to be indicated on the area 23b of the display panel section "1" and, at the same time, the symbol on the area 23c is turned to the fourth mode, "Now Dispensing" (Fig. 4, Step 11). The signal is also sent to either the first memory 41 or the second memory 42 which stores no data and vacant.

When the worker feels any danger to touch the section "1" of the touch sensitive panel 21 (Fig. 4, Step 3), the control device 20 outputs a signal for stopping dispensation of the concerned dispenser. In view of that the state is "Now Dispensing" (Fig. 4, Step 6) at that moment, the symbol is changed to one corresponding to "Emergent Stop" which is shown on the area 23c (Fig. 4, Step 7). When the controller 6 of the dispenser I receives the corresponding signal from the control device 20 (Fig. 3, Step 5), the pump motor 2 is stopped (Fig. 3, step 6).

When the section "1" of the touch panel 21 is touched by the worker who has confirmed no danger, in view of that the state at the present is "Emergent Stop" (Fig. 4, Step 8) the control device 20 outputs signal for allowing dispensation again so that the symbol representing "Dispensation Allowed" as the third mode is shown on the area 23c (Fig. 4, Step 9). When the controller 6 receives such signal from the device 20 (Fig. 3, Step 7), the pump motor 2 is reenergized (Fig. 3, Step 8) without resetting the indicator 8 to "zero" and with continuing calculation of the fuel flow volume.

When the customer has finished fuelling and hung the nozzle 4 again on the hook 9, the nozzle switch 7 is turned OFF (Fig. 3, Step 9), and the dispensation controller 6 of the dispenser I deenergizes the pump motor 2 and outputs the corresponding signal (Fig. 3, Step 10). When the control device 20 receives this signal through the line 10, (Fig. 4, Step 12), the data of dispensed fuel flow volume is settled in the memory 41 or 42 and the concerned memory is shown on the display area 23d by an alphabetical letter "A" or "B" and the

symbol in the area 23c of the section "1" disappears which means "Nozzle on Hook" (Fig. 4, Step 13).

Now in reference to Fig. 5, when the worker pushes a button of the ten-key board 27 for identifying the dispenser, namely "1" in this illustrated embodiment (Fig. 5, Step 1) and further the worker actuates the switches A or B of 28a in accordance with the indication appearing in the area 23d in order to select data of either of the memories 41 and 42, the dispensed fuel volume is shown on the area 26 in a larger scale (Fig. 5, Step 3). If he pushes the button switch 28b (Fig. 5, Step 4) under said condition, the payment slip is printed out (Fig. 5, Step 5) and the data in the selected memory is erased so that the display for the fuel volume on the area 26 is cleared off.

Claims

1. Control device for controlling a plurality of fuel dispensers comprising

a display panel (21) which is constructed also as a touch sensitive panel and divided into sections of the number corresponding to that of the fuel dispensers (I, II...)

and a microcomputer (40) which comprises means (47) for judging symbols which represent various states of the concerned dispenser in reference to signals from the dispenser and the corresponding touch sensitive panel section, means (44) for driving the display panel and connected with said judging means (47) so that a correspondingly judged symbol may be indicated on the concerned display section, and means (46) for outputting command, which corresponds to a signal inputted by touching the touch sensitive panel section, to the concerned dispenser,

the microcomputer (40) has memory means (41, 42) for storing a fuel volume dispensed by the fuel dispensers,

characterised in that the memory means (41, 42) include two or more memories each of which is adapted to store a fuel volume dispensed by one fuel dispenser, so that this fuel dispenser can be used for another dispensation with using another cleared or vacant memory.

2. Control device as set forth in Claim 1, in which said display panel (21) has a sectioned area (22) divided into a plurality of sections corresponding to dispensers, and a common area (26) for showing fuelling data of a designated dispenser in a larger scale.

3. Control device as set forth in Claim 1 or Claim 2, in which an increasing fuel volume data momentarily

transmitted from a fuel dispenser (I, II...) is stored in the memory (41 or 42) on one hand and indicated on the concerned display section through the judging means (47) and the display panel driving means (44) on the other hand.

4. Control device as set forth in Claim 1, in which each display panel section has areas (23a, 23c, 23b, 23d) each showing the dispenser number, any of symbols representing a state at the present of the concerned dispenser, dispensed fuel volume, and memory means.

