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(54) **A NIGHT DEPOSITORY OR SAFE DEPOSIT APPARATUS, A CONTROL UNIT AND AN  
INTERFACE CARD FOR THE SAME**

NACHTTRESOR ODER TRESOR, KONTROLLEINHEIT UND INTERFACE KARTE HIERFÜR  
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**EP 0 803 023 B1**

## Description

**[0001]** The present invention relates to a night depository or safe deposit apparatus for receiving and holding a deposit of money or other valuables and comprising a fire- and burglarproof housing defining an internal storage space and having an entrance opening, inlet means bridging the entrance opening and the internal storage space and permitting the transfer of a deposit from the outside into the internal storage space, code generating means accessible from the outside and serving to generate a code signal by actuating the code generating means, and control means connected to the code generating means and to the inlet means and adapted to perform a verification of a code signal generated by the code generating means prior to actuation of the inlet means for performing a deposit.

**[0002]** Various night depositories or safe deposit apparatuses of the type stated above are known wherein an internal CPU is used, constituting the control means, the code generating means typically being constituted by a keyboard by means of which a person wishing to make a deposit in the night depository or safe deposit apparatus of money contained in an envelope or other valuables contained in an envelope inputs a code, such as a 4-digit code or a pin code which in the CPU is compared to verified codes, i.e. codes giving access to performing a deposit in the night depository or safe deposit apparatus. Furthermore, a night depository or safe deposit apparatus is known in which the code generating means are constituted by a bar code scanner as described in German published patent application No. 3930656.

**[0003]** Moreover, the known night depositories or safe deposit apparatuses wherein control means for verification of the actual code signal are used typically have a connection to an external alarm center which is informed or alarmed if some malfunction takes place in the night depository or safe deposit apparatus. Typically, such a malfunction may be that a client having used the night depository or safe deposit apparatus does not close the outer gate covering the entrance opening, whereafter the relevant alarm or security center sends a person to close the gate.

**[0004]** Of course, other malfunctions may appear, as an incorrect positioning of an envelope in the inlet means may cause tearing of the envelope and thereby give rise to registration of a malfunction by the internal detectors in the night depository or safe deposit apparatus.

**[0005]** In addition, the known night depositories or safe deposit apparatuses may alarm the surveillance or guard center in certain instances when persons from the outside by force seek unjustified access to the internal storage space. Apart from these quite basic code verification functions and alarm functions, the known night depositories or safe deposit apparatuses are not able to communicate with the surroundings interactively.

**[0006]** It is an object of the present invention to provide a night depository or safe deposit apparatus of the type stated above which may be integrated in an existing data system and thus be programmed on-line and on-line transmit information, including data, in relation to the function of the night depository or safe deposit apparatus.

**[0007]** It is a further object of the present invention to provide a night depository or safe deposit apparatus in which the verification of a person's justification to make a deposit can be made in a more advanced manner than in the known night depositories or safe deposit apparatuses, e.g. the deposit may be limited to a specific number of times, or limited to be made only within specified intervals of time on specific days.

**[0008]** The above objects and numerous other objects, advantages etc. which will become evident from the below description of the present invention are obtained according to the invention by a night depository or safe deposit apparatus of the type stated above, the night depository or safe deposit apparatus according to the invention being characterized in that the control means comprises PC means adapted to perform the verification of the code signal by comparison of the code signal with a code input to the PC means and that the PC means is adapted to communicate with external data processing means for input of control data from the external data processing means, including verified codes, giving access to perform deposits in the internal storage space in the housing of the night depository or safe deposit apparatus, and for output of data to the external data processing means, including data representing the operation and function of the night depository or safe deposit apparatus.

**[0009]** When providing the control means of the night depository or safe deposit apparatus as PC means the substantial improvement is obtained, relative to known night depositories or safe deposit apparatuses comprising microprocessors for controlling the function of the night depository or safe deposit apparatus, that the night depository or safe deposit apparatus may form part of a data processing equipment or computer system wherein the night depository or safe deposit apparatus is used as a conventional PC and thus may be addressed and programmed in the same way as other PC based equipment. Hereby it is possible to transmit data from the PC means of the night depository or safe deposit apparatus, which PC means stores data regarding the operation and function of the night depository or safe deposit apparatus to external data processing equipment, e.g. equipment in a guard and surveillance center or a branch bank from which data equipment data can be input and output to and from the PC means of a night depository or safe deposit apparatus.

**[0010]** Furthermore, by providing the night depository or safe deposit apparatus according to the invention with PC means, which from the outside can be regarded as a conventional PC means, it becomes possible to ex-

tend the night depository or safe deposit apparatus with external equipment such as modems, data transmission cards, network cards, printer output cards etc. permitting input and output of data to and from the night depository or safe deposit apparatus for obtaining a considerably more advanced control of the night depository or safe deposit apparatus than hitherto possible with the conventional microprocessor-based night depositories or safe deposit apparatuses, and at the same time the information made available to a guard or surveillance center by the night depository or safe deposit apparatus becomes considerably more informative than the simple alarm signals which known night depositories or safe deposit apparatuses are able to generate.

**[0011]** A substantial advantage of the night depository or safe deposit apparatus according to the present invention is thus that the codes used by the PC means for verification of a code signal generated by the code generating means may readily be transmitted from the external data processing means and, thus, unlike conventional night depositories or safe deposit apparatuses, require no reprogramming of the internal microprocessor of the night depository or safe deposit apparatus on location. Simultaneously, the operation and function of the night depository or safe deposit apparatus may be monitored externally and the PC means of the night depository or safe deposit apparatus according to the invention may be programmed not only to generate alarm signals in case of detected malfunctions, but moreover to report whether specific events, such as a specific deposit corresponding to a specific code has taken place or, if desired, to inform of a specific number of deposits made since the night depository or safe deposit apparatus was last emptied.

**[0012]** Furthermore, with the more intelligent PC based control, the allowed deposit functions make it possible to determine specific logical relations between specific code signals, periods of time, dates and numbers of allowed deposits within a specific time, such as per day or per week etc., just as the night depository or safe deposit apparatus according to the invention permits an advanced supervision of the night depository or safe deposit apparatus from the external data processing means, e.g. by performing periodical malfunction supervision tests etc.

**[0013]** The night depository or safe deposit apparatus according to the invention is emptied periodically either dependent on the data reported by the PC means of the night depository or safe deposit apparatus to the external data processing means, or dependent on these data, e.g. provided the report of a specific number of performed deposits or the performance of a specific deposit has occurred, and the fire- and bombproof housing of the night depository or safe deposit apparatus is thus in a manner known per se provided with a lockable and unlockable door which when unlocked and opened gives access to take out deposits from the internal storage space.

**[0014]** To ensure that the lockable and unlockable door in the night depository or safe deposit apparatus according to the invention is not unintentionally open and thus gives access to the internal storage spaces of the night depository or safe deposit apparatus at times when the fire- and bombproof housing should be hermetically closed, a detector is preferably provided at the door for detecting the position of the door, the detector being connected to the control means just as the door is preferably provided with a controllable lock connected to the control means for locking the door by issuing a locking command, the locking command being generated by the PC means and transmitted to the controllable lock.

**[0015]** In the night depository or safe deposit apparatus according to the invention, the inlet means may be provided readily accessible in the entrance opening, but it is preferred that a lockable gate is provided in the entrance and that a detector is provided at the gate for detecting the position of the gate, the detector being connected to the control means. In this manner, the inlet means is normally locked behind the lockable gate and the position of the lockable gate is monitored by the detector belonging thereto. In the night depository or safe deposit apparatus according to the invention the PC means is preferably adapted to permit only that the lockable gate is opened for a specific, limited period of time, simultaneously - as explained below - permitting that the inlet means be positioned in a feeding position with the gate open to ensure that the night depository or safe deposit apparatus is not intentionally or unintentionally left partly open for an unlimited period of time with the risk of attempts being made, by blowing up or mechanical machining, to get access to the internal storage space of the night depository or safe deposit apparatus.

**[0016]** The lockable gate may in a conventional manner per se be formed as a mechanical lock and/or electric lock preferably connected to the control means for locking the gate by issuing a locking command.

**[0017]** The inlet means of the night depository or safe deposit apparatus according to the invention may be formed in any suitable manner, as in the field of night depositories or safe deposit apparatuses alternative embodiments of inlet means is known which, in accordance with sledge or lift principles or, alternatively, drum principles with a vertical or horizontal drum shaft, perform a transfer of a specific object, typically an envelope containing money or other valuables, from a position where a person outside the night depository or safe deposit apparatus places the object in question in the inlet means which thereupon in a closed transfer system transfers the object to the internal storage space of the night depository or safe deposit apparatus. In the presently preferred embodiment of the night depository or safe deposit apparatus according to the invention, the inlet means is constituted by a rotary drum preferably having a vertical drum shaft and being mounted rotatably relative to the housing opposite the entrance open-

ing and having a piston movable in the radial direction of the drum, the drum being rotatable between a first and a second position, in the first position the drum being placed with the piston facing the entrance opening, and in the second position the drum being placed with the piston facing the internal storage space, the piston being movable between a first and a second posture, in the first posture the piston being withdrawn from the outer peripheral surface of the drum, defining a deposition space for holding a deposit, and in the second posture the piston being moved forwardly to a posture substantially flush with the outer peripheral surface of the drum, and the piston being moved from the first posture to the second posture when the drum is rotated from the first position to the second position for performing the deposit in the internal storage space.

**[0018]** In this connection it should be noted that irrespective of the fact that it is preferred that the inlet means is in the form of a rotary drum, preferably having a vertical drum shaft, the night depository or safe deposit apparatus according to the invention may be implemented in any other advantageous and reliable manner.

**[0019]** In the night depository or safe deposit apparatus according to the invention, detectors are preferably provided at the drum for detecting the position and/or movement of the drum when rotating from the first position to the second position, thereby permitting to monitor the movement of the drum when it performs a deposit and, moreover, to monitor whether the drum is in a desired, correct position at a specific time. Additionally or alternatively, detectors may be provided for detecting the posture of the piston relative to the drum, the piston in the presently preferred embodiment of the night depository or safe deposit apparatus according to the invention being restrained in a guideway when the drum rotates from the first position to the second position, thereby making superfluous the provision of detectors for detecting the position and movement of the piston relative to the drum.

**[0020]** The movement of the drum from the first position to the second position and subsequently from the second position to the first position may take place in the same direction or in different directions, depending on the drum construction in question. However, in the presently preferred embodiment of the night depository or safe deposit apparatus according to the invention, the drum is moved from the first position to the second position by rotation in one specific direction about the rotational axis of the drum, just as the drum is rotated from the second position to the first position by rotation in the same direction as by rotation from the first position to the second position. Consequently, in the presently preferred embodiment, the drum is made so that during operation it rotates in one and the same direction, exclusively.

**[0021]** For obtaining a double safety of the rotary drum, more specifically to ensure that breaking up the gate, which in the normally locked position hides the

drum, does not give direct access to the piston of the rotary drum and thereby provides a further possibility of mechanical machining or blowing up of the piston, it is preferred that the rotary drum is encased in a deposition device in the fire- and burglarproof housing and that the drum is adapted to be parked in a blocked or hidden position between the first and the second positions, in which hidden position the piston is in the second posture and also hidden relative to the entrance opening. Only when the PC means in the night depository or safe deposit apparatus according to the invention has verified the authenticity of the code signal generated by the code generating means by comparison with the codes contained in the PC means, the rotary drum is firstly rotated from the blocking and hidden position to the first position, whereupon the lockable gate is released or unlocked. Simultaneously, the piston is moved from the second posture to the first posture, thus making it possible to place in the deposition space of the drum e.g. an envelope containing money or another object which it is desired to deposit in the internal storage space of the night depository or safe deposit apparatus. As indicated above, the PC means is programmed to permit that the rotary drum remains in the first position only for a specific, limited period of time, whereupon the rotary drum is actuated by the PC means to rotate into the hidden position, in which the deposition space in the drum is hidden relative to the entrance opening. Just like the movement of the drum is preferably monitored by means of detectors provided at the drum, it is preferred that locking means is provided at the drum for locking the drum in specific positions, e.g. the first and the second positions, the above-mentioned blocked and hidden position constituting a starting position, and if desired a further hidden position, such as the one mentioned above, where the drum is positioned in a hiding position after being placed in the first position for permitting unlocking of the gate. The further hidden position is thus utilized for hiding the drum, or rather the deposition space of the drum in the case where the gate has been opened and not been closed subsequently. In this manner it is ensured that the piston of the drum is not accessible from the outside through the entrance opening for an unlimited period of time, if the gate is still kept open, thus preventing that the piston of the drum can be machined for an unlimited period of time with a view to breaking up the night depository or safe deposit apparatus. Moreover, a further rotation from the further hidden position to the second position is preferably only made when the gate has been closed for some specific longer period of time.

