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(54)

A vending machine with information display

(57) A vending machine (1) for the dispensing of articles having a display (10) to visualize information connected to a processing unit (11) able to process the data for the display of the information, the processing unit (11) being connected to peripherals (12) for the input of said data for the display of the information and being connected to a computer network (19).

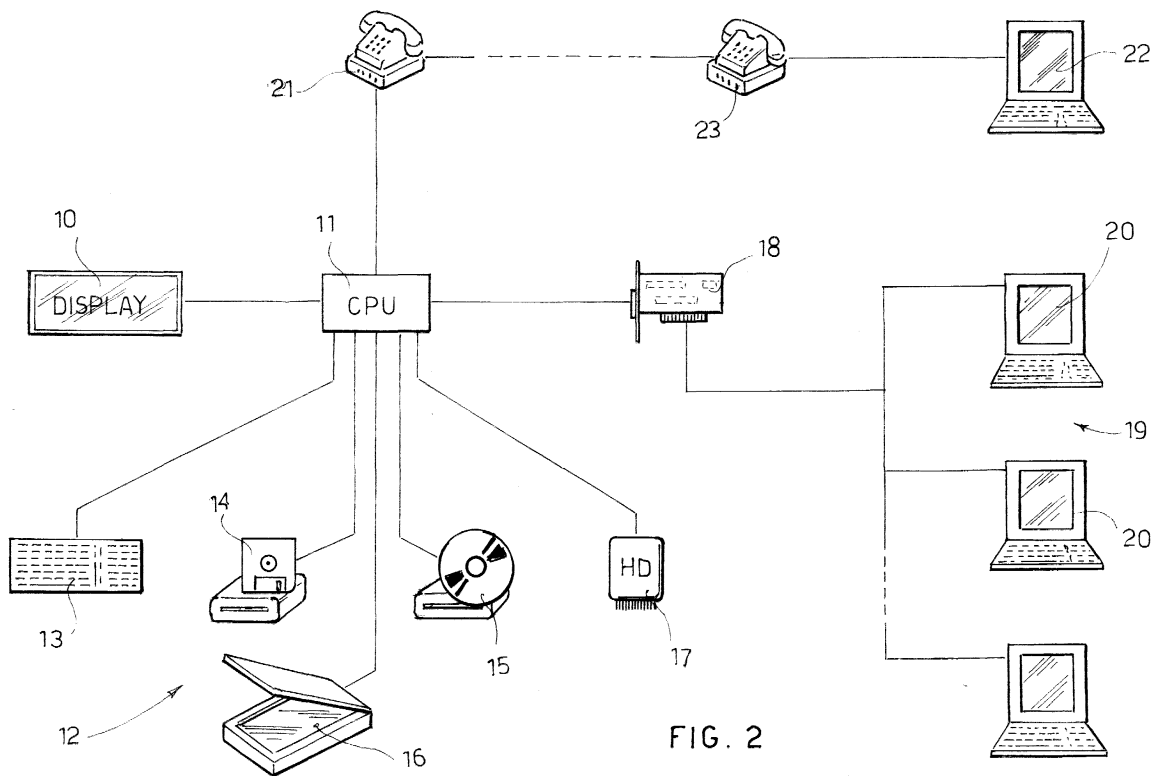


FIG. 2

Description

[0001] The present invention refers to a vending machine including a display to visualize information.

[0002] At present, there are different types of vending machines on the market, namely snack vending machines and vending machines of commonly used objects. Snack vending machines are known which dispense canned drinks, such as Coca-cola®, orangeade, etc., or drinks in cups, e.g. water, coffee, cappuccino, etc. or snacks, e.g. brioche, chocolate bars, biscuits, and similar.

[0003] These types of vending machines for drinks and/or snacks are generally located inside companies, factories and offices for use by staff and visitors, or in public places such as subways, stations, airports and shopping centres.

[0004] The known vending machines generally include a casing which contains the articles to be dispensed, a slot into which a coin, token or credit card is inserted to purchase the desired article, an opening from which the dispensed article comes out, some push buttons for the selection of the desired article and LEDs which indicate the amount to be inserted to obtain the selected article, or the possible selling out of the article.

[0005] The aim of the present invention is to provide a vending machine that is able to supply the user with information.