5. Control device as set forth in Claim 1, in which said symbols to be indicated on the concerned display panel section understandably at a glance represent "Nozzle on Hook" meaning normal state, "Nozzle Taken" meaning the state where the concerned dispenser is waiting to be made dispensable, "Dispensation Allowed" meaning a state where the concerned dispenser has been made dispensable, "Dispensing Now" and "Emergent Stop".

6. Control device as set forth in Claim 4, in which the microcomputer (40) further comprises a section judging means (45) for detecting a touch on the concerned display section, and the section judging means (45), symbol judging means (47) and symbol storing means (48) cooperate with each other each time the display section is touched so as to change an existing state of the concerned dispenser from "Nozzle Taken" to "Dispensation Allowed", from "Dispensing Now" to "Emergent Stop", or from "Emergent Stop" to "Dispensation Allowed", while the symbol judging means (47) and symbol storing means (48) cooperate with each other each time the symbol judging means receive a signal from the concerned dispenser so as to change an existing state of the concerned dispenser from "Nozzle on Hook" to "Nozzle Taken", from "Dispensation Allowed" to "Dispensing Now", for "Dispensing Now" to "Dispensation Allowed" or from "Dispensation Allowed" to "Nozzle on Hook".

7. Control device as set forth in Claim 1, in which the microcomputer (40) further comprises memory selecting means (32) connected to the memory means (41, 42) on one hand and to the display panel driving means (44) and slip issuing means (49) on the other hand so as to transfer the data of the memory means (41, 42) to the display driving means (44) for driving a displaying area (26) constructed as a part of the display panel (21) to indicate the data and to the slip issuing means (49) for driving a printer (29), said memory selecting means (43) being further connected to a first switch (28a) for selecting one of the memories (41, 42) and a second switch (28b) for driving the memory selecting means (43), the second switch (28b) being con-

nected also to the slip issuing means (49) so as to drive the latter, whereby, when one of the dispensers which has finished its dispensing operation is designated by operating a ten-key board (28d) provided on the control device (20) and the concerned one of the memories is selected by operating the first switch, the data in the selected memory is transmitted through the memory selecting means (43) to the display driving means (44) to display the data on the display area 26), and then, when the second switch (28b) is operated to actuate the slip issuing means (29), a slip with the data properly printed thereon by the printer is issued and the data in the selected memory is erased.

8. Control device as set forth in Claim 1, further comprising a third switch (28c) for stopping all dispensers in emergency.

Patentansprüche

1. Steuervorrichtung zur Steuerung einer Mehrzahl von Kraftstoff-Zapfstellen, mit

einem Sichtanzeigefeld (21), das auch als berührungsempfindliches Feld ausgebildet und in Abschnitte unterteilt ist, deren Anzahl derjenigen der Kraftstoff-Zapfstellen (I, II...) entspricht, und

einem Mikrocomputer (40), der ein Mittel (47) aufweist, um Symbole zu beurteilen, die verschiedene Zustände der betreffenden Zapfstelle unter Bezugnahme auf Signale von der Zapfstelle und dem betreffenden berührungsempfindlichen Feldabschnitt darstellen,

einem Mittel (44), das zum Treiben des Sichtanzeigefeldes vorgesehen und mit dem genannten Beurteilungsmittel (47) so verbunden ist, daß ein entsprechend beurteiltes Symbol auf dem betreffenden Anzeigefeldabschnitt angezeigt werden kann, und

einem Mittel (46), um einen Befehl, welcher einem durch Berühren des berührungsempfindlichen Feldabschnittes eingegebenen Signal entspricht, an die betreffende Zapfstelle auszugeben,

wobei der Mikrocomputer (40) ein Speichermittel (41, 42) aufweist, um ein Kraftstoffvolumen zu speichern, das durch die Kraftstoff-Zapfstellen abgegeben worden ist,

dadurch gekennzeichnet, daß das Speichermittel (41, 42) zwei oder mehr Speicher beinhaltet, von denen jeder dazu eingerichtet ist, ein durch eine Kraftstoff-Zapfstelle abgegebenes Kraftstoffvolumen zu speichern, so daß diese Kraftstoff-Zapfstelle für eine weitere Abgabe unter Benutzung eines weiteren gelöschten oder leeren Speichers benutzt werden kann.

2. Steuervorrichtung wie in Anspruch 1 angegeben, bei der das genannte Sichtanzeigefeld (21) einen in Abschnitte geteilten Bereich (22), welcher in eine Mehrzahl von Abschnitten unterteilt ist, die Zapfstellen entsprechen, sowie einen gemeinsamen Bereich (26) besitzt, um Betankungsdaten einer bezeichneten Zapfstelle in größerem Maßstab anzuzeigen.