**[0022]** The code generating means of the night depository or safe deposit apparatus according to the invention may be constituted by any suitable signal generating means known per se which is either actively brought to generate a code in the form of a code signal, or generates a representative code signal by scanning a card, an object etc. In the presently preferred night

depository or safe deposit apparatus according to the invention the code generating means is constituted by keyboard means adapted to generate an alphanumeric code when the keyboard is actuated. The keyboard means is preferably formed as burglarproof keyboard means, i.e. keyboard means formed without movable switches and preferably as piezo-electric keyboard means. In this embodiment, the night depository or safe deposit apparatus according to the invention has, moreover, preferably display means connected to the control means for presenting information to a person actuating the keyboard means. Also in alternative embodiments of the night depository or safe deposit apparatus having different code generating means, the display means may preferably be provided for presenting information to a person who makes use of the night depository or safe deposit apparatus with a view to transfer of a deposit from the outside to the internal storage space of the night depository or safe deposit apparatus.

**[0023]** In accordance with alternative embodiments of the night depository or safe deposit apparatus according to the invention, the night depository or safe deposit apparatus has alternative or additional code scanning means in the form of a bar code scanner, an optical scanner, a card reader, a tag scanner or tag reader, a voice recognition detector, an iris detector or a fingerprint scanner connected to the control means and adapted to generate a code signal, constituting either the code signal or a supplementary code signal which the PC means compares to the verifying codes. The tag reader is a reader adapted to actuate an electric circuit, a so-called tag, which when actuated, i.e. when electric power is supplied from the reader, issues a specific signal which is characteristic and unambiguously identifies the tag relation to the electronic circuit. The tag reader is preferably adapted to detect a number of tags simultaneously when these tags are placed e.g. in one and the same envelope containing a number of individual deposits which are identified by respective, individual tags. Thus, the night depository or safe deposit apparatus according to the invention may preferably be provided with two sets of code generating means, first keyboard means and, besides, reading means or scanning means, typically one of the above mentioned readers or scanners, in order to ensure that the person wishing access to the night depository or safe deposit apparatus firstly has knowledge of the specific code, and secondly is also in possession of an object such as an envelope with a specific bar code, a specific tag or a card entitling the person to obtain access to perform a deposit in the night depository or safe deposit apparatus. Alternatively, however, the reader or scanner may constitute the only code generating means in the night depository or safe deposit apparatus, since only the code generated by the reader or scanner is verified by the PC means in the above mentioned verification routine made when a person obtains access to perform a deposit in the night depository or safe deposit apparatus.

**[0024]** Advantageously, the PC means characteristic of the invention and performing the essential code verification and moreover communicating with the external data processing means in accordance with the basic realization according to the invention of permitting data input to the PC means and data output from the PC means to the existing data processing means, may themselves control the above mentioned locks, the above mentioned drum and, moreover, directly receive the detector signals generated by the above detectors for controlling the internal functions of the night depository or safe deposit apparatus. In the presently preferred embodiment of the night depository or safe deposit apparatus according to the invention, the control of the night depository or safe deposit apparatus is divided into two levels, a superior control level, wherein the night depository or safe deposit apparatus forms part of data communication with the surroundings handled by the PC means and wherein the internal data collection from the detectors and the actuation of the locks, the drum, etc. of the night depository or safe deposit apparatus is performed in a separate lower control level controlled by an internal CPU which is controlled by the PC means and transmits the detector signals to the PC means for further processing therein. This embodiment of the control means of the night depository or safe deposit apparatus as a two-level control means is considered an advantageous embodiment with respect to safety compared to an embodiment in which the PC means alone communicates with the surroundings and controls the internal functions of the night depository or safe deposit apparatus, since precisely the presence of a CPU interfacing the internal control and monitoring functions in the night depository or safe deposit apparatus with the superior control handled by the PC means, provides a "tamper"-proof securing of the control means of the night depository or safe deposit apparatus. As stated above, by configuring the control means in accordance with the basic realization according to the invention as PC means, the advantage is obtained that the night depository or safe deposit apparatus may form an integral part of a data processing system or computer center, since the PC means communicates via modems or communication connections for data input or data output.

**[0025]** Therefore, in the presently preferred embodiment of the night depository or safe deposit apparatus according to the invention, the PC means is as stated above adapted to perform a diagnostic program for detecting a malfunction in the night depository or safe deposit apparatus by addressing from the external data processing means and to transmit data representative of a malfunction in the night depository or safe deposit apparatus to the external data processing means after detecting a malfunction in the night depository or safe deposit apparatus.

**[0026]** The configuration characteristic of the present invention of the night depository or safe deposit appa-

ratus having the control means provided as PC means permits that the night depository or safe deposit apparatus according to the invention may be readily integrated in a PC net including the consequent advantages of immediate coupling and compatibility compared to other night depositories or safe deposit apparatuses which communicate with the surroundings via special code emitting and code receiving means exclusively. Moreover, the configuration characteristic of the present invention of the night depository or safe deposit apparatus may advantageously be used within technically equivalent fields of "burglary securing" thereby making the surveillance of specific objects or areas PC-compatible. Furthermore, it is remarked that the configuration of the night depository or safe deposit apparatus according to the invention having PC based control means permits an immediate extension of the night depository or safe deposit apparatus with other surveillance systems such as video monitory systems, which are either integrated direct in the night depository or safe deposit apparatus or are coupled via PC interface-means to the night depository or safe deposit apparatus and the external data processing system via the same or different PC nets, or alternatively integrated in the night depository or safe deposit apparatus via the PC means of the night depository or safe deposit apparatus.

**[0027]** The present invention also relates to a control unit of a night depository or safe deposit apparatus for receiving and holding a deposit of money or other valuables and comprising a fire- and burglarproof housing defining an internal storage space and having an entrance opening, inlet means bridging the entrance opening and the internal storage space and permitting the transfer of a deposit from the outside into the internal storage space, and code generating means accessible from the outside and serving to generate a code signal by actuating the code generating means, and control means connected to the code generating means and to the inlet means and adapted to perform a verification of a code signal generated by the code generating means prior to actuation of the inlet means for performing a deposit.

**[0028]** The object stated above along with a large number of other objects and advantages which will be evident from the below detailed description of the present invention are obtained in accordance with the teachings of the present invention by a control unit, the control unit according to the invention being characterized in that the control unit comprises PC means adapted to perform the verification of the code signal by comparison of the code signal with a code input to the PC means and in that the PC means is adapted to communicate with external data processing means for input of control data from the external data processing means, including verified codes giving access to perform deposits in the internal storage space in the housing of the night depository or safe deposit apparatus, and for output of data to the external data processing means in-

cluding data representing the operation and function of the night depository or safe deposit apparatus.

**[0029]** Advantageously, the control unit of the present invention may be embodied in accordance with the above embodiments of the night depository or safe deposit apparatus according to the invention.

**[0030]** Advantageously, the control unit according to the present invention may be formed as an integrated control unit, i.e. a control unit comprising all elements and components cooperating with the night depository or safe deposit apparatus. However, the control unit may alternatively be implemented as a combination of a PC and an interface card serving to interface the night depository or safe deposit apparatus and the PC, preferably to interface an internal CPU contained in the night depository or safe deposit apparatus and the PC.

**[0031]** The invention will now be described in more detail with reference to the accompanying drawings wherein

Figure 1 is a perspective, partly schematic view of a night depository according to the invention,

Figure 2 is a perspective, partly exploded and schematic, fragmental view of an entrance drum,

Figure 3 is a perspective, partly schematic view of an electronic control unit in the the night depository of Figure 1,

Figure 4 is a block diagram of the construction of the night depository of Figure 1 and showing partly the internal control of the night depository, partly the communication with the surroundings,

Figure 5 is a circuit diagram of an interface card of the night depository according to the invention, and

Figure 6 is a flow diagram of the control program performed by a PC in the night depository according to the invention.

**[0032]** Figure 1 illustrates a night depository according to the invention designated reference numeral 10 in its entirety. The night depository 10 comprises, like conventional night depositories, a housing 12, substantially having the shape of a box defining an internal space 22. The housing 12 is formed with a heavy wall having a thickness of about 50-150 mm. The housing 12 of the night depository is adapted to be mounted behind the wall structure of a house front or building or behind cladding glass wherein a rectangular opening is provided, through which a protruding portion 14 of the housing 12 of the night depository 10 extends. The protruding portion 14 is made of the same reinforced steel plate as the remainder of the housing 12 and has a front plate 16, as apparent from Figure 1, serving firstly to provide a completion of the protruding portion and secondly to se-

cure a number of operational means presented to a user and making the user capable of using the night depository as explained in the following.

**[0033]** Opposite the protruding portion 14 the housing 12 of the night depository 10 has a door 18 accessible from the interior of the above mentioned house or building, typically from a room in a financial institution or a room belonging to a service or security institution, in which a deposit of money or other valuables can be made in the night depository.

**[0034]** The door 18 is hinged in a conventional manner, not shown in detail in Figure 1, at one vertical edge and has an external operating handle by which a number of locking bolts 20 can be drawn into the interior of the door permitting that the door be opened by rotating about the above mentioned hinges. The position of the operating handle, the position of the locking bolts and door being either open or closed are detected by means of sensors or detectors, not shown in Figure 1, and serving to generate signals representing the actual positions of the door, the operating handle and the locking bolts.

**[0035]** Behind the front plate 16 of the protruding portion 14 a depository device 24 is mounted, forming an integral unit and serving the primary purpose of permitting the transfer of a deposit from the outside into the interior of the night depository 10 by means of an entrance device formed as a drum 36 accommodated in and supported in the depository device 24. The depository device 24 and the drum 36 are shown in more detail in Figure 2 and, thus, the following detailed description of the depository device 24 and the drum 36 refers to Figure 1 as well as to Figure 2 of the drawings. As apparent from Figure 2, the drum 36 is positioned at a front wall of the depository device 24, i.e. just behind the front plate 16, the drum being suspended in top and bottom journal bearings. The top journal bearing consists of a bearing tap 40 mounted in the circular top wall of the drum 36 and cooperating with a bearing bushing 34 in a bearing plate or top plate 28 of the depository device 24. Similarly, the bottom journal bearing consists of a bottom tap corresponding to the bearing tap 40 mounted protruding from the circular bottom wall of the drum 36 and cooperating with a bearing bushing 30 provided in a bottom plate 26 of the depository device 24.

**[0036]** Apart from the above mentioned circular top and bottom walls, the drum 36 has a peripheral side wall 37 extending approximately 280° along the periphery of the cylindrical drum 36. The remaining 80° of the periphery of the cylindrical drum 36 is constituted by a piston 38 which may be moved between a retracted position, as illustrated in Figure 2, and an advanced position in which the outer surface of the piston 36 is substantially flush with the side wall 37.