[0006] Another aim of the invention is to provide such a vending machine that is able to dispense objects linked with advertising messages, prize contests and/or competitions.

[0007] These aims are reached, in accordance with the invention, with the characteristics listed in the enclosed independent claim 1.

[0008] Advantageous embodiments of the invention will become apparent from the dependent claims.

[0009] The vending machine, according to the invention, has an information display that is preferably a liquid crystal display (LCD) which occupies a reduced space, or also an ordinary cathode ray tube (CRT) monitor. This display is connected to a processing unit (CPU) which processes the information visualized on the display.

[0010] The CPU can be connected to different types of peripherals such as, for instance, a keyboard, driver for magnetic media, data memory unit. In this way an operator, through such peripherals can send, to the CPU, the information to be visualized on the vending machine display.

[0011] The CPU can also be connected, by means of a network board, to a computer network so that it can be programmed by a network user.

[0012] The CPU may also have a modem so it can be programmed by a remote computer which is equipped with a modem.

[0013] In a preferred embodiment the vending machine, according to the invention, can be chosen for the dispensing of small promotional objects linked with prize

contests and/or competitions.

[0014] The advantages of such a vending machine, according to the invention, are evident.

[0015] In fact if the vending machine, according to the invention, is situated within a company, it surely represents a known meeting point for company staff. In this case, staff information can be displayed, such as for instance, refresher courses, new specifications, new sets of rules, etc. A vending machine positioned in a company waiting room can be used by company visitors, therefore it can display company advertising information.

[0016] In any case this type of vending machine, with information display, can be used to display useful information in cases of emergency.

[0017] Instead, vending machines located in public places, would be able to display advertising information or the services offered by a particular city or by the place in which the vending machine is located.

[0018] Additional characteristics of the invention will become clearer from the detailed description which follows, referring simply to an explanatory, non-limiting embodiment, shown in the enclosed diagrams, in which:

Fig. 1 is a perspective diagrammatic view of a vending machine with information display, according to the invention;

Fig. 2 is a block diagram showing the devices for the display operation of the vending machine, according to the invention.

[0019] As shown in Fig. 1, a vending machine denoted, as a whole, by reference number 1, includes a casing 2, which contains the articles to be dispensed, having a front door 3 closed by means of a padlock 4.

[0020] At least one slot 5 is made in the front door 3 able to accept coins, tokens, or cards for the payment of the desired articles. A banknote reader can be set behind the slot 5, to read banknotes to load credits in the vending machine. Next to slot 5 is an LED display 6, indicating the amount to be inserted into the slot 5 to obtain the requested article or indicating the amount inserted after the last extraction.

[0021] Still on the front panel 3 are envisaged push buttons 7 that can be pressed by the user to select the type of article required. Next to each push button 7 are LEDs 8 that light up to indicate the selling out of the relative article.

[0022] The lower part of the front panel 3 has an opening 9 to allow extraction of the article supplied by the vending machine 1.

[0023] The upper part of the front panel 3, has a display 10, preferably set at a height approximately corresponding to the average height of a user. The display 10 is preferably an ultra slim liquid crystal display (LCD) and therefore able to fit into the front door 3 of the vending machine 1. However, the display 10 can be an ordinary monitor (CRT) with cathode ray tube and can be

positioned in another part of the vending machine 1, in any case, accessible to a vending machine user.

[0024] As shown in Fig. 2 the display 10 is connected to a processing unit (CPU) 11 able to process the images to be visualized on the display 10. In this way, the display 10 can visualize notices in alphanumeric format and graphic images or animations in the graphic formats normally read by graphic programs, per se known.

[0025] The CPU 11 is connected to a number of peripherals 12 able to send, to the CPU, characters in alphanumeric format, images in graphic format and complete programs which can be executed by the CPU.

[0026] For instance, for the input of alphanumeric characters and for CPU 11 operation, a keyboard 13 can be used. Drivers for magnetic media, such as a floppy disc 14 and/or a compact disc 15, can be used for the input of images in graphic format and executable programs. A scanner can be used for the input of images and a data memory, namely a hard disk 17 can be used for the memorization of media programs at CPU 11. All the peripherals 12 can be positioned inside the casing 2 of the vending machine, so as to be accessible only to the authorized operator.