3. Steuervorrichtung wie in Anspruch 1 oder Anspruch 2 angegeben, bei der die Daten eines sich vergrößernden Kraftstoffvolumens, die augenblicklich von einer Kraftstoff-Zapfstelle (I, II...) übertragen werden, einerseits in dem Speicher (41 oder 42) gespeichert und andererseits auf dem betreffenden Anzeigefeldabschnitt durch das Beurteilungsmittel (47) und das Anzeigefeld - Treibermittel (44) angezeigt werden.

4. Steuervorrichtung wie in Anspruch 1 angegeben, bei der jeder Anzeigefeldabschnitt Bereiche (23a, 23c, 23b, 23d) aufweist, die jeder die Zapfstellennummer, sämtliche der Symbole, die einen gegenwärtigen Zustand der betrachteten Zapfstelle darstellen, das abgegebene Kraftstoffvolumen sowie die Speichereinrichtung zeigen.

5. Steuervorrichtung wie in Anspruch 1 angegeben, bei der die genannten Symbole, die auf dem betreffenden Anzeigefeldabschnitt anzuzeigen und auf einen Blick verständlich sind, "Zapfpistole am Haken", was den Normalzustand bedeutet, "Zapfpistole abgenommen", was den Zustand bedeutet, wo die betreffende Zapfstelle darauf wartet, abgabefähig gemacht zu werden, "Abgabe gestattet", was einen Zustand bedeutet, wo die betreffende Zapfstelle abgabefähig gemacht wurde, "jetzt Abgabe" und "Nothalt" darstellen.

6. Steuervorrichtung wie in Anspruch 4 angegeben, bei der der Mikrocomputer (40) außerdem ein Abschnittbeurteilungsmittel (45) aufweist, um eine Berührung auf dem betreffenden Anzeigefeldabschnitt zu erkennen, und das Abschnittbeurteilungsmittel (45), das Symbolbeurteilungsmittel (47) und das Symbolspeichermittel (48) jeweils miteinander zusammenwirken, so oft der Anzeigefeldabschnitt berührt wird, um einen gegebenen Zustand der betreffenden Zapfstelle von "Zapfpistole abgenommen" in "Abgabe gestattet", von "jetzt Abgabe" in "Nothalt" oder von "Nothalt" in "Abgabe gestattet" umzuändern, während das Symbolbeurteilungsmittel (47) und das Symbolspeichermittel (48) miteinander zusammenwirken, so oft das Symbolbeurteilungsmittel ein Signal von der betreffenden Zapfstelle erhält, um einen gegebenen Zustand der betreffenden Zapfstelle von "Zapfpistole am Haken" in "Zapfpistole abgenommen", von "Abgabe gestattet" in "jetzt Abgabe", von "jetzt

Abgabe" in "Abgabe gestattet" oder von "Abgabe gestattet" in "Zapfpistole am Haken" umzuändern.

7. Steuervorrichtung wie in Anspruch 1 angegeben, bei der der Mikrocomputer (40) außerdem ein Speicherauswählmittel (43) aufweist, das mit dem Speichermittel (41, 42) einerseits und mit dem Anzeigefeldtreibermittel (44) und einem Zahlbelegzettel-Ausgabemittel (49) andererseits verbunden ist, um die Daten des Speichermittels (41, 42) auf das Anzeigefeldtreibermittel (44) zu übertragen, um einen Anzeigefeldbereich (26) zu treiben, der als Teil des Sichtanzeigefeldes (21) ausgebildet ist, um die Daten anzuzeigen, und auf das Zahlbelegzettel-Ausgabemittel (49) zu übertragen, um einen Drucker (29) zu treiben, wobei das genannte Speicherauswählmittel (43) außerdem mit einem ersten Schalter (28a) für das Auswählen eines der Speicher (41, 42), und einem zweiten Schalter (28b) für das Treiben des Speicherauswählmittels (43) verbunden ist, wobei der zweite Schalter (28b) auch mit dem Zahlbelegzettel-Ausgabemittel (49) verbunden ist, um letzteres zu treiben, wodurch, wenn eine der Zapfstellen, die die Abgabefähigkeit beendet hat, durch Betätigen einer 10-Tasten-Tastatur (28d), die an der Steuervorrichtung (20) vorgesehen ist, bezeichnet wird und der betreffende eine der Speicher ausgewählt wird, indem der erste Schalter betätigt wird, die Daten in dem ausgewählten Speicher durch das Speicherauswählmittel (43) zu dem Anzeigefeldtreibermittel (44) übertragen werden, um die Daten auf dem Anzeigefeldbereich (26) anzuzeigen, und daß dann, wenn der zweite Schalter (28b) betätigt wird, um das Zahlbelegzettel-Ausgabemittel (29) zu betätigen, ein Zahlbelegzettel mit den darauf richtig aufgedruckten Daten mittels des Druckers ausgegeben wird und die Daten in dem ausgewählten Speicher gelöscht werden.