**[0037]** The piston 38 is moved relative to the top and bottom walls of the bottom, top and side guides of the drum 36, constituted by guideways and guide blocks 42 and 44, respectively, cooperating with corresponding

notches and projections in the curved wall of the piston 38. The movement of the piston 38 between the retracted position shown in Figure 2 and the above mentioned advanced position is caused by a guide pin 66 mounted on an arm rigidly connected to the piston 38 and cooperating with a guideway 32 formed in the bottom plate 26 of the depository device 24. Thus, the change of the position of the piston 38 relative to the remaining part of the drum 36 is caused by the rotation of the drum 36 in the bearing bushes 30 and 34, driven by a motor 60 mounted hindmost in the depository device 24 and through a gear 64 connected to a driving wheel 62 serving to drive a chain or a V-belt 58 positioned around a gearwheel or chain wheel or a V-belt wheel 59 at the top wall of the drum 36. The drum 36 is adapted for counterclockwise rotation. As far as the position of the drum 36 illustrated in Figures 1 and 2 is concerned, in which the drum 36 is placed with a storage space defined in front of the piston 38 just behind the gate 46, the drum 36 is normally parked in a parking position in which the piston 38 is advanced to a position flushing with the side wall 37, and in which the drum 36 has the piston 38 hidden relative to the gate 46 and to the internal space 22 of the night depository 10, since in the counterclockwise rotation or turning the drum is advanced with the back edge of the piston 38 placed behind a lock 70 and thus opposite the side wall of the depository device 24 illustrated in Figure 2.

**[0038]** At the underside, the drum 36 is shaped with a protruding, partly circumferential flange 68 constituting a tacho disc in a tacho detecting system also comprising a position detector 72 serving to generate information on the factual rotary position and movement of the drum 36 relative to the depository device 24. The lock 70 cooperating with the circumferential flange 68 serves to lock the drum 36 in specific positions relative to the depository device 24.

**[0039]** In the front plate, an unlockable gate 46 is provided, positioned opposite the drum 36 so that a back wall 48 of the gate 46 is flush with the cylindrical exterior wall of the drum 36 when the gate 46 is closed, the gate 46 being hinged relative to the front plate 36 in a hinge 52, and the gate 46, normally being locked when closed, can be opened by means of a grip 50 when the lock is released. Furthermore, a keyboard 54 and a display 56 are provided in the front plate 16 to be used by a person wishing to perform a deposit in the night depository. The keyboard 54 is constructed as a burglarproof keyboard which does not comprise movable switches but instead has a number of piezo-electric crystals for generating electric signals by mechanical actuation of the keyboard keys. Instead of the keyboard alternative means may be provided serving to verify that the person actually trying to obtain access to the night depository is entitled thereto, these means may be constituted by conventional locks, if desired combined with a keyboard, recognition means e.g. in the form of a fingerprint detector, a voice detector, an iris detector, a card reader, a bar code scan-

ner, a tag scanner or a tag reader (i.e. a scanner or a detector detecting a specific RF transmitter interactively addressed from the scanner or reader). The tag scanner or the tag scanner is preferably adapted to simultaneously detect and verify the authenticity of a number of individual tags. Besides, special embodiments of the night depository may be constructed with a printer for printing a receipt.

**[0040]** The function of the night depository may be controlled by a microcomputer and a PC, the control of the night depository being divided into two levels, a superior level, handled by the PC, wherein the night depository is in addition capable of communicating in a duplex communication mode with the surroundings in the same manner as a PC, and a lower level wherein a CPU monitors and controls the internal functions of the night depository, including the control of the driving motor 60 for rotating the drum 36, opening and closing the gate 46 etc., these functions being monitored by the detectors described above, including the position detector 72 and the detector described above which detects the position of the gate 46.

**[0041]** As indicated above and as will be discussed in more detail below, the superior control level is performed by a PC card, in Figure 1 designated the reference numeral 80, whereas the lower control level is handled by a microprocessor of an interface card 82. The PC card 78 and the interface card 82 are contained in a space 76 provided in the interior of the housing 12 of the night depository 10, the space 76 being defined relative to the above internal space 22 used for deposition purposes by a partition wall wherein a panel 84 is also provided comprising a keyboard 86 and a display 88, as illustrated in Figure 3, by means of which e.g. an employee of a financial institution is able to perform encodings in the night depository when opening the door 18.

**[0042]** In addition to the PC card 80 and the interface card 82, the space 72 comprises a power supply card or PS card 78 and a disk drive 90 for supplying power to the PC card and the interface card and for permitting input of data, respectively, including programming the PC card by means of a disk inserted in the disk drive 90. In Figure 3 such a disk is designated the reference numeral 92.

**[0043]** Furthermore, a detector 74 is mounted on the above mentioned wall separating the space 76 from the internal space 22 serving the purpose of performing registration of a specific deposit made in the night depository. Thus, the detector 74 may be constructed in any appropriate manner per se as a bar code scanner or alternatively as a tag scanner or a tag reader, i.e. a detector detecting an RF circuit contained in an envelope deposited in the night depository. Alternatively, other detectors can of course be used.

**[0044]** In Figure 3, the electronic control unit of the night depository is illustrated in greater detail, comprising the above mentioned cards, the PS card 78, the PC card 80 and the interface card 82, as well as the above

mentioned panel 84 including the keyboard 86 and the display 88. Furthermore, in Figure 3 the disk drive 90 is shown connected to the PC card 80 via a multi-cord cable 98.

**[0045]** The PC card 80 contains a number of integrated circuits, one of which is designated the reference numeral 94, and has a number of connectors, more precisely six connectors, one of which is designated the reference numeral 96, serving to receive additional cards, such as e.g. a modem card 100 or other commercially available PC extension cards which may be used in a given arrangement for implementing a desired function or for realizing a desired communication with the surroundings. Furthermore, in Figure 3 a mains supply terminal 102 is shown by which the control unit illustrated in Figure 3 is provided with 230 volt AC, 50 Hz from a conventional mains supply. Dependent on the mains supply available, the control unit may be modified according to the actual requirements, e.g. modified to US standard 110 volt AC, 60 Hz. In Figure 3 the PS card 78 is shown comprising a toroid transformer 104 mounted below the PS card itself. Besides, the PS card 78 is in the form of a conventionally stabilized power supplying card well known in the art per se for supplying both the PC card 80 including the disk drive 90 and the interface card 82 and besides other units in the night depository, including the keyboard 86 and the display 88 connected to the control unit via the interface card 82 as will be explained below with reference to Figure 4.

**[0046]** Figure 4 is a block diagram of the structure of the electronic control unit illustrated in Figures 1 and 3 of the drawing. The two control cards, i.e. the PC card 80 and the interface card 82 are in Figure 4 shown in a central control block 106 which, corresponding to the above mentioned control levels, realized by the internal microprocessors of the PC card 80 and the interface card 82, respectively, collectively controls the functions of the night depository and at the same time establishes communication with the surroundings. In the presently preferred embodiment, the control unit 106 contains these two separate control levels, since this embodiment is considered a preferable implementation with respect to safety, as the internal control of the function of the night depository is monitored by a microprocessor which communicates via an I/O gate of the PC card 80 with the superior control unit, thus securing that a specific operation in the night depository, particularly unlocking the gate 46 and subsequently rotating the drum 36 for performing a deposit in the internal space 22 of the night depository, necessitates a coordination of the monitoring of a number of states in the night depository detected by means of the above mentioned detectors and registered by the microprocessor, and an actuation of the lock of the gate 46 and subsequently of the motor 60 for rotating the drum 36. In this connection it is to be realized that the interface card 82 may in relation to the superior control of the PC card 80 as a matter of fact be considered a kind of "intelligent" switch board card



which, controlled by the PC card 80, establishes the interface or connection from the PC card 80 to the units placed peripherally in relation to the interface card 82, such as the above mentioned detectors, the motor 60, the keyboards 54 and 86 and the displays 56 and 88. Alternatively, the control block 106 may be constituted by a single PC card which collectively carries out the functions performed by the microprocessors of the PC card 80 and the interface card 82 in the night depository shown in the drawing.

**[0047]** Consequently, Figure 4 illustrates schematically how the interface card 82 is connected to the keyboard 54 and the display 56 mounted on the front plate 16, the keyboard 86 and the display 88 mounted on the panel 84, and the detector 72, the detector 74, the motor 60, and besides additionally two detectors 71 and 73, which may be constituted by further tacho detectors in the tacho detecting system comprising the tacho disc 68 and the tacho detector 72, or alternatively be constituted by detectors mounted in connection with the door 18, and a block 108, schematically illustrating the locks and detector means mounted on and cooperating with the gate 46, i.e. the above mentioned detector detecting whether the gate 46 is opened or closed and the above mentioned lock for locking the gate 46 is in a locked position. Besides, the interface card 82 is via a duplex communication mode connected to the above mentioned I/O gate of the PC card 80 which is furthermore connected to two PCs 110 and 122 via two connections, 112 and 124 respectively, which may be constituted by a telephone line and a communication line, respectively, i.e. established via the above mentioned modem card 100 and a network connection in a network in which the PC 122 forms part together with the PC card 80 of the night depository. As illustrated in Figure 4, the PC 110 comprises a monitor 114, a CPU 116, a keyboard 118 and a printer 120. Correspondingly, the PC 122 comprises a monitor 126, a CPU 128, a keyboard 130 and a printer 132. The above outlined connection to an external and possibly distant PC 110 via the telephone line 112 and the connection via a communication line, particularly a network connection to the PC 122 may be further extended by supplementary, conventional PC based units, such as typically a printer or a data collecting unit in the form of a disk drive or a DAT streamer connected to the PC card 80 via the communication line 124 or an additional gate, specially connected together with the PC 122 to the PC card 80 in a network configuration.

**[0048]** In Figures 5 and 6 of the drawing, a circuit diagram of the interface card 82 and a flow diagram of the central control program for the PC card 80 are shown, respectively. A detailed description of the circuit card shown in figure 5 will not be given, whereas the flow diagram of Figure 6 will be explained in connection with a more detailed description of the operation performed in the night depository when a deposit is made therein.

**[0049]** After programming the PC card 80, the PC card 80 performs during program load a control of the

positions of the two essential components, the gate 46 and the drum 36. More specifically, the PC card 80 controls in the block "gate closed?" whether the gate 46 is closed and proceeds in the program only provided the microprocessor of the interface card 82 verifies by addressing the detector contained in the block 108 and mounted on the gate 46 that the gate 46 is closed and provided the program proceeds to correct positioning of the drum 36 in the above mentioned parking position in the block "find park", since the operation of the program only proceeds provided the drum is placed in the correct parking position. Provided the gate 46 is closed and that the drum 36 is in the correct parking position, the program proceeds to the block "stand-by". In this position, a user may input a code by means of the keyboard 54, and in the block "correct code?" a verification of the authenticity of the encoded code is made, which verification can be made either internally by the PC card or on-line by communicating with the PC 110 or in a combined on-line and off-line verification, thus involving transmittance of data from the PC card 80 to an external verification unit, typically an external PC, such as the PC 110 connected to the PC card 80 via a telephone line, since the telephone connection is established via modems and furthermore encryption units, encrypting and decrypting the data transmitted from the PC card 80 to the PC 110 and received by the PC 110, respectively. Such an encrypted data transmission is well known in the art and may be realized in a manner known per se in accordance with numerous known encryption algorithms, such as DES algorithms or other public or secret encryption techniques. Provided the code is verified as being the correct code, the motor 60 is actuated so that the drum 36 is placed in the position having the piston just behind the gate 46. In this position, the piston 38 is retracted, controlled by the guideway 32 guiding the guide pin 66, and when the microprocessor of the PC card 82 verifies that the drum 36 is placed correctly, i.e. when the program is in the block "move to ready", the program proceeds to the block "gate open?". From there the program proceeds to the block "auto-park?" and, provided the gate is not opened within a specific time of e.g. 10 seconds, the program proceeds directly to the block "move to park", i.e. the program performs a parking of the drum in the starting or parking position. From the block "move to park" the program returns to the block "stand-by", during which return operation data representing the operation performed are stored in the block "store data". Provided the gate is opened within the above mentioned time limit, the program proceeds instead to the block "gate closed?". If the gate is not closed within a specific time limit of e.g. 20 seconds, the program proceeds to the block "move to hiding-place?", controlled by the PC card 80 via the microprocessor of the interface card 82, the drum thereupon addresses the motor 60 which rotates the drum from the position shown in Figure 2 to a position diametrically opposite the above mentioned parking position, i.e. the position