[0027] The CPU 11 can be connected to a computer network 19, including a number of terminals 20 connected with each other by a network board 18. In this way, the users of terminals 20, if enabled, can send data from their terminal to the CPU 11 which processes them visualizing such data on the display 10.

[0028] Besides, the CPU 11 can be connected to a modem 21. In this way, a user of a remote computer 22 with modem 23, if enabled, can send data to the CPU 11, which processes them visualizing such data on the display 10.

[0029] Clearly, in the case in which the CPU 11 is connected to a computer network 19 or is equipped with a modem 21, it will have an identification password or login known to the enabled operators who, through their remote computer 22 or their network terminal 20, can send data to the CPU 11 to visualize information on the display 10 of the vending machine 1.

[0030] A preferred use of the vending machine 1 is described later on.

[0031] Among the objects supplied by the vending machine 1 are preferably small promotional objects linked with prize contests and competitions. Such objects can be, for example, cards bearing images, notices, distinctive signs, numbers, symbols, initials and similar things. For instance, the cards may have printed images, notices and distinctive signs linked with an advertising promotion or famous figures.

[0032] Moreover, such cards can be numbered or initialled in sequence so the buyer can collect them and so form a collection.

[0033] In this way, at the moment of the dispensing of the card, the CPU 11 randomly processes the winning combination of the numbers or symbols linked with the prize contest. This winning combination is visualized on

the display 10 of the vending machine 1. Therefore the user can check if the winning combination appearing on the display 10 matches that on his/her card.

[0034] Besides, the CPU 11 is able to recognize the coincidence between the card combination and the displayed winning combination. Therefore, when a win is recognized, the vending machine 1 directly undertakes to notify the user of the win. Win notification is provided through the printing of a win slip by an electronic printer or similar connected to the vending machine.

[0035] The game winnings can be fulfilled by means of non-money prizes. The prizes can be tickets or coupons, e.g. scratchcards, used for games with prizes authorized by the Ministry of Finance or other government authority. The prizes can also be gifts and fancy goods or food orders to be claimed from shops or bars and similar in agreement with the promoting body of the game.

[0036] During a second stage, the buyer of the cards will have the chance to send a collection made up of a series of purchased cards to the game promoter. In this manner, the buyer will qualify for the right to take part in a prize contest in which there is a planned draw of intermediate and final prizes.