8. Steuervorrichtung wie in Anspruch 1 angegeben, außerdem einen dritten Schalter (28c) aufweisend, um sämtliche Zapfstellen im Notfall stillzusetzen.

Revendications

1. Dispositif de commande d'une série de distributeurs de carburant, comprenant

un panneau afficheur (21) conçu aussi comme panneau tactile et divisé en secteurs dont le nombre correspond à celui des distributeurs de carburant (I, II, ...) et
un micro-ordinateur (40) qui comprend
un moyen (47) de jugement de symboles qui représentent différents états du distributeur concerné en référence à des signaux émis par ce distributeur et par le secteur correspondant du panneau tactile,

un moyen (44) de commande du panneau afficheur qui est relié au moyen de jugement (47) de façon qu'un symbole jugé en correspondance puisse être indiqué dans le secteur d'affichage concerné, et

un moyen (46) d'envoi de commande, qui correspond à un signal saisi par toucher du secteur du panneau tactile, au distributeur concerné,

le micro-ordinateur (40) ayant des moyens (41, 42) de mémorisation d'un volume de carburant distribué par les distributeurs de carburant, caractérisé par le fait que les moyens de mémorisation (41, 42) contiennent deux ou plus de deux mémoires faites chacune pour mémoriser un volume de carburant distribué par un distributeur donné, afin que ce distributeur puisse être utilisé pour une autre distribution avec utilisation d'une autre mémoire effacée ou vacante.

2. Dispositif de commande selon la revendication 1, dans lequel le panneau afficheur (21) a une zone (22) divisée en une série de secteurs correspondant à des distributeurs et une zone commune (26) pour la présentation de données d'approvisionnement en carburant d'un distributeur désigné, à une plus grande échelle.

3. Dispositif de commande selon l'une des revendications 1 et 2, dans lequel des données de volume de carburant croissant émises momentanément par un distributeur de carburant (I, II, ...) sont d'une part mémorisées dans la mémoire (41 ou 42) et d'autre part indiquées dans le secteur d'affichage concerné par l'intermédiaire du moyen de jugement (47) et du moyen de commande de panneau afficheur (44).

4. Dispositif de commande selon la revendication 1, dans lequel chaque secteur du panneau afficheur a des zones (23a, 23b, 23c, 23d) qui présentent chacune le numéro du distributeur, un de symboles représentant un état actuel du distributeur concerné, du volume de carburant distribué et des moyens de mémorisation.

5. Dispositif de commande selon la revendication 1, dans lequel les symboles destinés à être indiqués dans le secteur concerné du panneau afficheur représentent de façon compréhensible d'un coup d'oeil "pistolet au crochet" signifiant état normal, "pistolet pris" signifiant l'état où le distributeur concerné attend d'être rendu prêt à distribuer, "distribution autorisée" signifiant un état où le distributeur concerné a été rendu prêt à distribuer, "distribution en cours" et "arrêt apparaissant".