in which the drum is rotated 90° forward, i.e. counter-clockwise, from the position shown in Figure 2 and thus hides the entrance opening. This step of the program routine serves the purpose of ensuring that after opening the gate, the drum is not open for an unlimited time, thereby allowing manipulations with the drum 36 in order to open it, for an unlimited time, with an open gate. Provided the drum 36 is moved to the so-called hidden position, the program proceeds to the block "time for reset?" during which the night depository or safe deposit apparatus is blocked for a period of time of e.g. 10 minutes, within which period of time the night depository or safe deposit apparatus cannot be used. Hereafter, the program proceeds to another block "gate closed?" and provided the gate has been closed while the night depository or safe deposit apparatus was blocked, the program returns to the first step of the actual deposition operation in completely the same manner as the program would have proceeded, provided the gate had been closed within the above mentioned time limit of e.g. 20 seconds, i.e. before the program proceeded to the block "move to hiding-place?". The first step of the actual deposition operation is made in the block "start dep", during which step the drum is rotated from the position of Figure 2 to the diametrically opposite position, whereby the piston 38 controlled by the guide pin 66 guided in the guideway 32 moves the piston forward to a position flush with the side wall 37, whereby an envelope placed in the storage space in front of the piston 38, is ejected from the space and falls down into the internal space 22 of the night depository. During the performance of the deposition a registration of the actually deposited object is made by means of the detector 74, i.e. a registration of the actual deposit is made in the block "registrate envelope" either by means of the tag scanner or the tag reader or by means of any other data collecting means, such as a bar code scanner, an optical scanner etc. From the block "registrate envelope" the program proceeds to the block "last dep?" asking whether additional deposits are to be made, since from that block the program may return to the block "move to ready" and again perform the actual deposition operation. If no additional deposits are made, the program proceeds to the above mentioned block "move to park" and herefrom returns to the block "stand by", as a registration of data in the block "store data" is made on basis of the deposit performed. It is to be realized that all the above time limits and intervals are determined exclusively by the program and, consequently, can be changed arbitrarily according to the specific application or the intended use of the night depository or safe deposit apparatus, including the intended arrangement, etc.

**[0050]** The data registration made during the operation of the night depository allows surveillance of the function of the night depository, partly internally, partly from an external PC such as the PC 110 or the PC 122 shown in Figure 4. The data registration may furthermore serve the purpose of advising the surroundings

whether a specific number of deposits or a specific deposit has taken place whereupon the night depository is blocked until it has been emptied. Besides, data communication with the surroundings gives the possibility not only to alarm externally provided a malfunction occurs in the night depository, but also to diagnose the error as the PC card 80 internally controls all the functions of the night depository by the intermediary of the interface card 82 and thus advises of the possible source of error. Besides, the program preferably comprises a diagnostic program actuated either by one of the external PCs 110 or 122 or by the keyboard 86. The keyboard 86 contained in the panel 84 allows the staff of the financial institution or the service or security institution operating the night depository 10 to monitor the function of the night depository and perform error analysis, change of codes, encoding supplementary data, etc. Besides, the arrangement of the night depository having a superior PC control firstly has the substantial advantage that the night depository or safe deposit apparatus may be readily integrated in a PC based data-environment and thus either directly or via suitable interface cards, such as modem cards, countability cards, network cards etc. may communicate with external data media, in particular PCs for transmitting data to and from the night depository for communication information on the function, operation and control of the night depository. Simultaneously, the intelligent control of the night depository permits that the verification routines performed for verifying the input codes may be extended by fixed time intervals within which a deposit is to be made with a specific code, just as a deposit with a specific code may be restricted to be made only once and subsequently cause transmittance of data from the PC card 80 to the external monitoring PCs, such as the PC 110 via the telephone line 112.

**[0051]** Contrary to a night depository, in which an internal microprocessor-based control program controls the night depository, the night depository according to the invention having a PC control permits that the functions and control of the night depository may be adapted and changed in a simple manner, either internally via the keyboard 86 or via input of data from the disk 92, or from the outside via a telephone or communication line, such as the telephone line 112 or the communication line 124 from an external PC, such as the PC 110 or the PC 122. Besides, what is extremely important, these external PCs offer the possibility of permanently monitoring the function of the night depository and receiving data on the operation of the night depository and thus, if required, to block the night depository and stop further deposits until a control of the night depository has been made on location and the night depository has been emptied of deposits. A further, specifically advantageous feature of the PC based night depository according to the invention is that the night depository must be expected to anticipate future development as the future technical development in the field of PCs is bound to

cause the appearance of new communication possibilities which are readily available to the night depository since these future communication possibilities realized by insert cards used in the CPU units of PCs available today, may readily be built into the night depository according to the invention.

## Claims

1. Night depository or safe deposit apparatus (10) for receiving and holding a deposit of money or other valuables and comprising a fire- and burglarproof housing (12) defining an internal storage space (22) and having an entrance opening (46), inlet means (24) bridging the entrance opening (46) and the internal storage space (22) and permitting the transfer of a deposit from the outside into the internal storage space (22), code generating means (54) accessible from the outside and serving to generate a code signal by actuating the code generating means (54), and control means (106) connected to the code generating means (54) and to the inlet means (24) and adapted to perform a verification of a code signal generated by the code generating means (54) prior to actuation of the inlet means (24) for performing a deposit **CHARACTERIZED in that** said control means (106) comprises PC means (80) adapted to perform said verification of said code signal by comparison of said code signal with a code input to said PC means and that said PC means (80) is adapted to communicate (112) with external data processing means (110, 122) for input of control data from said external data processing means (110, 122), including verified codes, giving access to perform deposits in said internal storage space (22) in said housing (12) of said night depository or safe deposit apparatus (10), and for output of data to said external data processing means (110, 122), including data representing the operation and function of said night depository or safe deposit apparatus (10).
2. The night depository or safe deposit apparatus (10) according to claim 1, **CHARACTERIZED in that** said fire- and burglarproof housing (12) furthermore comprises a lockable and unlockable door (18) which when unlocked and opened gives access to take out deposits from said internal storage space (22).
3. The night depository or safe deposit apparatus (10) according to claim 2, **CHARACTERIZED in that** a detector is provided at said door (18) for detecting said position of said door (18), said detector being connected to said control means (106) and **in that** said door (18) is provided with a controllable lock connected to said control means (106) for locking

said door by issuing a locking command.

4. The night depository or safe deposit apparatus (10) according to any of claims 1-3, **CHARACTERIZED in that** a lockable gate (46) is provided in said entrance opening and that a detector (108) is provided at said gate (46) for detecting the position of said gate, said detector (108) being connected to said control means.
5. The night depository or safe deposit apparatus (10) according to claim 4, **CHARACTERIZED in that** said lockable gate (46) has a mechanical lock and/or electric lock connected to said control means (106) for locking said gate by issuing a locking command.
6. The night depository or safe deposit apparatus (10) according to any of the preceding claims, **CHARACTERIZED in that** said inlet means (24) is constituted by a rotary drum (36) mounted rotatably about a rotational axis relative to said housing opposite said entrance opening and having a piston (38) movable in the radial direction of said drum (36), said drum (36) being rotatable between a first and a second position, in said first position said drum being placed with said piston facing the entrance opening (46), and in said second position said drum being placed with said piston facing said internal storage space (22), said piston (38) being movable between a first and a second posture, in said first posture said piston being withdrawn from said outer peripheral surface of said drum (36), defining a deposition space for holding a deposit, and in said second posture said piston (38) being moved forwardly to a posture substantially flush with said outer peripheral surface of said drum (36), and **in that** said piston (38) is moved from said first posture to said second posture when said drum (36) is rotated from said first position to said second position for performing said deposit in said internal storage space (22).
7. The night depository or safe deposit apparatus (10) according to claim 6, **CHARACTERIZED in that** detectors (72) are provided at said drum (36) for detecting said position and/or movement of said drum (36) during rotation from said first position to said second position.
8. The night depository or safe deposit apparatus (10) according to claims 6 or 7, **CHARACTERIZED in that** detectors are provided at said drum (36) for detecting said position of said piston (38) relative to said drum (36).
9. The night depository or safe deposit apparatus (10) according to any of claims 6-8, **CHARACTERIZED**

in that said drum (36) is moved from said first position to said second position by rotation in one direction about said rotational axis of said drum (36), just as said drum (36) is moved from said second position to said first position by rotation in the same direction as when rotating from said first position to said second position.

10. The night depository or safe deposit apparatus (10) according to any of claims 6-9, **CHARACTERIZED in that** said rotary drum (36) is encased in a depository device (24) in said fire- and burglarproof housing and **in that** said drum (36) is adapted to be parked in a blocked or hidden position between said first and said second positions, in which hidden position said piston (38) is in said second posture and also hidden relative to said entrance opening (46).
11. The night depository or safe deposit apparatus (10) according to any of claims 1-10, **CHARACTERIZED in that** said code generating means (54) is constituted by keyboard means adapted to generate an alphanumeric code when actuating said keyboard.
12. The night depository or safe deposit apparatus (10) according to claim 11, **CHARACTERIZED in that** said night depository or safe deposit apparatus (10) further has display means (56) connected to said control means (106) for presenting information to said person actuating said keyboard means (54).
13. The night depository or safe deposit apparatus (10) according to any of claims 1-12, **CHARACTERIZED in that** said night depository or safe deposit apparatus (10) further has code scanning means in the form of a bar code scanner, an optical scanner, a card reader, a tag scanner or a tag reader, a voice recognition detector, an iris detector or a finger-print scanner connected to said control means and adapted to generate a code signal, constituting either said code signal or a supplementary code signal which said PC means (80) compares to said verifying codes.
14. The night depository or safe deposit apparatus (10) according to any of claims 1-13, **CHARACTERIZED in that** said control means (106) in addition to said PC means (80) comprises a CPU (82) connected to said locks, detectors and inlet means of said night depository or safe deposit apparatus (10) partly for receiving detector signals from said detectors, partly for actuating said locks and said inlet means (24), said CPU (82) being controlled by said PC means (80) and transmitting said detector signals to said PC means (80).
15. The night depository or safe deposit apparatus (10) according to any of claims 1-14, **CHARACTERIZED**

in that said PC means (80) is adapted to communicate with said external data processing means (110, 122) via modems (112, 124) or communication connections (112, 124) for data input and data output.

16. The night depository or safe deposit apparatus (10) according to any of claims 1-15, **CHARACTERIZED in that** said PC means (80) is adapted to perform a diagnostic program for detecting a malfunction in said night depository or safe deposit apparatus (10) by addressing from said external data processing means (110, 122) and to transmit data representative of a malfunction in said night depository or safe deposit apparatus (10) to said external data processing means after detecting a malfunction in said night depository or safe deposit apparatus (10).
17. A control unit (106) of a night depository or safe deposit apparatus (10) for receiving and holding a deposit of money or other valuables and comprising a fire- and burglarproof housing (12) defining an internal storage space (22) and having an entrance opening (46), inlet means (24) bridging said entrance opening (46) and said internal storage space (22) and permitting the transfer of a deposit from the outside into said internal storage space (22), code generating means (54) accessible from the outside and serving to generate a code signal by actuating said code generating means (54), and control means (106) connected to said code generating means (54) and to said inlet means (24) and adapted to perform a verification of a code signal generated by said code generating means (54) prior to actuation of said inlet means for performing a deposit, **CHARACTERIZED in that** said control means (106) comprises PC means (80) adapted to perform said verification of said code signal by comparison of said code signal with a code input to said PC means (80) and in that said PC means (80) is adapted to communicate with external data processing means (110, 122) for input of control data from said external data processing means (110, 122), including verified codes, giving access to perform deposits in said internal storage space (22) in said housing (12) of said night depository or safe deposit apparatus (10), and for output of data to said external data processing means (110, 122), including data representing said operation and function of said night depository or safe deposit apparatus (10).
18. The control unit (106) according to claim 17, **CHARACTERIZED in that** said control means (106) in addition to said PC means (80) comprises a CPU (82) connected to said locks, detectors and inlet means of said night depository or safe deposit apparatus (10) partly for receiving detector signals from said

detectors, partly for actuating said locks and said inlet means (24), said CPU (82) being controlled by said PC means (80) and transmitting said detector signals to said PC means (80).