Claims

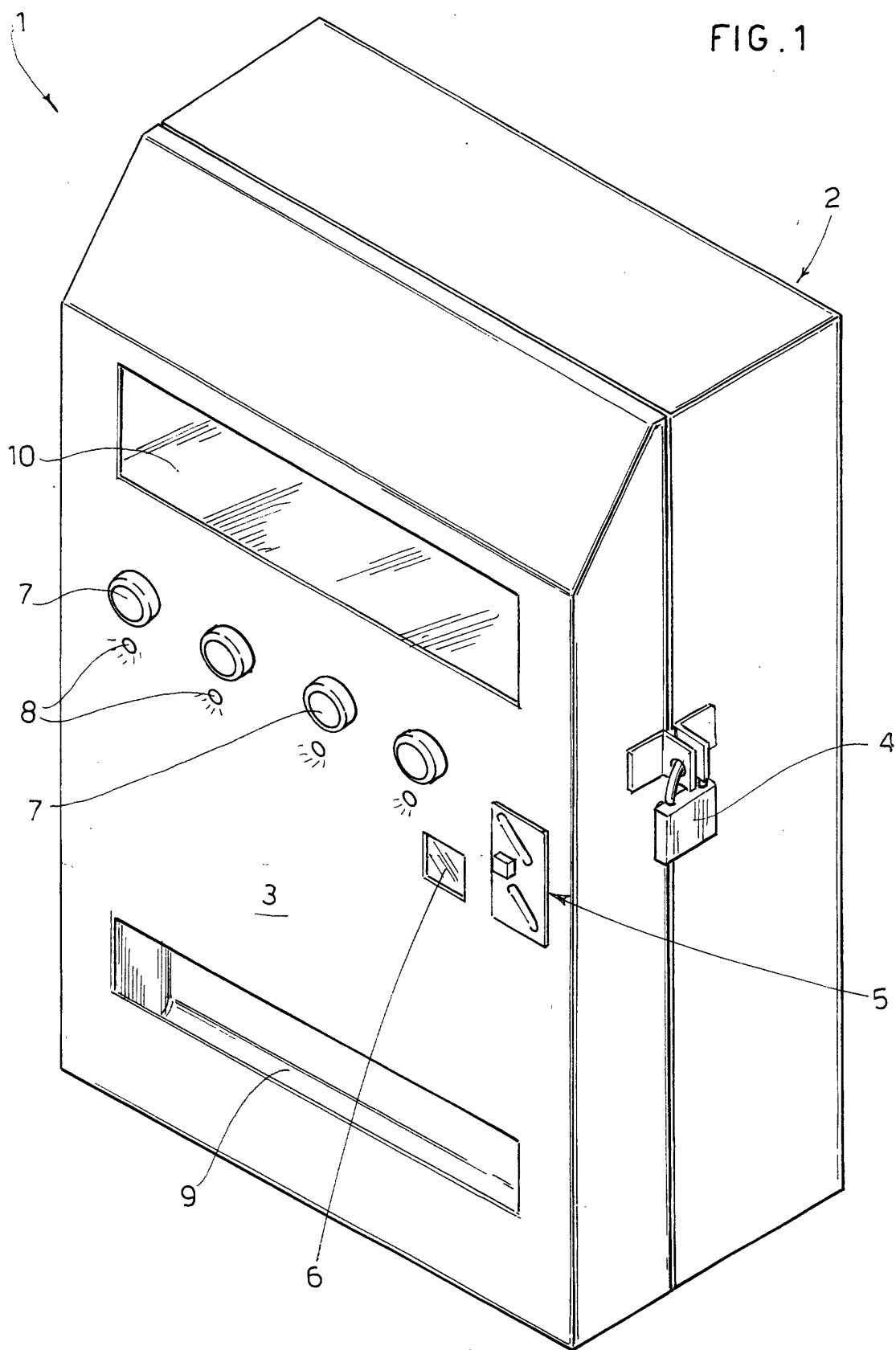
1. A vending machine (1) for the dispensing of articles, **characterised in that** it includes a display (10) for the visualization of information.
2. A vending machine as in claim 1, **characterised in that** said display (10) is a liquid crystal display (LCD) or a cathode ray tube (CRT).
3. A vending machine as in claim 1 or 2, **characterised in that** said display (10) is built into the front door (3) of said vending machine.
4. A vending machine, according to any one of the previous claims, **characterised in that** said display (10) is connected to a processing unit (11) able to process data for the visualization of images and/or alphanumeric characters.
5. A vending machine as in claim 4, **characterised in that** said processing unit (11) is connected to at least one peripheral (12) for the input of said data for the visualization of images and/or alphanumeric characters.
6. A vending machine as in claim 5, **characterised in that** said at least one peripheral (12) is within the casing (2) of the vending machine (1), so as to be accessible only to the authorized operators.
7. A vending machine as in claim 5 or 6, **characterised in that** said peripheral (13) is a keyboard (12)

for the input of alphanumeric characters and command signals towards said processing unit (11).

8. A vending machine, according to any one of claims 5 to 7, **characterised in that** said peripheral (13) is at least one driver for magnetic media able to contain magnetic media in which graphic images, text programs and executable programs are recorded. 5
9. A vending machine, according to any one of claims 5 to 8, **characterised in that** said peripheral (13) is an analyzer or scanner (16) able to analyze graphic images. 10
10. A vending machine, according to any one of claims 4 to 9, **characterised in that** said processing unit (11) is connected by a network board (18) to a computer network (19) so that an enabled operator with a terminal (20) of said computer network (19) can send data towards said processing unit (11). 15
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11. A vending machine, according to any one of the previous claims, **characterised in that** it supplies promotional objects on which are printed images, notices or distinctive advertising signs. 25
12. A vending machine, according to any one of the previous claims, **characterised in that** it supplies objects on which is printed a number or symbol, or a combination of numbers or symbols linked with a prize contest. 30
13. A vending machine as in claim 12, **characterised in that** at the moment of the dispensing of one of said objects linked with the prize contest, said processing unit (11) randomly processes a combination of winning symbols and said display (10) visualizes this winning combination of symbols. 35
14. A vending machine as in claim 12 or 13, **characterised in that** it includes a printer to print a win slip, in accordance with the win obtained through a supplied object linked with said prize contest. 40
15. A vending machine, according to any one of the previous claims, **characterised in that** it supplies objects on which is printed a sequence number or series, so as to allow the buyer to form a collection of said objects and that said series is linked with a prize contest. 45
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FIG. 1