6. Dispositif de commande selon la revendication 4, dans lequel le micro-ordinateur (40) comprend en outre un moyen de jugement de secteur (45) pour la détection d'un toucher du secteur d'affichage concerné, et ce moyen de jugement de secteur (45), le moyen de jugement de symboles (47) et le moyen de mémorisation de symboles (48) coopèrent chaque fois que le secteur d'affichage est touché afin de faire passer un état existant du distributeur concerné de "pistolet pris" à "distribution autorisée", de "distribution en cours" à "arrêt apparaissant" ou d'"arrêt apparaissant" à "distribution autorisée", tandis que le moyen de jugement de symboles (47) et le moyen de mémorisation de symboles (48) coopèrent chaque fois que le moyen de jugement de symboles reçoit un signal du distributeur concerné afin de faire passer un état existant du distributeur concerné de "pistolet au crochet" à "pistolet pris", de "distribution autorisée" à "distribution en cours", de "distribution en cours" à "distribution autorisée" ou de "distribution autorisée" à "pistolet au crochet".
7. Dispositif de commande selon la revendication 1, dans lequel le micro-ordinateur (40) comprend en outre un moyen de sélection de mémoire (32) relié d'une part aux moyens de mémorisation (41, 42) et d'autre part au moyen de commande de panneau afficheur (44) et à un moyen d'émission de ticket (49) afin de transférer les données des moyens de mémorisation (41, 42) au moyen de commande de panneau afficheur (44) pour commander une zone d'affichage (26) conçue comme partie du panneau afficheur (21) pour indiquer ces données et au moyen d'émission de ticket (49) pour la commande d'une imprimante (29), le moyen de sélection de mémoire (43) étant en outre relié à un premier commutateur (28a) pour la sélection d'une des mémoires (41, 42) et à un deuxième commutateur (28b) pour la commande du moyen de sélection de mémoire (43), le deuxième commutateur (28b) étant aussi relié au moyen d'émission de ticket (49) afin de commander ce dernier, de sorte que lorsqu'un des distributeurs qui a fini son opération de distribution est désigné par actionnement d'un clavier à dix touches (28d) prévu sur le dispositif de commande (20) et que la mémoire concernée est sélectionnée par actionnement du premier commutateur, les données contenues dans la mémoire sélectionnée sont transmises par le moyen de sélection de mémoire (43) au moyen de commande d'affichage (44) pour leur affichage dans la zone d'affichage (26), et ensuite, lorsque le deuxième commutateur (28b) est actionné pour actionner le moyen d'émission de ticket (29), un ticket avec les données convenablement imprimées dessus par l'imprimante est émis et les données contenues dans la mémoire sélectionnée sont effacées.
8. Dispositif de commande selon la revendication 1, comprenant un troisième commutateur (28c) pour l'arrêt d'urgence de tous les distributeurs.