19. The control unit (106) according to any of claims 17 or 18, **CHARACTERIZED in that** said PC means (80) is adapted to communicate with said external data processing means (110, 122) via modems (112, 124) or communication connections (112, 124) for data input or data output.

20. The control unit (106) according to any of claims 17 -19, **CHARACTERIZED in that** said PC means (80) is adapted to perform a diagnostic program for detecting a malfunction in said night depository or safe deposit apparatus (10) by addressing from said external data processing means (110, 122) and to transmit data representative of a malfunction in said night depository or safe deposit apparatus (10) to said external data processing means (110, 122) after detecting a malfunction in said night depository or safe deposit apparatus (10).

#### Patentansprüche

1. Nachttresor- oder Schließfachvorrichtung (10) zum Empfang und zur Aufbewahrung einer Hinterlegung von Geld oder anderer Wertgegenstände und mit einem feuer- und diebstahlsicheren Gehäuse (12), das einen inneren Aufbewahrungsraum (22) definiert, und umfassend eine Eingangsöffnung (46), Einlaßmittel (24), das die Eingangsöffnung (46) mit dem inneren Aufbewahrungsraum (22) verbindet und die Übertragung einer Hinterlegung von außen her in den inneren Aufbewahrungsraum (22) ermöglicht, codegenerierendes Mittel (54), das von außen her zugänglich ist und durch Betätigung des codegenerierenden Mittels zur Erzeugung eines Codesignals (54) dient, und Steuermittel (106), das mit dem codegenerierenden Mittel (54) und dem Einlaßmittel (24) verbunden und dazu eingerichtet ist, vor Betätigung des Einlaßmittels zur Ausführung einer Hinterlegung eine Verifizierung eines durch das codegenerierende Mittel (54) erzeugten Codesignals auszuführen, **dadurch gekennzeichnet, dass** das Steuermittel (106) PC-Mittel (80) umfasst, das durch Vergleich des Codesignals mit einer in das PC-Mittel eingegebenen Codeeingabe zur Ausführung der Verifizierung des Codesignals eingerichtet ist, und dass das PC-Mittel (80) dazu eingerichtet ist, mit äußeren Datenverarbeitungsmitteln (110, 122) zu kommunizieren, und zwar zur Eingabe von Steuerdaten der äußeren Datenverarbeitungsmittel (110, 122), einschließlich verifizierter Codes, die Hinterlegungen beim inneren Aufbewahrungsraum (22) des Gehäuses (12) der Nacht-

tresor- oder Schließfachvorrichtung (10) ermöglichen, und zur Ausgabe von Daten in die äußeren Datenverarbeitungsmittel (110, 122), einschließlich Daten, die den Betrieb und die Funktion der Nachttresor- oder Schließfachvorrichtung (10) vertreten.

2. Nachttresor- oder Schließfachvorrichtung (10) nach Anspruch 1, **dadurch gekennzeichnet, dass** das feuer- und diebstahlsichere Gehäuse (12) außerdem eine verschließbare und aufschließbare Tür (18) umfasst, die bei Aufschließung und Öffnung die Herausnahme von Hinterlegungen aus dem inneren Aufbewahrungsraum (22) ermöglicht.

3. Nachttresor- oder Schließfachvorrichtung (10) nach Anspruch 2, **dadurch gekennzeichnet, dass** ein Detektor zur Erkennung der Position der Tür (18) an der Tür (18) vorgesehen ist, wobei der Detektor mit dem Steuermittel (106) verbunden ist, und dass die Tür (18) mit einem steuerbaren Schloß versehen ist, der zur Verschließung der Tür durch Erlaß eines Verschlußbefehls mit dem Steuermittel verbunden ist.

4. Nachttresor- oder Schließfachvorrichtung (10) nach einem der Ansprüche 1-3, **dadurch gekennzeichnet, dass** ein verschließbares Tor (46) in der Eingangsöffnung vorgesehen ist, und dass ein Detektor (108) zur Erkennung der Position des Tors am Tor (46) vorgesehen ist, wobei der Detektor (108) mit dem Steuermittel verbunden ist.

5. Nachttresor- oder Schließfachvorrichtung (10) nach Anspruch 4, **dadurch gekennzeichnet, dass** das verschließbare Tor (46) einen mechanischen Schloß und/oder elektrischen Schloß hat, der zum Verschließen des Tors durch Erlaß eines Verschlußbefehls mit dem Steuermittel verbunden ist.

6. Nachttresor- oder Schließfachvorrichtung (10) nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** das Einlaßmittel (24) aus einer Drehtrommel (36) besteht, die um eine Drehachse im Verhältnis zum Gehäuse gegenüber der Eingangsöffnung drehbar montiert und mit einem in der radialen Richtung der Trommel (36) bewegbaren Kolben (38) versehen ist, dass die Trommel (36) zwischen einer ersten und zweiten einer Position rotierbar ist, wobei die Trommel in der ersten Position mit dem Kolben gegenüber der Eingangsöffnung (46) angeordnet ist, und wobei die Trommel in der zweiten Position mit dem Kolben gegenüber dem Aufbewahrungsraum (22) angeordnet ist, dass der Kolben (38) zwischen einer ersten und einer zweiten Stellung bewegbar ist, wobei der Kolben in der ersten Stellung von der äußeren peripherischen Fläche der Trommel (36) zurückgezogen ist und einen Hinterlegungsraum zur Aufbewahrung einer

Hinterlegung definiert, und wobei der Kolben (38) in der zweiten Stellung nach vorn im wesentlichen bündig mit der äußeren peripherischen Fläche der Trommel (36) gebracht ist, und dass der Kolben (38) von der ersten Stellung zur zweiten Stellung bewegt wird, wenn die Trommel (36) zur Ausführung der Hinterlegung beim inneren Aufbewahrungsraum (22) von der ersten Stellung zur zweiten Stellung rotiert wird.

7. Nachttresor- oder Schließfachvorrichtung (10) nach Anspruch 6, **dadurch gekennzeichnet, dass** Detektoren (72) zur Erkennung der Position und/oder Bewegung der Trommel (36) während der Rotation von der ersten Position zur zweiten Position an der Trommel (36) vorgesehen sind. 5
8. Nachttresor- oder Schließfachvorrichtung (10) nach Anspruch 6 oder 7, **dadurch gekennzeichnet, dass** Detektoren zur Erkennung der Position des Kolbens (38) gegenüber der Trommel (36) an der Trommel (36) vorgesehen sind. 10
9. Nachttresor- oder Schließfachvorrichtung (10) nach einem der Ansprüche 6-8, **dadurch gekennzeichnet, dass** die Trommel (36) durch Rotation in einer Richtung um die Drehachse der Trommel (36) von der ersten Position zur zweiten Position bewegt wird, so wie die Trommel (36) durch Rotation in der gleichen Richtung wie bei Rotation von der ersten Position zur zweiten Position von der zweiten Position zur ersten Position bewegt wird. 15
10. Nachttresor- oder Schließfachvorrichtung (10) nach einem der Ansprüche 6-9, **dadurch gekennzeichnet, dass** die Drehtrommel (36) in einer Hinterlegungsvorrichtung (24) des feuer- und diebstahlsicheren Gehäuses eingeschlossen ist, und dass die Trommel (36) dazu eingerichtet ist, in einer gesperrten oder verborgenen Position zwischen der ersten und der zweiten Position geparkt zu werden, in welcher verborgenen Position der Kolben (38) in der zweiten Stellung und gegenüber der Eingangsöffnung (46) ebenfalls verborgen ist. 20
11. Nachttresor- oder Schließfachvorrichtung (10) nach einem der Ansprüche 1-10, **dadurch gekennzeichnet, dass** das codegenerierende Mittel (54) aus Tastaturmitteln besteht, die durch Betätigung der Tastatur zur Erzeugung eines alphanumerischen Codes eingerichtet ist. 25
12. Nachttresor- oder Schließfachvorrichtung (10) nach Anspruch 11, **dadurch gekennzeichnet, dass** die Nachttresor- oder Schließfachvorrichtung (10) außerdem Displaymittel (56) besitzt, das mit dem Steuermittel (106) verbunden ist, um Information der Person vorzustellen, die das Tastaturmittel 30

(54) betätigt.

13. Nachttresor- oder Schließfachvorrichtung (10) nach einem der Ansprüche 1-12, **dadurch gekennzeichnet, dass** die Nachttresor- oder Schließfachvorrichtung (10) außerdem Codelesermittel in Form eines Balkencodelesers, eines optischen Lesers, eines Kartenlesers, eines Markenlesers, eines Spracherkennungsdetektors, eines Irisdetektors oder eines Fingerabdrucklesers besitzt, das mit dem Steuermittel verbunden und zur Erzeugung eines Codesignals eingerichtet ist, das entweder das erwähnte Signal oder ein ergänzendes Signal ausmacht, welches das PC-Mittel (80) mit den verifizierten Codes vergleicht. 35
14. Nachttresor- oder Schließfachvorrichtung (10) nach einem der Ansprüche 1-13, **dadurch gekennzeichnet, dass** das Steuermittel (106) außer dem PC-Mittel (80) eine Zentraleinheit (82) umfasst, die mit den Schlössern, Detektoren und dem Einlaßmittel der Nachttresor- oder Schließfachvorrichtung (10) verbunden ist, teils zum Empfang von Detektorsignalen der Detektoren, teils zur Betätigung der Schlösser und des Einlaßmittels (24), wobei die Zentraleinheit (82) von dem PC-Mittel (80) gesteuert wird und die Detektorsignale in das PC-Mittel (80) überträgt. 40
15. Nachttresor- oder Schließfachvorrichtung (10) nach einem der Ansprüche 1-14, **dadurch gekennzeichnet, dass** das PC-Mittel (18) dazu eingerichtet ist, durch Modems (112, 124) oder Kommunikationsverbindungen (112, 124) zur Dateneingabe und Datenausgabe mit den äußeren Datenverarbeitungsmitteln (110, 122) zu kommunizieren. 45
16. Nachttresor- oder Schließfachvorrichtung (10) nach einem der Ansprüche 1-15, **dadurch gekennzeichnet, dass** das PC-Mittel (80) dazu eingerichtet ist, durch Adressierung durch die äußeren Datenverarbeitungsmittel (110, 122) ein diagnostisches Programm zur Erkennung einer Funktionsstörung der Nachttresor- oder Schließfachvorrichtung (10) auszuführen, und nach der Erkennung einer Funktionsstörung der Nachttresor- oder Schließfachvorrichtung (10) Daten, die eine Funktionsstörung der Nachttresor- oder Schließfachvorrichtung (10) vertreten, in die äußeren Datenverarbeitungsmittel (110, 122) zu übertragen. 50
17. Steuereinheit (106) einer Nachttresor- oder Schließfachvorrichtung (10) zum Empfang und zur Aufbewahrung einer Hinterlegung von Geld oder anderer Wertgegenstände und mit einem feuer- und diebstahlsicheren Gehäuse (12), das einen inneren Aufbewahrungsraum (22) definiert, und umfassend eine Eingangsöffnung (46), Einlaßmittel 55

(24), das die Eingangsöffnung (46) mit dem inneren Aufbewahrungsraum (22) verbindet und die Übertragung einer Hinterlegung von außen her in den inneren Aufbewahrungsraum (22) ermöglicht, codegenerierendes Mittel (54), das von außen her zugänglich ist und durch Betätigung des codegenerierenden Mittels zur Erzeugung eines Codesignals (54) dient, und Steuermittel (106), das mit dem codegenerierenden Mittel (54) und dem Einlaßmittel (24) verbunden und dazu eingerichtet ist, vor Betätigung des Einlaßmittels zur Ausführung einer Hinterlegung eine Verifizierung eines durch das codegenerierende Mittel (54) erzeugten Codesignals auszuführen, **dadurch gekennzeichnet, dass** das Steuermittel (106) PC-Mittel (80) umfasst, das durch Vergleich des Codesignals mit einer in das PC-Mittel eingegebenen Codeeingabe zur Ausführung der Verifizierung des Codesignals eingerichtet ist, und dass das PC-Mittel (80) dazu eingerichtet ist, mit äußeren Datenverarbeitungsmitteln (110, 122) zu kommunizieren, und zwar zur Eingabe von Steuerdaten der äußeren Datenverarbeitungsmittel (110, 122), einschließlich verifizierter Codes, die Hinterlegungen beim inneren Aufbewahrungsraum (22) des Gehäuses (12) der Nachttresor- oder Schließfachvorrichtung (10) ermöglichen, und zur Ausgabe von Daten in die äußeren Datenverarbeitungsmittel (110, 122), einschließlich Daten, die den Betrieb und die Funktion der Nachttresor- oder Schließfachvorrichtung (10) vertreten.