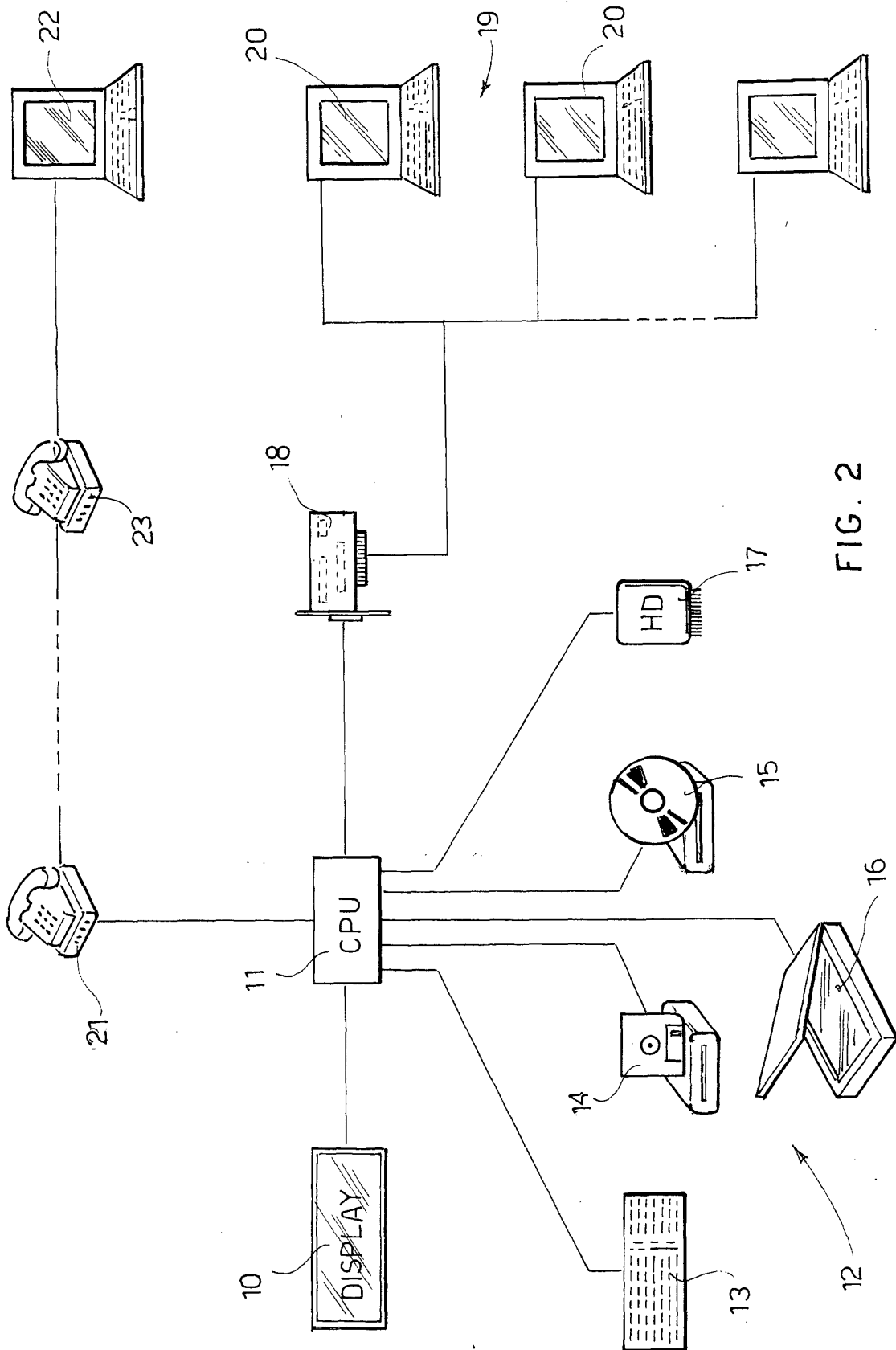


FIG. 2