FIG. 1

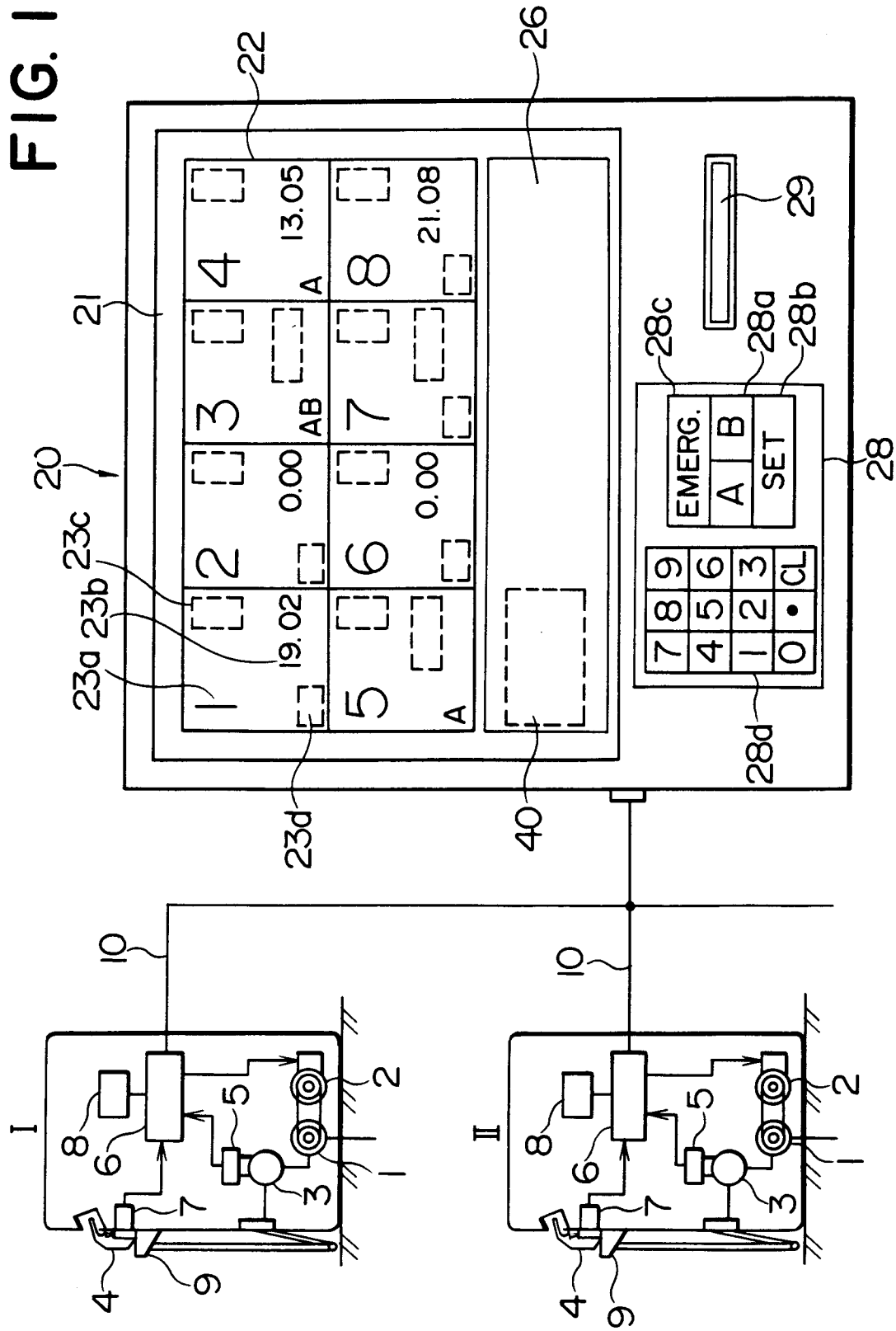


FIG. 2