18. Steuereinheit (106) nach Anspruch 17, **dadurch gekennzeichnet, dass** das Steuermittel (106) außer dem PC-Mittel (80) eine Zentraleinheit (82) umfasst, die mit den Schlössern, Detektoren und dem Einlaßmittel der Nachttresor- oder Schließfachvorrichtung (10) verbunden ist, teils zum Empfang von Detektorsignalen der Detektoren, teils zur Betätigung der Schlösser und des Einlaßmittels (24), wobei die Zentraleinheit (82) von dem PC-Mittel (80) gesteuert wird und die Detektorsignale in das PC-Mittel (80) überträgt.

19. Steuereinheit (106) nach Anspruch 17 oder 18, **dadurch gekennzeichnet, dass** das PC-Mittel (18) dazu eingerichtet ist, durch Modems (112, 124) oder Kommunikationsverbindungen (112, 124) zur Dateneingabe und Datenausgabe mit den äußeren Datenverarbeitungsmitteln (110, 122) zu kommunizieren.

20. Steuereinheit (106) nach einem der Ansprüche 17-19, **dadurch gekennzeichnet, dass** das PC-Mittel (80) dazu eingerichtet ist, durch Adressierung durch die äußeren Datenverarbeitungsmittel (110, 122) ein diagnostisches Programm zur Erkennung einer Funktionsstörung der Nachttresor- oder Schließfachvorrichtung (10) auszuführen, und nach

der Erkennung einer Funktionsstörung der Nachttresor- oder Schließfachvorrichtung (10) Daten, die eine Funktionsstörung der Nachttresor- oder Schließfachvorrichtung (10) vertreten, in die äußeren Datenverarbeitungsmittel (110, 122) zu übertragen.

## Revendications

1. Dépôt de nuit ou dispositif de coffre-fort (10) pour la réception et la détention d'un dépôt d'argent ou d'autres valeurs, et comprenant un boîtier (12) résistant au feu et à l'effraction définissant un dépôt intérieur (22) et ayant une ouverture d'entrée (46), des moyens d'admission (24) liant l'ouverture d'entrée (46) avec le dépôt intérieur (22) et permettant le transfert d'un dépôt de l'extérieur à l'intérieur du dépôt intérieur (22), des moyens de génération de code (54) étant accessibles de l'extérieur et qui servent à la génération d'un signal de code en actionnant les moyens de génération de code (54), ainsi que des moyens de contrôle (106) qui sont liés aux moyens de génération de code (54) et aux moyens d'admission (24) et qui sont adaptés à effectuer une vérification d'un signal de code généré par les moyens de génération de code (54) préalablement à l'actionnement des moyens d'admission (24) de manière à effectuer un dépôt **CARACTÉRISÉ en ce que** lesdits moyens de contrôle (106) comprennent des moyens de PC (80) adaptés à effectuer ladite vérification du signal de code en comparant ledit signal de code avec un code entré auxdits moyens de PC, et que lesdits moyens de PC (80) sont adaptés à communiquer (112) avec des moyens de traitement de données externes (110, 122) pour l'entrée de données de contrôle desdits moyens de traitement de données externes (110, 122), y compris des codes vérifiés, donnant accès à effectuer des dépôts à l'intérieur dudit dépôt intérieur (22) dans ledit boîtier (12) dudit dépôt de nuit ou dispositif de coffre-fort (10), et pour la sortie de données auxdits moyens de traitement de données externes (110, 122), y compris des données représentant l'opération et le fonctionnement dudit dépôt de nuit ou dispositif de coffre-fort (10).
2. Le dépôt de nuit ou dispositif de coffre-fort (10) selon la revendication 1, **CARACTÉRISÉ en ce que** le boîtier (12) résistant au feu et à l'effraction en outre comprend une porte (18) qui peut être verrouillée et déverrouillée, laquelle porte, à l'état non-verrouillée et ouverte donne l'accès au retrait de dépôts dudit dépôt intérieur (22).
3. Le dépôt de nuit ou dispositif de coffre-fort (10) selon la revendication 2, **CARACTÉRISÉ en ce qu'il** y a un détecteur à ladite porte (18) pour détecter la

position de ladite porte (18), ladite détecteur étant lié auxdits moyens de contrôle (106), et **en ce que** ladite porte (18) est munie d'un verrou contrôlable liée auxdits moyens de contrôle (106) pour verrouiller ladite porte par l'émission d'une commande de verrouillage.

4. Le dépôt de nuit ou dispositif de coffre-fort (10) selon l'une quelconque des revendications 1 à 3, **CARACTÉRISÉ en ce qu'il** existe une porte fermable (46) à verrou dans ladite ouverture d'entrée et qu'il y a un détecteur (108) à ladite porte (46) pour détecter la position de ladite porte, ledit détecteur (108) étant lié auxdits moyens de contrôle.
5. Le dépôt de nuit ou dispositif de coffre-fort (10) selon la revendication 4, **CARACTÉRISÉ en ce que** ladite porte fermable à verrou (46) a un verrouillage mécanique et/ou un verrouillage électrique lié auxdits moyens de contrôle (106) pour verrouiller ladite porte en émettant une commande de verrouillage.
6. Le dépôt de nuit ou dispositif de coffre-fort (10) selon l'une quelconque des revendications précédentes, **CARACTÉRISÉ en ce que** lesdits moyens d'admission (24) sont constitués par un tambour rotatif (36) monté rotativement autour d'un axe rotatif relatif audit boîtier opposé à ladite ouverture d'entrée et ayant un piston (38) mobile dans la direction radiale dudit tambour (36), ledit tambour (36) étant rotatif entre une première et une seconde position, dans ladite première position ledit tambour étant placé avec ledit piston face à l'ouverture d'entrée (46), et dans ladite seconde position ledit tambour étant placé avec ledit piston face audit dépôt intérieur (22), ledit piston (38) étant mobile entre une première et une seconde posture, dans ladite première posture ledit piston étant retiré de ladite surface périphérique externe dudit tambour (36), définissant un espace de dépôt pour détenir un dépôt, et dans ladite seconde posture ledit piston (38) étant déplacé en avant jusqu'à une posture considérablement au niveau de ladite surface périphérique externe dudit tambour (36), et **en ce que** ledit piston (38) est déplacé de ladite première posture à ladite seconde posture lorsque ledit tambour (36) a accompli un mouvement de rotation de ladite première position à ladite seconde position pour effectuer ledit dépôt à l'intérieur dudit dépôt intérieur (22).
7. Le dépôt de nuit ou dispositif de coffre-fort (10) selon la revendication 6, **CARACTÉRISÉ en ce qu'il** y a des détecteurs (72) situés audit tambour (36) pour détecter ladite position et/ou ledit mouvement dudit tambour (36) pendant la rotation de ladite première position à ladite seconde position.

8. Le dépôt de nuit ou dispositif de coffre-fort (10) selon les revendications 6 ou 7, **CARACTÉRISÉ en ce que** les détecteurs sont situés audit tambour (36) pour détecter ladite position dudit piston (38) relatif audit tambour(36).
9. Le dépôt de nuit ou dispositif de coffre-fort (10) selon l'une quelconque des revendications 6 à 8, **CARACTÉRISÉ en ce que** ledit tambour (36) est déplacé de ladite première position à ladite seconde position par rotation dans une direction autour dudit axe rotatif dudit tambour (36), au moment où ledit tambour (36) est déplacé de ladite seconde position à ladite première position par rotation dans la même direction que lorsqu'un mouvement de rotation est accompli de ladite première position à ladite seconde position.
10. Le dépôt de nuit ou dispositif de coffre-fort (10) selon l'une quelconque des revendications 6 à 9, **CARACTÉRISÉ en ce que** ledit tambour rotatif (36) est enveloppé dans un dispositif de dépôt (24) dans ledit boîtier résistant au feu et à l'effraction et **en ce que** ledit tambour (36) est adapté à être garé dans une position bloquée ou cachée entre lesdites première et seconde positions, dans quelle position cachée ledit piston (38) est dans ladite seconde posture et de plus caché par rapport à ladite ouverture d'entrée (46).
11. Le dépôt de nuit ou dispositif de coffre-fort (10) selon l'une quelconque des revendications 1 à 10, **CARACTÉRISÉ en ce que** lesdits moyens de génération de code (54) sont constitués par des moyens de clavier adaptés à générer un code alphanumérique lorsque ledit clavier est actionné.
12. Le dépôt de nuit ou dispositif de coffre-fort (10) selon la revendication 11, **CARACTÉRISÉ en ce que** ledit dépôt de nuit ou dispositif de coffre-fort (10) en outre a des moyens de visualisation (56) liés auxdits moyens de contrôle (106) pour présenter de l'information à ladite personne actionnant lesdits moyens de clavier (54).
13. Le dépôt de nuit ou dispositif de coffre-fort (10) selon l'une quelconque des revendications 1 à 12, **CARACTÉRISÉ en ce que** le dépôt de nuit ou dispositif de coffre-fort (10) est muni, en outre, de moyens de scanneur de code sous forme d'un lecteur de code à barres, un explorateur optique, un lecteur de cartes, un scanneur de marque, d'étiquette ou analogues ou un lecteur de marque, d'étiquette ou analogues, un détecteur de reconnaissance vocale, un détecteur iris ou un scanneur d'empreinte digitale lié auxdits moyens de contrôle et adaptés à générer un signal de code, constituant soit ledit signal de code ou un signal de code supplémentaire que les-



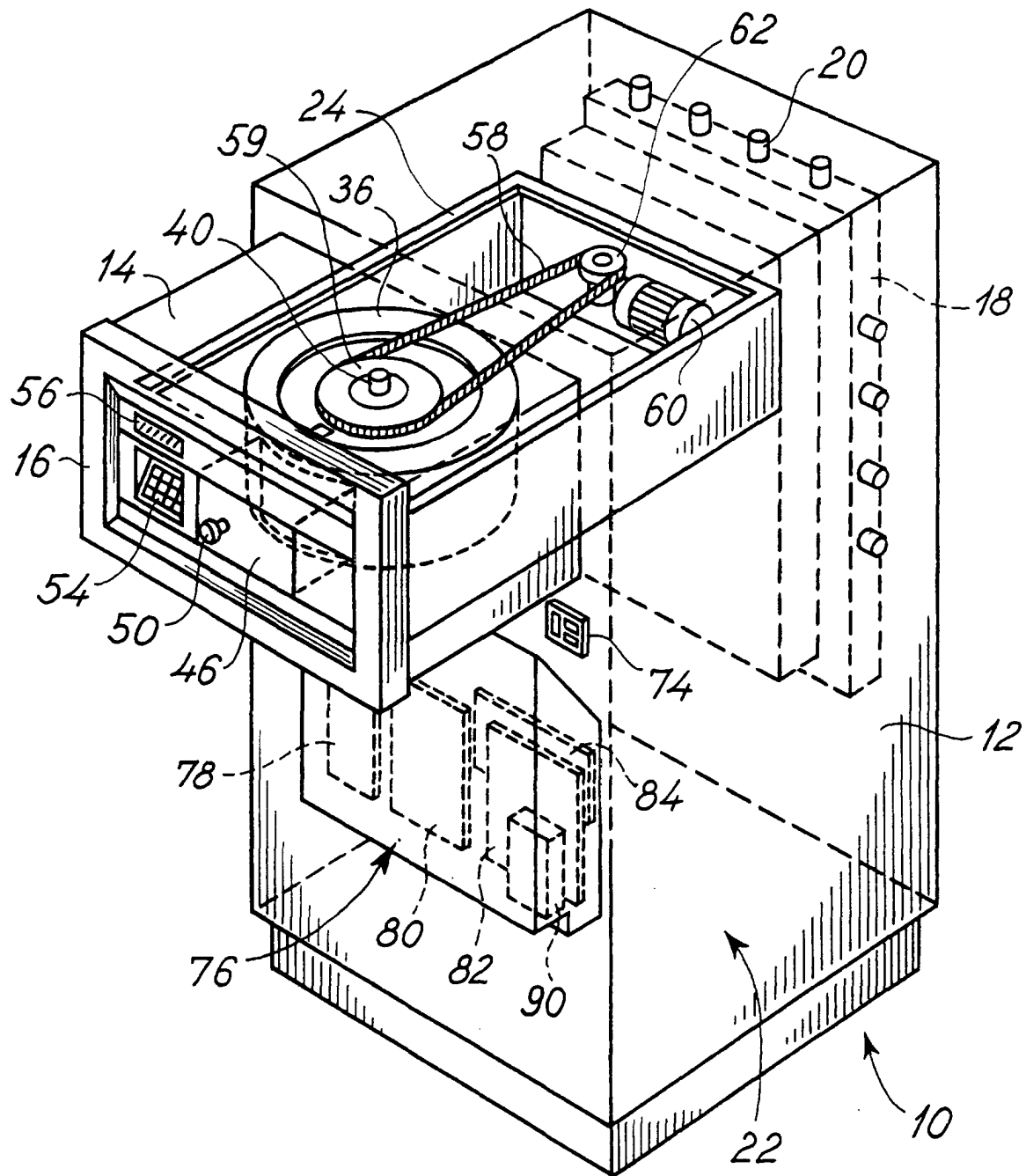
ditions moyennes de PC (80) comparant auxdits codes vérifiants.

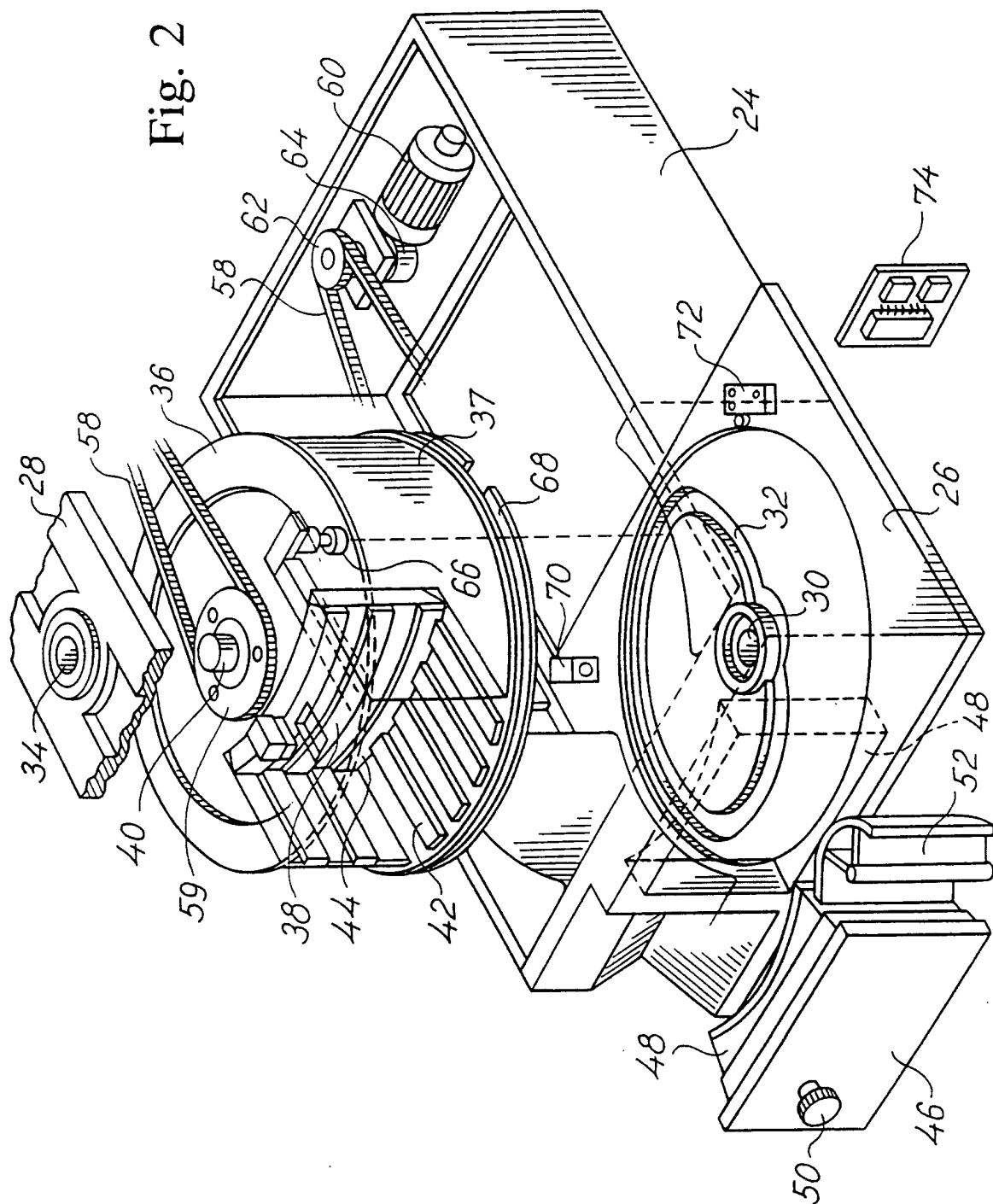
14. Le dépôt de nuit ou dispositif de coffre-fort (10) selon l'une quelconque des revendications 1 à 13, **CARACTÉRISÉ en ce que** lesdits moyens de contrôle (106) en sus desdits moyens de PC (80) comprennent une unité centrale de traitement (82) liée auxdits verrouillages, détecteurs et moyens d'admission dudit dépôt de nuit ou dispositif de coffre-fort (10) partiellement pour recevoir des signaux détecteurs desdits détecteurs, et partiellement pour actionner lesdits verrouillages et lesdits moyens d'admission (24), ladite unité centrale de traitement (82) étant contrôlée par lesdits moyens de PC (80) et transmettant lesdits signaux détecteurs auxdits moyens de PC (80). 5
15. Le dépôt de nuit ou dispositif de coffre-fort (10) selon l'une quelconque des revendications 1 à 14, **CARACTÉRISÉ en ce que** lesdits moyens de PC (80) sont adaptés à communiquer avec lesdits moyens de traitement de données externes (110, 122) par l'intermédiaire des modems (112, 124) ou des connexions de communication (112, 124) pour l'entrée et la sortie des données. 10
16. Le dépôt de nuit ou dispositif de coffre-fort (10) selon l'une quelconque des revendications 1 à 15, **CARACTÉRISÉ en ce que** lesdits moyens de PC (80) sont adaptés à effectuer un programme diagnostique pour détecter un défaut à l'intérieur dudit dépôt de nuit ou dispositif de coffre-fort (10) en adressant à partir desdits moyens de traitement de données externes (110, 122), et de transmettre des données 15
- représentant un défaut à l'intérieur dudit dépôt de nuit ou dispositif de coffre-fort (10) auxdits moyens de traitement de données externes après la détection d'un défaut à l'intérieur dudit dépôt de nuit ou dispositif de coffre-fort (10). 20
17. Une unité de contrôle (106) d'un dépôt de nuit ou dispositif de coffre-fort (10) pour recevoir et détenir un dépôt d'argent ou d'autres valeurs et comprenant un boîtier (12) résistant au feu et à l'effraction définissant un dépôt intérieur (22) et ayant une ouverture d'entrée (46), des moyens d'admission (24) liant ladite ouverture d'entrée (46) et ledit dépôt intérieur (22) et permettant le transfert d'un dépôt venant de l'extérieur à l'intérieur dudit dépôt intérieur (22), des moyens de génération de code (54) étant accessibles de l'extérieur et servant à générer un signal de code en actionnant lesdits moyens de 25
- génération de code (54), et des moyens de contrôle (106) liés auxdits moyens de génération de codes (54) et auxdits moyens d'admission (24) et adaptés à effectuer une vérification d'un signal de code généré par lesdits moyens de génération de code (54) 30

préalablement à l'actionnement desdits moyens d'admission pour effectuer un dépôt, **CARACTÉRISÉ en ce que** lesdits moyens de contrôle (106) comprennent des moyens de PC (80) adaptés à effectuer ladite vérification dudit signal de code en comparant ledit signal de code avec un code entré auxdits moyens de PC (80) et **en ce que** lesdits moyens de PC (80) sont adaptés à communiquer avec lesdits moyens de traitement de données externes (110, 122), pour l'entrée de données de contrôle desdits moyens de traitement de données externes (110, 122), y compris des codes vérifiés, donnant accès à effectuer des dépôts à l'intérieur dudit dépôt intérieur (22) dans ledit boîtier (12) dudit dépôt de nuit ou dispositif de coffre-fort (10), et pour la sortie de données auxdits moyens de traitement de données externes (110, 122), y compris des données représentant ladite opération et le fonctionnement dudit dépôt de nuit ou dispositif de coffre-fort (10). 35

18. L'unité de contrôle (106) selon la revendication 17, **CARACTÉRISÉ en ce que** lesdits moyens de contrôle (106) en sus desdits moyens de PC (80) comprennent une unité centrale de traitement (82) liée auxdits verrouillages, détecteurs et moyens d'admission dudit dépôt de nuit ou dispositif de coffre-fort (10) partiellement pour recevoir des signaux détecteurs desdits détecteurs, et partiellement pour actionner lesdits verrouillages et lesdits moyens d'admission (24), ladite unité centrale de traitement (82) étant contrôlée par lesdits moyens de PC (80) et transmettant lesdits signaux détecteurs auxdits moyens de PC (80). 40
19. L'unité de contrôle (106) selon l'une quelconque des revendications 17 ou 18, **CARACTÉRISÉ en ce que** lesdits moyens de PC (80) sont adaptés à communiquer avec lesdits moyens de traitement de données externes (110, 122) par l'intermédiaire des modems (112, 124) ou des connexions de communications (112, 124) pour l'entrée des données et la sortie des données. 45
20. L'unité de contrôle (106) selon l'une quelconque des revendications 17 à 19, **CARACTÉRISÉ en ce que** les moyens de PC (80) sont adaptés à effectuer un programme diagnostique pour détecter un défaut à l'intérieur dudit dépôt de nuit ou dispositif de coffre-fort (10) en adressant à partir desdits moyens de traitement de données externes (110, 122), et de transmettre des données représentant un défaut à l'intérieur dudit dépôt de nuit ou dispositif de coffre-fort (10) auxdits moyens de traitement de données externes (110, 122) après la détection d'un défaut à l'intérieur dudit dépôt de nuit ou dispositif de coffre-fort (10). 50