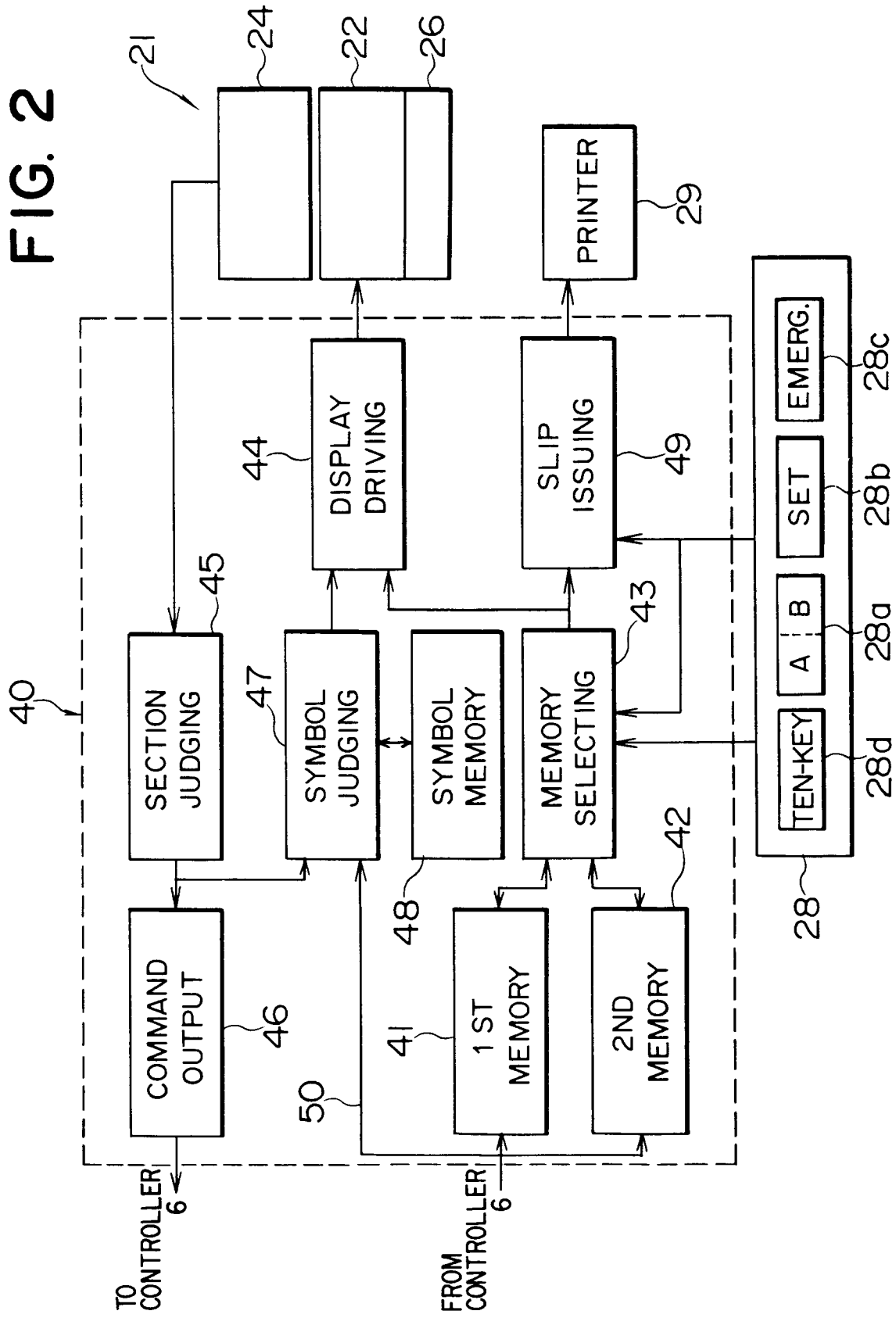


FIG. 3

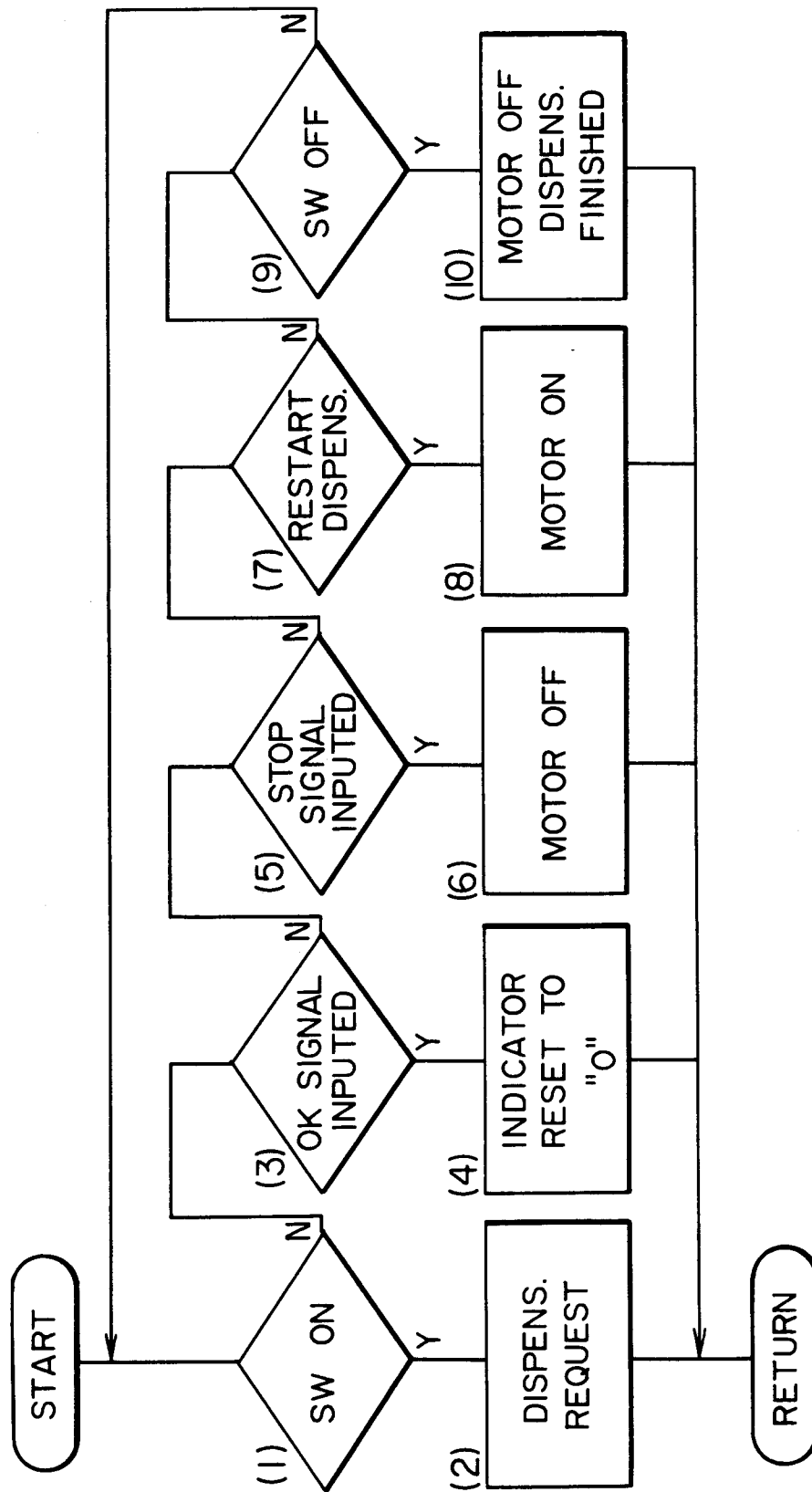