Fig. 1





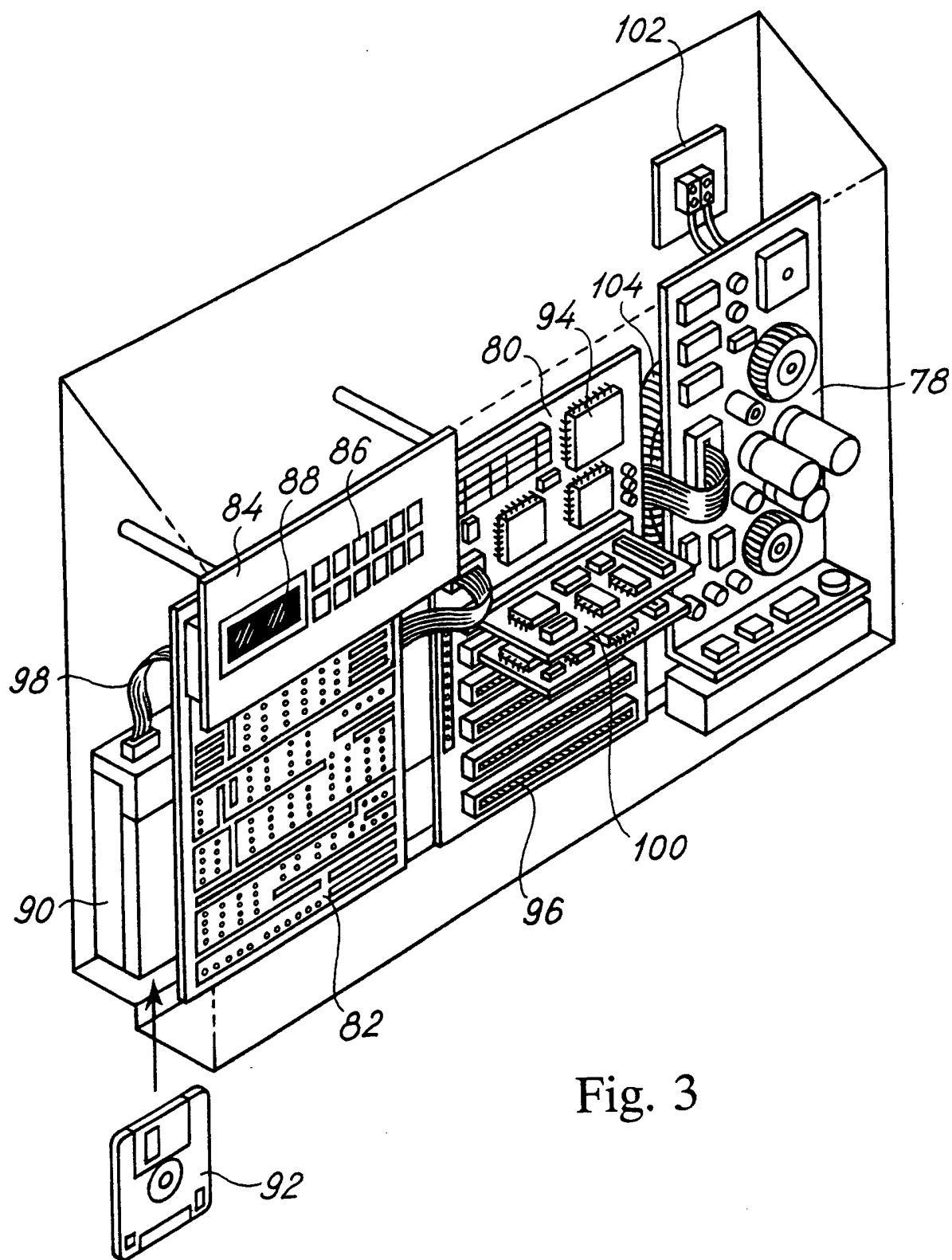
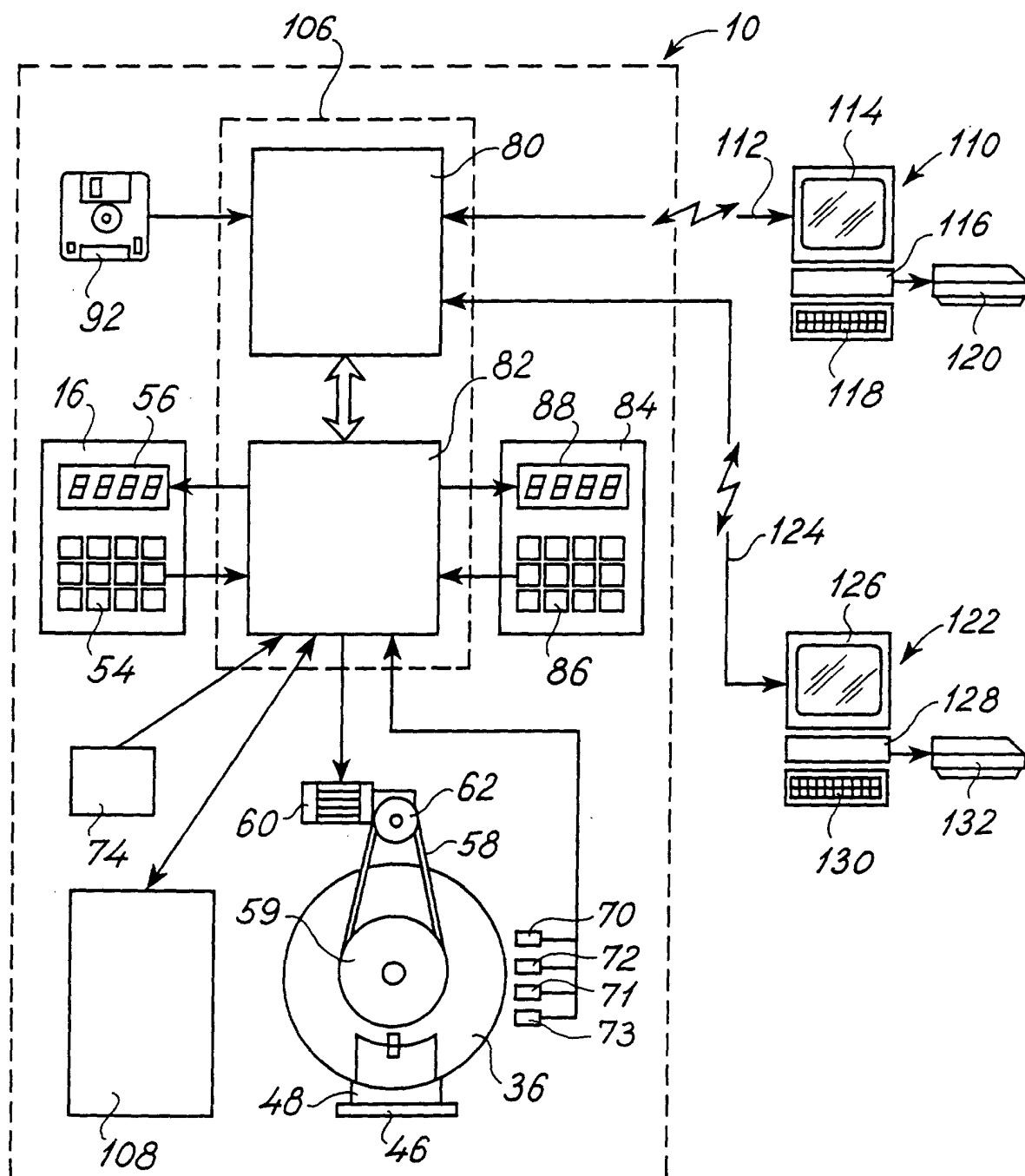


Fig. 3

Fig. 4



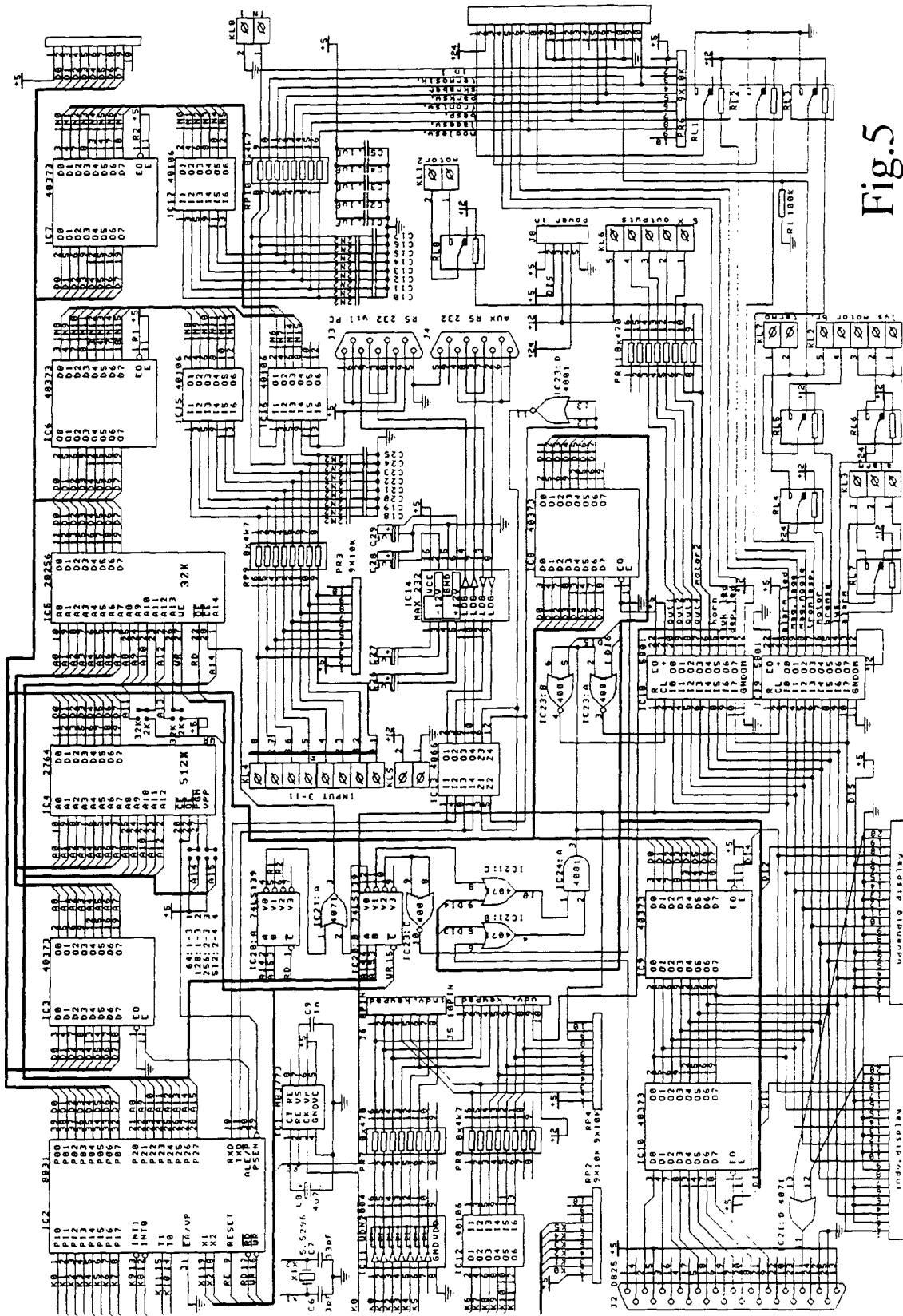


Fig. 5