FIG. 4

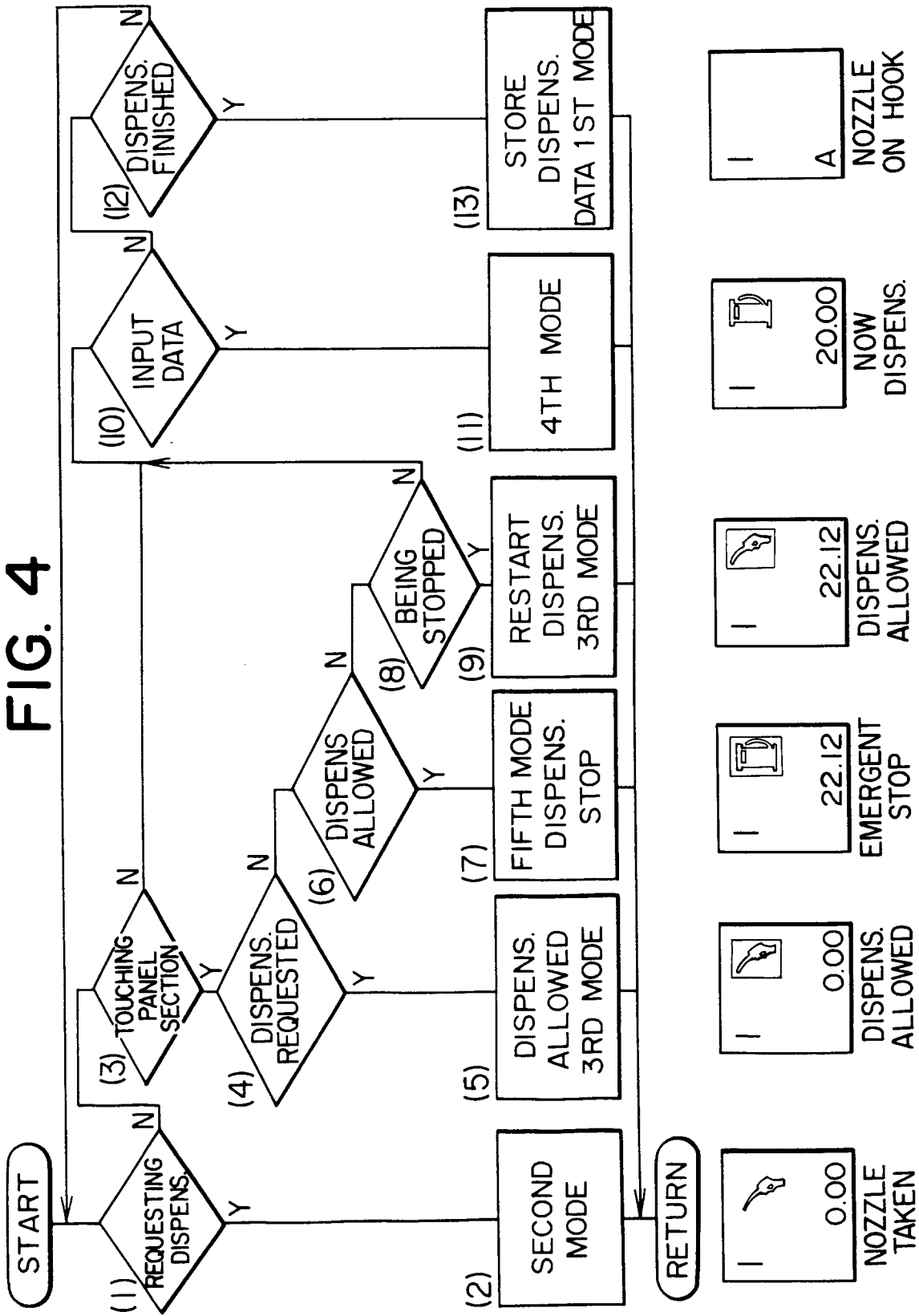


FIG. 5

